

## SCIENTIFIC REPORT OF EFSA

# The 2011 European Union Report on Pesticide Residues in Food<sup>1</sup>

European Food Safety Authority<sup>2, 3</sup>

European Food Safety Authority (EFSA), Parma, Italy

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### ABSTRACT

The report presents the results of the control activities related to pesticide residues in food carried out in 2011 in 29 European countries (27 Member States and 2 EFTA countries). The report also presents a dietary risk assessment. On the basis of the detailed analysis of the results, EFSA derived some recommendations aimed at improving the enforcement of the European pesticide residue legislation. In 2011, more than 79,000 samples of more than 600 food products were tested for pesticide residues throughout Europe. Nearly 900 pesticides were sought and less than 400 were detected in measurable amounts. In the framework of the EU-coordinated monitoring programme which covered more than 12,000 samples 98.1 % of the tested food samples analysed complied with the legal limits and that 53.4 % of samples contained no measurable residues at all. The dietary risk assessment that was performed to estimate the long-term exposure of consumers confirmed that there was no long-term risk to consumer health through their diets from 99 % of the 171 pesticides assessed. For two pesticides (dieldrin and heptachlor) the estimated worst-case exposure exceeded the toxicological reference value, indicating there may be a potential for an impact on consumer health. Neither compound is authorised for use as a pesticide, but due to historical use and the high persistence of the molecules and their capacity to bioaccumulate, they are still present in the food chain. The risk assessment that focussed on the short-term exposure revealed that potential consumer health concerns could not be excluded in 253 instances should the products that contained residues in high concentrations be consumed in high amounts. Finally, an acute risk assessment was carried out for pears that contained multiple residues of pesticides that share the same toxicological effects. Two samples of pears exceeded the toxicological threshold for cumulative effects.

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### KEY WORDS

pesticide residues, food control, monitoring, Maximum Residue Levels, consumer risk assessment, Regulation (EC) No 396/2005

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\* Some changes of editorial nature were made. The changes do not affect the contents of the report. To avoid confusion, the original version of the report has been removed from the website, but is available on request, as is the version showing all the changes made.

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## SUMMARY

This report summarises the results of the control activities related to pesticide residues in food carried out in 2011 in 27 Member States and two EFTA countries (Iceland and Norway). The report also presents the outcome of the dietary risk assessment carried out on the basis of the national control activities. While assessing the monitoring results, EFSA also derived some recommendations aimed at improving the enforcement of the European pesticide residue legislation.

Overall, in 2011 more than 79,000 samples of more than 600 different food products were tested for pesticide residues throughout Europe. Nearly 900 pesticides were sought and less than 400 were detected in measurable amounts.

The analysis of the results of the 2011 EU-coordinated programme, which requested the control of 12 different food products, shown that 1.9 % of the samples numerically exceeded the MRL (245 out of the 12,676 samples); of those, 1.1 % was also found to be non-compliant with the legal limits when the measurement uncertainty was taken into account. 44.7 % of the samples (5,660 samples) contained measurable residues within the legally permitted levels. In 53.4 % of the samples (6,771 samples), no quantifiable residues were found (residues below the limit of quantification). Out of the 179 pesticides covered by the EU-coordinated programme, 40 pesticides were not detected in any of the samples analysed. Overall, the most frequently detected residues were bromide ion (36.4 %), followed by propamocarb, thiabendazole, boscalid, dithiocarbamates, chlorpyrifos, imazalil and chlormequat; these substances were found in 5 to 25 % of the samples analysed. It is noted that positive results for bromide ion do not necessarily reflect the use of the pesticide methyl bromide since bromide is naturally occurring in food plants. In certain food products the detection of dithiocarbamates (measured as CS<sub>2</sub>) is resulting from naturally occurring plant compounds and not from the use of pesticides containing dithiocarbamates. The food products for which the highest MRL exceedance rate was recorded were spinach (6.5 % of the samples exceeding the MRL), beans with pods (4.1 % MRL exceedances), oranges (2.5 %), cucumbers (2.1 %), rice (2 %), carrots (1.6 %), mandarins (1.4 %) and pears (1.1 %). The lowest percentage of samples exceeding the MRL was identified for wheat flour (0.3 %) and potato samples (0.6 %). In animal products (1,429 samples of liver and poultry meat were analysed) no MRL exceedances were identified. The pesticide/crop combinations for which residue concentrations were quantified above the reporting level most frequently were imazalil/mandarins (65.1 %), imazalil/oranges (64.5 %) and chlorpyrifos/mandarins (51.7 %). High frequencies were also reported for bromide ion in carrots and spinach (55.7 % and 54.2 %, respectively). The highest percentages of MRL exceedances were found for dithiocarbamates in spinach (4.8 % of all spinach samples), followed by residues of bromide ion in rice (2.4 %), clothianidin in spinach (1.4 %) and carbendazim in rice (1.1 %).

In 2011, in total 79,035 samples were taken in the context of the national programmes. Compared to the previous monitoring year, the number of samples analysed in 2011 represented an increase by 2.5 %. 71,164 samples were classified as surveillance samples. 97.5 % of the surveillance samples analysed was at or below the MRL; thus, in 2.5 % of the samples, the legal limits were numerically exceeded for one or more pesticides (1,764 samples). For 1.5 % of the samples legal actions were triggered since, considering the measurement uncertainty, they were also found to be non-compliant with the MRL legislation. The total number of different pesticides sought among all the EEA countries was 888. Out of these, 381 pesticides were detected in measurable quantities. The percentage of food samples imported from third countries that exceeded the legal limit amounted to 6.3 %, while the exceedance rate in EU and EFTA countries was of 1.5 %. A similar ratio was calculated regarding the MRL non-compliance rate: 3.7 % versus 0.9 % for food produced in third countries and the EEA, respectively. Products originating from Cyprus, Malta, Bulgaria, Portugal, Slovenia, Iceland, Luxembourg, France, Belgium, the United Kingdom, Estonia, the Czech Republic, Austria, Greece and Spain were found to be above the calculated average non-compliance rate (0.9 %). For third countries the highest non-compliance rates (expressed in percentage of the samples analysed for the single countries) were identified for food originating from Vietnam (26.8 % of 421 samples), Kenya (15.2 % of 355 samples), Malaysia (14.0 % of 108 samples), Guatemala (12.1 % of 33 samples) and

Thailand (10.3 % of 458 samples). More specifically, the highest percentage of MRL exceedances was identified for Vietnamese peppers (61.5 %, mainly due to residues of hexaconazole, carbendazim and difenoconazole) and for Vietnamese basil (59.5 %, mainly due to residues of chlorpyrifos, carbendazim and hexaconazole), followed by okra produced in India (43.3 %, mainly because of residues of acephate, monocrotophos and endosulfan).

In total 1,796 samples of baby food were analysed among all reporting countries except Iceland. Measurable residues were found in 39 samples (2.2 %). The MRLs for baby food were exceeded in four samples (0.2 % of 1,796 samples). Compared to other food products, the frequency of residues detection and MRL exceedances in baby food was significantly lower.

In 2011 4,117 organically produced food products (5.8 % of the total number of samples) were analysed by the reporting countries except Bulgaria, Hungary and Iceland. Compared to conventionally grown food products, for organic samples a lower MRL exceedance rate was observed (0.5 % for organic products versus 2.6 % for conventional products).

7,711 samples of processed food products (10.8 % of the total number of samples) were taken by all reporting countries except Iceland. Overall, 1.1 % of the processed samples exceeded the MRL. The exceedance rate for processed products was found to be lower than the one determined for the corresponding unprocessed products. All reporting countries observed multiple residues in the samples analysed. Residues of two or more pesticides were found in 18,881 samples (26.5 % of all samples). 0.4 % of the samples were found to exceed more than one MRL. Pepper was the food product with the highest number of samples with multiple MRL exceedances. Among the food products covered by the EU-coordinated monitoring programme, pears were identified as the product with the highest number of multiple residues (corresponding to 52.7 % of the pear samples). The most frequent combinations of two pesticides measured in the same sample were reported for boscalid/pyraclostrobin (240 samples, 11.0 % of the 2,184 pears samples), boscalid/chlorpyrifos (164 samples, 7.5 %) and boscalid/dithiocarbamates (152 samples, 7.0 %).

The dietary risk assessment performed to estimate the long-term exposure of consumers concluded that no consumer health risk was expected for 169 of the 171 pesticides assessed. For two pesticides (dieldrin and heptachlor) the worst-case exposure estimates exceeded the toxicological reference value, indicating a potential impact on the consumer health. Neither compound is nowadays authorised for use as a pesticide, but due to the historical use and the high persistence of the molecules and their capacity to bio-accumulate, these two substances are still present in the food chain. The risk assessment that focussed on the short-term exposure revealed that potential consumer health concerns could not be excluded in 253 instances, if the products that contained residues in high concentrations were consumed in large amounts. Finally, an acute risk assessment was carried out considering pear samples that contained multiple pesticide residues sharing the same toxicological effects. Two samples of pears exceeded the toxicological threshold for cumulative effects.

Based on the detailed analysis of the monitoring results, EFSA issued a set of recommendations to be considered for the future control programmes. Some of the recommendations aimed at improving the clarity and efficiency of the EU-coordinated monitoring plans and reducing the rate of MRL breaches. Finally, some proposals were made which focus on data that would allow improving the dietary risk assessment.

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## LEGAL BASIS

Pesticide residues in food of plant and animal origin occur due to the use of plant protection products on crops used for food and feed. In order to ensure a high level of consumer protection, legal limits – so called ‘Maximum Residue Levels’ or briefly ‘MRLs’ are set at European level; the MRLs define the maximum concentration of pesticide residues permitted in food and feed. These legal standards are established under Regulation (EC) No 396/2005<sup>4</sup>. For more than 500 pesticides harmonised MRLs are in place at the moment in the EU. For pesticides not explicitly mentioned in the MRL legislation a default MRL of 0.01 mg/kg is applicable, a level equal to the limit of quantification achievable with analytical methods used for MRL enforcement. Regulation (EC) No 396/2005 also presents the legal framework for pesticide residue control activities to be carried out by Member States in order to enforce the MRLs.

The EU control programmes, which are established on an annual basis, define the food products and pesticides that should be monitored, taking into account problems that have been identified in the past regarding conformity to the MRLs and relevant for assessing consumer exposure. The EU-coordinated programme (EUCP) referring to the control year 2011 was defined in Commission Regulation (EU) No 915/2010<sup>5</sup>, hereafter referred to as ‘2011 monitoring regulation’.

In addition to the coordinated EU-control programme, Member States have to define national control programmes, which should focus on specific risks regarding compliance with pesticide legislation and risks for consumer safety.

According to Article 31 of Regulation (EC) No 396/2005, Member States have to share the results of the official controls and other relevant information with the European Commission, EFSA and other Member States. On the basis of these results, EFSA has to prepare an Annual Report on pesticide residues, analysing the data in view of the MRL compliance of food available in the EU and the exposure of European consumers to pesticide residues. For preparing the report, EFSA shall also consider other relevant information, in particular the results of monitoring of veterinary medicinal product residues reported in the framework of Directive 96/23/EC<sup>6</sup>.

The 2011 EU-coordinated programme regulation requested Member States to take at least ten samples of cereal-based baby foods. According to the specific baby food legislation in place at EU level (Directive 2006/125/EC<sup>7</sup> and 2006/141/EC<sup>8</sup>) the MRLs established under Regulation (EC) No 396/2005 do not apply to this type of food; instead, specific MRLs for baby food have been defined which are in general more restrictive than the legal limits for other food. In general a default MRL of 0.01 mg/kg is applicable which implements the precautionary principle; for certain pesticides which have a high toxicity specific MRLs, lower than 0.01 mg/kg, have been established for baby food.

According to the 2011 monitoring regulation Member States had to take at least one organic sample for each of the food products in focus. It is noted that for organic products no specific MRLs are established. Thus, the MRLs set in Regulation (EC) No 396/2005 apply equally to organic food and to

<sup>4</sup> Regulation (EC) No 396/2005 of the European Parliament and of the Council of 23 February 2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC. OJ L 70, 16.3.2005, p. 1-16.

<sup>5</sup> Commission Regulation (EU) No 915/2010 of 12 October 2010 concerning a coordinated multiannual control programme of the Union for 2011, 2012 and 2013 to ensure compliance with maximum levels of and to assess the consumer exposure to pesticide residues in and on food of plant and animal origin. OJ L 269, 13.10.2010, p. 8-18.

<sup>6</sup> Council Directive 96/23/EC of 29 April 1996 on measures to monitor certain substances and residues thereof in live animals and animal products and repealing Directives 85/358/EEC and 86/469/EEC and Decisions 89/187/EEC and 91/664/EEC. OJ L 125, 23.5.1996, p. 10-32.

<sup>7</sup> Commission Directive 2006/125/EC of 5 December 2006 on processed cereal-based foods and baby foods for infants and young children (Codified version) (Text with EEA relevance). OJ L 339, 6.12.2006, p. 16 - 35.

<sup>8</sup> Commission Directive 2006/141/EC of 22 December 2006 on infant formulae and follow-on formulae and amending Directive 1999/21/EC (Text with EEA relevance). OJ L 401, 20.12.2006, p. 1 - 33.

conventional food. Regulation (EC) No 834/2007<sup>9</sup> and Regulation (EC) No 889/2008<sup>10</sup> on organic production of agricultural products define specific labelling provisions and production methods which entail significant restrictions on the use of pesticides. In cases of immediate threat to the crop, certain pesticides listed in Commission Regulation 889/2008 may be used in organic farming according to national authorisations.

To complete the list of EU legislation concerning official controls of food, Regulation (EC) No 882/2004<sup>11</sup> should be mentioned. This regulation establishes a framework of general rules for the organisation of official controls at the EU level. For the verification of compliance with the EU food legislation, official controls should be carried out, including routine surveillance checks and more intensive controls such as inspections, audits, sampling and analysis of samples. In addition, this regulation provides that a list of food and feed of non-animal origin is drawn up which should be subject to an increased level of official controls at the point of entry into the EU territory because of known or emerging risks. A list of food and feed products which should be checked for certain pesticides together with the country of origin of the products in focus, was first published in Commission Regulation (EC) No 669/2009<sup>12</sup>. This specific import control list is regularly updated.

Plant protection products are used to protect plants and plant products against harmful organisms, including weeds and to improve agricultural production. To ensure a high level of protection of both human and animal health, the environment and to safeguard the competitiveness of EU agriculture, Council Directive 91/414/EEC<sup>13</sup>, repealed by Commission Regulation (EC) No 1107/2009<sup>14</sup>, was established. According to the above pieces of legislation active substances used in plant protection products have to undergo a comprehensive risk assessment and approval procedure before they are allowed to be placed on the market in the EU.

Article 50 of the EU food law<sup>15</sup> established the Rapid Alert System for Food and Feed (RASFF); further implementing measures concerning RASFF are laid down in Commission Regulation (EU) No 16/2011<sup>16</sup>. RASFF is a notification system which establishes an effective communication on risks related to food and feed between Member State contact points, the national competent authorities and the Commission. The information exchange facilitates a more rapid and coordinated response by Member States to a potential health threat. Risks related to pesticide residues found in food are analysed with a view to provide the Commission and Member States with any information required for the purposes of risk analysis. This procedure enables EFSA to perform its task of monitoring the health and nutritional risks from food as effectively as possible.

<sup>9</sup> Council Regulation (EC) No 834/2007 of 28 June 2007 on organic production and labelling of organic products and repealing Regulation (EEC) No 2092/91. OJ L 189, 20.7.2007, p. 1 – 23.

<sup>10</sup> Commission Regulation (EC) No 889/2008 of 5 September 2008 laying down detailed rules for the implementation of Council Regulation (EC) No 834/2007 on organic production and labelling of organic products with regard to organic production, labelling and control. OJ L 250, 18.9.2008, p. 1 – 82.

<sup>11</sup> Regulation (EC) No 882/2004 of the European Parliament and of the Council of 29 April 2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules. OJ L 165, 30.4.2004, p. 1 – 141.

<sup>12</sup> Commission Regulation (EC) No 669/2009 of 24 July 2009 implementing Regulation (EC) No 882/2004 of the European Parliament and of the Council as regards the increased level of official controls on imports of certain feed and food of non-animal origin and amending Decision 2006/504/EC (Text with EEA relevance). OJ L 194, 25.7.2009, p. 11 – 21.

<sup>13</sup> Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market. OJ L 230, 19.8.1991, p. 1-32.

<sup>14</sup> Regulation (EC) No 1107/2009 of the European Parliament and of the Council of 21 October 2009 concerning the placing of plant protection products on the market and repealing Council Directives 79/117/EEC and 91/414/EEC. OJ L 309, 24.11.2009, p. 1 – 50.

<sup>15</sup> Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety. OJ L 31, 1.2.2002, p. 1 – 24.

<sup>16</sup> Commission Regulation (EU) No 16/2011 of 10 January 2011 laying down implementing measures for the Rapid alert system for food and feed. Text with EEA relevance. OJ L 6, 11.1.2011, p. 7–10.

**TERMS OF REFERENCE**

In accordance with Article 32 of Regulation (EC) No 396/2005, EFSA shall submit the Annual Report on pesticide residues concerning the official control activities for food and feed carried out in 2011 to the Commission.

The Annual Report shall include at least the following information:

- an analysis of the results of the controls on pesticide residues provided by EU Member States;
- a statement of the possible reasons why the MRLs were exceeded, together with any appropriate observations regarding risk management options;
- an analysis of chronic and acute risks to the health of consumers from pesticide residues;
- an assessment of consumer exposure to pesticide residues based on the information provided under the first bullet point and any other relevant information available, including reports submitted under Directive 96/23/EC.

In addition, the report may include an opinion on the pesticides that should be included in future programmes.



## 1. Introduction

The objective of this report is to provide an overview of the official control activities (also referred to as ‘monitoring or control programmes’) performed by EU Member States and EFTA countries in order to ensure compliance of food with the legal limits, to summarise the results provided by the reporting countries, to identify critical areas of concern regarding sample compliance with Maximum Residue Levels (MRLs), assess the actual consumer exposure to pesticide residues and perform an analysis of the chronic and acute risks to consumer health.

The structure of this report is briefly outlined below:

In each EU Member State and EFTA country (also referred to as reporting countries), two control programmes<sup>17</sup> are in place: an EU-coordinated multiannual programme (EUCP) and a national programme (NP). The results of the 2011 **EU-coordinated programme** as established in Commission Regulation (EC) No 915/2010 are summarised in **chapter 2**. For this programme, which aims to provide statistically representative data regarding pesticide residues in food available to European consumers, the samples are chosen without any particular suspicion towards a specific producer and/or consignment. Thus, the results obtained in the coordinated programme are considered as an indicator for the MRL exceedance rate in food of plant and animal origin placed on the European common market and they allow an estimation of the actual consumer exposure. The dietary patterns of European consumers consist mainly of food products derived from approximately 30 to 40 main food crops. Monitoring the pesticide residues in these crops under the EU-coordinated monitoring programme should also provide a representative basis for the estimation of the exposure of European consumers to pesticide residues in food. In view of the resources available at national level, the control activities specified in the regulation on the EU-coordinated programme focus on approximately twelve products every year in a three-year cycle, covering the major food products within these three years. The details of the results of the 2011 EUCP are reported in **Appendix III** of this report.

The **national control programmes** (NP) are carried out complementary to the controls performed in the context of the EU-coordinated programme. They are performed to ensure compliance with the provisions established in food legislation regarding pesticide residues. The reporting countries define the priorities for their national control programmes taking into account the importance of food products in national diets, considering food with high residues/non-compliance rates in previous years, the use pattern of pesticides and laboratory capacities<sup>18</sup>. Also the number of samples and/or the number of pesticides analysed by the participating countries is defined according to national priorities. The results of national control programmes are therefore not directly comparable. Since samples taken in the framework of the EU-coordinated programme are in many cases analysed for a wider range of pesticides than defined in the respective regulation, the results for these samples are also reported under the national control programmes. Thus, since a strict separation of the two programmes is not possible, the results of the national programmes along with the results of the EUCP are pooled and summarised in **chapter 3**. A short description of the national monitoring programmes can be found in **Appendix II**. More details on the samples reported in Section 3 are provided in **Appendix IV** of this report.

The list of the national authorities responsible in the reporting countries for pesticide residue monitoring is reported in **Appendix I**<sup>19</sup>.

<sup>17</sup> See ‘Control programmes’ and ‘Sampling strategy’ in the Glossary.

<sup>18</sup> Further information on the criteria applied by the reporting countries in designing their national control programmes are available in Section 2 of the 2010 European Report on Pesticide Residue in Food (EFSA, 2012a).

<sup>19</sup> More detailed information on the results of national control activities is available from the respective national authorities. It should be noted that upon submission of the results, EFSA validated the data and recoded the names of the food and the pesticide names reported by the reporting countries to make them comparable. Thus, minor differences in the data published by the national authorities or in the ‘national summary reports’ of Appendix II and the data reported in the present report may occur.

Table 1-1 summarises the main characteristics of the two control programmes, e.g. the number of samples taken, the number of food products, the number of reporting countries, etc.

**Table 1-1:** Main characteristics of the design of the EUCP and the NP

Characteristic	EUCP 2011 <sup>20</sup>	NP 2011 <sup>21</sup>
Legal framework	Regulation (EU) No 915/2010	Article 30 of Regulation (EC) No 396/2005
Sampling strategy	Surveillance sampling; random choice of the samples	Surveillance or enforcement sampling, in line with the specific sampling design of each country
Number of food products tested	12 (mainly unprocessed, raw products)	Wide range of product types (unprocessed and processed products); in total 635 distinct food products
Number of pesticides analysed	179, some to be analysed only in food of plant or animal origin	Range per Member State: 61 - 844, in total 888 distinct pesticides
Number of samples taken	15 <sup>(*)</sup> -93 samples of each of the 12 food products in focus, depending on the size of the reporting country	Defined in the national sampling strategies
Origin of samples	Samples should reflect the food available for consumption	Defined at national level
Organic food	At least one organic sample per food product per country	Defined at national level (0.7 to 15.1 % of the samples)

(\*): For pesticides which require single residue analytical methods the minimum number of samples to be analysed was defined as 12 samples.

In **Section 4** the results of the **dietary exposure** assessments are reported. The calculations are mainly based on the results of the EU-coordinated multiannual control programme. The dietary exposure and the risk assessment have been carried out considering the 179 pesticides covered by the EUCP separately. In addition, a short-term exposure assessment was performed for a group of pesticides which belong to one cumulative assessment group and which were found in pear samples. In **Appendix V**, the results of the dietary exposure assessment are presented.

The recommendations derived on the basis of the findings of this report are summarised at the end of the report in the **Recommendations** section.

Readers not familiar with the terminology and the scientific concepts of pesticide risk assessment are invited to read the **Glossary**, which can be found at the end of this report. However, three important terms ('pesticide MRL', 'residue definition' and 'MRL exceedance') used throughout the whole report should be briefly explained in this introduction because they are key for interpretation of the findings described in the following sections.

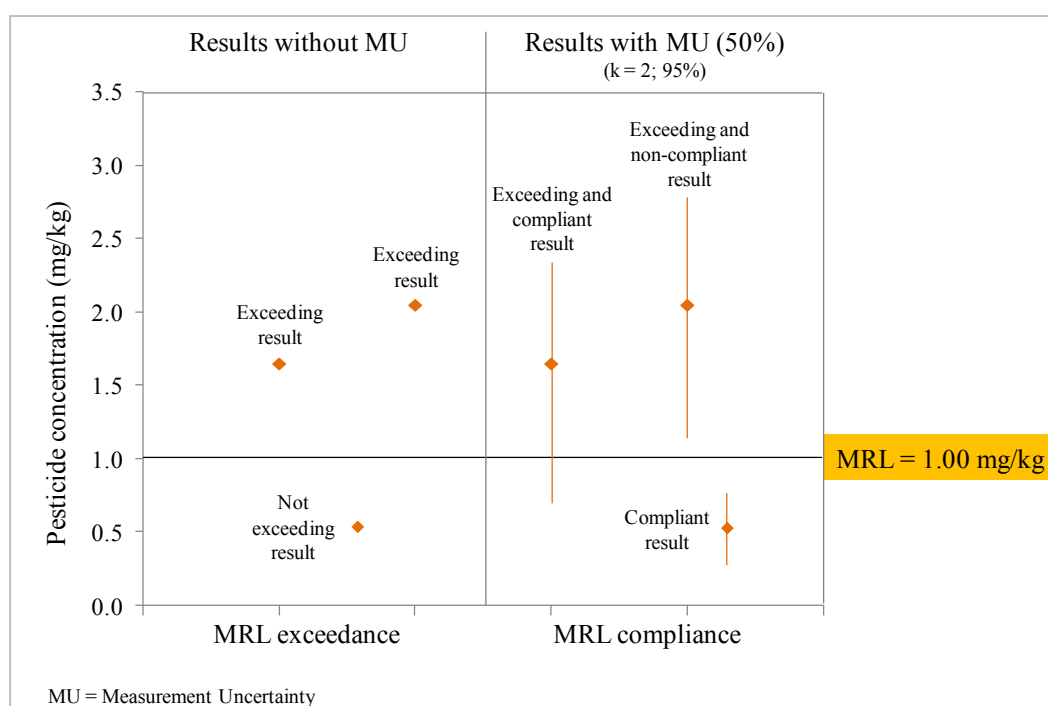
The term '**pesticide MRL**' refers to the upper concentration level of a pesticide residue in or on food or feed legally permitted by the European legislation. Active substances applied on a crop are not stable but depending on the stability of the substance may undergo to a certain extent a degradation/metabolism process. Consequently the substances applied, as well as their degradation products or metabolites, can be found on harvested crops. In case during the detailed assessment of the pesticide during the approval process the metabolites/degradation products were found to be relevant in terms of their concentration in food and/or because of their toxicological properties, they are taken into account for the setting of the legal limits. For this reason the concept of the legal '**residue definition**' was introduced. The residue definition specifies the chemical substances that are to be

<sup>20</sup> See Appendix III for more details on the food products and pesticides covered by the 2011 EUCP.

<sup>21</sup> See Appendix IV for more details on the food products and pesticides covered by the 2011 NP.

analysed and quantified in food samples, including the parent compound and where relevant the metabolites/degradation products. In the framework of this report, the results of the control activities are reported in line with legal residue definitions, unless it is explicitly mentioned that results not fully compliant with the residue definition were also considered in the data analysis.

In the context of this report, the term ‘**MRL exceedance**’ refers to the pesticide residue concentration, quantified in line with the legal residue definition that numerically exceeds the MRL, without taking into account the analytical measurement uncertainty (MU). Thus, this term should not be understood as MRL non-compliance, which would trigger legal consequences (e.g. administrative sanctions, fines, etc.). A pesticide residue concentration numerically exceeding the MRL may be considered by the national competent authorities as compliant with the European MRL, when the analytical measurement uncertainty is taken into consideration. As a consequence, the number/percentage of samples reported in the framework of this report as exceeding the MRL might be higher than the results reported by the Member States in their national reports as non-compliant. The different scenarios concerning the comparison of the residue concentration against the MRL, which might lead to different ‘interpretation’ in the EFSA report and the national reports, are illustrated in Figure 1-1.



**Figure 1-1:** Impact of measurement uncertainty on the interpretation of results with regard to MRL exceedance or MRL compliance

This report also covers the results submitted by the two EFTA countries, Iceland and Norway, who have according to Decision of the EEA Joint Committee No 127/2009<sup>22</sup> the same obligations as regards control of pesticide residues in food as EU Member States.

<sup>22</sup> Decision of the EEA Joint Committee No 127/2009 of 4 December 2009 amending Annex II (Technical regulations, standards, testing and certification) to the EEA Agreement. OJ L 62, 11.3.2010, p. 14–15.

## 2. EU-coordinated control programme

### 2.1. Design of the EU-coordinated control programme

The 12 food products<sup>23</sup> to be analysed in the framework of the 2011 EU-coordinated programme (EUCP) are listed in Table 2-1. The same table also reports the additional food products, which are covered by the EU-coordinated programme in the 3-year cycle.

**Table 2-1:** Food products to be monitored in the EUCPs

2011/2014	2009/2012	2010/2013
Beans with pods	Aubergines	Apples
Carrots	Bananas	Head cabbage
Cucumbers	Cauliflower	Leek
Oranges or mandarins	Table grapes	Lettuce
Pears	Orange juice	Peaches <sup>(b)</sup>
Potatoes	Peas without pods	Rye or oats
Rice	Peppers (sweet)	Strawberries
Spinach	Wheat	Tomatoes
Wheat flour <sup>(a)</sup>	Olive oil <sup>(a)</sup>	Wine from red or white grapes <sup>(a)</sup>
Liver <sup>(c)</sup>	Butter	Swine meat
Poultry meat	Chicken eggs	Cow's milk

(a): Processed products newly included

(b): Peaches including nectarines and similar hybrids

(c): Bovine and other ruminants, swine and poultry

According to the Regulation (EU) No 915/2010, a total of 179 pesticides (according to their residue definition<sup>24</sup>) had to be analysed - 162 thereof in food of plant origin (16 of them on a voluntary basis) and 33 in food of animal origin (3 of them on a voluntary basis). The regulation also defines some simplifications as regards the analysis of metabolites for some pesticides that cannot be analysed with routine enforcement methods. Appendix III (Table A)<sup>25</sup> of the current report provides the full list of pesticides covered by the 2011 EUCP.

In 2011 the reporting countries were asked to analyse on a voluntary basis triazole acetic acid, triazole lactic acid and triazole alanine. These compounds are also known as Triazole Derivative Metabolites (TDM). They are common metabolites of pesticides belonging to the triazole class. Since reporting countries did not provide any results for the TDM, they are not further discussed in this report.

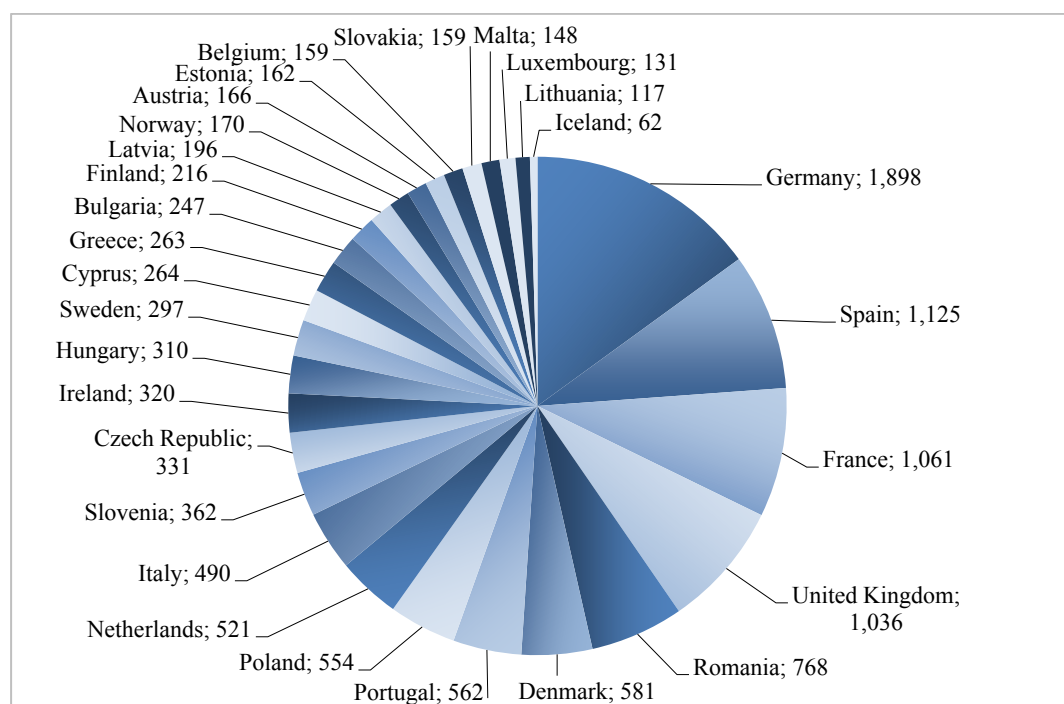
For other pesticides where the analysis was to be carried out on a voluntary basis, no results were reported or the number of results reported was comparatively low (e.g. amitrole, dinocap, nitenpyram and resmethrin) and therefore the statistical validity and significance of the findings is affected by a high uncertainty. EFSA would therefore recommend reconsidering the concept of including pesticides in the monitoring programme where analysis is not mandatory.

In total, 12,676 samples were analysed in the framework of the 2011 EUCP by the 29 reporting countries. The breakdown of the number of samples taken by each country is reported in Figure 2-1.

<sup>23</sup> See 'Food products' in the Glossary.

<sup>24</sup> See 'Residue definition' in the Glossary.

<sup>25</sup> Pesticides for which complex residue definitions have been established in the EU legislation (e.g. residue definitions that comprise the parent compound and metabolites/degradation products/different isomers or that refer to a common moiety) are reported with the pesticide names followed by the suffix '(RD)'. In Table A of Appendix III the full legal residue definition can be found.



**Figure 2-1:** Number of samples taken by reporting country under the EUCP

The 2011 EUCP requested the sampling and the analysis of cereal-based baby food. In total, results for 418 baby food samples were submitted by the reporting countries. As the 2011 EUCP did not clearly specify which pesticides had to be analysed in this product type, the number of pesticides sought in these samples differed significantly between Member States. Thus, the findings of these results are not directly comparable. The results for baby food samples are therefore not reported in this section of the report, but in Section 3.3.1 under the national programme results. In order to improve the comparability of the results for baby food, EFSA recommends giving clear guidance to reporting countries on the scope of pesticides to be analysed in baby food in the framework of the future EUCP.

In 2011 Member States had to take at least one organic sample of the 12 products covered by the EUCP, respectively. In total, 540 samples of organic products were reported in the framework of the EUCP. Since the number of samples was not sufficient to perform reliable statistical analysis, EFSA decided to present the results for the organic food in Section 3.3.2 of this report, where the results for all types of organic products were pooled and reported.

The minimum number of samples per product and per Member State specified in Commission Regulation (EU) No 915/2010 ranged from 15 to 93 (see Table 2-2). In this table also the actual number of samples per product taken by each Member State can be found. In general, most Member States fulfilled or even exceeded the sampling plan. However, the total minimum number of samples per food item requested by the 2011 EUCP (642 samples among all the EU Member States) was not reached for wheat flour. For food of animal origin (liver and poultry meat) and for wheat flour, it was noted that several Member States did not take the requested number of samples<sup>26</sup>. EFSA also noted that the number of samples for products where the sampling of alternative products was possible according to the EUCP (e.g. liver of bovine, other ruminants, swine or poultry), the number of samples for the individual products would not be sufficient to derive statistically meaningful conclusions.

<sup>26</sup> More detailed information on the results of control activities in the individual reporting countries is available from the respective national authorities. The list of web addresses where the results of monitoring plans have been published is reported in Appendix I. It should be noted that upon submission of the data, EFSA validated the data and recoded the names of the food and the pesticide names reported by the participating countries to make them comparable. In case of data inconsistencies, the reporting countries were asked for corrections. Therefore, small differences in the data published separately by the national authorities or in the “national summary reports” of Appendix II respectively and the data reported in the present report may occur.



EFSA would therefore recommend avoiding the possibility to take samples for alternative products, but to clearly define for which products samples should be taken.

**Table 2-2:** Number of samples requested and taken by reporting countries for each food item included in the EUCP

Country	Minimum number of samples requested per food product <sup>(a)</sup>	Actual number of samples taken												
		Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Wheat flour	Liver	Poultry meat	Total
Austria	12/15	14	16	15	3	13	16	15	15	17	15	15	12	166
Belgium	12/15	13	15	15	0	15	15	15	15	15	11	15	15	159
Bulgaria	12/15	27	21	18	20	18	26	22	15	16	22	25	17	247
Cyprus	12/15	27	27	27	9	18	29	27	28	27	15	15	15	264
Czech Republic, The	12/15	22	42	49	18	23	34	55	36	25	4	15	8	331
Denmark	12/15	44	59	63	59	58	56	59	37	45	61	15	25	581
Estonia	12/15	13	15	15	7	8	15	15	16	13	15	15	15	162
Finland	12/15	9	18	22	23	29	23	21	17	9	5	20	20	216
France	66	61	108	101	67	112	110	127	125	78	113	59	0	1,061
Germany	93	183	209	197	0	358	216	200	125	206	-( <sup>b</sup> )	100	104	1,898
Greece	12/15	17	21	52	3	26	24	31	23	22	15	15	14	263
Hungary	12/15	10	23	14	14	31	21	19	33	14	0	50	81	310
Iceland	12/15	0	13	11	0	15	9	14	0	0	0	0	0	62
Ireland	12/15	15	19	16	65	39	36	50	15	13	22	15	15	320
Italy	65	15	55	42	41	84	64	62	70	25	15	8	9	490
Latvia	12/15	2	20	21	4	16	21	20	21	20	23	13	15	196
Lithuania	12/15	13	15	14	5	8	15	17	16	14	0	0	0	117
Luxembourg	12/15	16	15	17	4	11	15	16	10	8	4	15	0	131
Malta	12/15	15	15	14	1	14	15	15	0	15	15	14	15	148
Netherlands, The	17	48	59	65	61	73	35	34	46	44	13	31	12	521
Norway	12/15	15	15	15	11	4	15	15	15	20	15	15	15	170
Poland	45	52	50	60	16	30	90	59	41	49	10	50	47	554
Portugal	12/15	62	68	56	16	48	67	66	64	53	62	0	0	562
Romania	17	37	66	92	41	99	80	167	50	59	12	5	60	768
Slovakia	12/15	16	15	14	7	10	15	15	15	15	14	15	8	159
Slovenia	12/15	30	40	43	30	30	59	66	3	15	16	16	14	362
Spain	45	90	65	78	200	249	99	93	75	83	22	34	37	1,125
Sweden	12/15	24	20	18	24	20	26	19	62	20	14	20	30	297
United Kingdom, The	66	97	96	96	107	2	118	106	72	54	72	108	108	1,036
Total		987	1,220	1,260	856	1,461	1,364	1,440	1,060	994	605	718	711	12,676

(a): According to Regulation (EU) No 915/2010, the minimum number of samples to be taken was based on the analytical method to be applied.

(b): According to the requirements set out in Regulation (EU) No 915/2010, in 2011 Germany analysed samples of wheat flour; however, due to a coding issue the results of the analysis of these samples have been dealt with the results provided in Section 3 of the 2011 EU Annual Report, which refers to the results of the national control activities.

## 2.2. Results by food product

In this section more detailed information on the results concerning the 12 food products covered by the 2011 EU-coordinated programme is reported. For each of them, the following analyses are presented:

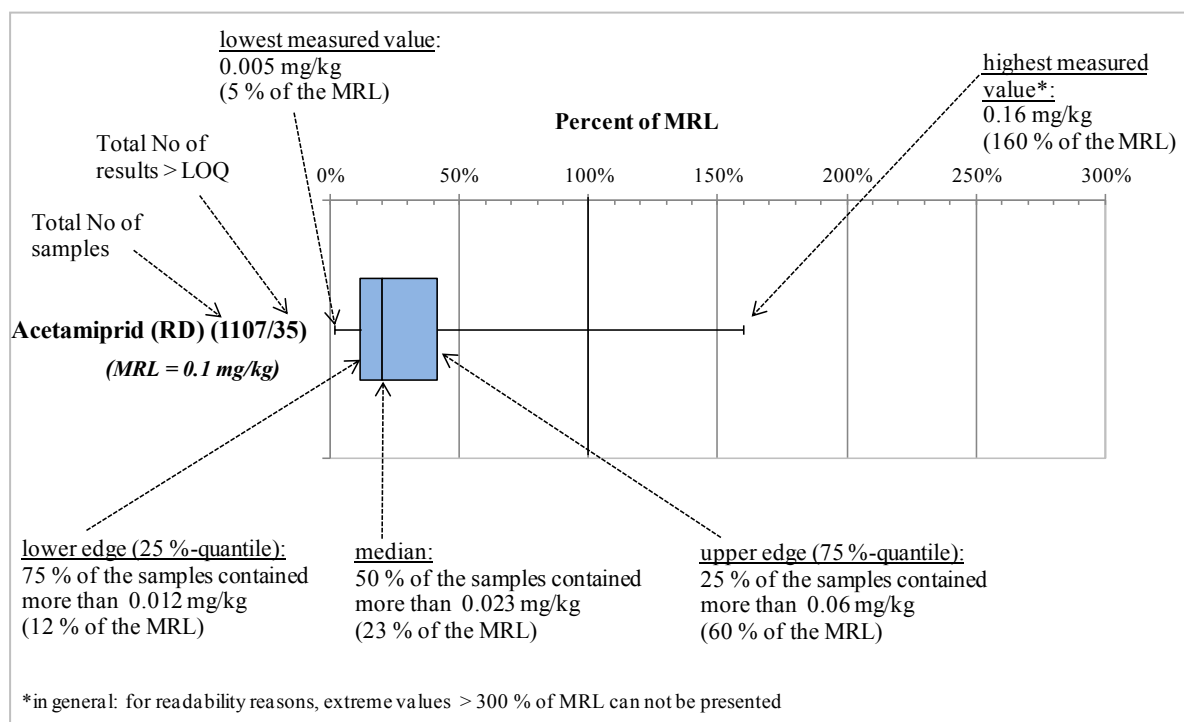
- A chart listing the pesticides found, sorted according to the frequency of detection<sup>27</sup> (upper x-axis scale). In the same chart, the percentages of samples with residues exceeding the MRLs (lower x-axis scale) are included. The total number of valid results<sup>28</sup> for each pesticide is reported in brackets next to the pesticide name. In the context of this section, the results exceeding the MRL always refer to the numerical exceedances of the regulated MRLs, not taking into account measurement uncertainties (see Figure 1-1).
- A table with background information on the pesticides most frequently found in the food products concerned (except for liver samples, only the pesticides found in at least 10 % of the samples are reported).
- A figure presenting the distribution of the measured residue levels, expressed in percent of the MRL applicable for the specific pesticide/crop combination<sup>29</sup>. Samples where the pesticide concerned was not found (result below the limit of quantification) were not taken into account in this chart. In brackets next to the name of the pesticide, the number of samples analysed for the pertinent pesticide and the number of samples containing measurable concentrations of the pesticide are reported. The distributions of the results are depicted as box plots (only for those pesticide/crop combinations for which residues were detected in at least five samples). The following information is presented:
  - the right whisker (line with margin) represents the highest measured residue value (expressed as % of the MRL);
  - the left whisker represents the lowest residue concentration greater than the limit of quantification (expressed as % of the MRL);
  - the median (vertical line within the box) corresponds to the residue concentration (expressed as % of the MRL) exceeded by 50 % of the samples containing measurable residues;
  - the left edge of the box (25 %-quantile) denotes the residue concentration (expressed as % of the MRL) exceeded in 75 % of the samples;
  - the 75 %-quantile (upper edge of the box) represents the residue concentration (expressed as % of the MRL) exceeded in 25 % of the samples.

<sup>27</sup> It should be noted that not all samples were analysed for all pesticides included in the EUCP. Thus, the numbers reported in brackets in the charts vary to a certain extent.

<sup>28</sup> The results that were not compliant with the residue definition were not included in the analysis.

<sup>29</sup> In case the MRL for a given pesticide/food combination changed during the monitoring year, EFSA compared the numerical value of the pesticide residue measured in the sample with the MRL applicable on 01/01/2011.

An example of a box plot is presented in Figure 2-2.



**Figure 2-2:** Residue concentrations measured, expressed in percent of the MRL (only samples with residues > LOQ)

### 2.2.1. Beans with pods

In 2011, 987 samples of beans were analysed; in 532 samples (53.9 %) no residues were detected, while 455 samples (46.1 %) contained residues in measurable concentrations. In 4.1 % of the samples (40 samples), the MRL was exceeded. In total, 64 different pesticides were detected; the MRL exceedances were related to 22 pesticides. The most frequently found pesticides were bromide ion (detected in 47.5 % of the tested samples), boscalid (RD) (11.1 %) and iprodione (10.9 %). In Figure 2-3 all pesticides found in beans are listed and ranked according to the frequency of the detection. Background information on the most frequently detected pesticides can be found in Table 2-3.

The most frequent MRL exceedances (in %) were recorded for acetamiprid (RD), methomyl (RD) and dimethoate (RD). Samples exceeding the MRL of acetamiprid (RD) were reported for samples originating mainly from Cyprus (6 samples); MRL exceedances for methomyl (RD) were reported for samples originating mainly from Morocco (3), while for dimethoate (RD) the reported exceedance of the MRL concerned samples from Egypt (1), Ireland (1) and Kenya (1). In Appendix III (Table E) the full list of samples exceeding the MRLs can be found, including information on the measured residue concentration and the origin of the sample.

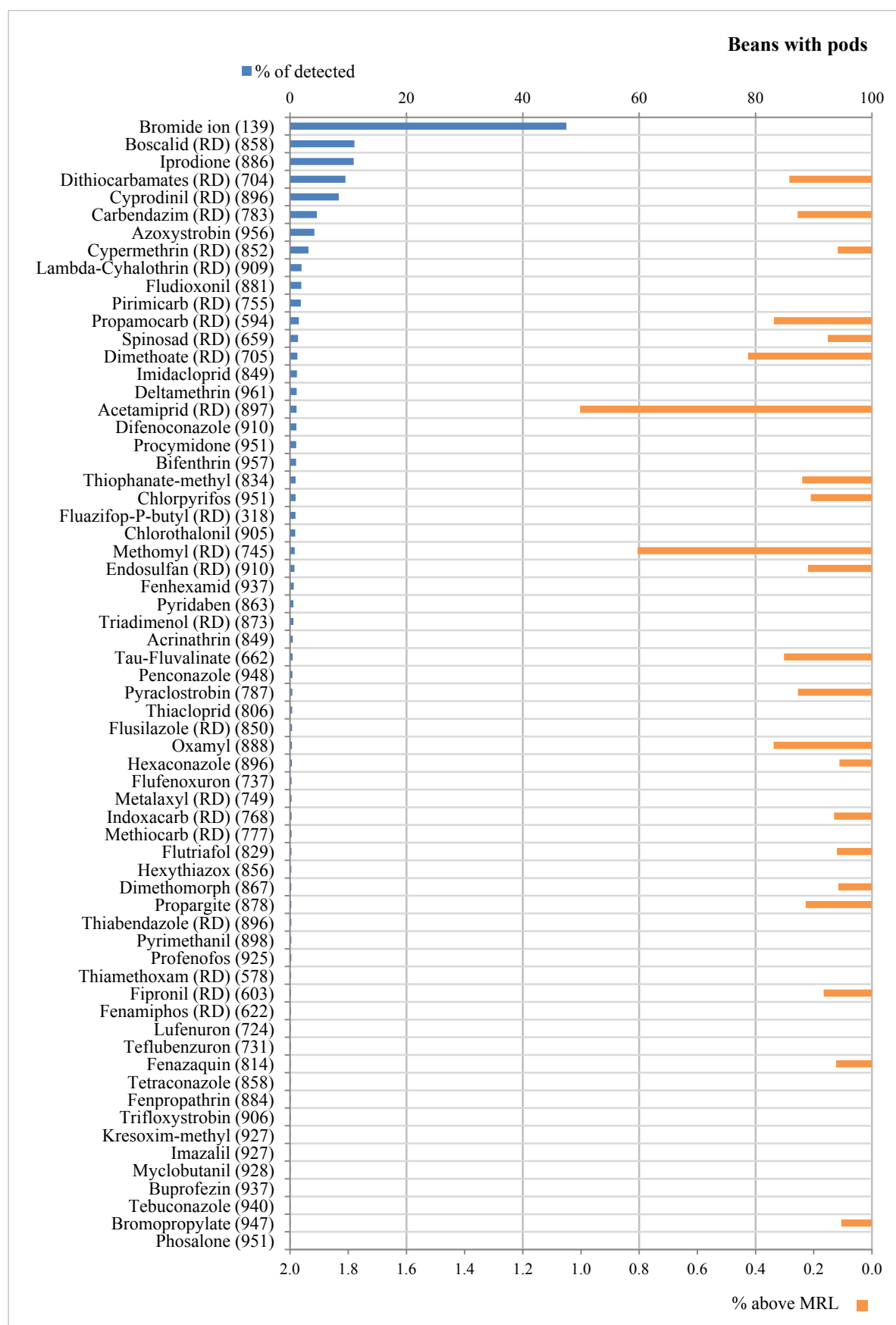
In Figure 2-4 the distribution of the residue concentrations expressed in percent of the MRL, is depicted for the pesticides found in at least five samples. The samples with non-detectable residues are not included in this presentation. For acetamiprid (RD)<sup>30</sup> and methomyl (RD)<sup>31</sup> the median residue levels and the 75 % quantiles were greater than 300 % of the MRL; individual MRL exceedances (less than five samples) were reported for bromopropylate (one sample, 130 % of the MRL), dimethomorph (one sample, 130 %), fenazaquin (one sample, 270 %), fipronil (RD) (one sample, 180 %), flutriafol (one sample, 194 %), hexaconazole (one sample, 285 %), indoxacarb (RD) (one sample, 750 %), oxamyl (three samples 1,100 %, 1,090 % and 300 % of the MRL, respectively), propargite (two samples, 3,400 % and 310 % of the MRL), pyraclostrobin (two samples, 1,100 % and 450 %) and tau-fluvalinate (two samples, 130 % and 110 %).

**Table 2-3:** Pesticides most frequently detected in beans with pods

Food product	Pesticide	% samples above LOQ	Background information on the pesticides found
Beans with pods	Bromide ion	47.5	Naturally occurring substance and metabolite of the pesticide methyl bromide. Since 2009 methyl bromide is no longer approved at the EU level.
	Boscalid (RD)	11.1	Systemic fungicide used to control plant diseases in a wide range of crops.
	Iprodione	10.9	Contact fungicide used to control plant diseases in a wide range of fruit and other crops.

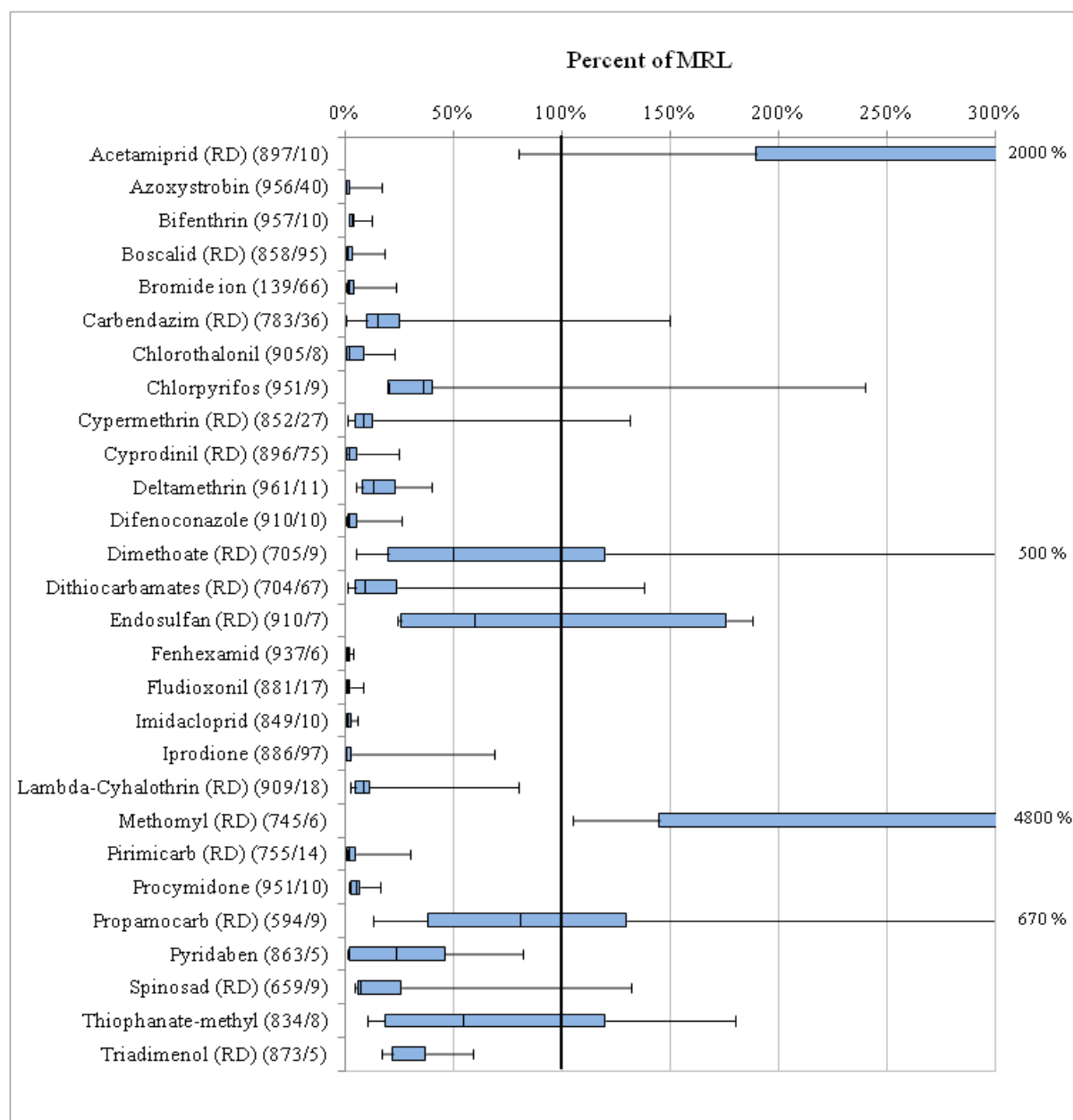
<sup>30</sup> MRL for acetamiprid in beans (with pods) in place on 01/01/2011 was 0.01 mg/kg, corresponding to the LOQ. The MRL was raised to 0.06 mg/kg in October 2011 and to 0.15 mg/kg in June 2013.

<sup>31</sup> The MRL for methomyl in beans (with pods) is set at the LOQ of 0.02 mg/kg. This value has not been amended in 2011.



**Figure 2-3:** Percentage of bean samples with detectable residues and residues above the MRL





**Figure 2-4:** Residue concentrations measured in beans (with pods), expressed in percent of the MRL (only samples with residues > LOQ)

### 2.2.2. Carrots

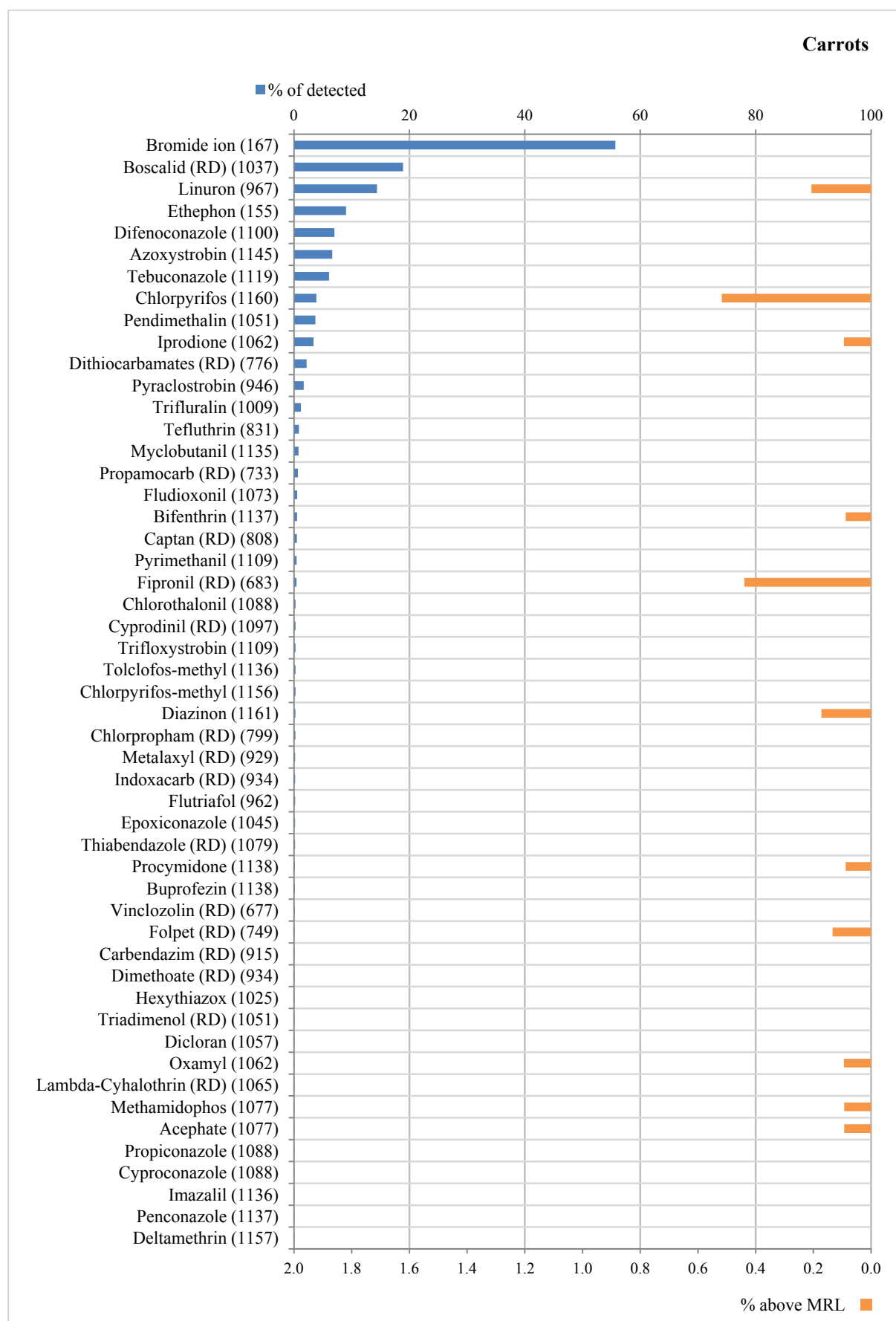
In 2011, 1,220 samples of carrots were analysed; in 699 samples (57.3 %) no pesticide residues were detected, while 521 samples (42.7 %) contained residues in measurable concentrations. In 1.6 % of the samples (19 samples), the MRL was exceeded. In total 51 different pesticides were detected; the MRL exceedances were related to 11 pesticides. The most frequently found pesticides were bromide ion (detected in 55.7 % of the tested samples), boscalid (RD) (18.9 %) and linuron (14.4 %). In Figure 2-5 all pesticides found in carrots are listed and ranked according to the frequency of detection. Background information on the most frequently detected pesticides can be found in Table 2-4.

The most frequent MRL exceedances (in %) were recorded for chlorpyrifos, fipronil (RD) and linuron. Samples exceeding the MRL of chlorpyrifos were reported for samples originating from Austria (1), Bulgaria (1), Spain (1), Greece (1), Portugal (1) and Slovakia (1). Samples exceeding the MRL of fipronil (RD) were reported for samples originating mainly from Spain (2) and Austria (1), and for linuron from France (2). In Appendix III (Table E) the full list of samples exceeding the MRLs can be found, including information on the measured residue concentrations and the origin of the samples.

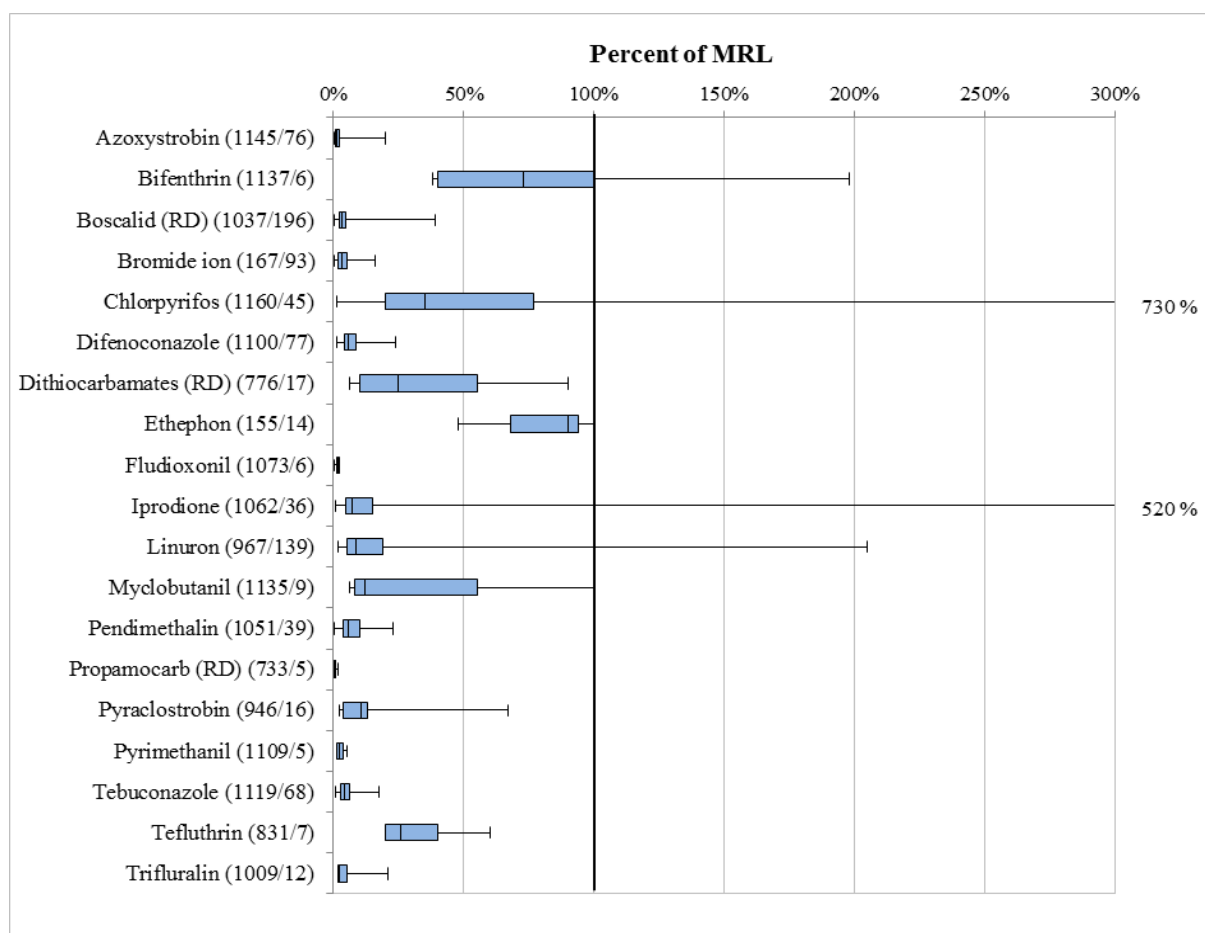
In Figure 2-6 the distribution of the residue concentrations, expressed in percent of the MRL, is depicted for the pesticides found in at least five samples. The samples with non-detectable residues are not included in this presentation. In addition to the pesticides presented in the box plot (Figure 2-6), individual MRL exceedances (less than five samples) were reported for acephate (one sample, 4,150 % of the MRL), folpet (RD) (one sample, 550 %), methamidophos (one sample, 640 %), oxamyl (one sample, 170 %), procymidone (one sample, 130 %), diazinon (two samples, 200 % and 180 %, respectively) and fipronil (RD) (three samples, 180 %, 180 % and 120 %, respectively).

**Table 2-4:** Pesticides most frequently detected in carrots

Food product	Pesticide	% samples above LOQ	Background information on the pesticides found
Carrots	Bromide ion	55.7	Naturally occurring substance and metabolite of the pesticide methyl bromide. Since 2009 methyl bromide is no longer approved at EU level.
	Boscalid (RD)	18.9	Systemic fungicide used to control plant diseases in a wide range of fruit and other crops.
	Linuron	14.4	Used as herbicide in different vegetables and other crops.



**Figure 2-5:** Percentage of carrot samples with detectable residues and residues above the MRL



**Figure 2-6:** Residue concentrations measured in carrots, expressed in percent of the MRL (only samples with residues > LOQ)

### 2.2.3. Cucumbers

In 2011, 1,260 samples of cucumbers were analysed, in 668 samples (53.0 %) no pesticide residues were detected, while 592 samples (47.0 %) contained residues in measurable concentrations. In 2.1 % of the samples (26 samples), the MRL was exceeded. In total 67 different pesticides were detected; the MRL exceedances were related to 15 pesticides. The most frequently found pesticides were bromide ion (detected in 39.0 % of the tested samples) and propamocarb (RD) (35.3 %). In Figure 2-7 all pesticides found in cucumbers are listed and ranked according to the frequency of the detection. Background information on the most frequently detected pesticides can be found in Table 2-5.

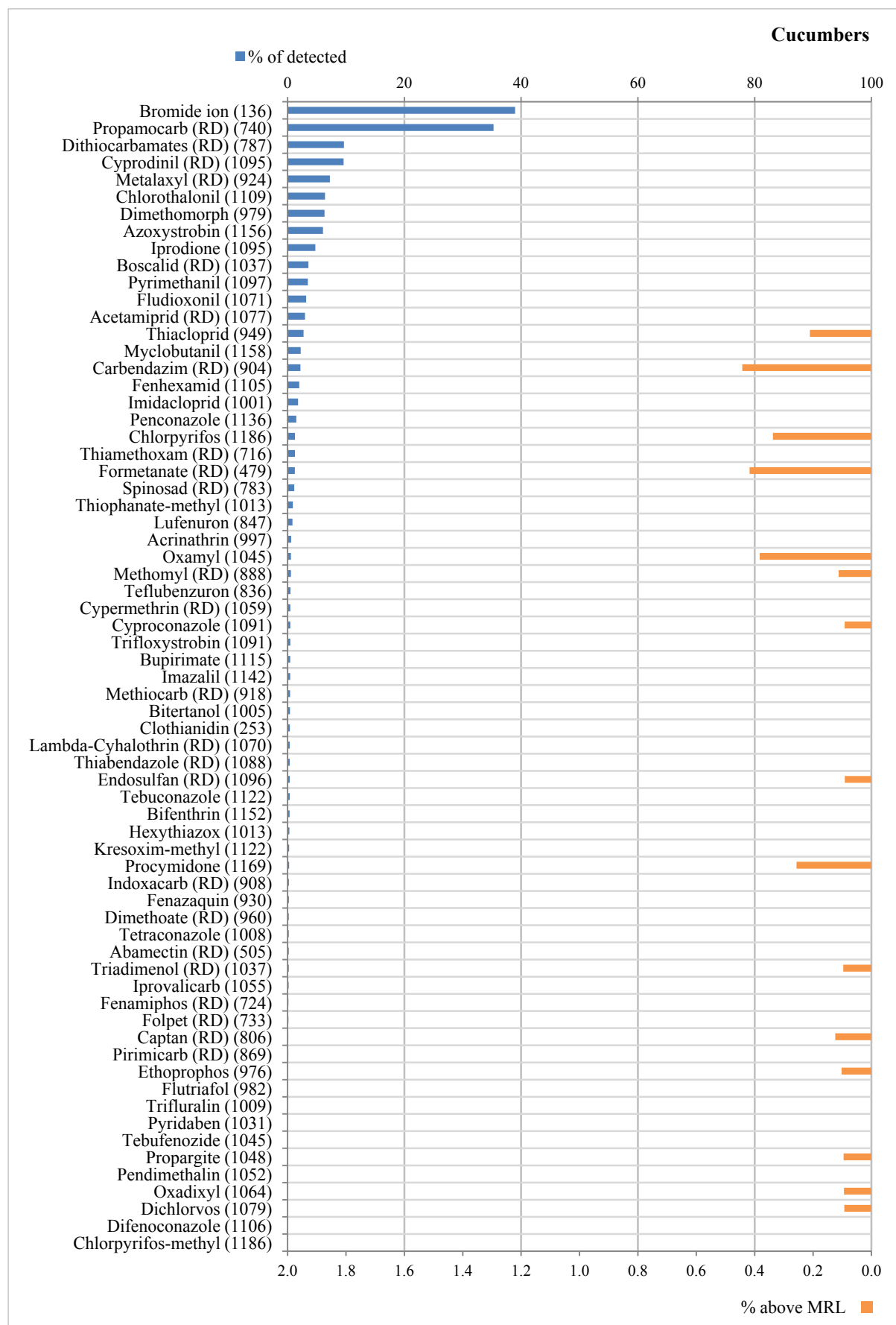
The most frequent MRL exceedances (in %) were recorded for: carbendazim (RD), formetanate (RD) and oxamyl. Samples exceeding the MRL of carbendazim (RD) were reported for samples originating mainly from Bulgaria (1), France (1), Lebanon (1) and Poland (1). 2 samples from Spain exceeded the MRL for formetanate (RD); MRL exceedances for oxamyl were reported for samples originating mainly from Bulgaria (1), Spain (1), Greece (1) and Lebanon (1). In Appendix III (Table E) the full list of samples exceeding the MRLs can be found, including information on the measured residue concentrations and the origin of the samples.

In Figure 2-8 the distribution of the residue concentrations expressed in percent of the MRL is depicted for the pesticides found in at least five samples. The samples with non-detectable residues are not included in this presentation. For oxamyl, the median residue levels and the 75 % quantiles were greater than 300 % of the MRL; therefore, these data points are not displayed in the figure. In addition to the pesticides presented in the box plot (Figure 2-8), individual MRL exceedances (less than five samples) were reported for captan (RD) (one sample, 410 % of the MRL), dichlorvos (one sample, 500 %), endosulfan (RD) (one sample, 1,320 %), ethoprophos (one sample, 110 %), oxadixyl (one sample, 270 %), propargite (one sample, 120 %), triadimenol (RD) (one sample, 155 %) and procymidone (three samples, 1,845 %, 365 % and 310 %, respectively).

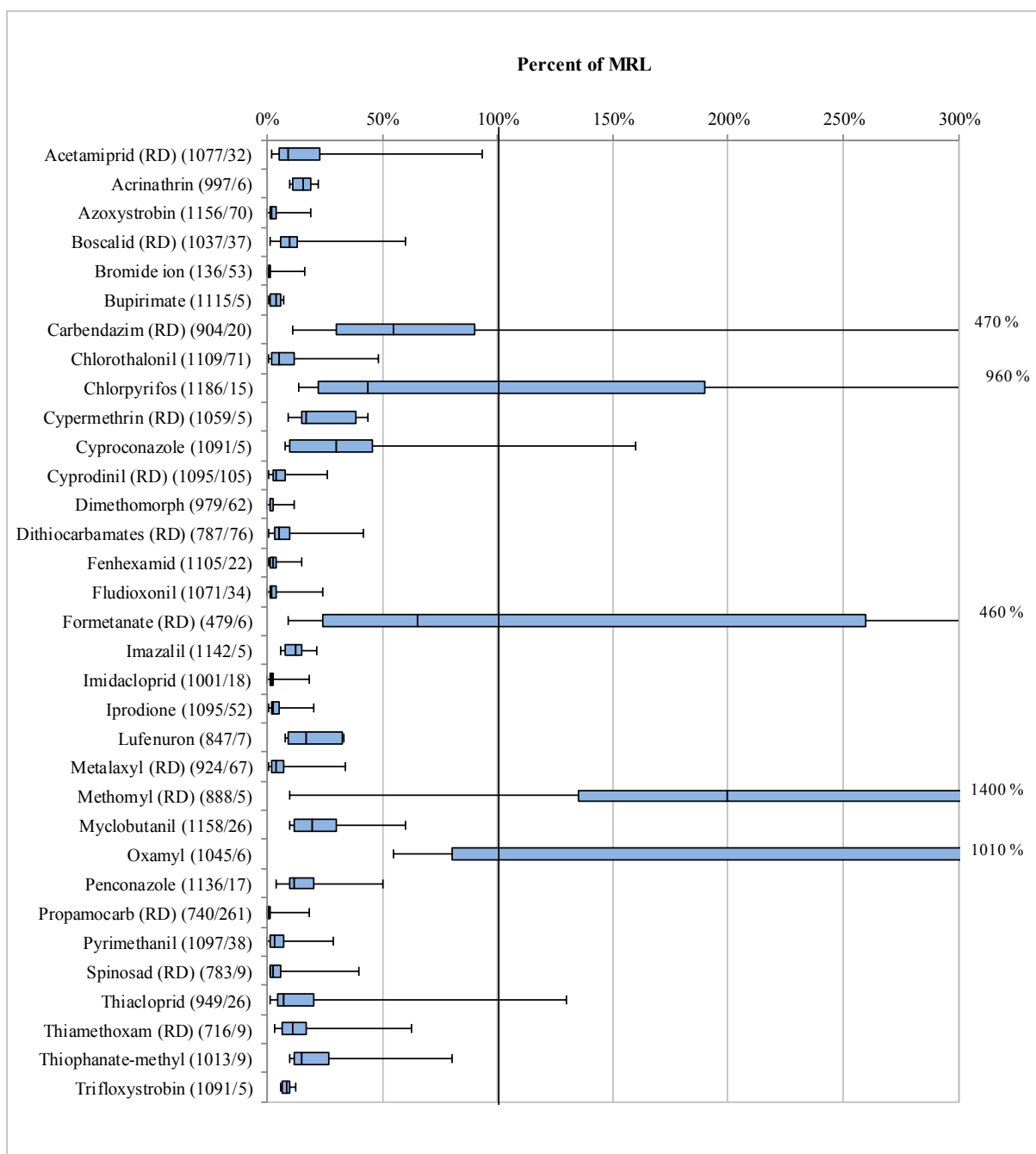
**Table 2-5:** Pesticides most frequently detected in cucumbers

Food product	Pesticide	% samples above LOQ	Background information on the pesticides found
Cucumbers	Bromide ion	39.0	Naturally occurring substance and metabolite of the pesticide methyl bromide. Since 2009, methyl bromide is no longer approved at EU level.
	Propamocarb (RD)	35.3	Systemic fungicide used to control diseases in a wide range of vegetables and other crops.





**Figure 2-7:** Percentage of cucumbers samples with detectable residues and residues above the MRL



**Figure 2-8:** Residue concentrations measured in cucumbers, expressed in percent of the MRL (only samples with residues > LOQ)

## 2.2.4. Mandarins

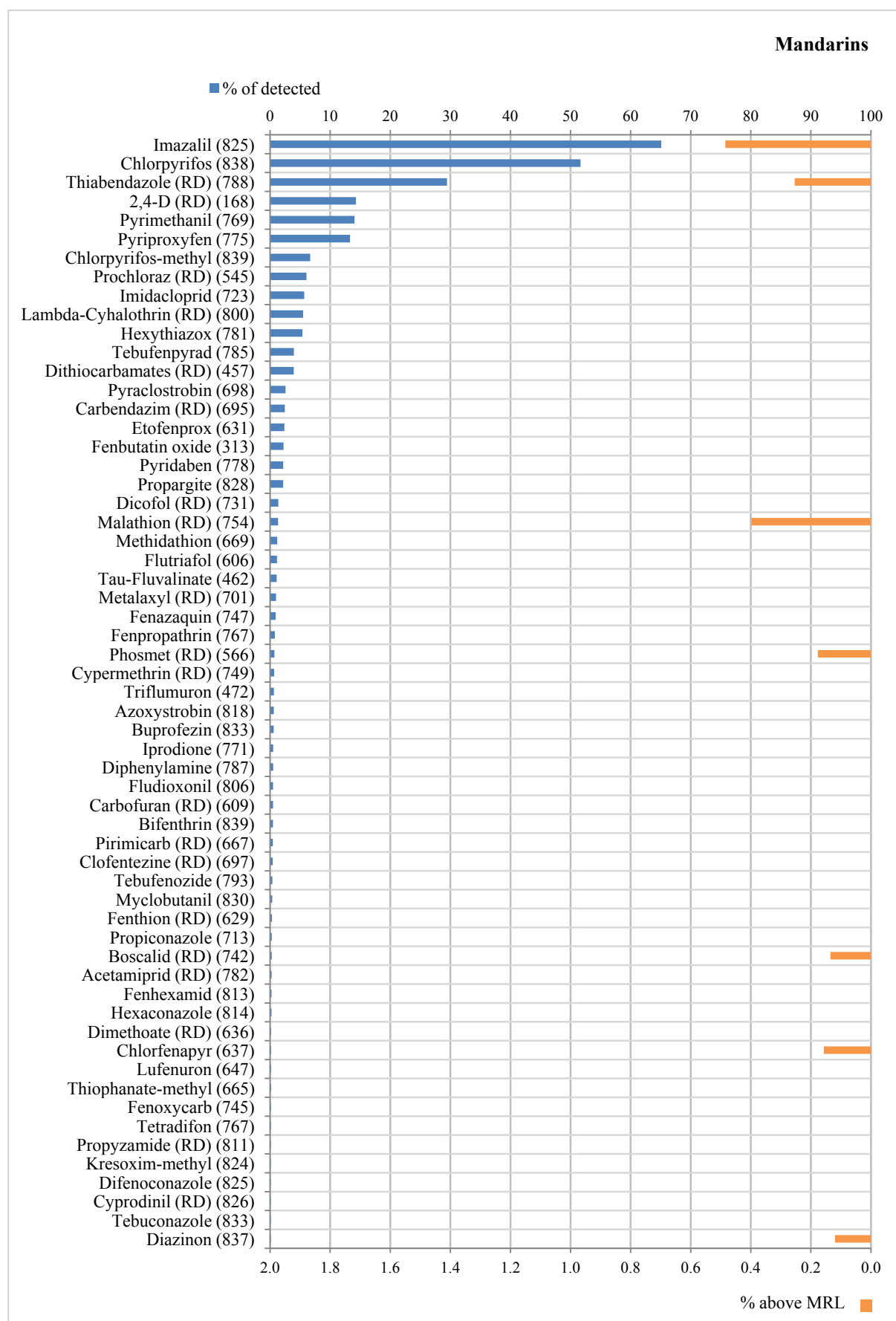
In 2011, 856 samples of mandarins were analysed; in 122 samples (14.3 %) no pesticide residues were detected, while 734 samples (85.7 %) contained residues in measurable concentrations. In 1.4 % of the samples (12 samples), the MRL was exceeded. In total, 59 different pesticides were detected; the MRL exceedances were related to seven pesticides. The most frequently found pesticides were imazalil (detected in 65.1 % of the tested samples), chlorpyrifos (51.7 %), thiabendazole (RD) (29.4 %), 2,4-D (RD) (14.3 %), pyrimethanil (14 %) and pyriproxyfen (13.3 %). In Figure 2-9 all pesticides found in mandarins are listed and ranked according to the frequency of the detection. Background information on the most frequently detected pesticides can be found in Table 2-6.

The most frequent MRL exceedances (in %) were recorded for imazalil, malathion (RD) and thiabendazole (RD). Samples exceeding the MRLs of imazalil originated from Spain (2), Israel (1) and South Africa (1); MRL exceedance for malathion (RD) were reported for samples originating from Spain (1), Morocco (1) and South Africa (1), while for thiabendazole (RD) samples from Argentina (1) and South Africa (1) exceeded the MRL. In Appendix III (Table E) the full list of samples exceeding the MRLs can be found, including information on the measured residue concentrations and the origin of the samples.

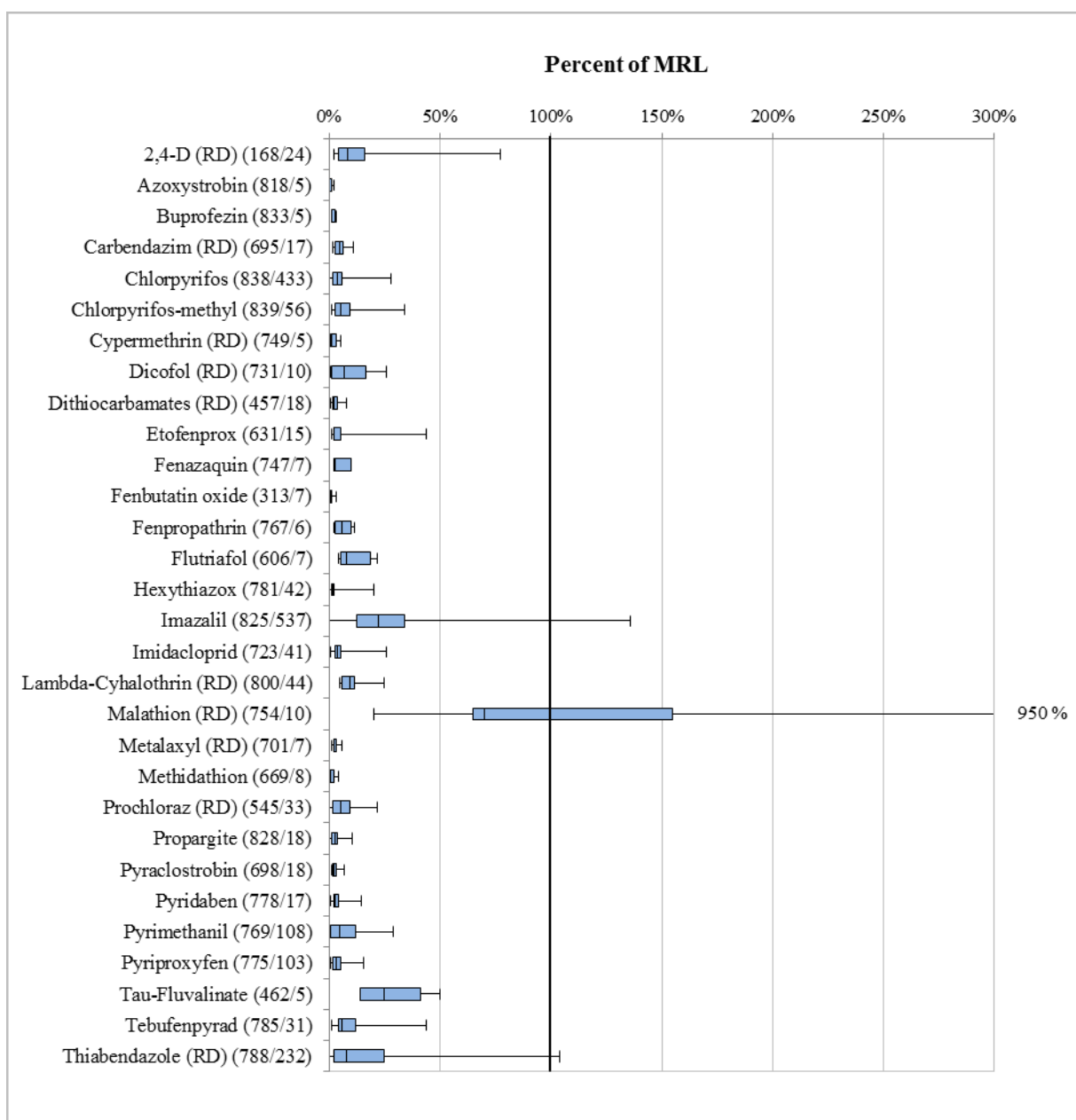
In Figure 2-10 the distribution of the residue concentrations expressed in percent of the MRL is depicted for the pesticides found in at least five samples. The samples with non-detectable residues are not included in this presentation. In addition to the pesticides presented in the box plot (Figure 2-10), individual MRL exceedances (less than five samples) were reported for boscalid (RD) (one sample, 200 % of the MRL), chlorfenapyr (one sample, 114 %), diazinon (one sample, 130 %) and phosmet (RD) (one sample, 135 %).

**Table 2-6:** Pesticides most frequently detected in mandarins

Food product	Pesticide	% samples above LOQ	Background information on the pesticides found
Mandarins	Imazalil	65.1	Systemic fungicide used to control a wide range of diseases in fruit and other crops. Used as post-harvest treatment.
	Chlorpyrifos	51.7	Non-systemic insecticide used to control different pests in soil or on foliage of fruit and other crops.
	Thiabendazole (RD)	29.4	Mainly used as post-harvest fungicide to control a wide range of different plant pathogens and storage diseases.
	2,4-D (RD)	14.3	Used as herbicide and plant growth regulator for different crops.
	Pyrimethanil	14.0	Fungicide used to control diseases in a wide range of fruit.
	Pyriproxyfen	13.3	Insect growth regulator used to control infestation with insect pests.



**Figure 2-9:** Percentage of mandarins samples with detectable residues and residues above the MRL



**Figure 2-10:** Residue concentrations measured in mandarins, expressed in percent of the MRL (only samples with residues > LOQ)

### 2.2.5. Oranges

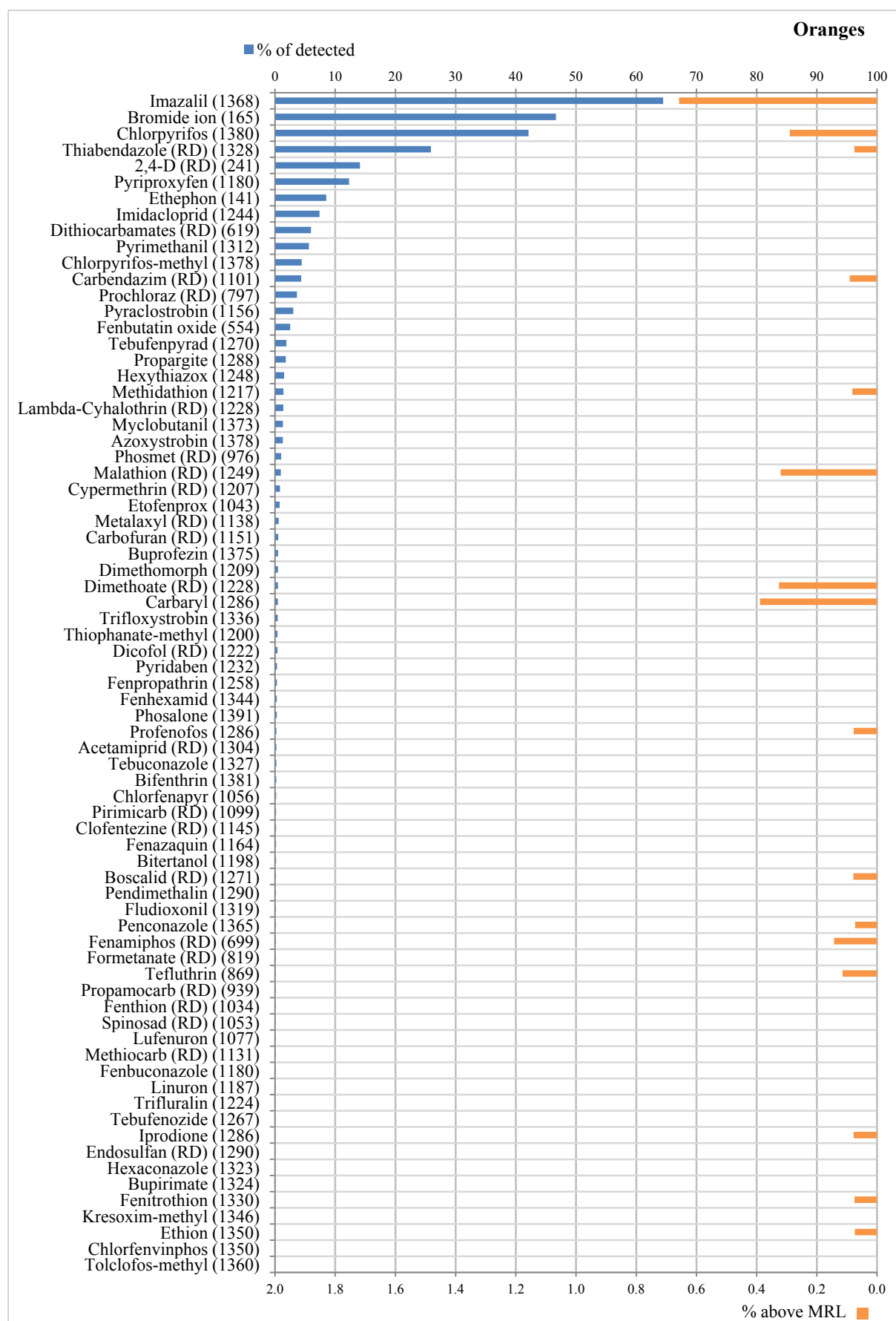
In 2011, 1,461 samples of oranges were analysed; in 288 samples (19.7 %) no pesticide residues were detected, while 1,173 samples (80.3 %) contained residues in measurable concentrations. In 2.5 % of the samples (36 samples) the MRL was exceeded. In total, 73 different pesticides were detected; the MRL exceedances were related to 16 pesticides. The most frequently found pesticides were imazalil (detected in 64.5 % of the tested samples), bromide ion (46.7 %), chlorpyrifos (42.1 %), thiabendazole (RD) (25.9 %), 2,4-D (RD) (14.1 %) and pyriproxyfen (12.3 %). In Figure 2-11 all pesticides found in oranges are listed and ranked according to the frequency of the detection. Background information on the most frequently detected pesticides can be found in Table 2-7.

The most frequent MRL exceedances (in %) were recorded for imazalil, carbaryl and dimethoate (RD). Samples exceeding the MRLs of imazalil were reported for samples originating mainly from Spain (3); MRL exceedances for carbaryl were reported for samples originating mainly from Dominican Republic (3), while for dimethoate (RD) samples exceeding the MRL were from Portugal (3) and Cyprus (1). In Appendix III (Table E) the full list of samples exceeding the MRLs can be found, including information on the measured residue concentrations and the origin of the samples.

In Figure 2-12 the distribution of the residue concentrations expressed in percent of the MRL is depicted for the pesticides found in at least five samples. The samples with non-detectable residues are not included in this presentation. In addition to the pesticides presented in the box plot (Figure 2-12), individual MRL exceedances (less than five samples) were reported for boscalid (RD) (one sample, 152 % of the MRL), ethion (one sample, 170 %), fenamiphos (RD) (one sample, 1,795 %), fenitrothion (one sample, 500 %), iprodione (one sample, 700 %), penconazole (one sample, 1,120 %), profenofos (one sample, 146 %) and tefluthrin (one sample, 130 %).

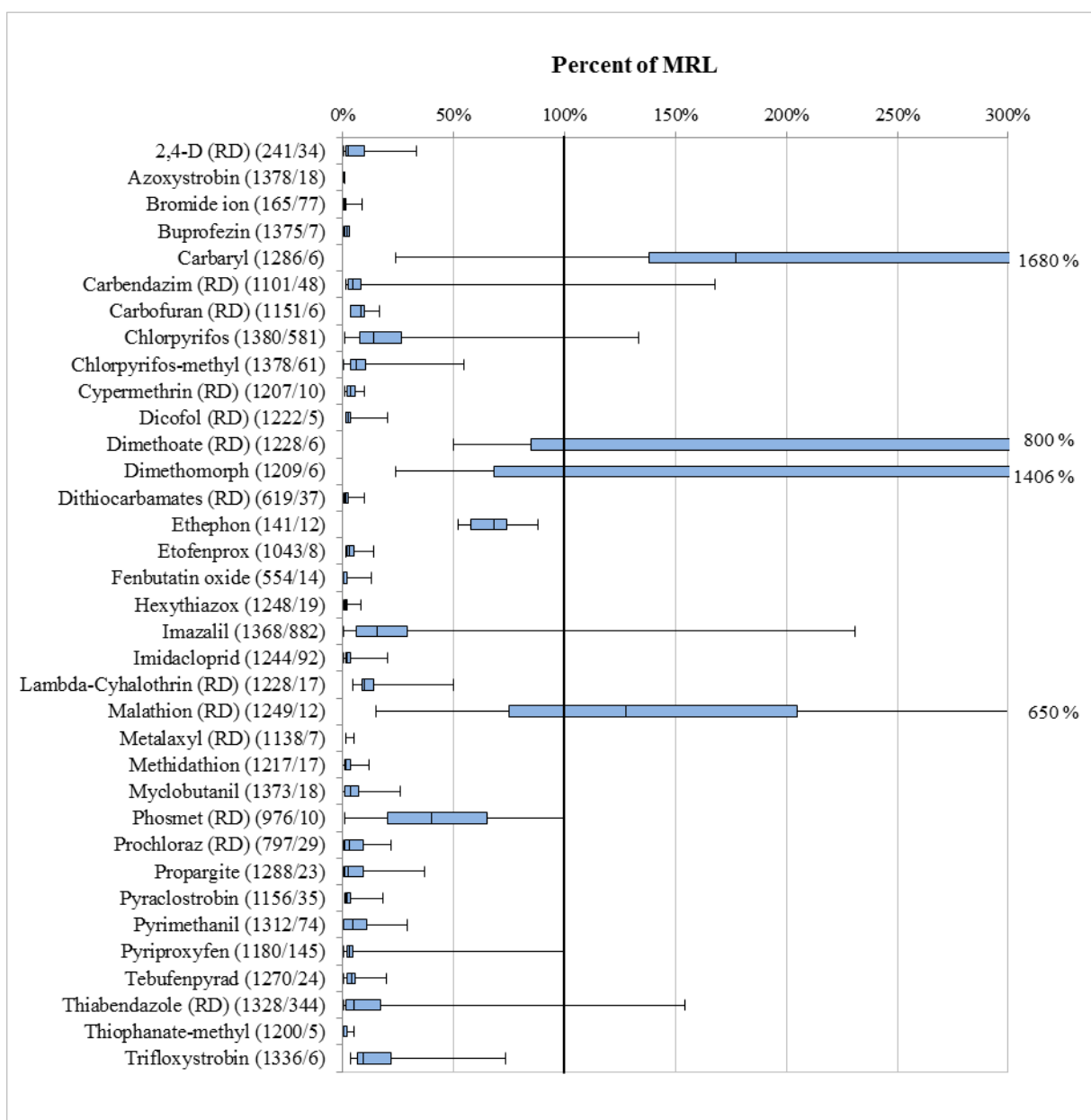
**Table 2-7:** Pesticides most frequently detected in oranges

Food product	Pesticide	% samples above LOQ	Background information on the pesticides found
Oranges	Imazalil	64.5	Systemic fungicide used to control a wide range of diseases in fruit and other crops. Used as post-harvest treatment.
	Bromide ion	46.7	Naturally occurring substance and metabolite of the pesticide methyl bromide. Since 2009 methyl bromide is no longer approved at EU level.
	Chlorpyrifos	42.1	Non-systemic insecticide used to control different pests in soil or on foliage of fruit and other crops.
	Thiabendazole (RD)	25.9	Mainly used as post-harvest fungicide to control a wide range of different plant pathogens and storage diseases.
	2,4-D (RD)	14.1	Used as herbicide and plant growth regulator for different crops.
	Pyriproxyfen	12.3	Insect growth regulator used to control infestation with insect pests.



**Figure 2-11:** Percentage of orange samples with detectable residues and residues above the MRL





**Figure 2-12:** Residue concentrations measured in oranges, expressed in percent of the MRL (only samples with residues > LOQ)

### 2.2.6. Pears

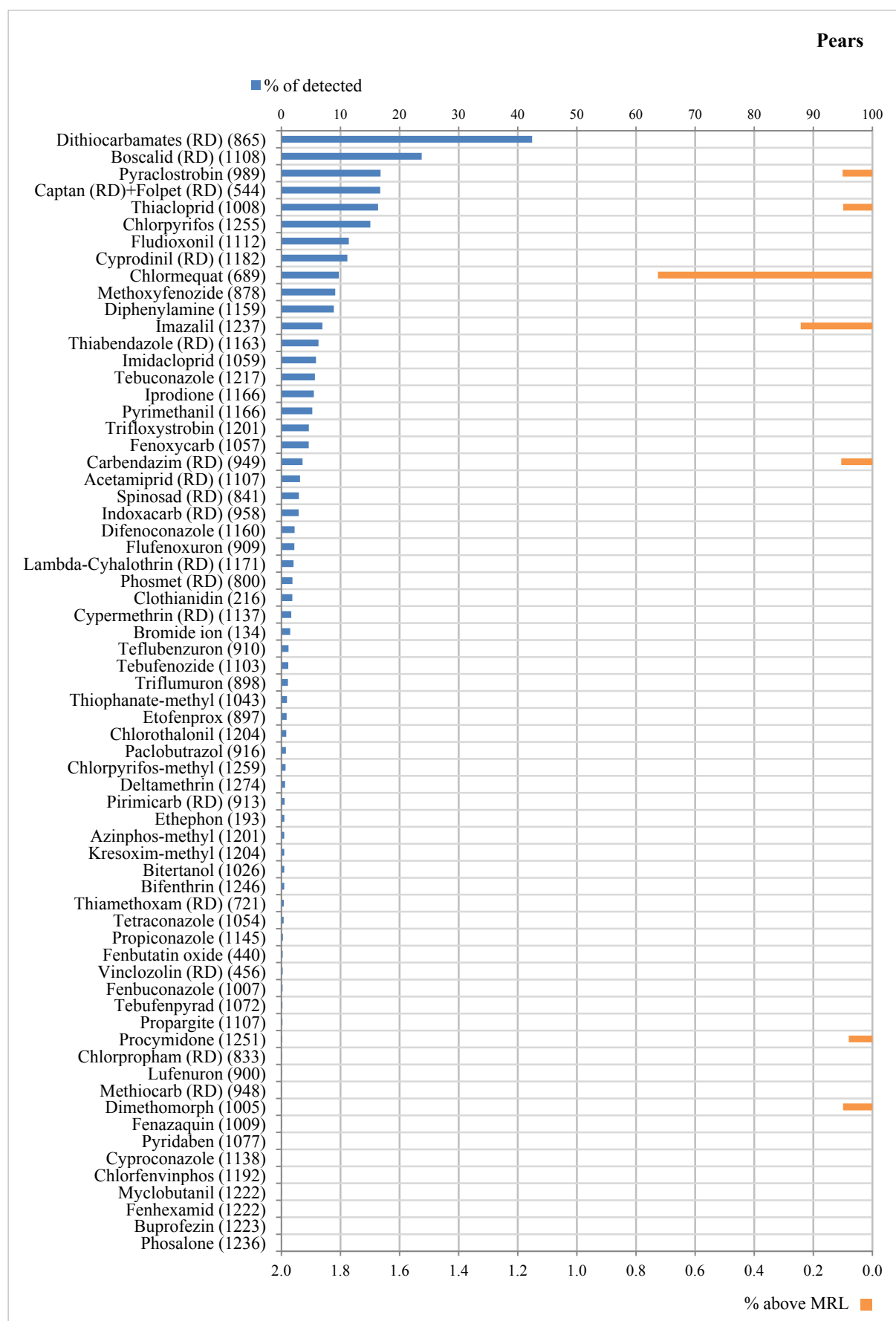
In 2011, 1,364 samples of pears were analysed; in 398 samples (29.2 %) no pesticide residues were detected, while 966 samples (70.8 %) contained residues in measurable concentrations. In 1.1 % of the samples (15 samples) the MRL was exceeded. In total, 66 different pesticides were detected; the MRL exceedances were related to seven pesticides. The most frequently found pesticides were dithiocarbamates (RD) (detected in 42.4 % of the tested samples), boscalid (RD) (23.7 %), pyraclostrobin (16.8 %), captan (RD) + folpet (RD) (16.7 %), thiacloprid (16.4 %), chlorpyrifos (15.1 %), fludioxonil (11.4 %) and cyprodinil (RD) (11.2 %). In Figure 2-13 all pesticides found in pears are listed and ranked according to the frequency of the detection. Background information on the most frequently detected pesticides can be found in Table 2-8.

The most frequently MRL exceedances (in %) were recorded for chlormequat, imazalil and carbendazim (RD). Samples exceeding the MRLs of chlormequat originated from Spain (4) and the Netherlands (1); MRL exceedances for imazalil were reported for samples originating mainly from Spain (3), while carbendazim (RD) exceedances were related to samples originating from South Africa (1). In Appendix III (Table E) the full list of samples exceeding the MRLs can be found, including information on the measured residue concentrations and the origin of the samples.

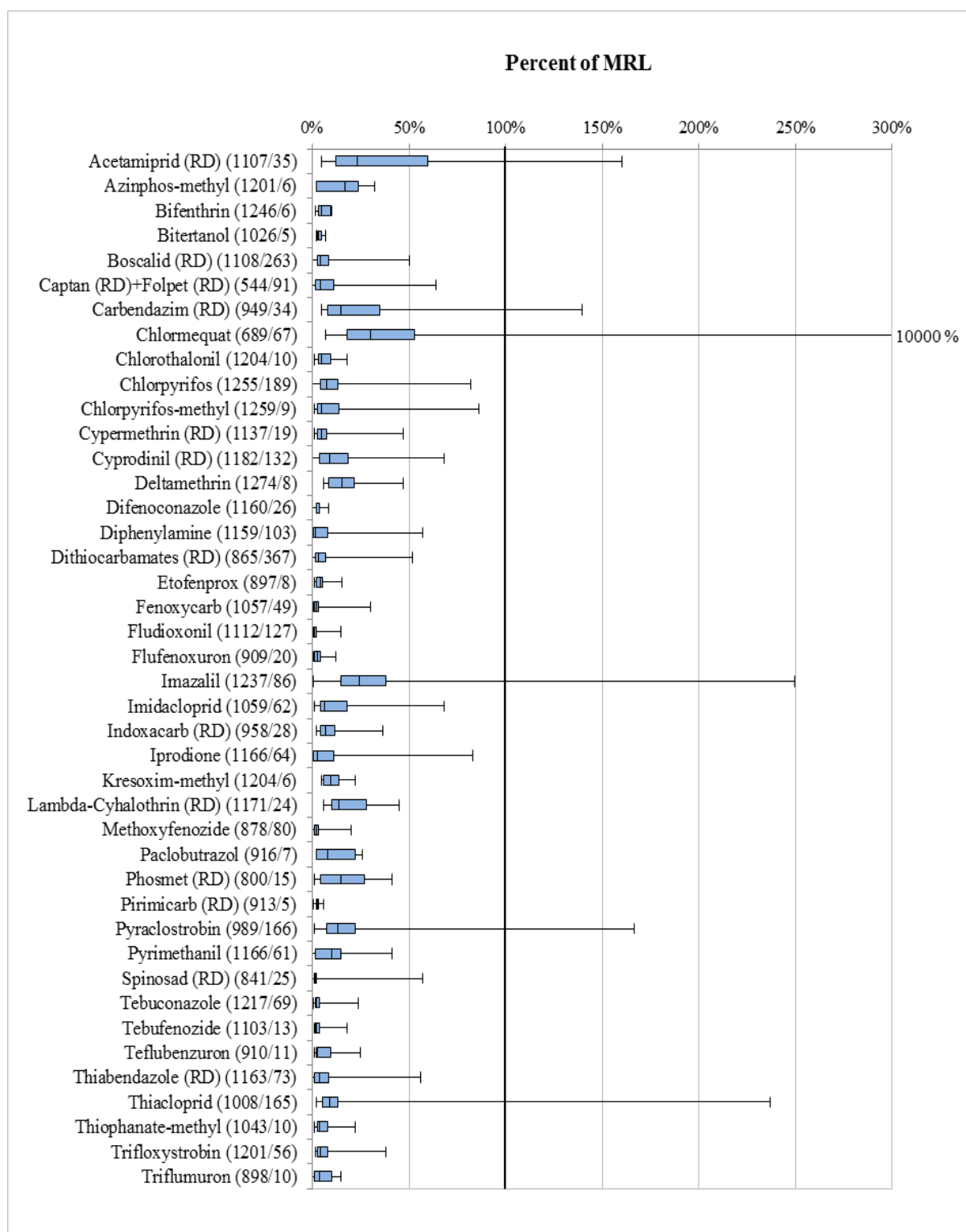
In Figure 2-14 the distribution of the residue concentrations expressed in percent of the MRL is depicted for the pesticides found in at least five samples. The samples with non-detectable residues are not included in this presentation. In addition to the pesticides presented in the box plot (Figure 2-14), individual MRL exceedances (less than 5 samples) were reported for dimethomorph (one sample, 220 % of the MRL) and procymidone (one sample, 180 %).

**Table 2-8:** Pesticides most frequently detected in pears

Food product	Pesticide	% samples above LOQ	Background information on the pesticides found
Pears	Dithiocarbamates (RD)	42.4	Non-systemic fungicides used for foliar treatment of fruit and vegetables.
	Boscalid (RD)	23.7	Systemic fungicide used to control diseases in a wide range of fruit and other crops.
	Pyraclostrobin	16.8	Fungicide used to control diseases in a wide range of fruit and other crops.
	Captan (RD)+Folpet (RD)	16.7	Non-systemic fungicides used to control diseases in a wide range of fruit and other crops.
	Thiacloprid	16.4	Systemic insecticide used against different pests in a wide range of crops.
	Chlorpyrifos	15.1	Non-systemic insecticide used to control different pests in soil or on foliage of fruit and other crops.
	Fludioxonil	11.4	Systemic fungicide used against powdery mildew in vines and different diseases in fruit and vegetable crops.
	Cyprodinil (RD)	11.2	Foliar fungicide used for control of plant diseases in a range of fruit and vegetables.



**Figure 2-13:** Percentage of pear samples with detectable residues and residues above the MRL



**Figure 2-14:** Residue concentrations measured in pears, expressed in percent of the MRL (only samples with residues > LOQ)

### 2.2.7. Potatoes

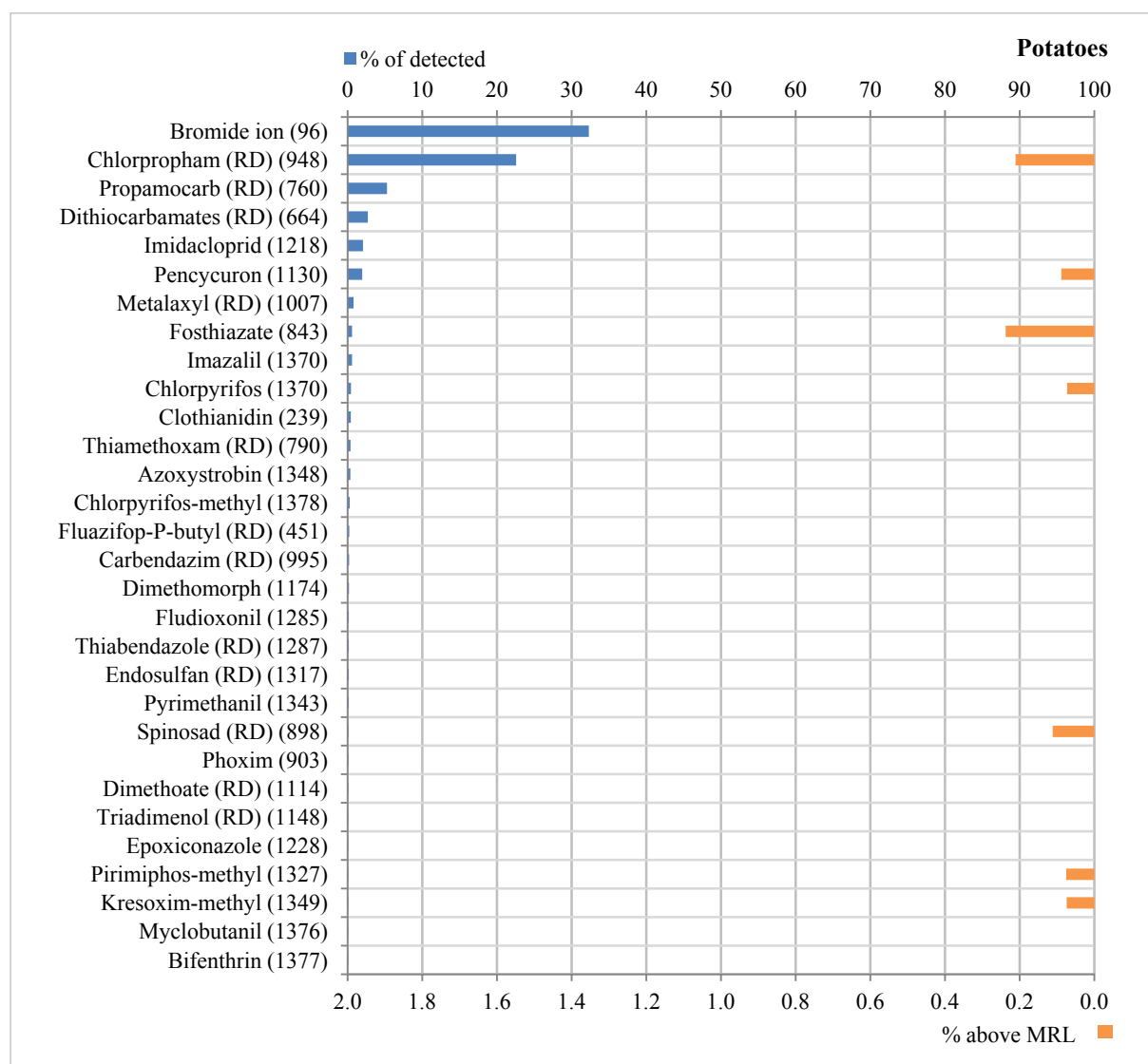
In 2011, 1,440 samples of potatoes were analysed; in 1,098 samples (76.2 %) no pesticide residues were detected, while 342 samples (23.8 %) contained residues in measurable concentrations. In 0.6 % of the samples (9 samples) the MRL was exceeded. In total, 30 different pesticides were detected; the MRL exceedances were related to seven pesticides. The most frequently found pesticides were bromide ion (detected in 32.3 % of the tested samples) and chlorpropham (RD) (22.6 %). In Figure 2-15 all pesticides found in potatoes are listed and ranked according to the frequency of the detection. Background information on the most frequently detected pesticides can be found in Table 2-9.

The most frequent MRL exceedances (in %) were recorded for fosthiazate, chlorpropham (RD) and spinosad (RD). Samples exceeding the MRLs of fosthiazate originated from France (1 sample) and the United Kingdom (1 sample); MRL exceedances for chlorpropham (RD) were reported for samples originating mainly from the United Kingdom (2), while for spinosad (RD) samples from Cyprus (1) exceeded the MRL. In Appendix III (Table E) the full list of samples exceeding the MRLs can be found, including information on the measured residue concentrations and the origin of the samples.

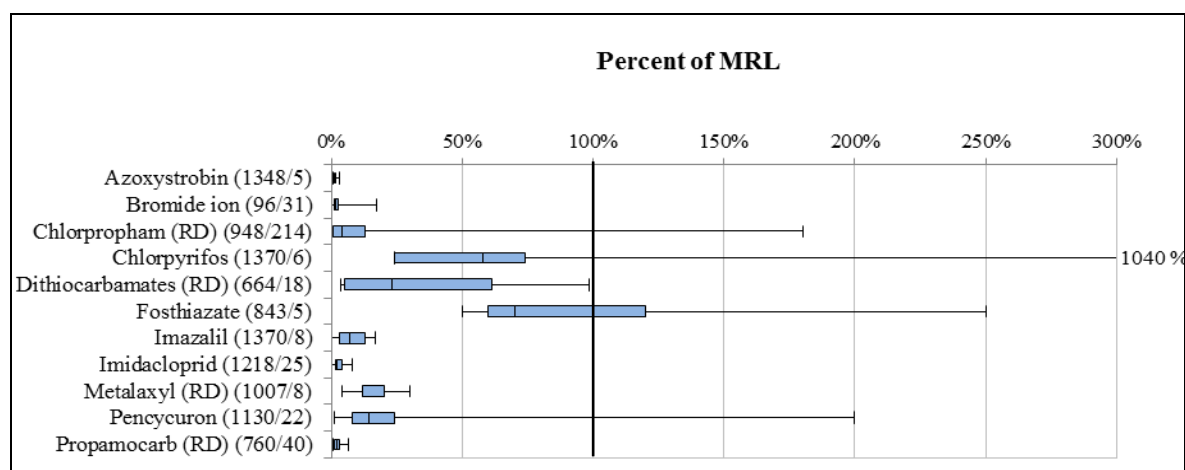
In Figure 2-16 the distribution of the residue concentrations expressed in percent of the MRL is depicted for the pesticides found in at least five samples. The samples with non-detectable residues are not included in this presentation. In addition to the pesticides presented in the box plot (Figure 2-16), individual MRL exceedances (less than five samples) were reported for kresoxim-methyl (one sample, 108 % of the MRL), pirimiphos-methyl (one sample, 116 %) and spinosad (RD) (one sample, 2,000 %).

**Table 2-9:** Pesticides most frequently detected in potatoes

Food product	Pesticide	% samples above LOQ	Background information on the pesticides found
Potatoes	Bromide ion	32.3	Naturally occurring substance and metabolite of the pesticide methyl bromide. Since 2009, methyl bromide is no longer approved at EU level.
	Chlorpropham (RD)	22.6	Used as post-harvest treatment to avoid sprouting of potatoes.



**Figure 2-15:** Percentage of potatoes samples with detectable residues and residues above the MRL



**Figure 2-16:** Residue concentrations measured in potatoes, expressed in percent of the MRL (only samples with residues > LOQ)

### 2.2.8. Rice

In 2011, 1,060 samples of rice were analysed; in 748 samples (70.6 %) no pesticide residues were detected, while 312 samples (29.4 %) contained residues in measurable concentrations. In 2 % of the samples (21 samples) the MRL was exceeded. In total, 36 different pesticides were detected; the MRL exceedances were related to seven pesticides. The most frequently found pesticides were bromide ion (detected in 16.4 % of the tested samples). In Figure 2-17 all pesticides found in rice are listed and ranked according to the frequency of the detection. Background information on the most frequently detected pesticides can be found in Table 2-10.

The most frequent MRL exceedances (in %) were recorded for bromide ion, carbendazim (RD) and hexaconazole. Three samples found exceeding the MRLs of bromide ion originated from India; MRL exceedances for carbendazim (RD) were reported for samples originating mainly from Pakistan (4), while for hexaconazole MRL exceedance were identified for samples from Vietnam (2). In Appendix III (Table E) the full list of samples exceeding the MRLs can be found, including information on the measured residue concentrations and the origin of the samples.

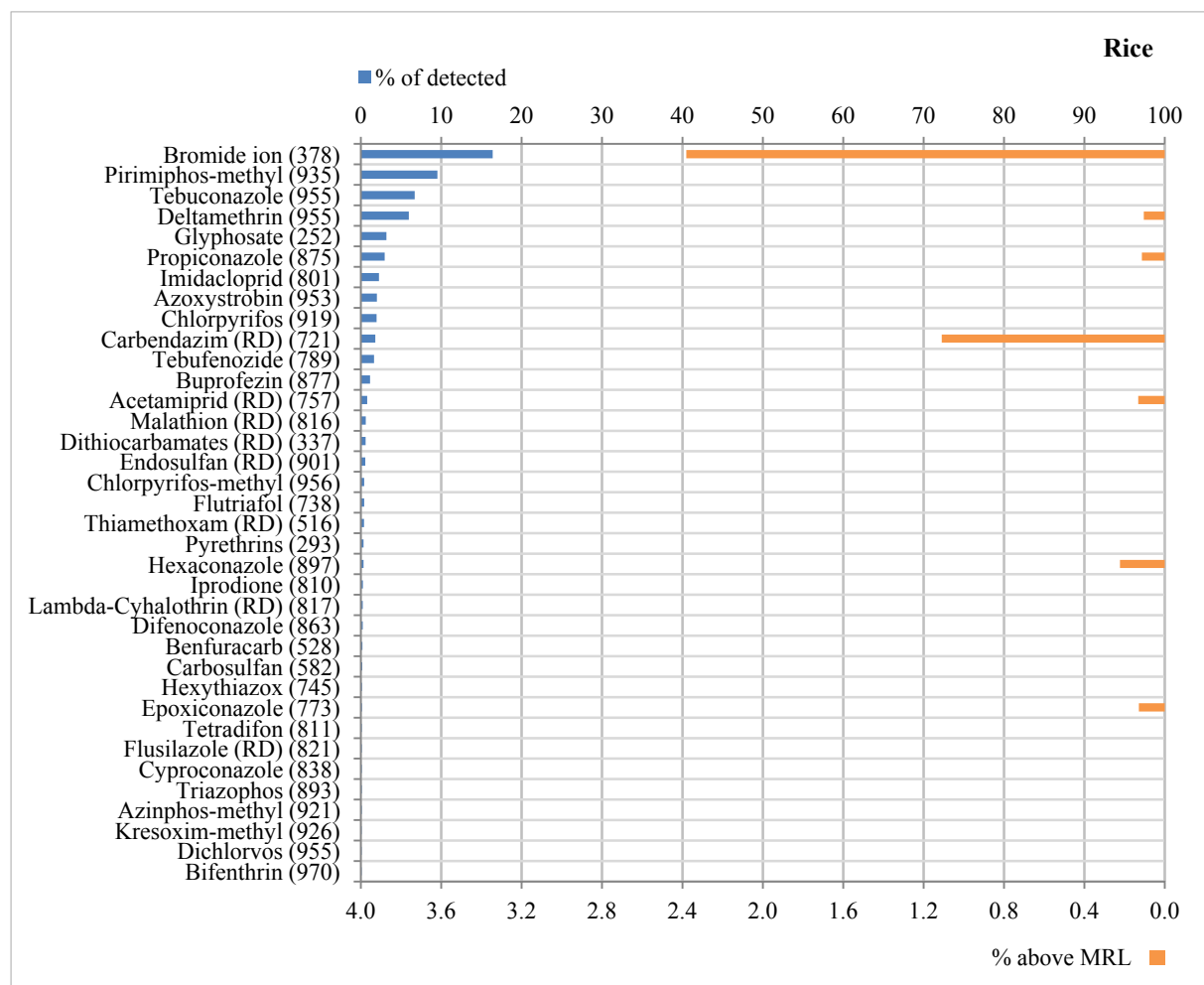
In Figure 2-18 the distribution of the residue concentrations expressed in percent of the MRL is depicted for the pesticides found in at least five samples. The samples with non-detectable residues are not included in this presentation. In addition to the pesticides presented in the box plot (Figure 2-18) individual MRL exceedance (less than 5 samples) were reported for epoxiconazole (one sample, 190 % of the MRL) and hexaconazole (two samples, 250 % and 110 %, respectively).

**Table 2-10:** Pesticides most frequently detected in rice

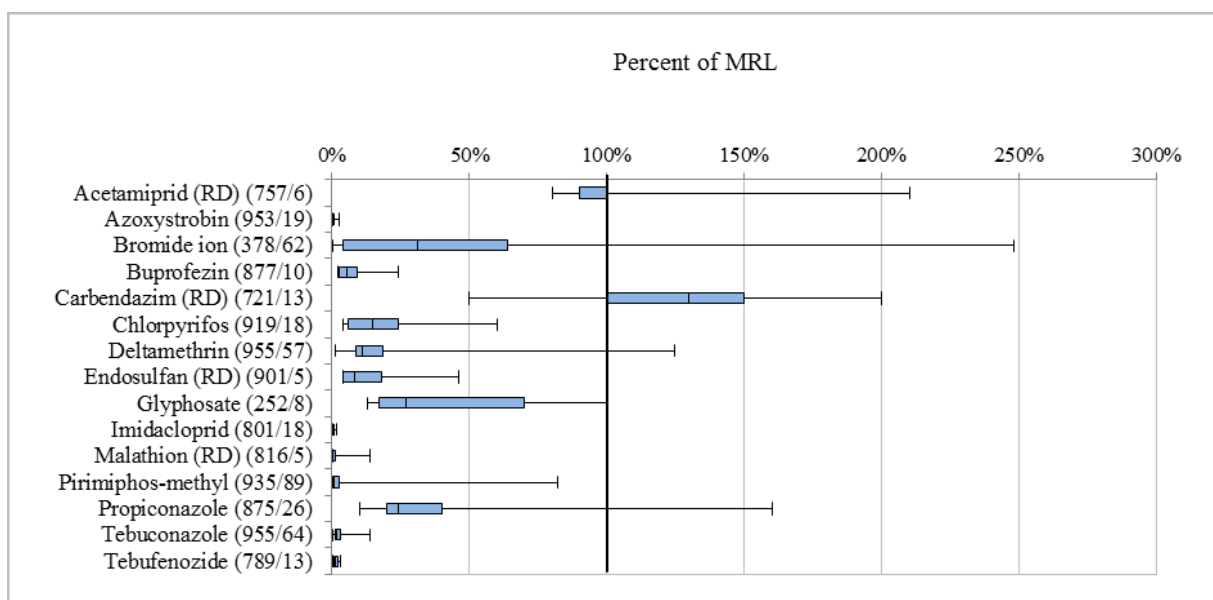
Food product	Pesticide	% samples above LOQ	Background information on the pesticides found
Rice	Bromide ion	16.4	Naturally occurring substance and metabolite of the pesticide methyl bromide. Since 2009, methyl bromide is no longer approved at EU level.

It is noted that the MRLs for rice apply to the unprocessed, raw food product traded, not to the polished rice. Usually, the residues are lower in polished rice because they are to a certain extent removed during the milling procedures. Since Regulation (EU) No 915/2010 did not clearly specify which rice product should be analysed (unprocessed paddy rice or polished rice), the results reported might refer to samples of polished rice and therefore underestimate the real residue concentrations. To avoid ambiguities it is therefore recommended to specify in the future monitoring programmes whether processed polished or unprocessed paddy rice should be analysed in the framework of the EUCP.





**Figure 2-17:** Percentage of rice samples with detectable residues and residues above the MRL



**Figure 2-18:** Residue concentrations measured in rice, expressed in percent of the MRL (only samples with residues > LOQ)

### 2.2.9. Spinach

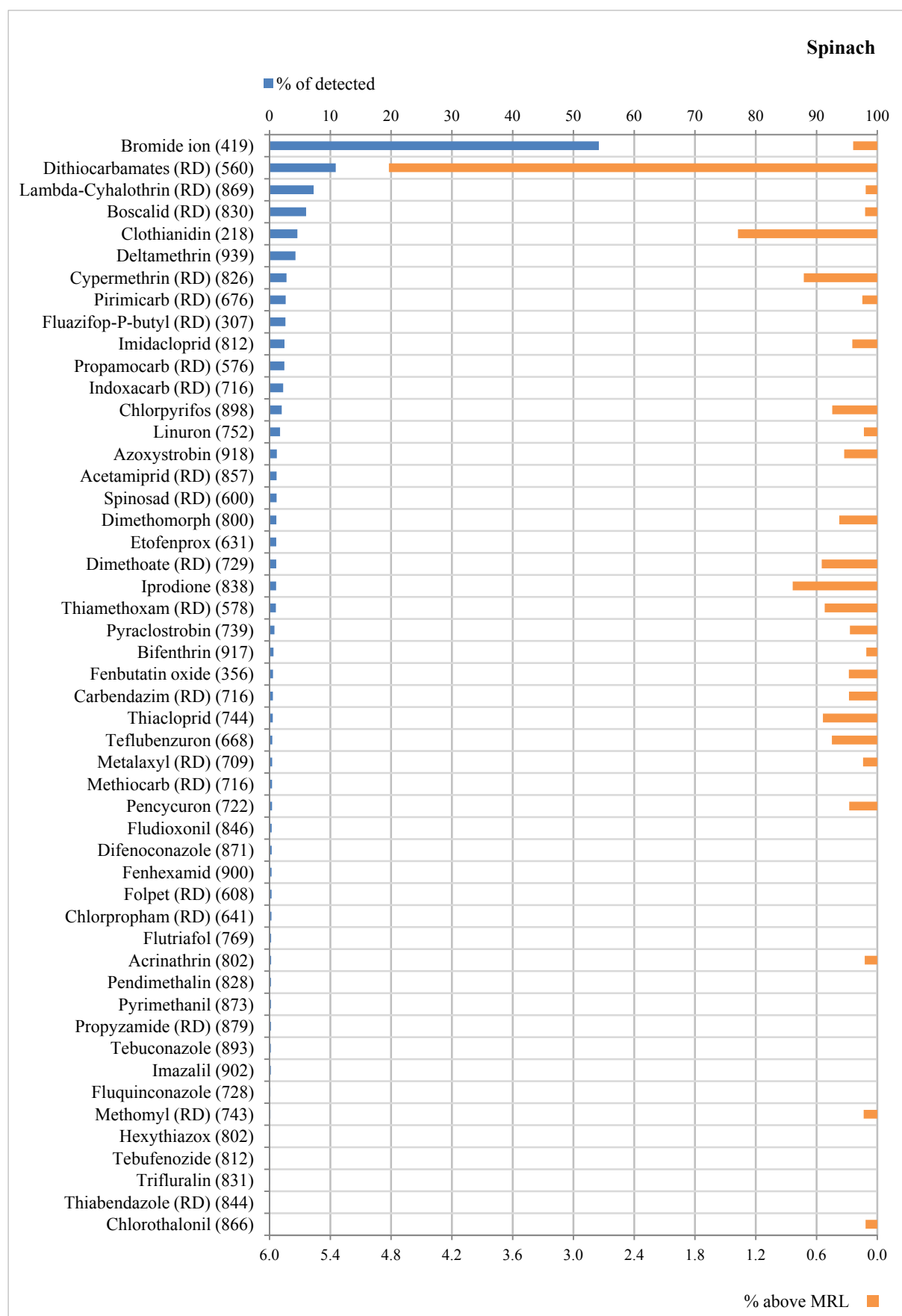
In 2011, 994 samples of spinach were analysed; in 530 samples (53.3 %) no pesticide residues were detected, while 464 samples (46.7 %) contained residues in measurable concentrations. In 6.5 % of the samples (65 samples) the MRL was exceeded. In total, 50 different pesticides were detected; the MRL exceedances were related to 26 pesticides. The most frequently found pesticides were bromide ion (detected in 54.2 % of the tested samples) and dithiocarbamates (RD) (10.9 %). In Figure 2-19 all pesticides found in spinach are listed and ranked according to the frequency of the detection. Background information on the most frequently detected pesticides can be found in Table 2-11.

The most frequent MRL exceedances (in %) were recorded for dithiocarbamates, clothianidin and iprodione. Samples exceeding the MRLs for dithiocarbamates originated mainly from Cyprus (8 samples) and Germany (7); MRL exceedance for clothianidin were reported for samples originating from Greece (2) and Estonia (1) while for iprodione samples from Germany (2) and Estonia (2) exceeded the MRL. In Appendix III (Table E) the full list of samples exceeding the MRLs can be found, including information on the measured residue concentrations and the origin of the samples.

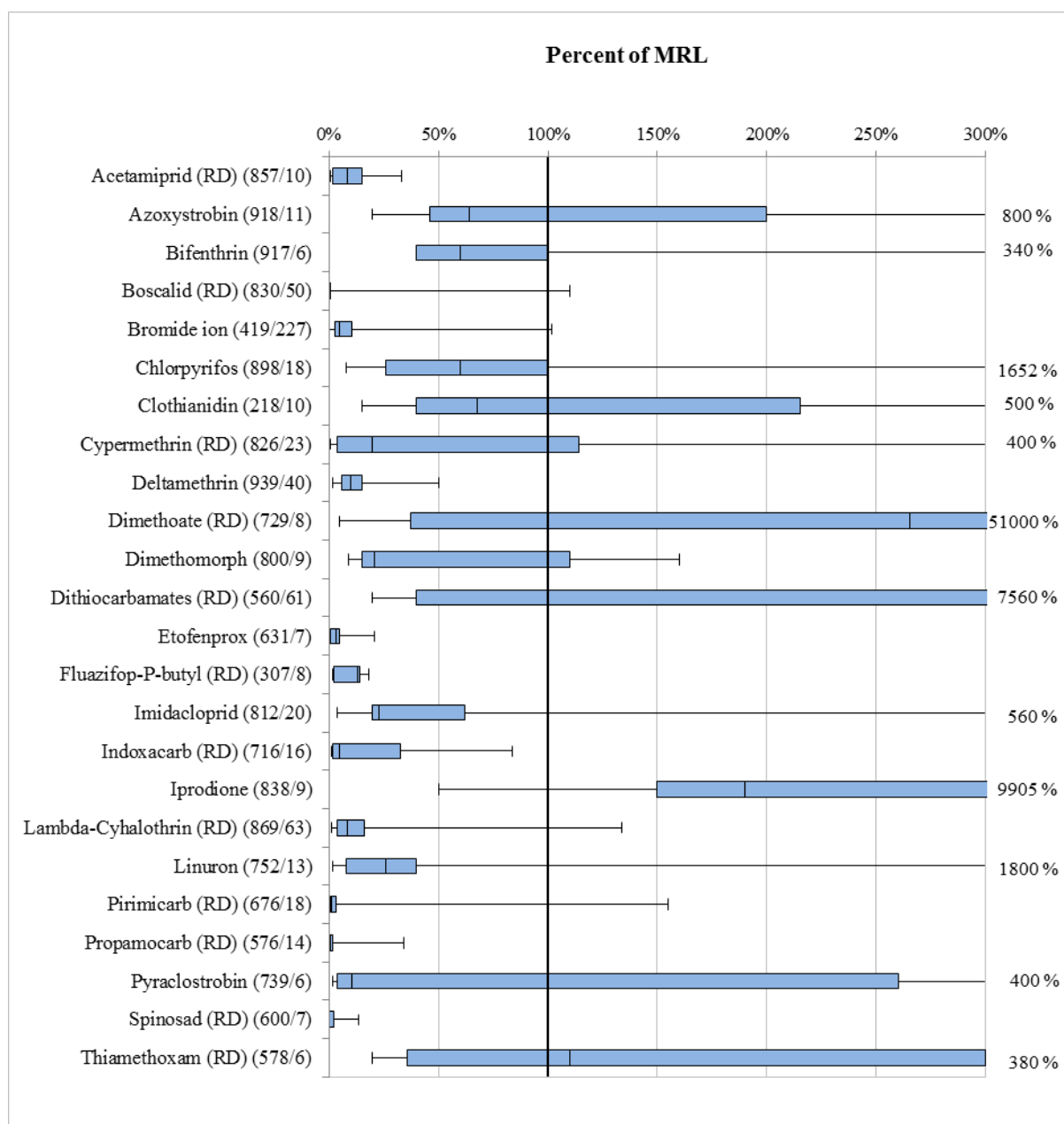
In Figure 2-20 the distribution of the residue concentrations expressed in percent of the MRL is depicted for the pesticides found in at least five samples. The samples with non-detectable residues are not included in this presentation. In addition to the pesticides presented in the box plot (Figure 2-20), individual MRL exceedance (less than 5 samples) were reported for acrinathrin (one sample, 2,100 % of the MRL), chlorothalonil (one sample, 1,700 %), fenbutatin oxide (one sample, 1,060 %), metalaxyl (RD) (one sample, 1,640 %), methomyl (RD) (one sample, 23,200 %), pencycuron (two samples, 2,000 % and 106 % respectively), carbendazim (RD) (two samples, 200 % and 160 % respectively), teflubenzuron (three samples, 2,400 %, 2,000 % and 112 % respectively) and thiacloprid (four samples, 1,050 %, 730 %, 335 % and 265 % respectively).

**Table 2-11:** Pesticides most frequently detected in spinach

Food product	Pesticide	% samples above LOQ	Background information on the pesticides found
Spinach	Bromide ion	54.2	Naturally occurring substance and metabolite of the pesticide methyl bromide. Since 2009, methyl bromide is no longer approved at EU level.
	Dithiocarbamates (RD)	10.9	Non-systemic fungicides used for foliar treatment of fruit and vegetables.



**Figure 2-19:** Percentage of spinach samples with detectable residues and residues above the MRL



**Figure 2-20:** Residue concentrations measured in spinach, expressed in percent of the MRL (only samples with residues > LOQ)

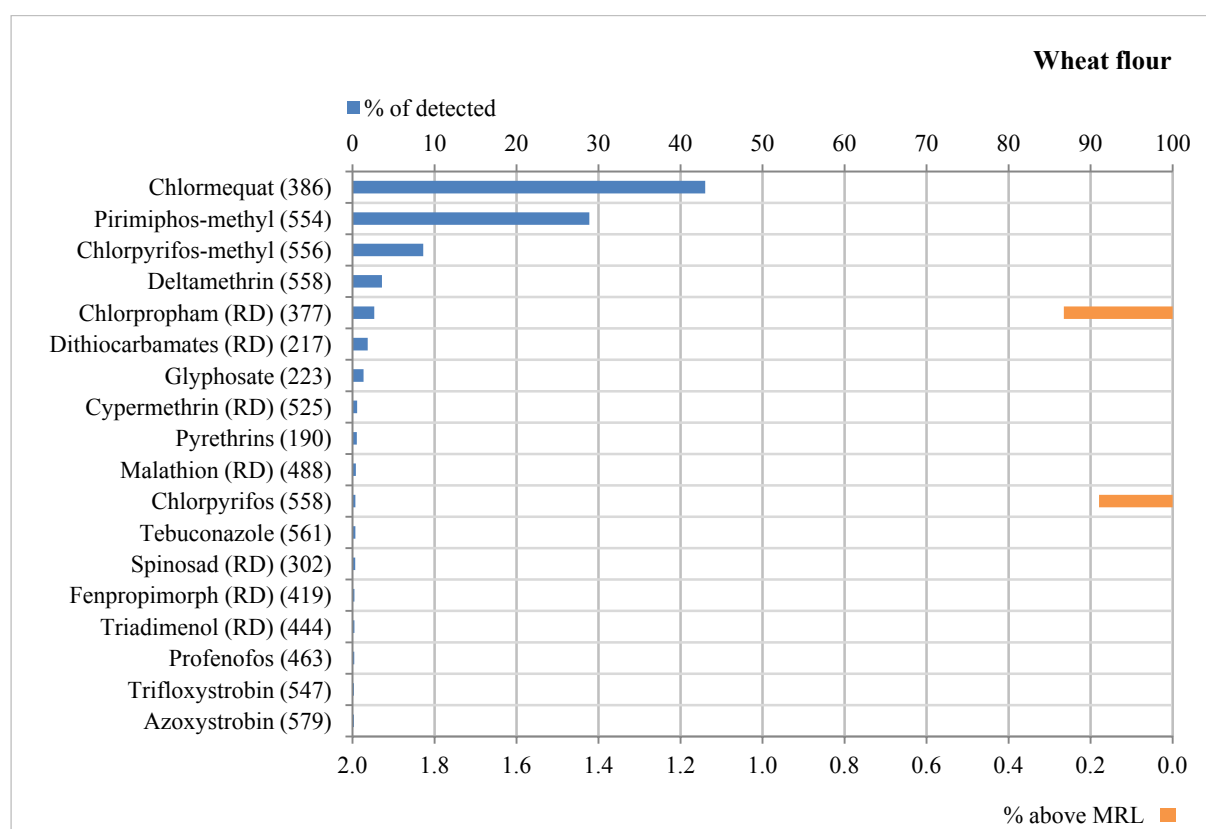
### 2.2.10. Wheat flour

In 2011, 605 samples of wheat flour were analysed; in 290 samples (47.9 %) no pesticide residues were detected, while 315 samples (52.1 %) contained residues in measurable concentrations. 0.3 % of the samples (2 samples) were reported as exceeding the legal limit<sup>32</sup>. In total, 18 different pesticides were detected; the MRL exceedances were related to two pesticides. The most frequently found pesticides were chlormequat (detected in 43.0 % of the tested samples) and pirimiphos-methyl (28.9 %). In Figure 2-21 all pesticides found in wheat flour are listed and ranked according to the frequency of the detection. Background information on the most frequently detected pesticides can be found in Table 2-12.

The two MRL exceedances were recorded for chlorpropham (RD) and chlorpyrifos. The only sample exceeding the MRL of chlorpyrifos originated from Rwanda; the origin of the sample exceeding the chlorpropham (RD) MRL was unknown.

**Table 2-12:** Pesticides most frequently detected in wheat flour

Food product	Pesticide	% samples above LOQ	Background information on the pesticides found
Wheat flour	Chlormequat	43.0	Plant growth regulator used in cereals.
	Pirimiphos-methyl	28.9	Insecticide for post-harvest storage.



**Figure 2-21:** Percentage of wheat flour samples with detectable residues and residues above the MRL

<sup>32</sup> Since wheat flour is a processed product, a processing factor needs to be taken into account to decide whether the measured residue concentration in wheat flour is exceeding the legal limit set for unprocessed wheat grains. The processing factors applied by the national competent authorities are not reported in detail in the framework of the submission of monitoring results.

### 2.2.11. Liver

In 2011, 718 samples of livers were analysed (140 of bovine liver, seven of goat liver, 323 of poultry liver, 85 of sheep liver and 163 of swine liver); in 692 samples (96.4 %) no pesticide residues were detected, while 26 samples (3.6 %) contained residues in measurable concentrations. In total, six different pesticides were detected; no MRL exceedances were reported. The most frequently found pesticides were DDT (RD) (detected in 3.0 % of the tested samples), dieldrin (RD) (2.7 %) and endosulfan (RD) (1.6 %). In Table 2-13 these results are further broken down for the different species. In this table also some background information on the detected pesticides can be found.

**Table 2-13:** Pesticide residues measured above the LOQ in liver samples

Food product	Pesticide	Type of liver	% samples above LOQ	Background information on the pesticides found
Liver	DDT (RD)	Bovine	1.6	Persistent organic pollutant, banned in Europe since 1979.
		Poultry	2.4	
		Sheep	10.8	
		Swine	0.7	
	Dieldrin (RD)	Poultry	2.7	Persistent organic pollutant. Banned in 1979.
	Endosulfan (RD)	Poultry	1.6	Persistent organic pollutant. Not approved in EU since 2005.
	Hexachlorobenzene	Bovine	0.8	Persistent organic pollutant. Banned in 1979.
		Poultry	1.1	
	Hexachlorocyclohexane (alpha)	Poultry	0.4	Persistent organic pollutant. Banned in 1979.
	Lindane	Poultry	1.4	Persistent organic pollutant. Not approved since 2000.

### 2.2.12. Poultry meat

In 2011, 711 samples of poultry meat were analysed; in 706 samples (99.3 %) no pesticide residues were detected, while five samples (0.7 %) contained residues in measurable concentrations. In poultry meat only two different pesticides were detected; no sample was found to exceed the legal limits. The two different pesticides found were DDT (RD) (detected in 0.7 % of the tested samples) and hexachlorobenzene (0.2 %); both compounds are considered as persistent organic pollutants which were used in the past as pesticides but were banned in Europe more than 30 years ago.

## 2.3. Results by pesticide

Among the 162 pesticides that were analysed in food of plant origin and the 33 pesticides that were searched in food of animal origin, no samples with measurable residues of the following 40 pesticides were identified in the framework of EU-coordinated control programme: aldicarb (RD), amitraz (RD), amitrole, azinphos-ethyl, bromuconazole (RD), chlordane (RD), chlorobenzilate, cyfluthrin (RD), dichlofluanid, dicotophos, dinocap (RD), EPN, endrin, esfenvalerate (RD), fenarimol, haloxyfop (RD), heptachlor (RD), hexachlorocyclohexane (beta), mepanipyrim (RD), mepiquat, metconazole, methoxychlor, monocrotophos, nitenpyram, oxydemeton-methyl (RD), parathion, parathion-methyl (RD), permethrin (RD), phenthoate, prothioconazole (RD), pyrazophos, quinoxifen, quintozone (RD), resmethrin (RD), spiroxamine, tecnazene, tolylfluanid (RD), trichlorfon, triticonazole and zoxamide.

Measurable residues were found for 136 different substances in 5,905 samples. 80 pesticides were detected in more than 0.15 % of the samples. Bromide ion was detected most frequently (36.4 % of total 1,679 samples tested for this substance). Bromide ion is a compound that may result from the use of the non-authorised pesticide methyl bromide, a pesticide that was used in the past for post-harvest fumigation or for soil fumigation. Since bromide ion is also naturally occurring in plants, the detection of residues of bromide ion is not necessarily linked to the use of the pesticide methyl bromide. The

current residue definition and the analytical methods do not allow discriminating between the naturally occurring bromide and the bromide resulting from the pesticide use<sup>33</sup>. Propamocarb (RD), thiabendazole (RD), boscalid (RD), dithiocarbamates (RD), chlorpyrifos, imazalil and chlormequat occurred in 5 to 25 % of the samples analysed. It is noted that dithiocarbamates residues are usually determined via carbon disulfide (CS<sub>2</sub>) analysis, a common moiety molecule. Also naturally occurring substances generate CS<sub>2</sub> and therefore mimic the presence of dithiocarbamates. Thus, the detection of CS<sub>2</sub> is not necessarily resulting from the use of dithiocarbamates as plant protection products. Fludioxonil, tebuconazole, carbendazim (RD), pirimiphos-methyl, ethephon, thiacloprid, glyphosate, azoxystrobin, iprodione, 2,4-D (RD), pyriproxyfen, pyraclostrobin, pyrimethanil, imidacloprid, chlorpropham (RD) and cyprodinil (RD) were found in 2 % to 5 % of the samples.

Residues exceeding the legal limits were related to 73 different pesticides, which were measured in samples originated from 42 countries. In Appendix III (Table E), detailed information on these findings is reported. It is noted that out of the 282 determinations exceeding the MRLs numerically (without considering the measurement uncertainty), 160 were considered as non-compliant with the legal limits by the competent national authorities<sup>34</sup>.

The highest number of non-compliant determinations was found for spinach from Cyprus, followed by spinach from Germany and beans with pods from Cyprus (see Table 2-14). In some cases, the country of origin was not reported or was not known to the reporting country.

**Table 2-14:** Highest number of MRL exceedances by food product and by food origin

Food product	Country of origin	Number of determinations above the MRL	Number of determinations non-compliant with the MRL
Spinach	Cyprus	22	22
Spinach	Germany	20	13
Oranges	Spain	12	7
Beans with pods	Cyprus	11	11
Beans with pods	Morocco	11	3
Cucumbers	Spain	8	6
Pears	Spain	8	4
Rice	India	6	1
Rice	Vietnam	6	0

## 2.4. Results by reporting country

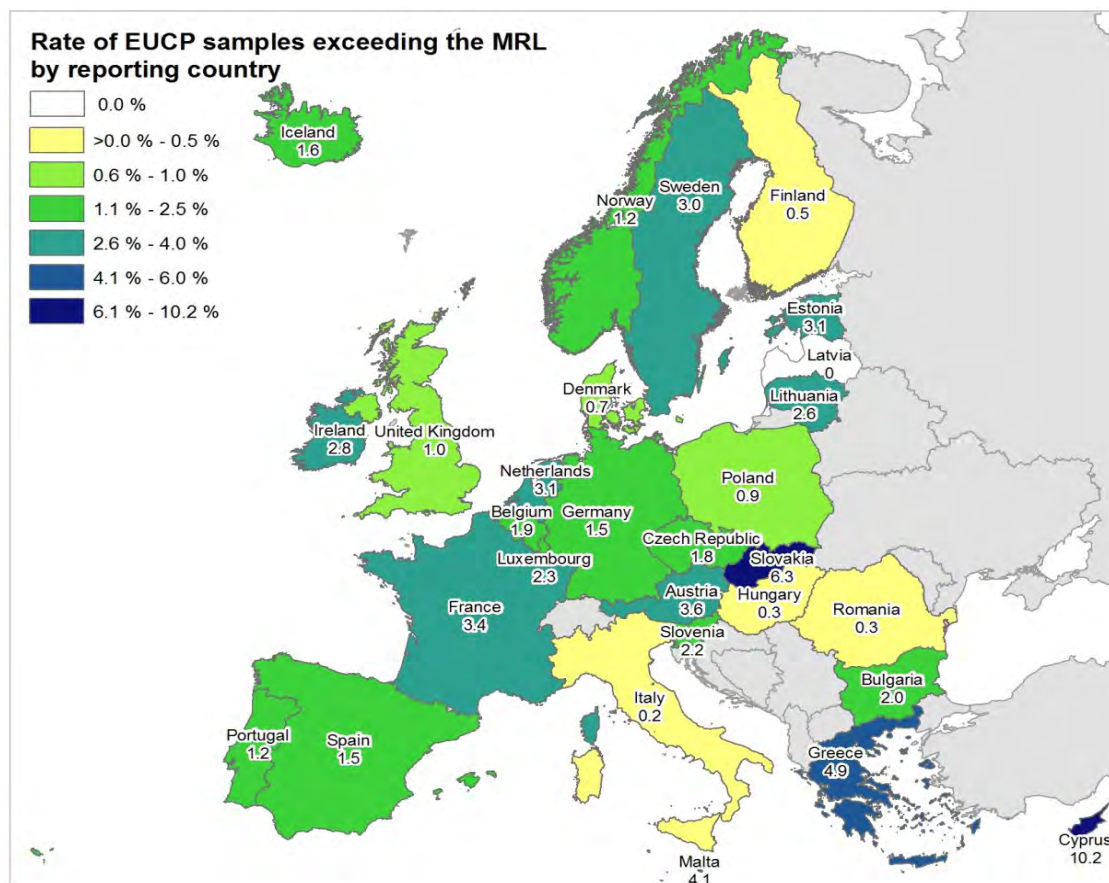
The MRL exceedance rate by reporting country is depicted in Map 2-1. These rates vary widely throughout Europe, ranging from 0.0 % (Latvia) to 10.2 % (Cyprus) of the samples analysed. These results give some indications that the food available in the different Member States differs to a certain extent as regards the MRL compliance. However, since the number of samples in certain countries was low (less than 200 samples from Austria, Estonia, Iceland, Latvia, Lithuania, Luxemburg, Malta, Norway and Slovenia) the results are subject to a higher uncertainty.

More details on findings concerning the 2011 EU-coordinated programme by reporting country are described in Tables B and D of Appendix III.

<sup>33</sup> EFSA recently issued an assessment reviewing the existing MRLs for bromide ion (EFSA, 2013). EFSA proposed to revise the existing MRLs, taking into account the maximum residue levels established at international level. It is noted the Codex Alimentarius Commission has established guideline levels for a number of crops (e.g. cereals, cocoa products, dried fruit, peanuts and tree nuts) for the residue definition methyl bromide which reflect post-harvest treatments. It would be desirable to explore the possibility to revise the residue definition at EU level which would allow identifying unambiguously whether the residues in the food occur because of the use of methyl bromide.

<sup>34</sup> See 'MRL compliance/non-compliance' in the Glossary.





Map 2-1: Percentage of EUCP samples exceeding the MRL by reporting country

## 2.5. Results by food origin

Figure 2-22 shows the percentages of measurable residues and MRL exceedances for each crop in the EUCP by country of origin. In the upper part of the figure the results for samples originating from EU Member States and EFTA countries are summarised, while the results for third countries can be found in the lower part of the figure.

Sample origin	Total samples	% detected												% above the MRL												
		Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Wheat flour	Liver	Poultry meat	Total (in %)	Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Wheat flour	Liver	Poultry meat
EU Member States and EFTA countries																										
Austria	126												32.5													3.2
Belgium	282												64.5													0.7
Bulgaria	191												17.3													3.1
Cyprus	205												35.1													13.2
Czech Republic, The	106												37.7													0.0
Denmark	226												13.3													0.0
Estonia	84												29.8													3.6
Finland	83												22.9													0.0
France	815												41.2													1.1

Sample origin	Total samples	% detected													% above the MRL												
		Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Wheat flour	Liver	Poultry meat	Total (in %)	Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Wheat flour	Liver	Poultry meat	Total (in %)
Germany	807													54.3													1.2
Greece	484													42.1													2.5
Hungary	234													17.9													0.9
Iceland	26													0.0													0.0
Ireland	88													17.0													1.1
Italy	967													51.0													0.6
Latvia	100													17.0													0.0
Lithuania	46													32.6													0.0
Luxembourg	40													15.0													0.0
Malta	88													29.5													6.8
Netherlands, The	606													52.1													0.8
Norway	88													22.7													0.0
Poland	477													27.5													1.3
Portugal	405													45.9													2.5
Romania	462													10.8													0.2
Slovakia	57													22.8													1.8
Slovenia	188													28.2													2.7
Spain	2,268													69.1													1.9
Sweden	119													13.4													0.0
United Kingdom, The	610													31.3													1.3
<b>Third countries</b>																											
Argentina	179													67.6													1.7
Cambodia	25													12.0													0.0
Chile	53													90.6													1.9
China	22													45.5													0.0
Croatia	15													86.7													0.0
Egypt	138													48.6													3.6
Ethiopia	10													60.0													10.0
India	77													45.5													7.8
Israel	93													54.8													2.2
Jordan	11													54.5													9.1
Kenya	100													48.0													4.0
Morocco	218													62.4													6.0
New Zealand	30													33.3													0.0
Pakistan	62													21.0													8.1
Peru	48													97.9													4.2
South Africa	324													87.0													1.5
Suriname	10													30.0													0.0
Thailand	136													21.3													1.5
Turkey	88													60.2													4.5
USA	29													31.0													0.0

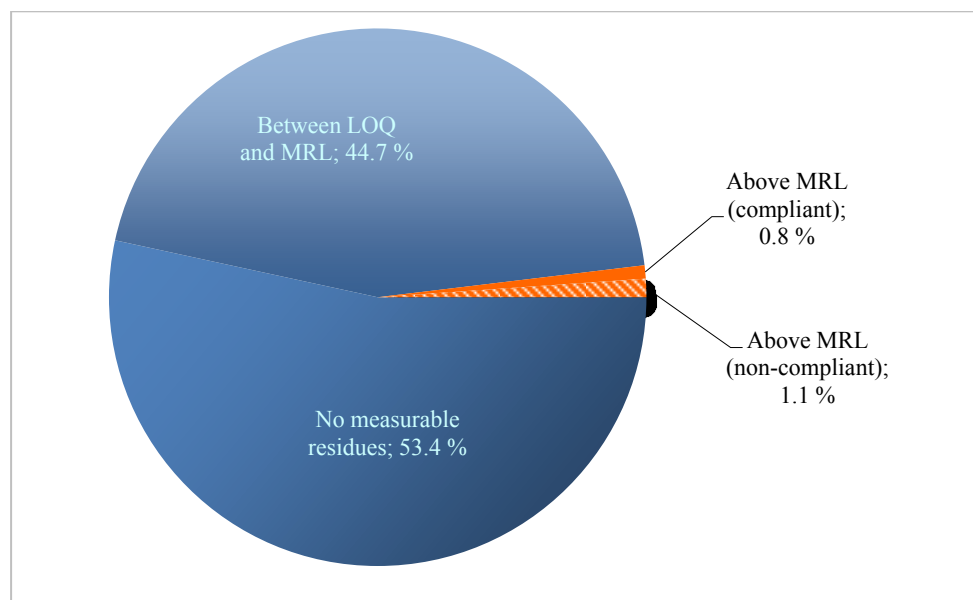
Sample origin	Total samples	% detected												% above the MRL													
		Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Wheat flour	Liver	Poultry meat	Total (in %)	Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Wheat flour	Liver	Poultry meat	Total (in %)
Uruguay	38													65.8													0.0
Vietnam	15													53.3													26.7
Other	677													44.9													3.0
Overall	12,676	46.1	42.7	47.0	85.7	80.3	70.8	23.8	29.4	46.7	52.1	3.6	0.7	46.6	4.1	1.6	2.1	1.4	2.5	1.1	0.6	2.0	6.5	0.3	0.0	0.0	1.9

Legend (in %)	% ≥ 80	60 ≤ % < 80	40 ≤ % < 60	20 ≤ % < 40	0 < % < 20	0	No results		% ≥ 16	8 ≤ % < 16	4 ≤ % < 8	2 ≤ % < 4	0 < % < 2	0	No results	

**Figure 2-22:** Summary results on EUCP samples with detectable residues and residues above the MRL by country of origin and by food product

## 2.6. Overall results

The analysis of the results of the 12,676 samples of the 2011 EU-coordinated programme shows that 1.9 % of the samples exceeded one or more MRLs (245 samples). Taking into account the measurement uncertainty, 1.1 % of the samples were considered to be non-compliant with the MRL (139 samples) and 0.8 % (106 samples) numerically exceeded the MRL but were considered to be compliant<sup>35</sup>. 44.7 % of the samples (5,660 samples) contained measurable residues, but within the legally permitted concentrations (above the LOQ but below the MRL)<sup>36</sup>. 53.4 % of the samples (6,771 samples) did not contain residues in measurable concentrations (no residues above the limit of quantification) (Figure 2-23).



**Figure 2-23:** Overall percentages of EUCP samples with and without measurable residues, residues exceeding the MRL and non-compliant with the MRL

<sup>35</sup> See figure in the Legal basis.

<sup>36</sup> See 'MRL exceedance' in the Glossary.

Among the plant products analysed in the 2011 EU-coordinated control programme, wheat flour had the lowest percentage of samples exceeding the MRL (0.3 % of the 605 samples analysed), followed by potato samples (0.6 % of 1,440 samples) and pear samples (1.1 % of 1,364 samples). The ascending ranking of samples exceeding the MRL is continued with mandarins (1.4 %), carrots (1.6 %), rice (2.0 %), cucumbers (2.1 %), oranges (2.5 %), beans with pods (4.1 %) and spinach (6.5 %). In animal products (1,429 samples of liver and poultry meat analysed for 33 pesticides), no MRL exceedances were identified.

Figure 2-24 summarises the results of the 2011 EU-coordinated programme for each pesticide/crop combination tested, presenting the percentages of samples with measurable residues above the LOQ (left side of the table) and the percentages of samples exceeding the MRL (right side of the table). The white cells in Figure 2-24 refer to pesticide/crop combinations for which no analysis was requested. The lightest shaded cells on the left side of the table refer to pesticide/crop combinations for which all determinations were found to be below the LOQ; the lightest shaded cells on the right part of the table refers to combinations for which no MRL exceedances were reported. Cells filled with darker colours (on the left and right sides of the table) correspond to higher percentages of samples with measurable residues and MRL exceedances, respectively.

Imazalil/mandarins (65.1 %), imazalil/oranges (64.5 %), bromide ion/carrots (55.7 %) and bromide ion/spinach (54.2 %) were the pesticide/crop combinations for which residue concentrations were found above the reporting level most frequently. The highest percentages of MRL exceedances were found for dithiocarbamates in spinach (exceeded in 4.8 % of the samples), followed by residues of bromide ion in rice (2.4 %), clothianidin in spinach (1.4 %) and carbendazim (RD) in rice (1.1 %).

Pesticide	No of samples	% detected											% above the MRL												
		Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Wheat flour	Liver	Poultry meat	Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Wheat flour	Liver	Poultry meat
2,4-D (RD)	2,102																								
Abamectin (RD)	4,472																								
Acephate	9,778																								
Acetamiprid (RD)	9,548																								
Acrinathrin	9,036																								
Aldicarb (RD)	7,453																								
Amitraz (RD)	3,987																								
Amitrole	804																								
Azinphos-ethyl	1,034																								
Azinphos-methyl	10,147																								
Azoxystrobin	10,498																								
Benfuracarb	5,876																								
Bifenthrin	11,722																								
Bitertanol	8,972																								
Boscalid (RD)	9,320																								
Bromide ion	1,679																								
Bromopropylate	10,315																								
Bromuconazole (RD)	7,284																								
Bupirimate	10,160																								
Buprofezin	10,242																								
Captan (RD) <sup>37</sup>	6,505																								
Carbaryl	9,840																								
Carbendazim (RD)	8,256																								
Carbofuran (RD)	7,850																								
Carbosulfan	7,176																								

<sup>37</sup> For beans and pears, the figures (or colours) are referring to the residues of 'Captan (RD) + Folpet (RD)' following the legal residue definition.

Pesticide	No of samples	% detected											% above the MRL												
		Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Wheat flour	Liver	Poultry meat	Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Wheat flour	Liver	Poultry meat
Chlordane (RD)	781																								
Chlorfenapyr	7,599																								
Chlorfenvinphos	10,076																								
Chlormequat	1,075																								
Chlorobenzilate	1,073																								
Chlorothalonil	10,015																								
Chlorpropham (RD)	7,269																								
Chlorpyrifos	11,668																								
Chlorpyrifos-methyl	11,772																								
Clofentezine (RD)	7,047																								
Clothianidin	2,345																								
Cyfluthrin (RD)	8,945																								
Cypermethrin (RD)	10,531																								
Cyproconazole	9,776																								
Cyprodinil (RD)	9,973																								
DDT (RD)	1,199																								
Deltamethrin	11,488																								
Diazinon	11,863																								
Dichlofluanid <sup>38</sup>	9877																								
Dichlorvos	9,955																								
Dicloran	9,292																								
Dicofol (RD)	8739																								
Dicrotophos	543																								
Dieldrin (RD)	875																								
Difenoconazole	9,994																								
Dimethoate (RD)	8,424																								
Dimethomorph	8,857																								
Dinocap (RD)	1,871																								
Diphenylamine	9,499																								
Dithiocarbamates (RD)	5,988																								
EPN	6,377																								
Endosulfan (RD)	11,097																								
Endrin	1,283																								
Epoxiconazole	9,349																								
Esfenvalerate (RD)	1,464																								
Ethephon	1,231																								
Ethion	10,184																								
Ethoprophos	8,434																								
Etofenprox	7,362																								
Fenamiphos (RD)	6,070																								
Fenarimol	9,626																								
Fenazaquin	8,431																								
Fenbuconazole	8,529																								
Fenbutatin oxide	3,698																								
Fenhexamid	10,204																								
Fenitrothion	10,240																								
Fenoxycarb	8,992																								
Fenpropathrin	9,428																								
Fenpropimorph (RD)	8,221																								
Fenthion (RD)	8,201																								
Fipronil (RD)	5,971																								
Fluazifop-P-butyl (RD)	3,667																								
Fludioxonil	9,655																								

<sup>38</sup>For dichlofluanid the results reported as dichlofluanid were pooled with the results reported as sum of dichlofluanid and DMSA.

Pesticide	No of samples	% detected											% above the MRL												
		Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Wheat flour	Liver	Poultry meat	Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Wheat flour	Liver	Poultry meat
Flufenoxuron	7,728																								
Fluquinconazole	8,490																								
Flusilazole (RD)	9,052																								
Flutriafol	8,495																								
Folpet (RD) <sup>37</sup>	5,916																								
Formetanate (RD)	4,635																								
Fosthiazate	6,522																								
Glyphosate	475																								
Haloxyfop (RD)	2,621																								
Heptachlor (RD)	904																								
Hexachlorobenzene	1,246																								
Hexachlorocyclohexane (α)	989																								
Hexachlorocyclohexane (β)	952																								
Hexaconazole	9,816																								
Hexythiazox	9,156																								
Imazalil	10,330																								
Imidacloprid	9,171																								
Indoxacarb (RD)	8,109																								
Iprodione	9,605																								
Iprovalicarb	9,447																								
Kresoxim-methyl	10,237																								
Lambda-Cyhalothrin (RD)	9,669																								
Lindane	1,228																								
Linuron	8,678																								
Lufenuron	7,628																								
Malathion (RD)	9,282																								
Mepanipyrim (RD)	6,176																								
Mepiquat	979																								
Metalaxyl (RD)	8,181																								
Metconazole	7,336																								
Methamidophos	9,693																								
Methidathion	11,071																								
Methiocarb (RD)	8,062																								
Methomyl (RD)	7,965																								
Methoxychlor	1,041																								
Methoxyfenozide	7,314																								
Monocrotophos	9,753																								
Myclobutanil	10,232																								
Nitenpyram	467																								
Oxadixyl	9,020																								
Oxamyl	9,385																								
Oxydemeton-methyl (RD)	7,520																								
Paclobutrazol	7,712																								
Parathion	11,244																								
Parathion-methyl (RD)	9,316																								
Penconazole	10,443																								
Pencycuron	8,344																								
Pendimethalin	9,689																								
Permethrin (RD)	1,237																								
Phenthoate	8,379																								
Phosalone	10,392																								
Phosmet (RD)	9,291																								
Phoxim	6,358																								
Pirimicarb (RD)	7,914																								
Pirimiphos-methyl	11,532																								
Prochloraz (RD)	5,073																								

Pesticide	No of samples	% detected												% above the MRL											
		Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Wheat flour	Liver	Poultry meat	Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Wheat flour	Liver	Poultry meat
Procymidone	10,480																								
Profenofos	10,979																								
Propamocarb (RD)	6,221																								
Propargite	9,278																								
Propiconazole	9,628																								
Propyzamide (RD)	9,956																								
Prothioconazole (RD)	2,737																								
Pyraclostrobin	8,493																								
Pyrazophos	1,023																								
Pyrethrins	4,994																								
Pyridaben	9,102																								
Pyrimethanil	9,895																								
Pyriproxyfen	8,806																								
Quinoxifen	9,400																								
Quintozene (RD)	846																								
Resmethrin (RD)	797																								
Spinosad (RD)	7,171																								
Spiroxamine	8,895																								
Tau-Fluvalinate	6,777																								
Tebuconazole	10,316																								
Tebufenozide	9,396																								
Tebufenpyrad	9,125																								
Tecnazene	946																								
Teflubenzuron	7,679																								
Tefluthrin	6,992																								
Tetraconazole	9,002																								
Tetradifon	9,645																								
Thiabendazole (RD)	9,846																								
Thiacloprid	8,559																								
Thiamethoxam (RD)	6,391																								
Thiophanate-methyl	8,684																								
Tolclofos-methyl	10,152																								
Tolyfluanid (RD)	6,591																								
Triadimenol (RD)	9,194																								
Triazophos	11,318																								
Trichlorfon	6,984																								
Trifloxystrobin	10,092																								
Triflumuron	7,052																								
Trifluralin	9,278																								
Triticonazole	8,231																								
Vinclozolin (RD) <sup>39</sup>	9,973																								
Zoxamide	8,210																								

Legend (in %)	% ≥ 25	15 ≤ % < 25	5 ≤ % < 15	3 ≤ % < 5	2 ≤ % < 3	1 ≤ % < 2	0 < % < 1	0	No samples analysed		% ≥ 1	0.5 ≤ % < 1	0.2 ≤ % < 0.5	0.1 ≤ % < 0.2	0 < % < 0.1	0	No samples analysed

**Figure 2-24** Summary results on EUCP samples with residues above the LOQ and above the MRL

<sup>39</sup> It was noted that a high percentage of the samples was not analysed for the full residue definition (residue definition for plant products: vinclozolin (sum of vinclozolin and all metabolites containing the 3,5-dichloroaniline moiety, expressed as vinclozolin), residue definition for food of animal origin: vinclozolin, iprodione, procymidone, sum of compounds and all metabolites containing the 3,5-dichloroaniline moiety, expressed as 3,5-dichloroaniline). A simplification of the residue definition should be considered, taking into account the analytical problems linked to the current residue definition which require the application of single-residue methods.



## SUMMARY CHAPTER 2

The analysis of the results of the 2011 EU-coordinated programme shows that 1.9 % of the samples exceeded the MRL numerically (245 out of the 12,676 samples); 1.1 % were found to be non-compliant with the legal limit, taking into account the measurement uncertainty. 44.7 % of the samples (5,660 samples) had measurable residues above the reporting level, but within the legally permitted levels. In 53.4 % of the samples (6,771 samples) no quantifiable residues were found (residues below the limit of quantification).

Out of the 179 pesticides covered by the EU-coordinated programme, 40 distinct pesticides were not detected in any of the samples analysed.

Overall, the most frequently detected residues were bromide ion (36.4 %), followed by propamocarb (RD), thiabendazole (RD), boscalid (RD), dithiocarbamates (RD), chlorpyrifos, imazalil and chlormequat found in 5 to 25 % of the samples analysed. It is noted that positive results for bromide ion do not necessarily reflect the use of the pesticide methyl bromide since bromide is naturally occurring in food. In certain food products the detection of dithiocarbamates (measured as CS<sub>2</sub>) is resulting from naturally occurring plant compounds and not from the use of pesticides containing dithiocarbamates.

In the ranking of the MRL exceedances, the food products on top were spinach (6.5 % of the samples exceeding the MRL), beans with pods (4.1 % MRL exceedances), oranges (2.5 %), cucumbers (2.1 %), rice (2 %), carrots (1.6 %), mandarins (1.4 %) and pears (1.1 %). The lowest percentage of samples exceeding the MRL was identified for wheat flour (0.3 %), and potato samples (0.6 %). In animal products (1,429 samples of liver and poultry meat were analysed for 33 pesticides) no MRL exceedances were identified.

The pesticide/crop combinations for which residue concentrations were found above the reporting level most frequently were imazalil/mandarins (65.1 %), imazalil/oranges (64.5 %), bromide ion/carrots (55.7 %) and bromide ion/spinach (54.2 %). The highest percentages of MRL exceedances were found for dithiocarbamates in spinach (exceeded in 4.8 % of all samples), followed by residues of bromide ion in rice (2.4 %), clothianidin in spinach (1.4 %) and carbendazim (RD) in rice (1.1 %).

Beans with pods: 987 bean samples were analysed and 64 different pesticide residues were measured in quantifiable amounts. The most frequently found compounds were bromide ion, boscalid (RD) and iprodione.

Carrots: 1,220 carrots samples were analysed and 51 different pesticides residues were measured in quantifiable amounts. The most frequently found compounds were bromide ion, boscalid (RD) and linuron.

Cucumbers: 1,260 cucumbers samples were analysed and 67 different pesticides residues were measured in quantifiable amounts. The most frequently found pesticides were bromide ion and propamocarb (RD).

Mandarins: 856 mandarins samples were analysed and 59 different pesticides residues were measured in quantifiable amounts. The most frequently found active substances were imazalil, chlorpyrifos, thiabendazole (RD), 2,4-D (RD), pyrimethanil and pyriproxyfen.

Oranges: 1,461 oranges samples were analysed and 73 different pesticides residues were measured in quantifiable amounts. The most frequently found substances were imazalil, bromide ion, chlorpyrifos, thiabendazole (RD), 2,4-D (RD) and pyriproxyfen.

Pears: 1,364 pears samples were analysed and 66 different pesticides residues were measured in quantifiable amounts. The most frequently found active substances were dithiocarbamates (RD), boscalid (RD), pyraclostrobin, captan (RD)+folpet (RD), thiacloprid, chlorpyrifos, fludioxonil and cyprodinil (RD).

Potatoes: 1,440 potatoes samples were analysed and 30 different pesticides residues were measured in quantifiable amounts. The most frequently found pesticides were bromide ion and chlorpropham (RD).

Rice: 1,060 rice samples were analysed and 36 different pesticides residues were measured in quantifiable amounts. The most frequently found pesticide was bromide ion.

Spinach: 994 spinach samples were analysed and 50 different pesticides residues were measured in quantifiable amounts. The most frequently found pesticides were bromide ion and dithiocarbamates (RD).

Wheat flour: 605 wheat flour samples were analysed and 18 different pesticides residues were measured in quantifiable amounts. The most frequently found active substances were chlormequat and pirimiphos-methyl.

Liver: 718 liver samples were analysed and six different pesticides residues were measured in quantifiable amounts. The most frequently found active substances were DDT (RD), dieldrin (RD) and endosulfan (RD). No MRL exceedances were reported.

Poultry meat: 711 poultry meat samples were analysed and two different pesticides were measured in quantifiable amounts (DDT (RD) and hexachlorobenzene). No MRL exceedances were reported.

### 3. National programmes

#### 3.1. Design of the national control programmes

The main characteristics of 2011 national programmes are listed in Table 3-1. 79,035 samples were taken in the context of the national programmes, an increase of 2.5 % compared to the previous year.

The national programmes can be classified as either surveillance or enforcement programmes<sup>40</sup>, depending on the sampling strategies defined at country level. Since in enforcement programmes the sampling is targeted towards products of specific growers/producers/importers or to specific consignments which are likely to be non-compliant with the MRL legislation, the probability of finding samples with positive results or samples exceeding the legal limits is higher than in surveillance programmes<sup>41</sup>. 71,164 of the samples (90.0 %) were surveillance samples while 7,871 samples (10.0 %) were reported as enforcement samples.

In this section of the report, only the results of surveillance samples are reported in more detail because without knowing the reasons for taking specific enforcement samples the interpretation of the relevance of the results is not possible. More details on results of enforcement samples may be available from the competent authorities in the Member States and EFTA countries (see Appendix I).

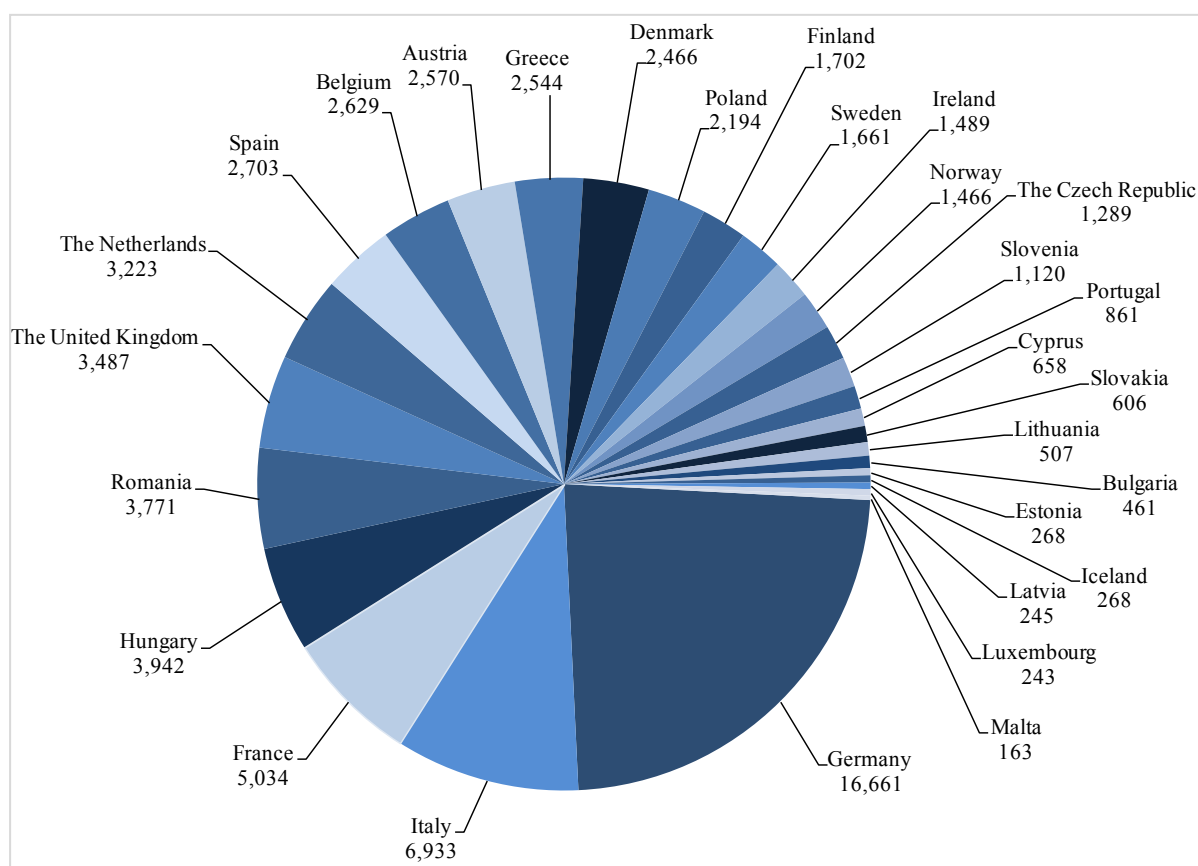
**Table 3-1:** Main characteristics of the national programmes

Main characteristics	Numbers
Total number of samples (surveillance and enforcement)	79,035
Total number of surveillance samples	71,164
Total number of enforcement samples	7,871
Total number of pesticides analysed	888
Total number of pesticides detected	381
Number of food product types analysed	635
Number of countries of origin of the food samples analysed	152
Number of samples originating from third countries (surveillance samples)	13,772
Number of samples with EU origin (surveillance samples)	54,612
Number of samples with unknown origin (surveillance samples)	2,780
Number of organic samples (surveillance samples)	4,117
Number of baby food samples (surveillance samples)	1,796
Number of processed samples (surveillance samples, excluding baby food samples)	7,711

The total number of surveillance samples taken by the individual reporting countries is presented in Figure 3-1

<sup>40</sup> See 'Sampling strategy' in the Glossary.

<sup>41</sup> In enforcement samples, the MRL exceedance rate was generally higher than in surveillance samples. In total, 592 samples, corresponding to 7.5 % of all enforcement samples, exceeded the MRL.



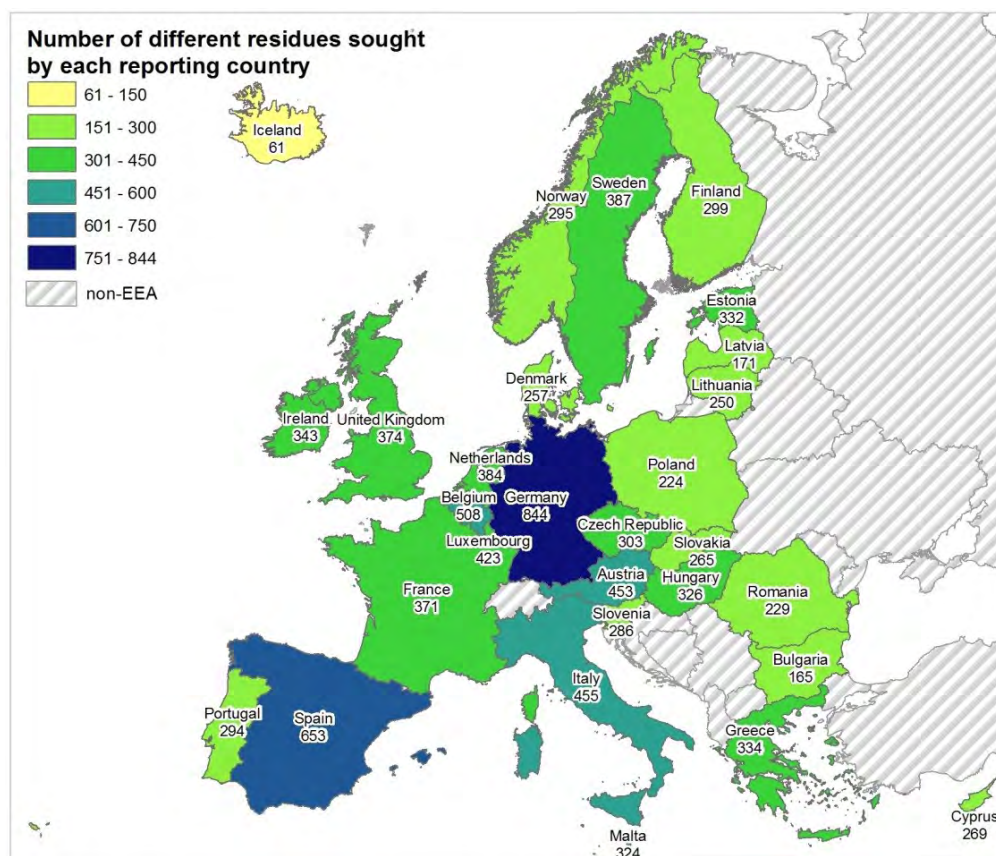
**Figure 3-1:** Total number of surveillance samples taken by each reporting country

Map 3-1 shows the number of pesticides sought in surveillance samples by each reporting country. This number ranges widely, from 61 to 844. Overall, the number of different pesticides analysed for among all the 29 reporting countries is 888<sup>42</sup>; of those, 381 were detected in measurable concentrations.

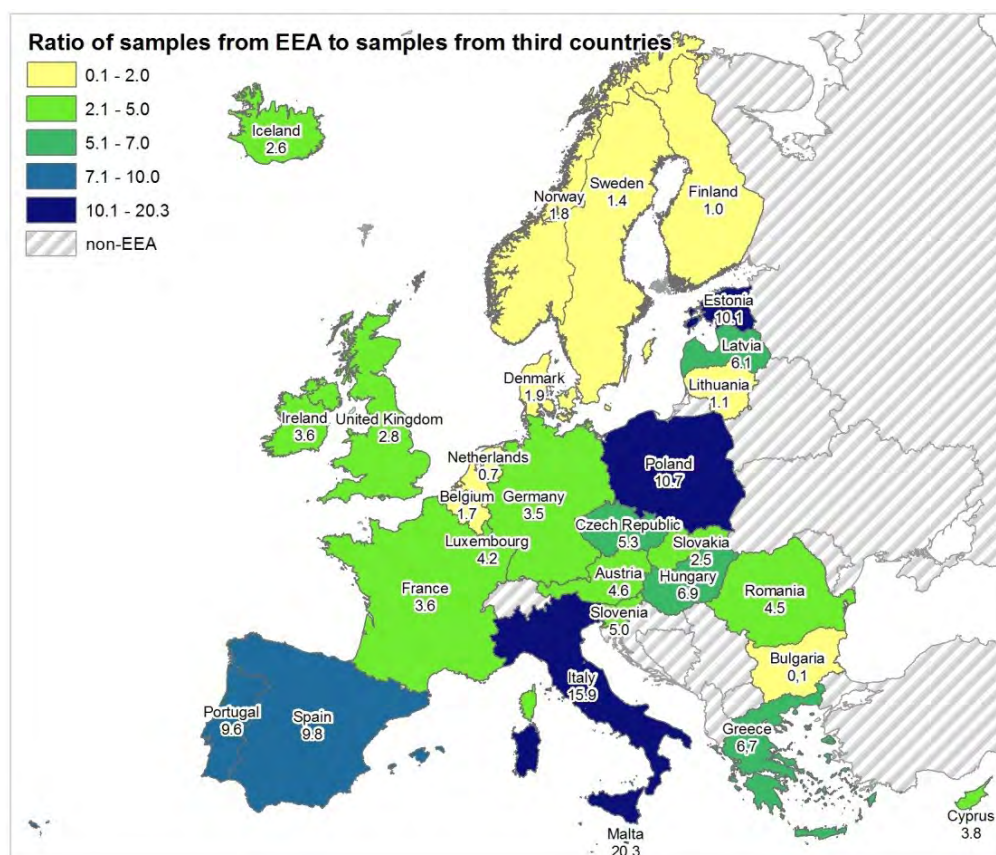
National programmes cover samples originating from domestic, European Union, EFTA countries and third country production. The majority of samples taken were produced in one of the reporting countries (76.7 %). 19.4 % of the samples were taken from imported consignments or lots. In 3.9 % of the samples, the origin of the samples was not reported.

In Map 3-2 the ratio of samples originating from the EEA area and from third countries is presented for each reporting country. These data demonstrate that only a few countries focus the national control programmes on food products imported from third countries (ratio <1), whereas most reporting countries prioritise samples originating from EEA countries (ratio >1).

<sup>42</sup> The number of pesticides sought refers to the residue definitions (see 'Residue definition' in the Glossary). Metabolites or degradation products included in a residue definition are not counted separately.



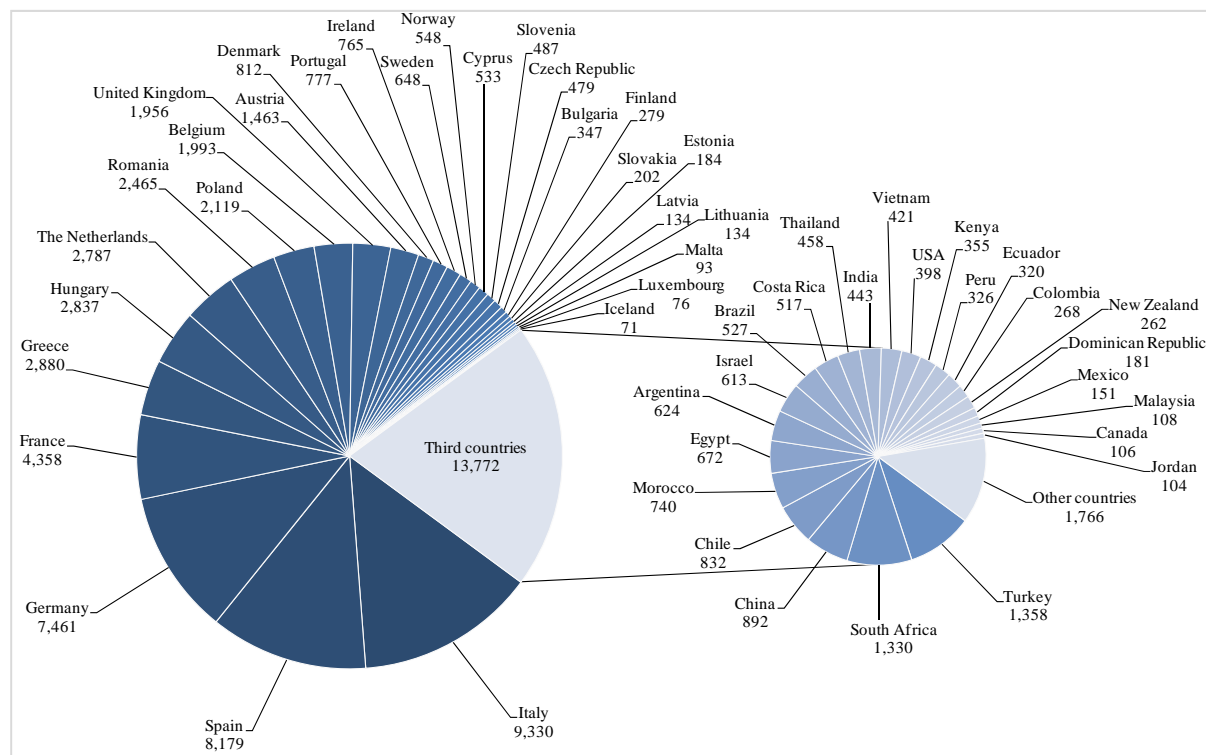
**Map 3-1:** Number of different residues sought by each reporting country



**Map 3-2:** Ratio of EEA and third country samples tested in each reporting country



In Figure 3-2, the number of samples tested among all the reporting countries is split up according to the country of origin. The highest number of samples analysed in 2011 originates from Italy, Spain and Germany. Among the third countries, samples from Turkey, South Africa and China are the top three countries in the ranking.



**Figure 3-2:** Number of samples by country of origin

### 3.2. Results by food origin

In Table 3-2 the overall non-compliance/MRL exceedance rates are reported, comparing the results for samples originating from EU and EFTA with the results from third countries. An overall MRL exceedance rate of 2.5 % was observed for all surveillance samples. Considering the measurement uncertainty, for 1.5 % of the samples an infringement (non-compliance) was identified which triggered legal sanctions (e.g. penalties, fines, warning and administrative actions).

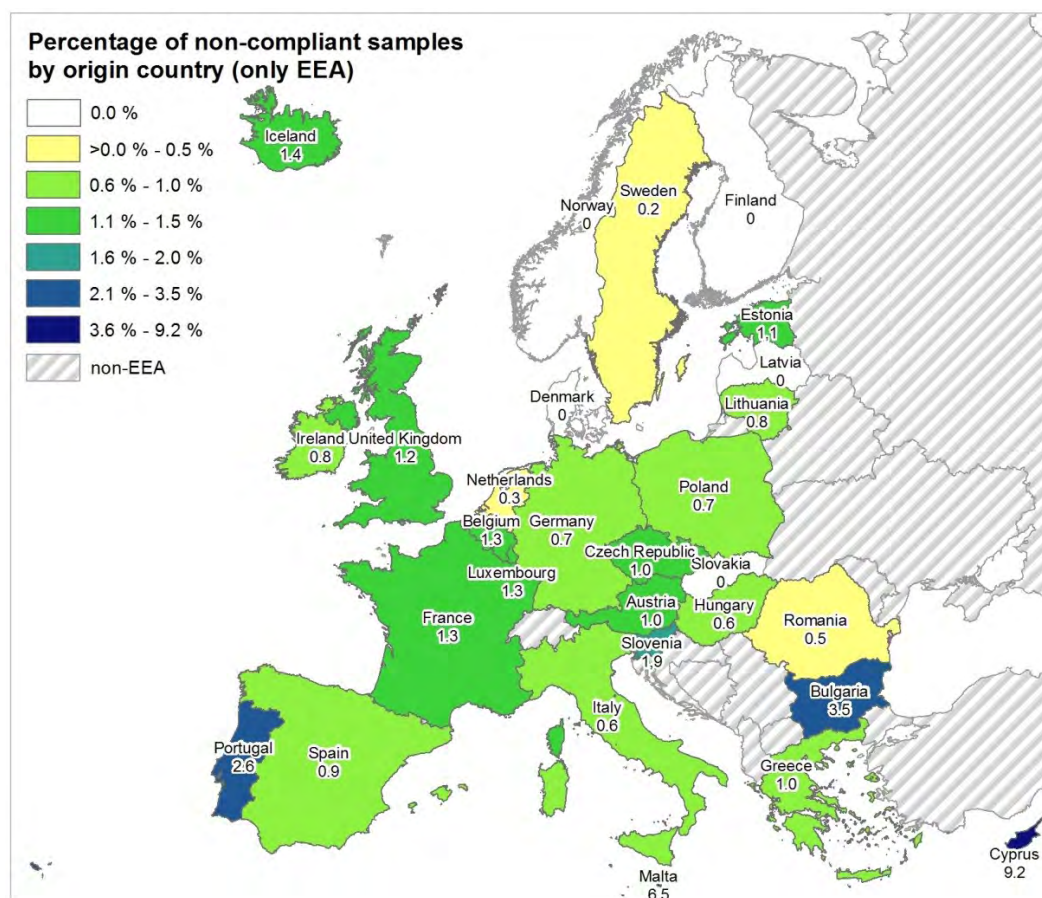
In total, 3.7 % of the samples imported from third countries exceeded the legal limit, while the non-compliance rate for food produced in the EU and in EFTA countries was found to be 0.9 %. A similar ratio was calculated regarding the numerical exceedance of the MRL: 6.3 % for products from third countries versus 1.5 % of the samples produced in the EU and EFTA countries.

**Table 3-2:** Samples exceeding the MRL according to the country of origin

Sample origin	Number of samples	Above MRL	% of exceedance	% of non-compliance
EU and EFTA countries	54,612	835	1.5	0.9
Third countries	13,772	869	6.3	3.7
Unknown	2,780	60	2.2	1.4
<b>Total</b>	<b>71,164</b>	<b>1,764</b>	<b>2.5</b>	<b>1.5</b>

The results concerning non-compliant samples originating from EU and EFTA countries and in third countries are presented separately in Map 3-3 and Map 3-4. In the EEA area, non-compliance rates above the average (0.9 %) were identified for products originating from Cyprus, Malta, Bulgaria,

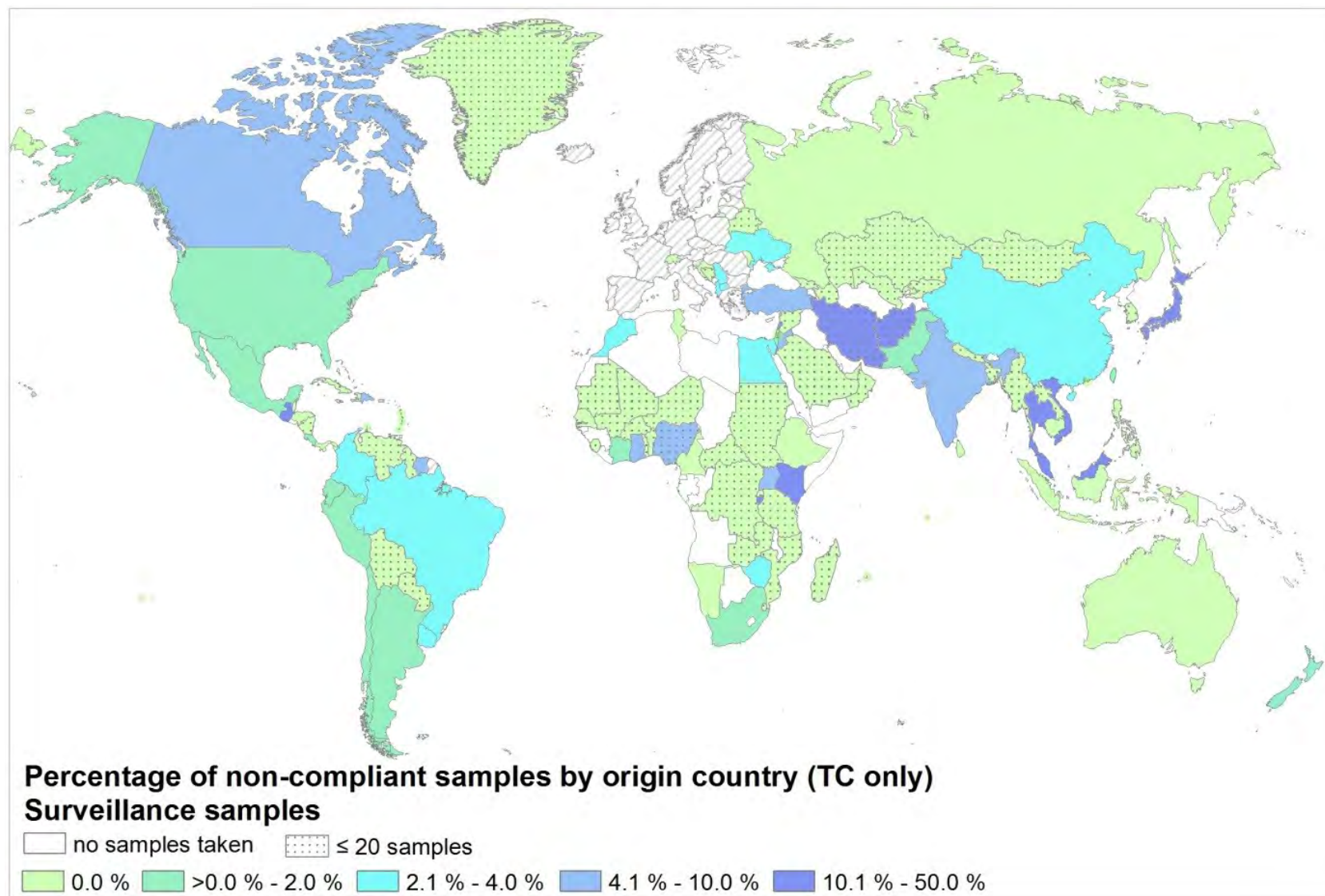
Portugal, Slovenia, Iceland, Luxembourg, France, Belgium, the United Kingdom, Estonia, the Czech Republic, Austria, Greece and Spain.



**Map 3-3:** Percentage of non-compliant samples by origin country

Regarding samples from third countries (Map 3-4) it is noted that for some of these countries the number of samples analysed was very low and therefore the results are statistically not representative. Among the countries with more than 20 samples, the highest non-compliance rates (expressed in percentage of samples analysed) were identified for food originating from Vietnam (26.8 % of 421 samples), Kenya (15.2 % of 355 samples), Malaysia (14.0 % of 108 samples), Guatemala (12.1 % of 33 samples), and Thailand (10.3 % of 458 samples). Countries for which a low number of samples were taken (less than or equal to 20) are depicted with a dotted pattern in Map 3-4.





**Map 3-4:** Percentage of non-compliant samples by origin country (third countries only)

Table 3-3 focuses on country/food product combinations for which at least 20 samples were analysed and for which more than 10 % of the samples exceeded the MRL. This table includes only imported, unprocessed samples.

**Table 3-3:** Imported food products (unprocessed) most frequently exceeding the MRL

Country of origin <sup>(a)</sup>	Food product	Total number of samples taken	% of samples above MRL	Pesticides mostly found above the MRL by country/food combination
Brazil	Figs	23	30.4	ethephon, azoxystrobin
Chile	Peaches	39	10.3	iprodione
China	Tea leaves	73	15.1	buprofezin, imidacloprid, chlorfluazuron
Colombia	Passion fruit	24	25.0	lambda-cyhalothrin (RD), cypermethrin (RD), cyromazine
Ghana	Pineapples	32	15.6	ethephon, chlorpyrifos, carbendazim (RD)
India	Okra	30	43.3	acephate, monocrotophos, endosulfan (RD)
	Rice	85	12.9	isoprothiolane, bromide ion, carbendazim (RD)
Israel	Persimmons	28	10.7	fenthion (RD), boscalid (RD)
Kenya	Beans (with pods)	194	10.8	dimethoate (RD), acephate, methomyl (RD)
	Peas (with pods)	89	40.4	dimethoate (RD), dithiocarbamates (RD), metalaxyl (RD)
South Africa	Lemons	39	10.3	formetanate (RD), bromopropylate, diphenylamine
Turkey	Lentils, dry	70	24.3	hydrogen phosphide <sup>(b)</sup> , glyphosate, chlorpyrifos
	Peppers	143	10.5	procymidone, formetanate (RD), clofentezine (RD)
	Pomegranate	37	40.5	acetamiprid (RD), tau-fluvalinate, thiacloprid
Uruguay	Oranges	21	19.0	fenthion (RD), orthophenylphenol, imazalil
Vietnam	Basil	37	59.5	chlorpyrifos, carbendazim (RD), hexaconazole
	Peppers	78	61.5	hexaconazole, carbendazim (RD), difenoconazole

<sup>(a)</sup>: Only countries where at least 20 samples were taken and 10 % or more of the samples exceeded the MRL.

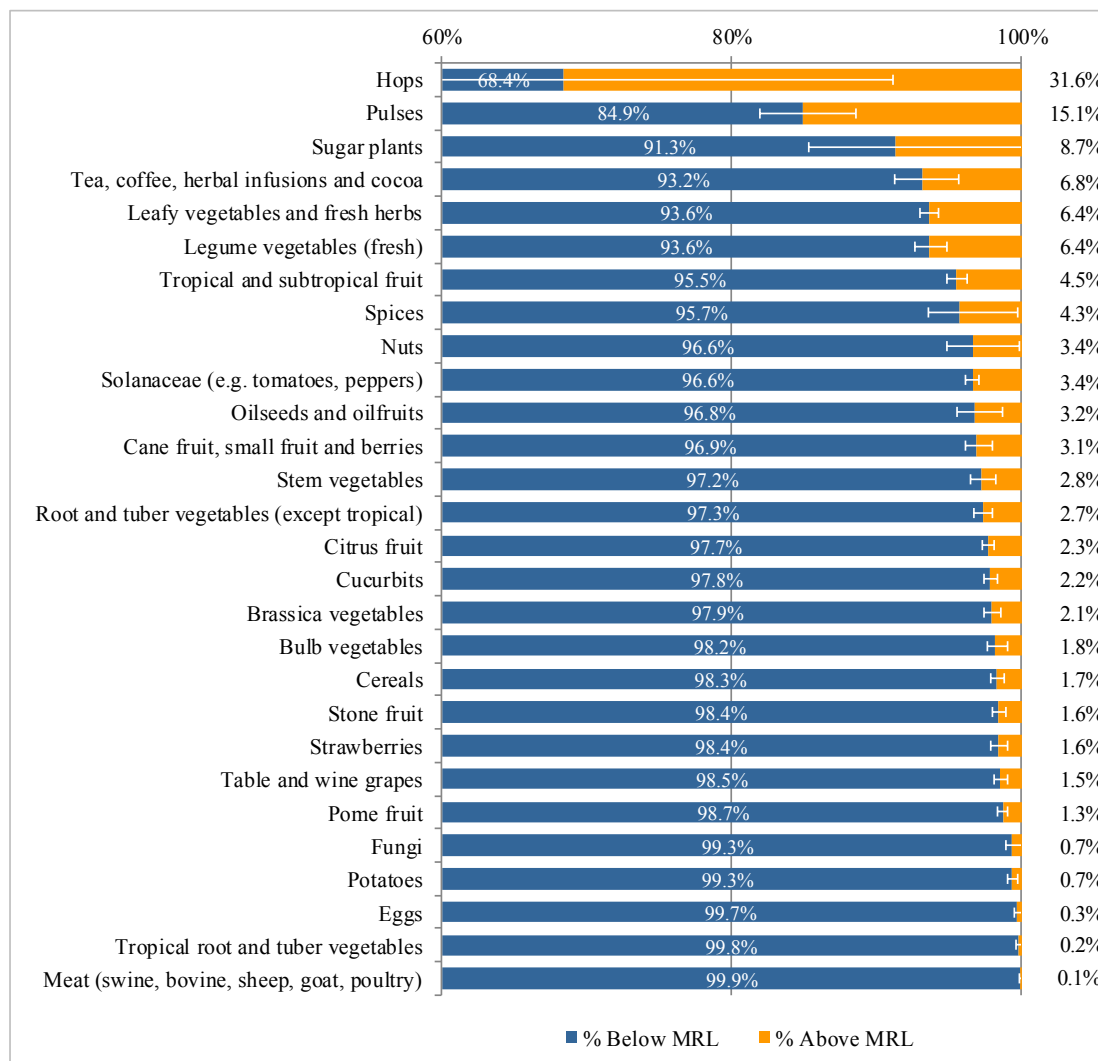
<sup>(b)</sup>: Hydrogen phosphide (phosphides expressed as hydrogen phosphide).

(RD): Following the residue definition in Appendix III, Table A, otherwise as laid down in Regulation (EC) No 396/2005 (e.g. hydrogen phosphide (RD)).

The highest percentage of MRL exceedances was found for peppers produced in Vietnam: 61.5 % of the pepper samples exceeded the MRL mainly for hexaconazole, carbendazim and difenoconazole. In Vietnamese basil the MRL exceedance rate was 59.5 %, being chlorpyrifos, carbendazim (RD) and hexaconazole the pesticides most frequently exceeding the MRL. In okra samples from India, an MRL exceedance rate of 43.3 % was found; this finding relates mainly to pesticides residues of acephate, monocrotophos and endosulfan (RD). The full list of results per country of origin for surveillance samples is given in Appendix IV, Table H.

### 3.3. Results by food product

In Figure 3-3<sup>43</sup>, the MRL-exceedance rates are presented for food classes. The highest MRL exceedance rates were detected for hops (31.6 % of 19 samples), pulses (15.1 % of 438 samples) and sugar plants (8.7 % of 23 samples). High MRL exceedance rates were also observed in tea, coffee, herbal infusions, cocoa (6.8 % of 526 samples), leafy vegetables (e.g. lettuce) and fresh herbs (e.g. parsley) (6.4 % of 5,589 samples). On the other end of the ranking, the lowest MRL exceedance rates were found for food of animal origin (0.1 % of 1231 meat samples, 0.3 % of 333 egg samples), tropical root and tuber vegetables (0.2% of 418 samples) and potatoes (0.7 % of 2359 samples).



**Figure 3-3:** Percentage of samples exceeding the MRL by food class

#### 3.3.1. Baby food

In 2011, a total of 1,796 surveillance samples of baby food were reported by all reporting countries. No results were provided by Iceland.

Table 3-4 lists the pesticides detected in baby food samples. Residues above the LOQ were found in 39 samples (2.2 %). The MRLs for baby food were numerically exceeded in four samples (0.2 %); considering the measurement uncertainty, one of these samples was found compliant with the legal limit. Compared to other food products, the frequency of residue detections and MRL exceedances in baby food is significantly lower. Two of the samples exceeding the legal limits originated from

<sup>43</sup> Due to the rounding to one decimal, the summed percentage of % below and % above the MRL may slightly differ from 100 %.

Bulgaria. These samples violated the MRL for pirimiphos-methyl (0.028 mg/kg and 0.056 mg/kg, respectively), which is an insecticide used when storing wheat or grains and on a wide range of crops. The country of origin is not known for the other two samples exceeding the MRL, which contained residues of pirimiphos-methyl (1 sample at 0.016 mg/kg) and ethylenethiourea (1 sample at 0.03 mg/kg). It is noted that ethylenethiourea, which is a degradation product of certain dithiocarbamates, is not covered by the EU MRL legislation (Regulation (EC) No 396/2005). However, the reporting Member State applied the default MRL of 0.01 mg/kg for this substance, since it was detected in a product falling under Directive 2006/125/EC and 2006/141/EC. Some of the substances found in baby food samples are products that were used in the past as pesticides, but which are still present in the environment due to their persistence (e.g. DDT (RD), dieldrin, endrin and hexachlorobenzene). In addition to these pesticides, other non-approved pesticides were detected, such as endosulfan, fonofos, methoxychlor and nitrofen. In ten baby food samples, which were labelled as organic products, pesticide residues were measured in low concentrations not exceeding the legal limits (Figure 3-4).

**Table 3-4:** Pesticides found in baby food samples

Pesticides	Number of detections	Concentration range (mg/kg)	Organic sample	MRL exceedance
Acetamiprid	1	0.002		
Azoxystrobin	1	0.00013	Yes	
Cypermethrin (RD)	3	0.0037-0.0049		
DDT (RD)	1	0.000584	Yes	
Dieldrin (RD)	2	0.001		
Dithiocarbamates	3	0.01-0.03	Yes (1)*	
Endosulfan (RD)	2	0.000197-0.000489	Yes (1)*	
Endrin	1	0.003		
Epoxiconazole	1	0.01		
Ethylenethiourea	2	0.007-0.03		(1) Yes
Etofenprox	1	0.002		
Fonofos	1	0.0003	Yes	
Hexachlorobenzene	1	0.000213	Yes	
Imazalil	1	0.01		
Lambda-Cyhalothrin	1	0.002		
Methoxychlor	2	0.004-0.006	Yes (2)*	
Nitrofen	1	0.0021		
Pirimicarb (RD)	1	0.0048		
Pirimiphos-methyl	5	0.002-0.056		(3) Yes
Propamocarb (RD)	1	0.005		
Prothioconazole (RD)	1	0.006	Yes	
Pyraclostrobin	1	0.007		
Pyrimethanil	1	0.003		
Spinosad (RD)	1	0.002		
Tebuconazole	2	0.004-0.01		
Tebufenpyrad	1	0.001	Yes	

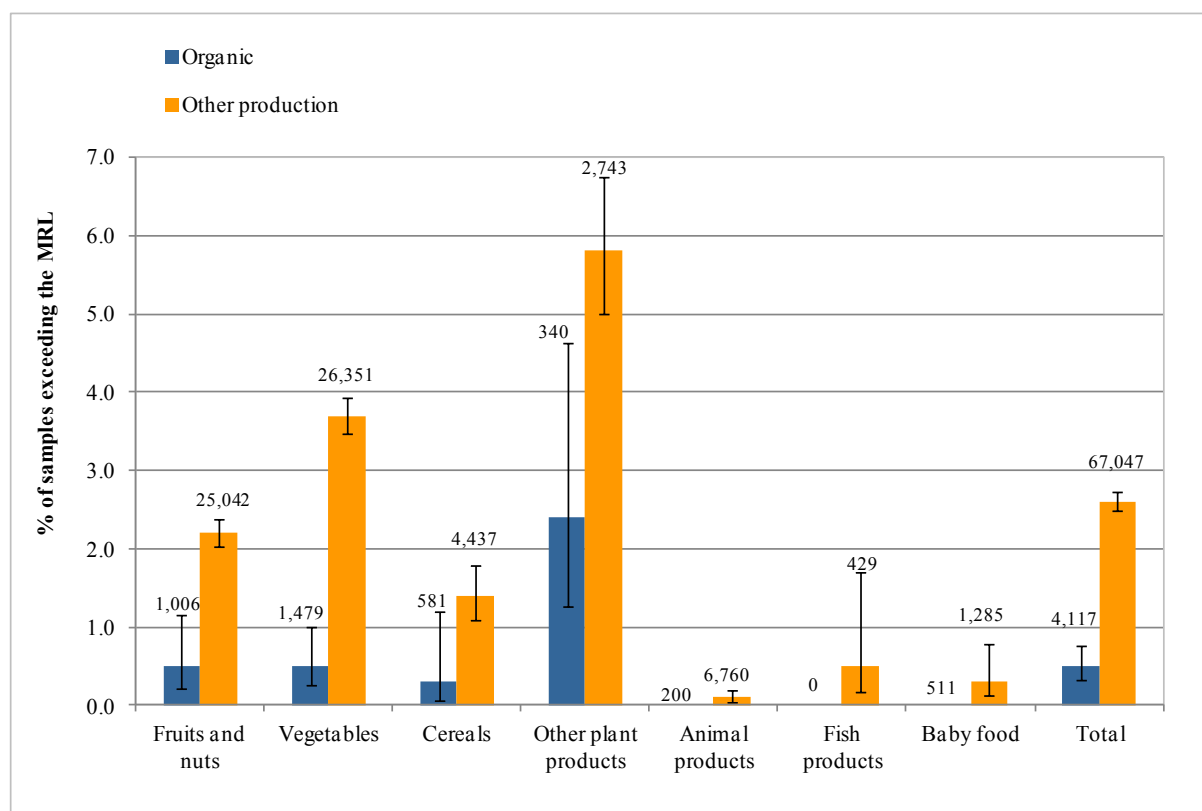
\*: The numbers in brackets indicates the number of detections of the concerned pesticide in organic samples

Multiple residues (two or more residues) were not found in baby food samples.

More details on baby food results are reported in Appendix IV, Table B6.

### 3.3.2. Organic food

In 2011, a total of 4,117 organic origin samples (5.8 % of all samples) were analysed. All reporting countries except Bulgaria, Hungary and Iceland analysed organic food samples. A comparison of the organic and conventional production results is presented in Figure 3-4<sup>44</sup>.



**Figure 3-4:** Comparison of the percentage of samples exceeding the MRL for organic and conventional products

The total number of samples analysed for each food group is reported on top of the bars; the statistical uncertainty of the calculated MRL exceedance rate is indicated by the respective confidence intervals, included in the chart<sup>45</sup>.

For all food groups presented in Figure 3-4, lower MRL exceedance rate were reported for the organic products. For fruit and nuts, the exceedance rates for organic and conventional products were 0.5 % and 2.2 %, respectively; for vegetables, the exceedance rates of 0.5 % and 3.7 % were observed for organic and conventional products, respectively. Overall, 0.5 % of organic samples contained residue concentrations exceeding the legal limit, while for conventional products the MRL exceedance rate was 2.6%.

In Appendix IV, Table E, more details can be found regarding the results of organic samples compared to conventionally produced products.

In total, 131 different substances were found in organic samples.

Table 3-5 lists the most frequently pesticide/food product combinations for which pesticides were found at measurable levels in five or more organic unprocessed samples. One of these pesticides is permitted in organic farming (spinosad (RD)); other pesticides are related to environmental

<sup>44</sup> To better understand the food classification used in this Figure, see: 'Food Products' in the Glossary.

<sup>45</sup> The confidence interval gives the estimated range of values which is likely to include the MRL exceedance rate with a probability of 95 %. The calculation was based on a Bayesian approach.



contamination (e.g. hexachlorebenzene and DDT (RD)) or to naturally occurring substances (e.g. bromide ion and dithiocarbamates).

**Table 3-5:** Pesticides found in organic food products

Pesticide	Food Products	Number of detections	Range of measured residue levels (mg/kg)	2011 MRL
Bromide ion	Wheat	9	0.67-4.84	50
	Carrots	16	0.14-2.5	50
	Spinach	14	0.484-3.2	50
DDT (RD)	Chicken eggs	9	0.001-0.006	0.05
	Cattle milk and milk products	5	0.0009-0.021	0.04
Ethephon	Wheat	5	0.115-0.24	1
Hexachlorobenzene	Chicken eggs	8	0.0007-0.002	0.02
	Cattle milk and milk products	5	0.002-0.003	0.01
Spinosad (RD)	Tomatoes	11	0.004-0.12	1
	Pears	7	0.002-0.025	1

### 3.3.3. Processed food

In 2011, a total of 7,711 samples of processed products (excluding baby food samples), were taken by all reporting countries except Iceland (10.8 % of the total samples). The samples cover a range of more than 100 types of processed food (e.g. juices produced from different fruits or vegetables and canned food). The most frequently analysed processed food types were processed cereal products (1,045 samples), olive oil (690 samples) and juices (189 samples) mainly produced from citrus fruits.

According to the MRL Regulation (Article 20 of Regulation (EC) No 396/2005) the MRL applicable for processed products is the MRL established for the corresponding unprocessed agricultural product, taking into account changes in the levels of pesticide residues caused by the processing. Thus, specific factors, which describe whether the processing leads to an accumulation or a dilution of a residue in the processed product, need to be applied to decide whether a processed product is compliant with the MRL. These processing factors should be established in a specific Annex of the MRL Regulation (Annex VI). As currently this Annex is not yet established, Member States may use processing factors derived from different sources (e.g. national authorisation dossiers, EFSA reasoned opinions or EFSA conclusions and international evaluations of pesticides such as JMPR evaluations). The lack of a harmonised list of processing factors currently impedes the MRL enforcement practice and the detailed analysis of the reported results.

Despite the lack of harmonised processing factors, EFSA noted that for most of the processed products the MRL exceedance rate was reported to be lower than for the corresponding unprocessed products. The overall percentage of processed samples exceeding the legal limit was 1.1 % of the analysed samples.

### 3.4. Multiple residues in the same sample

According to current EU legislation, the presence of multiple residues in one sample is not considered as non-compliant with MRL legislation as long as the individual residues do not exceed the individual MRL. Legal actions must be imposed by the Member States only in cases where one or more MRL is exceeded. However, the presence of multiple residues in food samples is of particular interest, because it might indicate that questionable agricultural practices have been used.

All reporting countries observed multiple residues in the samples analysed. Considering the results of both the national and the EU-coordinated programmes in 2011, residues of two or more pesticides were found in 18,881 samples, corresponding to 26.5 % of the surveillance samples analysed. 288 of the surveillance samples (0.4 %) were found to exceed more than one EU MRL. One sample

(processed vine leaves) exceeded the MRLs for 16 different pesticides. Pepper was the product with the highest number of samples with multiple MRL exceedances (40 samples out of 2,187 processed and unprocessed pepper samples exceeded the MRL for at least two pesticides).

Food products with high frequencies of multiple residues were hops (90.0 % of 20 hops samples), strawberries (61.1 % of 2,066 strawberries samples) and citrus fruits (59.8 % of 5,763 citrus fruits samples). Additional unprocessed food products with multiple residues, sorted according to the percentage of multiple residues, are listed in Table 3-6.

In Appendix IV (Table C) the results of multiple residues are further detailed for the different reporting countries.

**Table 3-6:** Percentage of samples with multiple residues by food product/group (only products/groups with more than 10 samples with multiple residues)

Product (number of samples analysed)	Number of different residues in the same sample									
	0	1	2	3	4	5	6	7	>7	Overall >1
	Percentage of samples according to the number of different residues in the same sample									
Hops (20)	10.0			15.0	10.0	30.0	25.0	5.0	5.0	90.0
Strawberries (2,066)	24.0	14.9	15.6	14.4	10.9	7.6	5.5	2.7	4.3	61.1
Citrus fruit (5,763)	20.6	19.6	20.7	16.9	11.0	5.7	2.8	1.4	1.2	59.8
Cane fruit, small fruit and berries (1,422)	32.6	12.7	12.3	11.3	8.6	8.4	5.1	4.1	4.6	54.6
Pome fruit (5,399)	32.6	20.9	17.0	12.8	7.2	4.1	2.7	1.3	1.4	46.5
Table and wine grapes (3,727)	36.0	18.1	12.9	9.6	7.8	5.6	3.6	2.3	3.9	45.9
Stone fruit (3,541)	36.1	25.0	15.8	9.0	6.3	3.5	2.0	1.0	1.4	38.9
Leafy vegetables and fresh herbs (4,964)	45.8	20.9	11.5	8.8	5.3	3.6	2.1	1.0	1.2	33.4
Tropical and subtropical fruit (3,460)	50.4	22.4	17.2	6.5	2.3	0.8	0.3	0.1	0.0	27.2
Tea, coffee, herbal infusions and cocoa (461)	58.1	15.6	9.3	3.0	4.6	2.8	2.6	1.5	2.4	26.2
Solanaceae (e.g. tomatoes, peppers) (5,498)	56.2	19.6	10.2	4.8	3.3	1.9	1.1	0.9	1.9	24.1
Spices (190)	54.2	24.7	9.5	7.9	1.6	1.1	0.5	0.5		21.1
Legume vegetables (fresh) (2,050)	58.2	21.4	10.9	6.2	1.8	0.5	0.3	0.4	0.2	20.4
Root and tuber vegetables (except tropical) (2,607)	58.6	22.6	10.1	4.9	2.1	0.8	0.3	0.3	0.2	18.8
Cucurbits (3,531)	61.6	20.3	8.3	4.7	2.4	1.2	0.5	0.5	0.5	18.2
Stem vegetables (1,447)	67.4	15.4	7.4	4.4	2.8	1.1	0.7	0.2	0.6	17.1
Cereals (4,801)	64.4	23.2	8.9	2.4	1.0	0.2		0.0	0.0	12.5
Milk and milk products (1,524)	81.2	7.5	10.7	0.3	0.1	0.1	0.1			11.3
Bulb vegetables (1,325)	73.9	15.7	5.8	2.7	0.8	0.4	0.2	0.1	0.4	10.4
Brassica vegetables (1,852)	75.8	14.1	5.3	2.4	1.1	0.8	0.2	0.2	0.2	10.1
Fungi (529)	76.6	13.6	7.0	2.3	0.4			0.2		9.8
Oilseeds and oil fruits (1,381)	77.0	15.9	5.1	1.5	0.3	0.1				7.0
Pulses (656)	77.9	15.7	3.5	1.5	1.1	0.3				6.4
Potatoes (2,421)	71.4	23.0	4.2	1.0	0.3	0.0	0.0	0.1		5.6
Eggs (362)	89.5	5.8	2.5	2.2						4.7
Fat (swine, bovine, sheep, goat, poultry) (1,080)	90.0	8.4	1.3	0.2	0.1					1.6
Meat (swine, bovine, sheep, goat, poultry) (1,601)	97.8	1.1	0.8	0.3	0.1					1.2



Product (number of samples analysed)	Number of different residues in the same sample									
	0	1	2	3	4	5	6	7	>7	Overall >1
	Percentage of samples according to the number of different residues in the same sample									
Tropical root and tuber vegetables (416)	96.2	3.1	0.7							0.7
Liver (swine, bovine, sheep, goat, poultry) (1,181)	97.7	1.6	0.4	0.1	0.1	0.1				0.7

Multiple residues in one sample can result from the application of different types of pesticides used to protect the crop against different pests or diseases, e.g. insecticides, fungicides and herbicides. Pesticide formulations often contain a number of pesticides which have different modes of action. The use of pesticides with different modes of action is often recommended by national authorities in integrated pest management strategies in order to minimise the development of pest resistance to pesticides. In addition to the agricultural practices mentioned above that may be different in the Member States (e.g. due to different climate conditions), other possible reasons for the occurrence of multiple residues are:

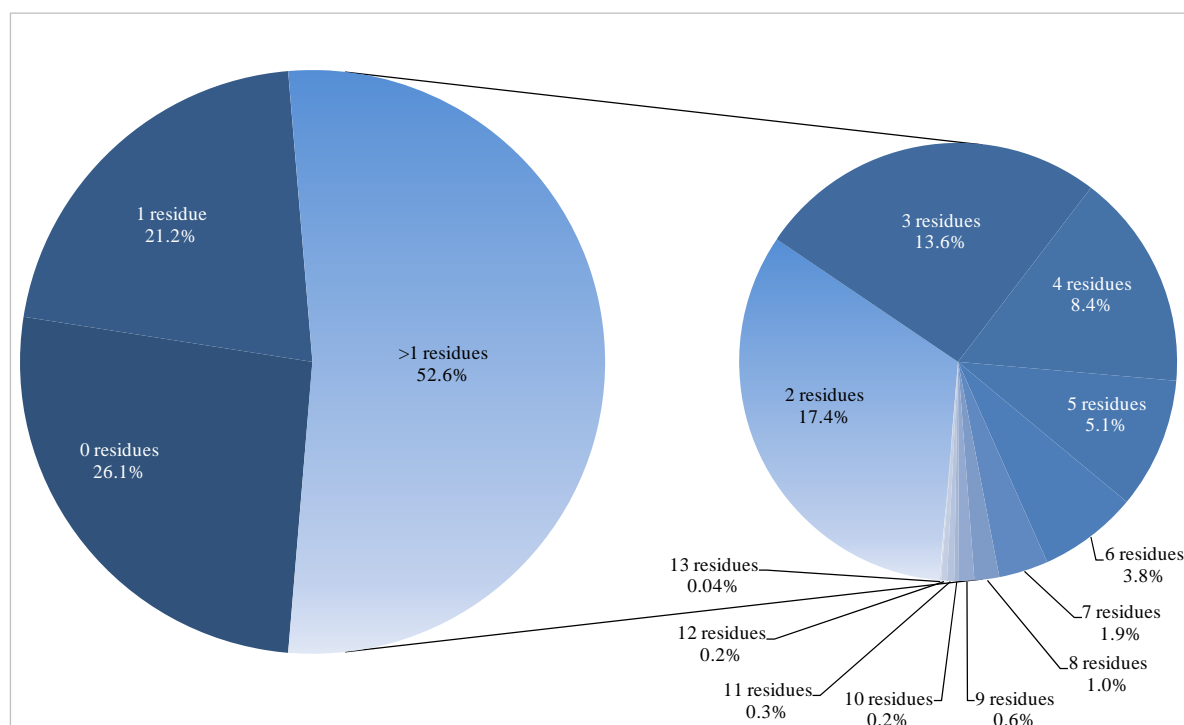
- mixing of lots that were treated with different pesticides, either during the sampling or in the course of the sorting of the items (e.g. sorting for quality classes);
- mixing of lots during food production (e.g. beer and orange juices);
- residues resulting from soil uptake in cases where pesticides have high persistence in the soil;
- residues resulting from spray drift from neighbouring plots or cross-contamination in the processing of the crops (e.g. by washing practices);
- contamination during handling, packaging and storage.

Further analysis of samples containing multiple residues could facilitate clearer understanding and explanations for the presence of multiple residues in the same sample. Due to the large volume of data, one crop for which multiple residues were observed repeatedly (pears) was selected for a more detailed data analysis.

### 3.4.1. Case study on pears

Pears were chosen for the case study due to the high percentage of multiple residues observed and because it is a crop which is important for human consumption.

The total number of unprocessed pear samples was 2,184. No measurable residues were observed in 26.1 % (571 samples) of these samples, and 21.2 % (463 samples) had one pesticide residue. The remaining samples (1,150 samples; 52.6 %) contained multiple residues: up to 13 different pesticides were detected in the same pear sample (Figure 3-5).



**Figure 3-5:** Percentage of pear samples according to the number of different pesticides found in the same sample

In Table 3-7, the results for the multiple residue samples are reported according to the sample origin (countries with less than 10 samples are not reported). Samples from Belgium, Chile and Portugal had the highest occurrence rates of samples containing more than one pesticide.

**Table 3-7:** Number of pear samples with different pesticide residues by country of origin

Country of origin (total number of samples analysed)	Number of residues							Maximum
	0	1	2	3	4	5	>5	
	Percentage of samples							
Argentina (167)	38.9	24.0	22.8	9.0	4.2	0.6	0.6	7
Belgium (149)	4.7	10.1	20.1	16.8	18.1	12.8	17.4	8
Chile (78)	9.0	20.5	21.8	30.8	6.4	6.4	5.1	7
China (34)	41.2	32.4	11.8	5.9	2.9	2.9	2.9	9
France (82)	34.1	29.3	14.6	15.9	4.9	1.2		5
Germany (100)	33.0	34.0	11.0	13.0	3.0	5.0	1.0	6
Greece (83)	56.6	20.5	7.2	3.6	6.0	4.8	1.2	6
Hungary (77)	26.0	26.0	28.6	13.0	2.6	1.3	2.6	6
Italy (435)	19.8	16.8	17.2	16.3	11.0	6.7	12.2	12
Netherlands, The (219)	16.9	16.0	24.7	17.4	12.3	6.4	6.4	13
Poland (60)	45.0	25.0	16.7	11.7		1.7		5
Portugal (99)	5.1	25.3	17.2	9.1	10.1	7.1	26.3	12
Romania (41)	90.2	7.3	2.4					2
Slovenia (28)	21.4	14.3	10.7	7.1	25.0	21.4		5
South Africa (205)	17.1	33.2	22.4	14.6	6.8	2.0	3.9	7
Spain (168)	35.7	17.3	11.3	10.1	4.8	4.8	16.1	11
Total (2,025)	514	429	365	279	168	106	164	

The maximum number of residues found in a single pear sample was 13, found in one sample originating from the Netherlands. The detected compounds were: azoxystrobin, cyflufenamid, cyprodinil, dimetomorph, etoxazole, fludioxonil, fluoxastrobin, furathiocarb, haloxyfop-methyl,

hexythiazox, isoxaben, proquinazid and trifloxystrobin. None of the detected pesticides exceeded the respective MRLs.

In total, 114 different pesticides were found in pear samples with multiple residues. The most frequently found pesticides were boscalid (RD) (438 determinations), dithiocarbamates (RD) (395 determinations), chlorpyrifos (311 determinations), pyraclostrobin (259 determinations) and thiacloprid (211 determinations).

The most frequent combinations of two pesticides measured in the same sample were boscalid (RD)/pyraclostrobin (240 samples, 11.0 % of the 2,184 pears samples), boscalid (RD)/chlorpyrifos (164 samples, 7.5 %) and boscalid (RD)/dithiocarbamates (RD) (152 samples, 7.0 %).

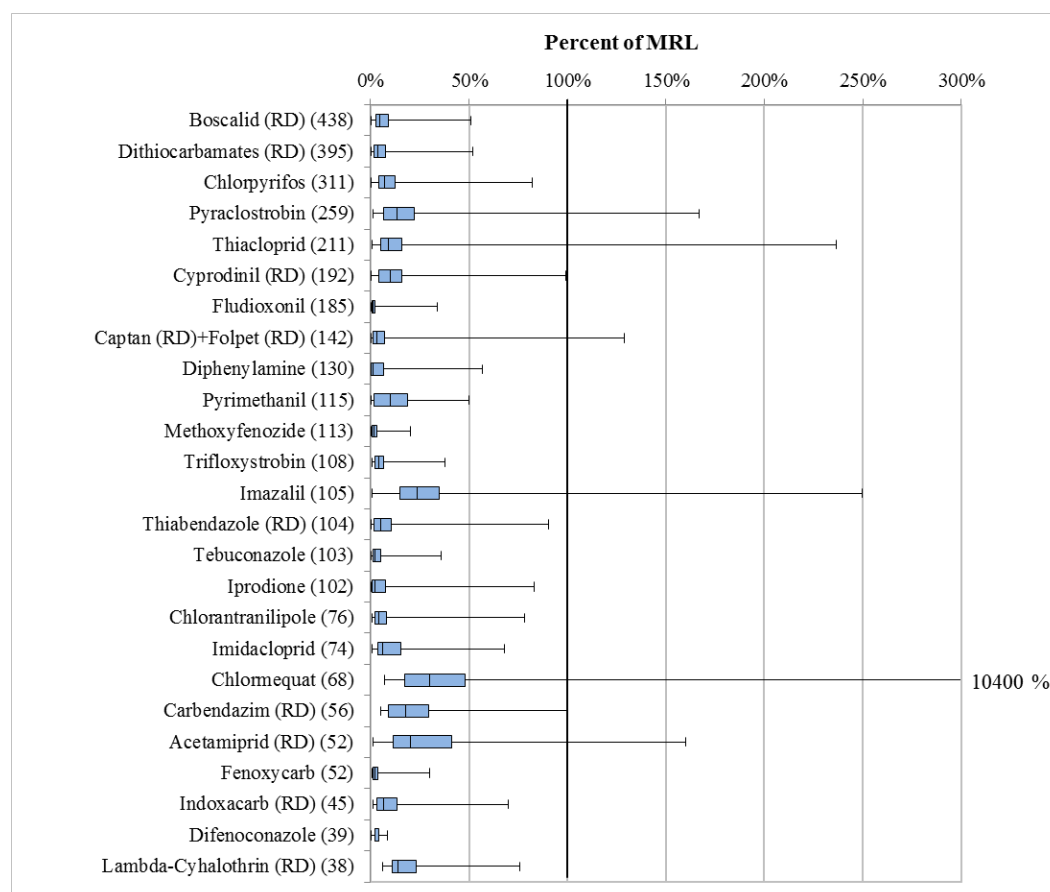
When assessing multiple residues in food, not only the number of different pesticides should be considered, but also the concentration of the individual pesticides measured in the sample. In Figure 3-6, the residue concentrations for the most frequently detected pesticides on pear samples with multiple residues are compared with the MRL, presenting the results as box plots<sup>46</sup>. The number of samples with measurable residues is shown in brackets. For 18 of the 25 most frequently found pesticides in pears the median residue concentrations were below 10 % of the MRL. For 15 of the 25 residues, the 75<sup>th</sup> percentile was below 15 % of the MRL. The total number of samples analysed for the pertinent pesticide is reported in brackets in Figure 3-5.

The analysis demonstrated that in most samples containing multiple residues the measured residue concentrations were well below the MRL.

A sample may be of concern if the individual substances present in the same sample belong to a group of chemicals that have a common mode/mechanism of action and therefore needs to be assessed in a cumulative exposure assessment. In Section 4.3 of the present report the results of an estimate of the short-term exposure to multiple pesticide residues found on pears are reported.

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<sup>46</sup> Further explanation on the box plots can be found in Section 2.2.



**Figure 3-6:** Box plots for the multiple residues in unprocessed pears, expressed in percentage of the MRL (top 25 results)

### 3.5. Reasons for MRL exceedances

In 2011, 2,356 samples (including enforcement samples) were found to exceed the MRLs. The actual reasons for MRL breaches<sup>47</sup> reported by the national competent authorities concerned only a limited number of samples. In the following compilation the information received on reasons for MRL breaches reported in 2011 are summarised:

- Missing import tolerances
- GAP not respected: use of authorised pesticide on a crop but the application rate and/or application method not respected
- GAP not respected: use of pesticide non-authorised on the specific crop
- GAP not respected: use of non-authorised pesticide on the specific crop due to a lack of knowledge
- GAP not respected: harvested too soon after application
- Use of pesticide according to authorised GAP: unexpected slow degradation of residues
- Non-authorised pesticide used as seed treatment
- Cross contamination: spray drift, adventitious contamination and possible drift from neighbouring fields

<sup>47</sup> See also 'MRL exceedances' in the Glossary.

- Contamination: spraying equipment not sufficiently clean
- Contamination: residues resulting from previous use of a pesticide (e.g. uptake of residues from soil)
- Residues resulting from other sources than plant protection treatment (e.g. biocides, veterinary medicines, bio fuel)
- Residues resulting from degradation of one pesticide into another exceeding the legal limit of this last one
- Naturally occurrence (e.g. dithiocarbamates in turnips)
- Changes of the EU MRL during the year

On the basis of these explanations for MRL breaches reported by national competent authorities, EFSA cannot derive general conclusions on the reasons for MRL exceedances. However, considering the detailed results and the statistics concerning the MRL exceedance rates, EFSA identified some areas of concern regarding MRL exceedances (see bullet points below).

- The observed overall MRL exceedance rate reported for samples originated from third countries is four times higher than the exceedance rate for products grown in EU and EFTA countries (Table 3-2). Many of the MRL exceedances refer to pesticides that are no longer approved in the EU (e.g. acephate, monocrotophos, endosulfan, isoprothiolane, fenthion and bromopropylate). In the EU, for non-approved pesticides the legal limits are set at the limit of quantification, unless import tolerances were requested or MRLs are established at international level (Codex Alimentarius). Thus, if import tolerance have not been requested for pesticides that are still used in third countries, the current EU MRLs might not be sufficient. In order to avoid trade problems for imported products there are two possible options: 1) avoiding the use of pesticides which are no longer approved at EU level, 2) requesting import tolerances reflecting the Good Agricultural Practices of third countries. As these two options are often not well understood by importers/producers in third countries, EFSA recommends fostering training programmes to improve the knowledge of EU legal framework on pesticide residues.
- MRL exceedances in third countries were also observed for approved pesticides on crops where the EU MRL is set at the LOQ or at a level that might not be sufficient to cover the approved uses in third countries. Also in these cases, the possibility to request import tolerances reflecting the needs in the third countries should be considered by importers/producers in third countries.
- The highest number of MRL exceedances regarding food products grown in Europe were observed for leafy vegetables (in particular in spinach, lettuce, vine leaves, chard and parsley), some fruit crops (e.g. table grapes, apples, strawberries, peaches and currants) and other crops like beans with pods, celery and carrots. The reason for the high frequency of MRL exceedances in vine leaves is most likely due to the fact that pesticides authorised for the use on table or wine grapes were also used on crops that used to produce vine leaves. Since at EU level only for a very limited number of pesticide MRLs above the LOQ are established for vine leaves, the use of pesticides authorised for table or wine grapes, often leads to MRL exceedances. Producers of vine leaves should be informed which products are approved for vines intended for vine leave production. In addition, if needed, applications to raise the existing MRLs for vine leaves should be prepared. The necessary residue trials are need to be generated either by the authorisation holders or by grower associations.
- The other vegetables and fruit crops with high MRL exceedance rates are typically intensive cultivated products which often undergo repeated pesticide treatments. For this type of

products it is of utmost importance that the producers strictly follow the authorised Good Agricultural Practices defined on the pesticide labels and that the pesticide application equipment is properly maintained.

On the basis of these observations, EFSA recommends that the European Commission continues funding training programmes under e.g. the framework of 'Better Training for Safer Food' (BTSF) which should be tailored for countries where repeatedly MRL exceedances were observed. In addition, targeted audits performed by the Food and Veterinary Office (FVO) should be performed in the countries concerned. Also national competent authorities should consider the need of organising training programmes for farmers and other stakeholders involved in the food production and supply chain.

EFSA also recommends continuing monitoring of products which are important for European consumption and in which high frequencies of MRL exceedances were observed (e.g. spinach, lettuce, table grapes, apples, strawberries, peaches, beans with pods and carrots). In addition, crops like chard, parsley, currants, celery and other crops which often exceeded the legal limits should be included in national control programmes.

### **3.6. Overall results**

97.5 % of the surveillance samples analysed (69,400 samples) were at or below the legal MRL. In 2.5 % of the samples, the legal limits were exceeded numerically for one or more pesticides (1,764 samples). For 1.5 % of the samples legal actions were triggered since, considering the measurement uncertainty, they were found to be non-compliant with the MRL legislation.

In 2011, the total number of different pesticides sought in EEA countries was 888. Out of these, 381 pesticides were found in measurable quantities.

## SUMMARY CHAPTER 3

In 2011, in total 79,035 samples were taken in the context of the national programmes which is an increase of 2.5 % compared to the previous year. 71,164 samples were classified as surveillance samples. The following results refer to surveillance samples only.

97.5% of the surveillance food samples analysed were within EU legal limits; thus, in 2.5 % of the samples, the legal limits were exceeded numerically for one or more pesticides (1,764 samples). For 1.5 % of the samples legal actions were triggered since, considering the measurement uncertainty, they were found to be non-compliant with the MRL legislation.

The total number of different pesticides sought in EEA countries was 888. Out of these, 381 pesticides were found in measurable quantities.

The percentage of food samples imported from third countries that exceeded the legal limit amounted to 6.3 %, while the exceedance rate in EU and EFTA countries was of 1.5 %. A similar ratio was calculated regarding the non-compliance rate for food produced in third countries: 3.7 % in third countries versus 0.9 % in the EU and EFTA countries, respectively.

In the EEA area, the average of the MRL non-compliance rate was 0.9 %. Products originating from Cyprus, Malta, Bulgaria, Portugal, Slovenia, Iceland, Luxembourg, France, Belgium, the United Kingdom, Estonia, the Czech Republic, Austria, Greece and Spain were found to be above the average non-compliance rate.

For third countries the highest non-compliance rates were identified for food originating from Vietnam (26.8 % of 421 samples), Kenya (15.2 % of 355 samples), Malaysia (14.0 % of 108 samples), Guatemala (12.1 % of 33 samples), and Thailand (10.3 % of 458 samples). In this ranking countries with less than 20 samples were not considered.

The highest percentage of MRL exceedances were found for Vietnamese peppers (61.5 % mainly due to residues of hexaconazole, carbendazim (RD) and difenoconazole) and for Vietnamese basil (59.5 % mainly due to residues of chlorpyrifos, carbendazim (RD) and hexaconazole), followed by okra produced in India (43.3 % mainly due to residues of acephate, monocrotophos and endosulfan (RD)).

All reporting countries except Iceland analysed in total 1,796 samples of baby food. Residues above the LOQ were found in 39 samples (2.2 %). The MRLs for baby food were exceeded in four samples (0.2 %). Compared to other food products, the frequency of residue detections and MRL exceedances in baby food is significantly lower.

4,117 organic origin samples (5.8 % of the total number of samples) were analysed by all reporting countries except Bulgaria, Hungary and Iceland. Organic samples were found to have lower MRL exceedance rate than in conventional products (0.5 % for organic products versus 2.6 % for conventional products).

7,711 samples of processed products (excluding baby food samples) (10.8 % of the total number of samples) were taken by all reporting countries except Iceland. Overall, 1.1 % of the processed samples exceeded the MRL. The exceedance rate for processed products was found to be lower than the one determined for the corresponding unprocessed products.

All reporting countries observed multiple residues in the samples analysed. Residues of two or more pesticides were found in 18,881 samples (26.5 % of all samples). 0.4 % of the samples were found to exceed more than one EU MRL. One sample of processed vine leaves was found to exceed the MRLs for 16 different pesticides. Pepper was the food product with the highest number of samples with multiple MRL exceedances.



Among the food products covered by the EU-coordinated monitoring programme, pears were identified as the product with the highest number of multiple residues (52.7 % of the pear samples). 114 different pesticides were found in pear samples with multiple residues. The most frequently found pesticides were boscalid (RD) (438 detections), dithiocarbamates (RD) (395 detections), chlorpyrifos (311 detections), pyraclostrobin (259 detections) and thiacloprid (211 detections). The most frequent combinations of two pesticides measured in the same sample were boscalid (RD)/pyraclostrobin (240 samples, 11.0 % of the 2,184 pears samples), boscalid (RD)/chlorpyrifos (164 samples, 7.5 %) and boscalid (RD)/dithiocarbamates (RD) (152 samples, 7.0 %).

The reasons for MRL breaches reported by the national competent authorities concerned only a limited number of samples. However, considering the detailed results and the statistics concerning the MRL exceedance rates, EFSA identified some areas of concern regarding MRL exceedances; these concerned both imported and EU products of different food groups.

#### 4. Dietary exposure and dietary risk assessment

According to Article 32 of Regulation (EC) No 396/2005, EFSA is required to assess the consumer dietary exposure to pesticide residues and to provide an analysis of the chronic and acute consumer health risks resulting from pesticide residues in and on food.

Dietary exposure is calculated according to the following equation:

$$\text{Dietary exposure} = \frac{\sum(\text{residue concentration} \times \text{food consumption})}{\text{body weight}}$$

In the acute or short-term exposure assessment the uptake of pesticide residues via food consumed within a short period of time, usually within one meal or one day, is estimated. The chronic or long-term exposure assessment aims to quantify the pesticide intake by consumers over a long period, predicting the lifetime exposure. A comparison of the estimated chronic and acute dietary exposure with the relevant toxicological reference values for long-term and short-term exposure (i.e. the acceptable daily intake (ADI) and the Acute Reference Dose (ARfD), respectively (see Appendix V, Table A), indicates if consumers are exposed to pesticide residues that may pose a health risk. As long as the dietary exposure is lower than or equal to the toxicological reference values a consumer health risk can be excluded with a high degree of certainty. However, if the calculated dietary exposure exceeds the ARfD or the ADI, effects on the consumer health might occur and consequently appropriate risk management options should be considered, e.g. the withdrawal of food products from the market which were identified as posing a possible health concern or restrictions regarding the use of certain pesticides.

For estimating the actual acute and chronic exposure to pesticide residues measured in monitoring programmes EFSA used the deterministic risk assessment methodology that was originally developed for the risk assessment in the context of pesticide authorisations (EFSA PRIMo) (EFSA, 2007). The model implements the principles of the WHO methodologies for short-term and long-term risk assessment (FAO, 2009), taking into account the food consumption data available for the European population.

The assumptions for the short-term and long-term exposure assessment related to the individual pesticides are outlined in Sections 4.1 and 4.2, respectively. In Section 4.3 the approach used for the exposure assessment to multiple residues occurring in individual samples is described.

##### 4.1. Short-term (acute) exposure assessment – individual pesticides

For the calculation of the short-term intake, the exposure is calculated based on the principles of the methodology developed by JMPR (FAO, 2009), the International Estimation of Short Term Intake (IESTI) methodology, including some adaptations<sup>48</sup>. The methodology implies the coincidence of the following events:

- A consumer eats a large portion of a certain food product (normally the 97.5<sup>th</sup> percentile of the daily food consumption reported in food surveys, considering only persons who have consumed the pertinent food product during the reference period);
- The calculation is based on the assumption that the food product containing the highest residue measured (HRM) in the framework of the 2011 EU-coordinated programme or of any of the national surveillance control programmes is consumed;
- The HRM is multiplied by a factor (variability factor) which allows for potential inhomogeneous residue distribution among the individual units in the sample analysed. The variability factors depend on the unit size of the food item (for food products with a unit

<sup>48</sup> The IESTI methodology was amended in the following points: 1) the HR/STMR is replaced by the HRM; 2) variability factor, see next footnote.

weight between 25 and 250 g, a factor of 7 is applied (e.g. carrots, mandarins, oranges, pears and potatoes)). The underlying assumption is that the consumer may pick out a highly contaminated unit which contains a residue that is seven-fold higher than that in the composite which was analysed in a monitoring programme. For food products with a unit weight of more than 250 g (e.g. cucumbers) a variability factor of 5 is applied. No variability factor is used for food products with unit weights less than 25 g (e.g. beans with pods, spinach and rice)<sup>49</sup> or for food of animal origin (liver and poultry meat).

- No reduction of residues on the food commodity eaten (e.g. via washing, peeling, cooking and degradation during storage).
- The residue values reported according to the residue definition for enforcement (in accordance with the EU MRL legislation) were not recalculated to the residue definition for risk assessment<sup>50</sup> due to the lack of a comprehensive list of conversion factors.

It should be stressed that the co-occurrence of the above events (i.e. large portion size, highest residue measured and inhomogeneous residue distribution) is rather unlikely and leads to conservative results, meaning that the calculated exposure is likely to overestimate the real exposure of European consumers. In case the estimated consumer exposure based on these conservative assumptions does not lead to an exceedance of the toxicological reference values, a consumer health risk can be excluded with a high probability. However, if the calculated exposure exceeds the toxicological reference values, further refined calculations should be performed to verify if the food poses a health concern (e.g. more realistic estimations of residues in edible part of the crop such as exposure to residues present in the edible part of oranges without peel).

The short-term assessment is carried out separately for each pesticide/crop combination as it is considered unlikely that a consumer will eat two or more different food products in large portions within a short period of time and that all of these food products contain residues of the same pesticide at the highest level observed during the reporting year.

The short-term exposure assessments were performed for the pesticides covered by the 2011 EU-coordinated programme (Appendix III, Table A), considering the 11 unprocessed food products covered by the EU coordinated monitoring programme (i.e. beans (with pods), carrots, cucumbers, oranges, mandarins, pears, potatoes, rice, spinach, liver and poultry meat). For wheat flour no acute risk assessment was conducted.

The short-term (acute) consumer exposure is calculated using the following input parameters:

- For each pesticide/crop combination the highest residue (HRM) was identified considering all the results reported in the framework of the 2011 EU-coordinated and the national programmes (surveillance samples only)<sup>51</sup>. The non-compliant results were not considered for the exposure assessment.
- For pesticide/crop combinations where all reported results were below the LOQ, no acute exposure assessment was calculated.

<sup>49</sup> In 2007, JMPR recommended to use a variability factor of 3 for all food products with unit weight greater than 25 g instead of the variability factors of 5, 7 and 10 as recommended in the previous guidelines (FAO, 2009). At European level the choice of the most appropriate variability factor to be used for the acute risk assessment is still under discussion. However, so far Member States did not agree to reduce the variability factor. Thus, at EU level the calculations are performed with the more conservative variability factors of 5 and 7. The variability factor of 10, which was recommended by JMPR to be used for leafy vegetables, was found to be overly conservative and was therefore not included in the EFSA PRIMo as default variability factor (EFSA, 2007).

<sup>50</sup> See 'residue definition' in the Glossary.

<sup>51</sup> It is noted that samples which exceeded the legal limit and which, according to the model assumptions, would lead to high exposure situations, might have been taken off the market before they were available for consumption (e.g. non-compliances identified for import controls). To allow more realistic exposure assessments it would be desirable to receive more information from reporting countries as to whether lots which were exceeding the MRL were actually placed on the market and are therefore relevant to acute consumer risk assessment.

- For liver, results were reported for bovine, goat, sheep, swine and poultry liver. The results for the different species were pooled to identify the HRM.
- The exposure calculation is based on the large portion food consumption data implemented in the EFSA PRIMo; the exposure calculation for liver was performed for bovine liver<sup>52</sup> (EFSA, 2007).
- Unit weight for the individual food products (retrieved from the EFSA PRIMo, EFSA, 2007)
- For certain pesticides the first risk assessment screening indicated a consumer health risk for some food products that are normally consumed only after processing. In order to refine the exposure assessment, processing factor were taken into account, where such information was available (see Table 4-1).

**Table 4-1:** Processing factors applied for refined exposure assessments

Food Product	Pesticide	Processing Factor	Processed food item	Source
Mandarins	Chlorpyrifos	0.04	mandarin, peeling	FAO, 2000
	Dithiocarbamates	0.88	orange, pulp	BVL, 2002
	Imazalil	0.07	average citrus, pulp	EFSA, 2010b
	Methidathion	0.03	orange, pulp	BVL, 2002
	Prochloraz (RD)	0.01	orange, pulp	BfR Database: ATLANTA, 2007
Oranges	Carbaryl	0.78	orange, peeling	FAO, 2002
	Carbendazim (RD)	0.46	citrus fruit, peeling	EFSA, 2009b
	Chlorpyrifos	0.04	orange, peeling	FAO, 2000
	Dimethoate (RD)	0.14	orange, juice	FAO, 1998
	Dithiocarbamates	0.88	orange, pulp	BVL, 2002
	Ethion	0.03	orange, pulp	BVL, 2002
	Imazalil	0.08	orange, pulp	EFSA, 2010b
	Methidathion	0.03	orange, pulp	BVL, 2002
	Prochloraz (RD)	0.11	mandarin, pulp	BVL, 2002
Potatoes	Chlorpropham	0.57	potatoes, unpeeled and boiled	EFSA, 2012d
	Imazalil	0.14	potato, boiled (washed with peel)	EFSA, 2010b

In order to perform the risk assessment, the calculated exposure for a certain pesticide/crop combination was compared with the ARfD value established for the pesticide concerned. In Appendix V (Table A) the ARfD values used for the acute risk assessment are listed. It should be mentioned that some of the ARfD values were recently lowered and were not in place in 2011 when the monitoring results were generated (e.g. bitertanol).

Since the residue definition for dimethoate contains compounds with significantly different toxicity (i.e. dimethoate and omethoate), it is not possible to perform an unambiguous risk assessment. Thus, for this compound EFSA calculated two scenarios: the optimistic dimethoate scenario where it is assumed that the determined residues are related only to the less toxic dimethoate, while in the pessimistic omethoate scenario, the total residue concentration reported is assumed to refer to the more toxic omethoate.

Also the residue definitions for esfenvalerate (RD), methomyl (RD) and triadimenol (RD) contain compounds with different toxicological profiles. To perform the acute risk assessment, it was assumed that the residue found result from the use of the authorised substance.

<sup>52</sup> Since the consumption of liver of other species is lower than the consumption of bovine liver, the selected scenario reflects the most critical situation.

For dithiocarbamates, the risk assessment is based on the ARfD established for the pesticide which was leading to the setting of the MRL<sup>53</sup>.

For 37 substances included in the EU coordinated monitoring programme the setting of an ARfD was not necessary because of the low acute toxicity of the substances. These pesticides are therefore not relevant for acute exposure assessment.

For 15 pesticides the short-term risk assessment has been performed with the ADI instead of the ARfD because these have not been evaluated with regard to the setting of the ARfD and/or the setting of the ARfD was not finalised.

For eight substances no acute risk assessment could be performed since neither an ARfD nor an ADI was available<sup>54</sup> (i.e. azinphos-ethyl, dicotophos, EPN, hexachlorobenzene, hexachlorocyclohexane (alpha), hexachlorocyclohexane (beta), nitenpyram and propargite).

The list of ADI values can be found in Appendix V, Table A.

#### 4.1.1. Residue levels used for short-term (acute) exposure assessment – individual pesticides

For each pesticide/crop combination the highest measured residue concentration (HRM) was derived and used to perform the IESTI calculations (Table 4-2). In this table, EFSA also included the HRMs for pesticides for which no ARfD was deemed necessary and pesticides for which no toxicological reference values are available. Pesticide/crop combinations where no samples were requested to be analysed are shaded in grey. Empty cells refer to pesticide/crop combinations for which samples were analysed, but none of the samples contained measurable residues (i.e. all results were below the LOQ).

**Table 4-2:** Highest residues measured (HRM) (in mg/kg) used as input values for the short-term dietary exposure calculations

Pesticide	Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Liver <sup>(a)</sup>	Poultry meat
2,4-D (RD) <sup>(*)</sup>				0.77	0.33						
Abamectin (RD)	0.01		0.018								
Acephate	0.09	0.83									
Acetamiprid	0.2		0.28	0.16	0.029	0.16		0.062	1.676		
Acrinathrin	0.097		0.085						1.05		
Aldicarb (RD)											
Amitraz (RD)	0.01										
Amitrole <sup>(*)</sup>											
Azinphos-ethyl <sup>(**)</sup>											
Azinphos-methyl						0.1		0.011			
Azoxystrobin <sup>(*)</sup>	0.5	0.2	0.213	0.38	0.127	0.015	0.05	0.15	0.4		
Benfuracarb								0.006			
Bifenthrin	0.082	0.099	0.04	0.08	0.04	0.039	0.02	0.02	0.17		
Bitertanol	0.02		0.077		0.01	0.14					
Boscalid <sup>(*)</sup>	0.362	0.39	0.26	0.1	0.076	1.014			11		
Bromide ion <sup>(*)</sup>	7.1	8	8.3	3.878	2.568	2.480	8.517	124	51		
Bromopropylate	0.013			0.19	0.031	0.01					

<sup>53</sup> As the dithiocarbamates MRLs for cucumbers and potatoes are linked to the use of propineb, short-term exposure was compared with the ARfD for propineb. The MRLs for beans (with pods) and carrots result from the use of mancozeb. Thus, the exposure was compared with the ARfD of mancozeb. The MRL legislation does not give an indication which pesticide triggered the MRL setting for mandarins, oranges, pears and rice. In this case the risk assessment was performed with the reference values set for ziram, the dithiocarbamate with the lowest ARfD.

<sup>54</sup> For some pesticides the toxicological reference values (ADI/ARfD) are not available because the national/EU/international toxicological assessment was not finalised or not carried out due to e.g. the incomplete toxicological dossier.

Pesticide	Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Liver <sup>(a)</sup>	Poultry meat
Bromuconazole (RD)											
Bupirimate <sup>(*)</sup>			0.1		0.01	0.01					
Buprofezin	0.038	0.042	0.031	0.031	0.031	0.143		0.12			
Captan (RD)		0.1	0.082			3.86					
Carbaryl					0.84						
Carbendazim (RD)	0.3	0.014	0.47	0.089	0.84	0.279	0.023	0.063	0.2		
Carbofuran (RD)	0.027			0.16	0.05						
Carbosulfan								0.034			
Chlordane (RD)											
Chlorfenapyr	0.01	0.02		0.057	0.04						
Chlorfenvinphos					0.006	0.011					
Chlormequat						10.4					
Chlorobenzilate											
Chlorothalonil	1.13	0.04	0.68			0.18			0.17		
Chlorpropham (RD)		0.045				0.015	18		0.003		
Chlorpyrifos	0.15	0.73	0.48	0.56	0.4	0.41	0.52	0.04	0.826		
Chlorpyrifos-methyl		0.05	0.03	0.79	0.274	0.43	0.021	0.022			
Clofentezine (RD) <sup>(*)</sup>											
Clothianidin			0.006			0.05	0.01	0.01	0.15		
Cyfluthrin (RD)	0.07		0.002			0.07					
Cypermethrin (RD)	1.2		0.13	0.1	0.2	0.74			2.8		
Cyproconazole	0.01	0.03	0.08			0.06		0.004			
Cyprodinil <sup>(*)</sup>	0.5	0.04	0.204	0.02		0.99	0.012		0.001		
DDT (RD) <sup>(*)</sup>										0.062	0.013
Deltamethrin	0.08	0.01	0.003	0.04		0.06		2.497	0.27		
Diazinon	0.01	0.02		0.013	0.024						
Dichlofluanid											
Dichlorvos	0.011		0.13			0.003		0.01			
Dicloran		0.02									
Dicofol (RD)	0.07			0.52	0.5				0.3		
Dicrotophos <sup>(**)</sup>											
Dieldrin (RD)										0.004	0.0008
Difenoconazole	0.26	0.097	0.066	0.023	0.008	0.043		0.029	0.1		
Dimethoate (RD)	0.61	0.011	1.8	0.011	0.16		0.015		10.27		
Omethoate	0.61	0.011	1.8	0.011	0.16		0.015		10.27		
Dimethomorph	0.27	0.0012	0.12	0.017	0.703	0.11	0.3		0.21		
Dinocap (RD)											
Diphenylamine <sup>(*)</sup>				0.05	0.065	5.7	0.038				
Dithiocarbamates (RD) - ziram				2.5	1.571	2.6		0.05	3.78		
Dithiocarbamates (RD) - propineb			0.83				0.296				
Dithiocarbamates (RD) - mancozeb	2	0.18									
Endosulfan (RD)	0.15		0.66		0.0096		0.03	0.023		0.027	
Endrin											
EPN <sup>(**)</sup>	0.035										
Epoxiconazole	0.04	0.05					0.01	0.19			
Esfenvalerate (RD)	0.50			0.02		0.010					
Ethephon		0.05			0.044	0.009					
Ethion	0.02				0.017						
Ethoprophos			0.022								
Etofenprox				0.44	0.19	0.2	0.016		0.63		
Fenamiphos (RD)	0.018		0.11		0.359	0.0013					
Fenarimol					0.011		0.018				
Fenazaquin	0.27		0.07	0.05	0.07	0.028					
Fenbuconazole					0.003	0.03					

Pesticide	Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Liver <sup>(a)</sup>	Poultry meat
Fenbutatin oxide	0.011			0.673	0.651	0.142			0.53		
Fenhexamid <sup>(*)</sup>	0.08	0.023	0.15	0.014	0.05	0.026			0.041		
Fenitrothion					0.24						
Fenoxycarb				0.02		0.3					
Fenpropathrin	0.01			0.23	0.057						
Fenpropimorph											
Fenthion (RD)				0.23	0.099						
Fipronil (RD)	0.1	0.009									
Fluazifop-P-butyl (RD)	0.045	0.038	0.01				0.03		0.33		
Fludioxonil <sup>(*)</sup>	0.084	0.023	0.24	1.107	0.071	1.7	0.019		0.039		
Flufenoxuron <sup>(*)</sup>	0.054		0.01			0.11					
Fluquinconazole	0.019					0.018			0.008		
Flusilazole	0.02							0.02			
Flutriafol	0.097	0.024	0.02	0.043				0.1	0.032		
Folpet (RD)		0.11	0.014			3.86			0.715		
Formetanate (RD)			0.23	0.007	0.015						
Fosthiazate			0.02				0.05				
Glyphosate <sup>(*)</sup>								0.1			
Haloxypfop (RD)											
Heptachlor (RD)											
Hexachlorobenzene <sup>(**)</sup>										0.039	0.002
Hexachlorocyclohexane (alpha) <sup>(**)</sup>										0.002	
Hexachlorocyclohexane (beta) <sup>(**)</sup>											
Hexaconazole	0.075			0.014	0.02			0.05			
Hexythiazox <sup>(*)</sup>	0.036	0.011	0.02	0.2	0.08	0.064		0.019	0.015		
Imazalil	0.049	0.013	0.085	6.78	11.55	4.99	1.2		0.02		
Imidacloprid	0.2		0.18	0.26	0.2	0.34	0.04	0.048	0.28		
Indoxacarb (RD)	0.15	0.011	0.045	0.016		0.21			1.68		
Iprodione <sup>(*)</sup>	3.43	2.60	0.40	0.05	0.14	4.15		0.05	1.98		
Iprovalicarb <sup>(*)</sup>			0.027								
Kresoxim-methyl <sup>(*)</sup>	0.01		0.02	0.011	0.009	0.044	0.054	0.003			
Lambda-cyhalothrin (RD)	0.16	0.012	0.043	0.12	0.14	0.14		0.5	0.668		
Lindane										0.0035	
Linuron		0.41			0.024				0.9		
Lufenuron <sup>(*)</sup>	0.018		0.066	0.018	0.042	0.02					
Malathion (RD)	0.025			0.36	0.13			1.1			
Mepanipyrim (RD) <sup>(*)</sup>											
Mepiquat											
Metalaxyl (RD)	0.042	0.013	0.17	0.03	0.026		0.06		0.82		
Metconazole											
Methamidophos	0.03	0.064									
Methidathion	0.015			0.2	1.3	0.002					
Methiocarb (RD)	0.110		0.1		0.018	0.021			0.099		
Methomyl (RD)	0.96		0.35					0.01	11.6		
Methoxychlor											
Methoxyfenozide					0.029	0.4					
Monocrotophos											
Myclobutanil	0.011	0.2	0.07	0.96	1	0.22	0.02				
Nitenpyram <sup>(**)</sup>											
Oxadixyl			0.027				0.015				
Oxamyl	0.11	0.017	0.42								
Oxydemeton-methyl (RD)											
Paclobutrazol						0.13					
Parathion					0.031						



Pesticide	Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Liver <sup>(a)</sup>	Poultry meat
Parathion-methyl (RD)											
Penconazole	0.03	0.015	0.05		0.56	0.01					
Pencycuron <sup>(*)</sup>							0.2		1		
Pendimethalin <sup>(*)</sup>	0.01	0.095	0.029		0.02				0.008		
Permethrin (RD)											
Phenthoate											
Phosalone	0.013			0.025	0.0448	0.01					
Phosmet (RD)				0.27	0.2	0.19					
Phoxim						0.001	0.01				
Pirimicarb (RD)	0.3		0.012	0.032	0.22	0.183			3.1		
Pirimiphos-methyl							0.183	4.1			
Prochloraz (RD)				2.15	2.2						
Procymidone	0.16	0.026	0.369			0.036					
Profenofos	0.2				0.073						
Propamocarb (RD)	0.67	0.15	1.8		0.015		0.17	0.01	10.3		
Propargite <sup>(**)</sup>	0.34		0.012	0.31	1.1	0.12	0.01				
Propiconazole		0.02	0.012	0.032	0.006	0.02		0.08			
Propyzamide <sup>(*)</sup>				0.011					0.018		
Prothioconazole (RD)											
Pyraclostrobin	0.22	0.082	0.02	0.066	0.18	0.5			2		
Pyrazophos											
Pyrethrins								0.48	0.34		
Pyridaben	0.41		0.028	0.072	0.1	0.037	0.05				
Pyrimethanil <sup>(*)</sup>	0.04	0.05	0.68	4.05	3.05	2.5	0.03		0.02		
Pyriproxyfen				0.141	0.6	0.0118					
Quinoxifen <sup>(*)</sup>											
Quintozene (RD) <sup>(*)</sup>											
Resmethrin (RD)											
Spinosad (RD) <sup>(*)</sup>	0.66		0.4		0.001	0.57	0.4		1.34		
Spiroxamine						0.0043		0.012			
tau-Fluvalinate	0.13			0.073	0.061						
Tebuconazole	0.259	0.087	0.242	0.11	0.07	0.36	0.01	0.28	0.021		
Tebufenozide <sup>(*)</sup>			0.03	0.16	0.05	0.18		0.093	0.04		
Tebufenpyrad				0.22	0.099	0.04					
Tecnazene											
Teflubenzuron <sup>(*)</sup>	0.01		0.05			0.25			1.2		
Tefluthrin		0.037	0.01		0.013						
Tetraconazole	0.01		0.02			0.07					
Tetradifon <sup>(*)</sup>	0.02			0.103	0.013			0.004			
Thiabendazole <sup>(*)</sup>	0.031	0.02	0.014	5.2	7.7	4.52	1.6		0.025		
Thiacloprid	0.06		0.39			0.71			0.21		
Thiametoxam (RD)	0.095		0.188			0.0584	0.047	0.1	0.19		
Thiophanate-methyl	0.18		0.08	0.04	0.3	0.11					
Tolclofos-methyl <sup>(*)</sup>		0.09			0.03						
Tolyfluanid (RD)						0.1833		0.05			
Triadimenol (RD)	0.059	0.048	0.31				0.06				
Triazole acetic acid											
Triazole alanine											
Triazole lactic acid											
Triazophos			0.018					0.008			
Trichlorfon											
Trifloxystrobin <sup>(*)</sup>	0.016	0.02	0.064	0.0045	0.22	0.19	0.011				
Triflumuron <sup>(*)</sup>				0.04		0.11					
Trifluralin <sup>(*)</sup>		0.21	0.007		0.022				0.04		

Pesticide	Beans with pods	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Liver <sup>(a)</sup>	Poultry meat
Triticonazole											
Vinclozolin (RD)	0.012	0.012									
Zoxamide <sup>(*)</sup>											

<sup>(a)</sup>: The results for liver samples of different species (bovine, goat, sheep, swine and poultry liver) were pooled to derive the HRM.

<sup>(\*)</sup>: Pesticides for which the setting of an ARfD was considered not necessary due to the low acute toxicity of the pesticide.

<sup>(\*\*)</sup>: Pesticides for which no toxicological reference values are allocated (neither ARfD, nor ADI)

▨: No samples analysed for the pesticide/crop combination

#### 4.1.2. Results of the short-term risk (acute) assessment – individual pesticides

The results of the short-term risk assessment, expressed in percent of the toxicological reference values, are presented in Table 4-3. For pesticide/crop combinations where the exposure is below or equal to 100 % of the toxicological reference value, no short-term consumer health risk is expected. Blank cells in the table refer to pesticide/crop combinations where the exposure was considered to be negligible because none of the samples analysed contained measurable residues. The pesticide/crop combinations for which exceedances of the ARfD (or ADI) were identified are highlighted, shading the respective cells in dark orange (exposure between 100 % and 1,000 % of the toxicological reference value) or dark red (exposure exceeding 1,000 % of the ARfD/ADI). Results reported in bold font refer to residue findings which exceeded the MRL; the number in brackets refers to the number of samples exceeding the toxicological threshold (i.e. number of samples for which the calculated exposure is greater than 100 % of the ARfD/ADI).

For 24 substances no residues were detected in quantifiable concentrations in any of the samples analysed: aldicarb (RD), bromuconazole (RD), chlordane (RD), chlorobenzilate, dichlofluanid, dinocap (RD), endrin, fenpropimorph (RD), haloxyfop (RD), heptachlor (RD), mepiquat, metconazole, methoxychlor, monocrotophos, oxydemeton-methyl (RD), parathion-methyl (RD), permethrin (RD), phenthoate, prothioconazole (RD), pyrazophos, resmethrin (RD), tecnazene, trichlorfon, triticonazole. For these pesticides the short-term exposure resulting from the food products covered by the EU-coordinated monitoring programme is negligible.

For an additional 79 pesticides EFSA concluded that the measured residue concentrations did not pose a consumer health risk.

For 31 pesticides at least one sample was identified which contained residues in concentrations that could pose potential for a consumer health risk. In total, the screening for potential short-term consumer health concerns identified 253 cases where the respective toxicological reference value was exceeded.

The highest number of samples exceeding the toxicological threshold was identified for pears/dithiocarbamates (ziram scenario) (93 samples), pears/imazalil (43 samples) and oranges/imazalil (18 samples). It is noted that the calculation for pears/dithiocarbamates is based on the conservative assumption that the dithiocarbamates residues result from the most toxic pesticide of the dithiocarbamates group. Thus, the results are likely to overestimate the real consumer risk.

The food products that raised a potential intake concern most often were pears, oranges and cucumbers (146 pear samples, 44 orange samples and 26 cucumber samples concerning 11 pesticides, respectively) followed by potatoes (9 samples concerning 2 pesticides) and spinach (7 samples concerning 6 different pesticides). In addition 7 rice samples, 6 samples of mandarins, 6 samples of beans with pods and 2 samples of carrots were found to exceed the ARfD.

Most of the samples for which an acute risk could not be excluded referred to samples with residues that also exceeded the EU MRLs. However, for 11 pesticide/crop combinations the calculations indicated that the toxicological thresholds were exceeded, even though the measured residue concentration was below the MRL. These pesticide/crop combinations were: bitertanol/pears<sup>55</sup>, carbofuran (RD)/mandarins/oranges<sup>56</sup>, chlorfenvinphos/oranges/pears<sup>57</sup>, dithiocarbamates (RD) – ziram/mandarins/oranges<sup>58</sup>, fenthion (RD)/mandarins<sup>59</sup>, lambda-cyhalothrin/oranges<sup>60</sup>, prochloraz (RD)/oranges<sup>61</sup> and tebuconazole/pears<sup>62</sup>.

None of the food samples having potential to pose an acute consumer health concern was organically produced.

It is noted that for liver and poultry meat none of the tested samples contained residues in concentrations that posed a consumer health risk.

The detailed results of the calculations are reported separately for each pesticide in calculation spreadsheets which can be found in Appendix V (Table B) of this report.

**Table 4-3:** Summarised results of the short-term dietary exposure assessment (exposure expressed in % of the ARfD or ADI)

Pesticide <sup>63</sup>	Beans (with pods)	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Liver	Poultry meat
Abamectin (RD)	2.3		21								
Acephate	1.0	53									
Acetamiprid (RD)	2.3		16	8.9	3.9	15		0.78	38		
Acrinathrin	11		50						237 (1)		
Aldicarb (RD)											
Amitraz (RD)	1.1										
Azinphos-methyl						91		1.4			
Benfuracarb								0.38			
Bifenthrin	3.1	21	7.8	15	18	12	10	0.84	13		
Bitertanol	2.3		45		13	128 (1)					
Bromopropylate	14	35	3.0					0.49			
Bromuconazole (RD)											

<sup>55</sup> The ARfD for bitertanol was lowered in 2011. As a consequence, the MRLs were re-assessed; the MRL for pears was lowered to the LOQ in 2013.

<sup>56</sup> The MRLs for carbofuran/oranges and carbofuran/mandarins were raised in 2011, taking over CXL values that were adopted in 2010 by Codex Alimentarius Commission. This decision should be reconsidered.

<sup>57</sup> Taking into account the high acute toxicity of chlorfenvinphos, in 2013 the MRLs were lowered for a range of crops, among others for oranges and pears, to 0.01 mg/kg.

<sup>58</sup> The risk assessment for the dithiocarbamates is affected by high uncertainties since the source of the residue is not known.

<sup>59</sup> The fenthion MRL for mandarins was lowered to the LOQ in 2011.

<sup>60</sup> Since lambda-cyhalothrin is a non-systemic pesticide, the residues in the edible part of oranges might be lower than the residues measured in the fruit including the peel. Lacking of a peeling factor, EFSA could not perform a refined risk assessment.

<sup>61</sup> The ARfD for prochloraz was lowered in 2011. The existing MRLs have not yet been reviewed.

<sup>62</sup> The lowering of the MRL for tebuconazole for different crops, among others for pears, was recently agreed.






<sup>63</sup> The table does not contain pesticides for which the setting of an ARfD was unnecessary, nor where a reference values was not available.


Pesticide <sup>63</sup>	Beans (with pods)	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Liver	Poultry meat
Buprofezin	0.09	0.53	0.36	0.35	0.82	2.6		0.30			
Captan (RD)		2.1	1.6			117 (1)					
Carbaryl					869 (2)						
Carbendazim (RD)	17	4.4	137 (1)	25	256 (2)	127 (1)	18	4.0	23		
Carbofuran (RD)	204 (1)			5936 (4)	4421 (8)						
Carbosulfan								8.6			
Chlordane (RD)											
Chlorfenapyr	0.76	8.5		21	35						
Chlorfenvinphos					159 (1)	200 (1)					
Chlormequat						1353 (2)					
Chlorobenzilate											
Chlorothalonil	2.1	0.42	6.6			2.7			0.64		
Chlorpropham (RD)		0.57				0.27	316 (8)		0.01		
Chlorpyrifos	1.7	46	28	1.3	2.1	37	80	0.50	19		
Chlorpyrifos-methyl		3.2	1.8	44	36	39	3.2	0.28			
Clothianidin			0.35			4.6	1.5	0.13	3.4		
Cyfluthrin (RD)	4.0		0.58			32					
Cypermethrin (RD)	6.8		3.8	2.8	13	34			32		
Cyproconazole	0.57	9.5	23			27		0.25			
Deltamethrin	9.1	6.3	1.8	22		55		315 (7)	61		
Diazinon	0.45	5.1		2.9	13						
Dichlofluanid											
Dichlorvos	6.2		380 (2)			14		6.3			
Dicloran		5.1									
Dicofol (RD)	0.40			15	33				3.4		
Dieldrin (RD)											0.31
Difenoconazole	1.8	3.8	2.4	0.80	0.66	2.5		0.23	1.4		
Dimethoate (RD)	69	7.0	1053 (2)	6.1	30		23		2320 (1)		
Omethoate scenario	346	35	5263	31	149		115		11600		
Dimethomorph	0.5	0.01	1.2	0.2	16	1.7	7.7		0.8		
Dinocap (RD)											
Dithiocarbamates (RD) - ziram scenario				306 (1)	458 (4)	592 (93)		1.6	214 (2)		
Dithiocarbamates (RD) - propineb scenario			92 (2)				86				

Pesticide <sup>63</sup>	Beans (with pods)	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Liver	Poultry meat
Dithiocarbamates (RD) - mancozeb scenario	6.7	3.4									
Endosulfan (RD)	11		257 (1)		8.5		31	1.9			
Endrin											
Epoxiconazole	2.0	14					6.7	10			
Esfenvalerate (RD)	11			2.2		1.8					
Ethephon		6.3			12	1.6					
Ethion	11				3.4						
Ethoprophos			13								
Etofenprox				2.5	2.5	1.8	0.25		1.4		
Fenamiphos (RD)	8.4		257 (1)		1904 (1)	5.0					
Fenarimol					7.3		14				
Fenazaquin	3.1		4.1	2.8	9.3	2.6					
Fenbuconazole					0.13	0.91					
Fenbutatin oxide	0.12			38	86	13			12		
Fenitrothion					245 (1)						
Fenoxycarb				0.06		1.4					
Fenpropathrin	0.38			43	25						
Fenpropimorph (RD)											
Fenthion (RD)				128 (1)	131 (2)						
Fipronil (RD)	13	6.3									
Fluazifop-P-butyl (RD)	3.0	14	3.4				27		44		
Fluquinconazole	1.1					8.2			0.90		
Flusilazole (RD)	4.5							5.0			
Flutriafol	2.2	3.0	2.3	4.8				2.5	1.5		
Folpet (RD)		3.5	0.41			176 (1)			8.1		
Formetanate (RD)			269 (3)	7.8	40						
Fosthiazate			23				154 (1)				
Haloxyfop (RD)											
Heptachlor (RD)											
Hexaconazole	17			16	53			13			
Imazalil	1.1	1.7	9.9	53	245 (18)	909 (43)	52		0.90		
Imidacloprid	2.8		13	18	33	39	7.7	0.76	7.9		
Indoxacarb (RD)	1.4	0.56	2.1	0.71		15			30		

Pesticide <sup>63</sup>	Beans (with pods)	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Liver	Poultry meat
Lambda-cyhalothrin (RD)	24	10	34	89	248 (3)	170 (1)		84	201 (1)		
Lindane										0.05	
Linuron		87			11				68		
Malathion (RD)	0.09			6.7	5.8			4.6			
Mepiquat											
Metalaxyl (RD)	0.10	0.16	2.0	0.33	0.69		1.9		3.7		
Metconazole											
Methamidophos	11	135 (1)									
Methidathion	1.7			3.3	52	1.8					
Methiocarb (RD)	9.6		45		18	15			17		
Methomyl (RD)	436 (3)		819 (4)					5.0	10487 (1)		
Methoxychlor											
Methoxyfenozide					1.9	18					
Monocrotophos											
Myclobutanil	0.04	4.1	1.3	17	43	6.5	0.99				
Oxadixyl			16				23				
Oxamyl	125 (2)	108 (1)	2456 (8)								
Oxydemeton-methyl (RD)											
Paclobutrazol						12					
Parathion					82						
Parathion-methyl (RD)											
Penconazole	0.07	0.19	0.58		15	0.18					
Permethrin (RD)											
Phenthoate											
Phosalone	0.15			1.4	5.9	0.91					
Phosmet (RD)				33	59	39					
Phoxim						2.4	41				
Pirimicarb (RD)	3.4		0.70	1.8	29	17			70		
Pirimiphos-methyl							19	35			
Prochloraz (RD)				4.8	128 (2)						
Procymidone	15	14	180 (1)			27					
Profenofos	0.23				0.97						
Propamocarb (RD)	0.90	1.1	13		0.24		3.1	0.02	28		
Propiconazole		0.42	0.23	0.59	0.27	0.61		0.34			

Pesticide <sup>63</sup>	Beans (with pods)	Carrots	Cucumbers	Mandarins	Oranges	Pears	Potatoes	Rice	Spinach	Liver	Poultry meat
Prothioconazole (RD)											
Pyraclostrobin	8.3	17	3.9	12	80	152 (1)			151 (1)		
Pyrazophos											
Pyrethrins								3.0	3.8		
Pyridaben	9.3		3.3	8.0	27	6.7	15				
Pyriproxyfen				0.08	0.80	0.01					
Resmethrin (RD)											
Spiroxamine						0.39		0.15			
tau-Fluvalinate	3.0			8.1	16						
Tebuconazole	9.8	18	47	20	31	109 (1)	5.1	12	1.6		
Tebufofenpyrad				61	66	18					
Tecnazene											
Tefluthrin		47	12		35						
Tetraconazole	0.23		2.3			13					
Thiacloprid	2.3		76			216 (1)			16		
Thiamethoxam (RD)	0.22		2.2			1.1	1.5	0.25	0.86		
Thiophanate-methyl	1.0		2.3	1.1	20	5.0					
Tolylfluanid (RD)						6.7		0.25			
Triadimenol (RD)	1.3	6.1	36				19				
Triazole acetic acid											
Triazole alanine											
Triazole lactic acid											
Triazophos			105 (1)					10			
Trichlorfon											
Triticonazole											
Vinclozolin (RD)	0.23	1.3									

Legend
 
 exposure below 1 % of ARfD
 
 exposure up to 10 % of ARfD
 
 exposure up to 100 % of ARfD
 
 exposure up to 1000 % of ARfD
 
 no samples above the LOQ

 No samples analysed

#### 4.2. Long-term (chronic) risk assessment – individual pesticides

The chronic or long-term exposure assessment estimates the expected exposure of an individual consumer over a long period, predicting the lifetime exposure. The long-term exposure assessment can be calculated with a simple deterministic approach according to the following equation:



$$\text{Long-term exposure} = \sum (MRC_i * F_i)$$

$MRC_i$ : Mean residue concentration for food commodity  $i$  (expressed in mg/kg)

$F_i$ : Mean food consumption of food commodity  $i$  (expressed in g/kg body weight per day)

Thus, the long-term dietary intake can be estimated by multiplying the mean residue concentration calculated for each food commodity by the average daily food consumption for the respective food commodity. Thus, the underlying model assumptions for the long-term risk assessment are the following:

- A consumer eats over his lifetime mean portions of all the food products included in the diet (the consumption of higher amounts of a certain food on one day is compensated by days without consumption or consumption of an amount below the average). In the framework of this report, the mean food consumption data used for the calculations are the consumption data derived from food surveys performed in Member States and which were submitted to EFSA for the preparation of the standard model for dietary risk assessment of pesticide residues (i.e. EFSA PRIMo rev. 2, EFSA, 2007);
- The food consumed contains an average residue concentration (the consumption of food containing higher residues is compensated by days where the food consumed contained residues below the average or was free of residues). The calculation of the mean residue concentration is further explained in Section 4.2.1;
- A possible reduction of residues on the food commodity eaten (e.g. via washing, peeling, cooking and degradation during storage) was not taken into account.

In this report, the long-term risk assessment is calculated separately for each pesticide covered by the 2011 EU-coordinated monitoring programme, taking into account the food products covered by the three-years cycle of the EU-coordinated monitoring (see Table 2-1). Considering the different diets reflected in the EFSA PRIMo, these food products cover 39 % to 95 % of the total dietary intake of food of plant origin.

If the calculated exposure was below the toxicological reference value derived for long-term exposure, i.e. the Acceptable Daily Intake (ADI)<sup>64</sup>, the consumer is considered as adequately protected. The toxicological reference values used for the risk assessment are reported in Appendix V (Table A). For eight pesticides (azinphos-ethyl, dicofol, EPN, hexachlorobenzene, hexachlorocyclohexane (alpha), hexachlorocyclohexane (beta), nitenpyram and propargite) a toxicological assessment was not performed or the data available were insufficient to derive an ADI value. Thus, for these pesticides, a long-term risk assessment could not be performed.

Since the residue definition for dimethoate contains two compounds with significantly different toxicity (i.e. dimethoate and omethoate), it is not possible to perform an unambiguous risk assessment. Thus, for this compound EFSA calculated two scenarios: the optimistic dimethoate scenario where it is assumed that the calculated mean residue concentrations are related only to the less toxic dimethoate, while in the pessimistic omethoate scenario the total residue concentration reported is assumed to refer to the more toxic omethoate.

Also the residue definitions for esfenvalerate, methomyl and triadimenol contain compounds with different toxicity. To perform the chronic risk assessment, it was assumed that the residues found are related to the use of the authorised substance only (esfenvalerate, methomyl and triadimenol, respectively).

<sup>64</sup> See 'Acceptable Daily Intake (ADI)' in the Glossary.

For dithiocarbamates, three scenarios were calculated, assuming that the measured CS<sub>2</sub> concentration refers exclusively to mancozeb, propineb and ziram, respectively.

For the triazole metabolites a risk assessment was not calculated as no residue results were reported by any country.

It is noted that the risk assessment is performed with a very conservative approach which is overestimating the exposure of European consumers. For refinements higher tier calculations could be performed, e.g. by means of probabilistic modelling, using the distributions of the individual food consumptions reported by the respondents of food consumption surveys and the distribution of the measured residue concentrations identified in the monitoring programmes. EFSA developed a methodology for probabilistic calculations (EFSA, 2008, 2009a, 2012b, 2013a). However, since details on the practical implementation need to be further discussed, EFSA did not perform higher tier risk assessments in the framework of this report.

#### **4.2.1. Residue levels used for long-term (chronic) exposure assessment – individual pesticides**

For each pesticide/crop combination, the mean residue concentration used as input value in the chronic exposure estimations was derived according to the following approach:

- For each pesticide/crop combination an overall mean value was computed, using the actual values measured in the individual samples. For samples with residues below the LOQ, EFSA used as a conservative assumption the numerical value of the LOQ to calculate the overall mean<sup>65</sup>.
- For the crops covered by the 2011 EU-coordinated monitoring programme (beans (with pods), carrots, cucumbers, oranges, mandarins, pears, potatoes, rice, spinach, liver and poultry meat), the mean residue concentration was calculated from the results presented in Section 2 of this report.
- Wheat flour was not included in the long-term exposure assessment. Instead, the results for wheat were used (see next bullet point).
- For the remaining food products considered in the long-term exposure assessment, the residue input figures were derived from the results of the 2011 national programmes (surveillance samples only). This applies to apples, peaches, table grapes, strawberries, banana, tomatoes, peppers, aubergines, cauliflower, head cabbage, lettuce, peas (without pods), leek, oats, rye, wheat, swine meat, milk and milk products and chicken eggs.
- All the results reported for the liver (bovine, goat, sheep, swine and poultry liver) were pooled to calculate the mean residue concentrations. The exposure was assessed on the basis of the consumption of bovine liver.
- Results concerning samples analysed with analytical methods for which the LOQ was greater than the corresponding MRL were disregarded.
- Results that were not compliant with the residue definition were normally omitted.
- If for a given pesticide/crop combination positive findings were not reported by any of the countries supplying data (i.e. all the results were reported below the LOQ), the contribution of

<sup>65</sup> The approach used to calculate the input values for the exposure assessment (also referred to as upper bound approach) leads to conservative estimates. In order to make more realistic calculations, alternative approaches would be possible (e.g. calculating the mean residue concentration on the basis of results above the limit of detection, taking into account information on percent crop treated or pesticide approvals granted in the different Member States). However, these alternatives require further input data which are currently not available to EFSA.

these crops to the total dietary intake was not considered, assuming a 'no use/no residue' situation.

- The residue values reported according to the residue definition for enforcement (in accordance with the EU MRL legislation) were not recalculated to the residue definition for risk assessment<sup>66</sup>, lacking a comprehensive list of conversion factors.

The residue levels used as input values for the calculation of the long-term exposure are reported in Table 4-4. Empty cells in the table concern pesticides/commodity combinations for which none of the samples tested contained quantifiable residues.

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<sup>66</sup> See 'residue definition' in the Glossary.

**Table 4-4:** Mean residue concentrations (in mg/kg) used as input values for the long-term dietary exposure calculations

Pesticide	Apples	Aubergines	Bananas	Beans (with pods)	Carrots	Cauliflower	Cucumbers	Grapes (table)	Head cabbage	Leek	Lettuce	Mandarins	Oranges	Pears	Peaches	Peas (without pods)	Peppers	Potatoes	Rice	Spinach	Strawberries	Tomatoes	Oats	Rye	Wheat	Chicken eggs	Liver	Milk and milk products	Poultry meat	Swine meat
2,4-D (RD)		0.0130				0.0092		0.0113	0.0139			0.0838	0.0202						0.0155											
Abamectin (RD)							0.0095														0.0111									
Acephate	0.0114	0.0117			0.0122												0.0117					0.0120								
Acetamiprid	0.0103	0.0123		0.0111			0.0117				0.0150	0.0102	0.0098	0.0114	0.0103		0.0130		0.0087	0.0143	0.0095	0.0117								
Acrinathrin	0.0189	0.0168	0.0288	0.0206			0.0208	0.0179		0.0166					0.0209		0.0175			0.0180	0.0169	0.0188								
Aldicarb (RD)																														
Amitraz (RD)																	0.0170					0.0196								
Amitrole																														
Azinphos-ethyl																														
Azinphos-methyl	0.0207							0.0179						0.0194	0.0189				0.0165											
Azoxystrobin	0.0145	0.0171	0.0412	0.0159	0.0153	0.0182	0.0150	0.0252	0.0169	0.0191	0.0366	0.0144	0.0141			0.0326	0.0203	0.0137	0.0167	0.0155	0.0280	0.0188		0.0162						
Benfuracarb																			0.0136											
Bifenthrin	0.0130		0.0139	0.0136	0.0146		0.0134	0.0122	0.0148		0.0155	0.0127	0.0137	0.0134	0.0142	0.0225	0.0112	0.0141	0.0175	0.0148	0.0108	0.0126			0.0156			0.0045		
Bitertanol	0.0163		0.0284				0.0183	0.0164					0.0130	0.0186	0.0153		0.0143					0.0147								
Boscalid	0.0289	0.0339		0.0157	0.0175	0.0448	0.0118	0.0662	0.0468	0.0663	0.0964	0.0122	0.0117	0.0405	0.0318	0.1040	0.0164			0.0450	0.0715	0.0170	0.0123	0.0166	0.0148					
Bromide ion				1.3711	1.8793		1.2758				13.1409			0.8385	0.7915		3.2458	1.3145	9.1827	5.7893		1.9230	4.4540	5.0846	2.9811					
Bromopropylate	0.0095			0.0093				0.0092			0.0125											0.0111								
Bromuconazole (RD)								0.0138																						
Bupirimate	0.0133	0.0146					0.0111	0.0133						0.0120	0.0139		0.0125				0.0181	0.0143								
Buprofezin	0.0175	0.0167	0.0166	0.0141	0.0153			0.0148			0.0149	0.0140	0.0152	0.0146			0.0164		0.0176			0.0184								
Captan (RD)	0.0710			0.0279	0.0236		0.0134	0.0130			0.0127			0.0476	0.0258		0.0211				0.0431	0.0337								
Carbaryl	0.0170													0.0155			0.0156				0.0141	0.0185								
Carbendazim (RD)	0.0145	0.0144		0.0126	0.0103		0.0127	0.0159	0.0173		0.0135	0.0161	0.0372	0.0131	0.0160	0.0351	0.0179	0.0101	0.0090	0.0110	0.0124	0.0141			0.0209					
Carbofuran (RD)						0.0098						0.0114	0.0101				0.0104													
Carbosulfan																			0.0136		0.0184									
Chlordane (RD)																													0.0004	
Chlorfenapyr							0.0144					0.0114	0.0116				0.0112				0.0113									
Chlorfenvinphos													0.0107	0.0107																
Chlormequat							0.0121	0.0176						0.0353									0.9119	0.1342	0.0778					
Chlorobenzilate																														
Chlorothalonil	0.0189	0.0250	0.0209	0.0211	0.0196		0.0238	0.0209	0.0198	0.0212	0.0235			0.0193	0.0184		0.0208			0.0096	0.0207	0.0244			0.0121					
Chlorpropham (RD)			0.0110		0.0173		0.0171	0.0171	0.0130		0.0148	0.0173	0.0174	0.0190				0.2414		0.0198					0.0130					
Chlorpyrifos	0.0184	0.0142	0.0267	0.0126	0.0154	0.0157	0.0133	0.0217	0.0151	0.0169	0.0125	0.0533	0.0345	0.0200	0.0193	0.0275	0.0141	0.0138	0.0174	0.0155	0.0135	0.0129	0.0139		0.0158					
Chlorpyrifos-methyl	0.0121				0.0125		0.0117	0.0123			0.0116	0.0154	0.0142	0.0136	0.0127		0.0097	0.0126	0.0170		0.0109	0.0120	0.0213	0.0213	0.0293					
Clofentezine (RD)	0.0121												0.0125	0.0117			0.0092				0.0182	0.0139								
Clothianidin							0.0095	0.0105			0.0113			0.0099	0.0110		0.0108	0.0095		0.0109		0.0105								
Cyfluthrin (RD)	0.0217		0.0142					0.0240	0.0297		0.0222				0.0199															
Cypermethrin (RD)	0.0211	0.0347	0.0157	0.0270			0.0213	0.0342	0.0187	0.0292	0.0266	0.0139	0.0178	0.0256	0.0286		0.0263			0.0379	0.0164	0.0266			0.0204					
Cyproconazole	0.0135				0.0156		0.0123	0.0126		0.0159				0.0126	0.0145		0.0132		0.0134		0.0129	0.0141			0.0170					
Cyprodinil	0.0166	0.0152		0.0168	0.0118		0.0134	0.0442			0.0548	0.0122		0.0270	0.0221	0.0250	0.0120				0.0502	0.0178								
DDT (RD)			0.0161		0.0132				0.0272									0.0125		0.0135				0.0168		0.0042	0.0058	0.0026	0.0063	0.0180

Pesticide	Apples	Aubergines	Bananas	Beans (with pods)	Carrots	Cauliflower	Cucumbers	Grapes (table)	Head cabbage	Leek	Lettuce	Mandarins	Oranges	Pears	Peaches	Peas (without pods)	Peppers	Potatoes	Rice	Spinach	Strawberries	Tomatoes	Oats	Rye	Wheat	Chicken eggs	Liver	Milk and milk products	Poultry meat	Swine meat
Deltamethrin	0.0199	0.0192	0.0184	0.0171	0.0174			0.0226	0.0221	0.0190	0.0253			0.0216	0.0181		0.0164		0.0411	0.0236	0.0178	0.0183	0.0221	0.0224	0.0207					
Diazinon	0.0095				0.0093			0.0096				0.0096			0.0095		0.0117													
Dichlofluanid											0.0091												0.0092							
Dichlorvos							0.0096										0.0092		0.0092		0.0092									
Dicloran		0.0116			0.0109			0.0135			0.0111										0.0144									
Dicofol (RD)	0.0132											0.0169	0.0176				0.0123					0.0198								
Dicrotophos																	0.0082													
Dieldrin (RD)							0.0100																			0.0032	0.0057	0.0041		
Difenoconazole	0.0144	0.0148	0.0145	0.0141	0.0143		0.0131	0.0138	0.0172	0.0166	0.0154	0.0121		0.0128	0.0237		0.0206		0.0134	0.0140	0.0129	0.0162								
Dimethoate (RD)	0.0107	0.0106	0.0103	0.0099	0.0097	0.0108	0.0098	0.0104	0.0106	0.0098	0.0109	0.0101	0.0097		0.0103	0.0150	0.0105	0.0095		0.0236	0.0094	0.0104	0.0089	0.0129	0.0123					
Omethoate	0.0111	0.0109		0.0104		0.0106		0.0107	0.0093		0.0105						0.0107			0.0111	0.0104	0.0113								
Dimethomorph	0.0142	0.0139		0.0119		0.0176	0.0126	0.0275	0.0177	0.0159	0.0282		0.0148	0.0116	0.0139		0.0129	0.0123		0.0127	0.0119	0.0148								
Dinocap								0.0082					0.0135																	
Diphenylamine	0.0524		0.0139									0.0121		0.0639	0.0145		0.0157				0.0138									
Dithiocarbamates (RD)	0.1201	0.1799	0.1280	0.0714	0.0512	0.2232	0.0717	0.1023	0.2081	0.1415	0.2983	0.0499	0.0527	0.1615	0.1115	0.0195	0.0956	0.0490	0.0333	0.0635	0.0879	0.0954		0.1081						
Endosulfan (RD)				0.0135	0.0144		0.0142						0.0128				0.0119	0.0141	0.0150		0.0112	0.0126					0.0076			
Endrin																														
EPN																	0.0091													
Epoxiconazole			0.0127		0.0108													0.0102	0.0115			0.0109		0.0108	0.0109					
Esfenvalerate (RD)								0.0120														0.0111								
Ethephon	0.0273				0.0280			0.0689					0.0189	0.0164			0.0356					0.0372			0.1650					
Ethion		0.0091											0.0092				0.0089				0.0091									
Ethoprophos							0.0105										0.0117													
Etofenprox	0.0110	0.0097						0.0099	0.0086		0.0094	0.0122	0.0108	0.0109	0.0198		0.0098			0.0126	0.0099	0.0095								
Fenamiphos (RD)		0.0136		0.0099				0.0092					0.0105									0.0106								
Fenarimol	0.0132							0.0113			0.0104				0.0132		0.0109				0.0114									
Fenazaquin	0.0108	0.0099	0.0099	0.0100			0.0104	0.0110				0.0109	0.0109	0.0106	0.0109		0.0100				0.0107	0.0104								
Fenbuconazole	0.0137							0.0134						0.0130	0.0108	0.0158	0.0098													
Fenbutatin oxide	0.0182	0.0134	0.0152					0.0418			0.0172	0.0126	0.0134	0.0234			0.0109			0.0140										
Fenhexamid	0.0184	0.0169	0.0164	0.0144			0.0153	0.1163		0.0170	0.0479	0.0145	0.0149	0.0190	0.0231	0.0243	0.0201			0.0162	0.0930	0.0228			0.0193					
Fenitrothion																	0.0091													
Fenoxycarb	0.0156							0.0165				0.0128		0.0155	0.0179															
Fenpropathrin				0.0091				0.0095				0.0124	0.0135								0.0114	0.0092								
Fenpropimorph	0.0117		0.0129					0.0112		0.0164											0.0110				0.0126					
Fenthion (RD)												0.0113	0.0102																	
Fipronil			0.0097		0.0112																									
Fluazifop-P-butyl (RD)				0.0089														0.0095		0.0137	0.0139									
Fludioxonil	0.0190	0.0150		0.0125	0.0127		0.0129	0.0264			0.0567	0.0141	0.0130	0.0209	0.0256	0.0245	0.0140	0.0129		0.0123	0.0413	0.0158								
Flufenoxuron	0.0124			0.0110				0.0149							0.0123							0.0114								
Fluquinconazole	0.0132							0.0138													0.0139									
Flusilazole (RD)				0.0109				0.0112							0.0111		0.0111		0.0109											
Flutriafol	0.0131			0.0129	0.0149		0.0123	0.0121			0.0127	0.0161					0.0163		0.0127	0.0119	0.0127	0.0123								
Folpet (RD)	0.0315			0.0279			0.0110	0.0129			0.0425			0.0403	0.0128		0.0115			0.0287	0.0335	0.0301								

Pesticide	Apples	Aubergines	Bananas	Beans (with pods)	Carrots	Cauliflower	Cucumbers	Grapes (table)	Head cabbage	Leek	Lettuce	Mandarins	Oranges	Pears	Peaches	Peas (without pods)	Peppers	Potatoes	Rice	Spinach	Strawberries	Tomatoes	Oats	Rye	Wheat	Chicken eggs	Liver	Milk and milk products	Poultry meat	Swine meat
Formetanate (RD)		0.0088					0.0134	0.0118					0.0155				0.0108					0.0115								
Fosthiazate											0.0089						0.0089	0.0091												
Glyphosate																			0.0503				0.2320		0.1770					
Haloxyp (RD)								0.0100						0.0099				0.0100												
Heptachlor (RD)																												0.0033		
Hexachlorobenzene																			0.0081							0.0031	0.0056	0.0021	0.0059	0.0044
Hexachlorocyclohexane (alpha)																										0.0031	0.0052	0.0013		
Hexachlorocyclohexane (beta)											0.0090															0.0027		0.0013		
Hexaconazole				0.0106				0.0106				0.0104	0.0105				0.0116		0.0108		0.0107									
Hexythiazox	0.0136	0.0177	0.0130	0.0130	0.0156		0.0125	0.0161				0.0131	0.0144		0.0154		0.0161	0.0168	0.0130	0.0130	0.0156									
Imazalil	0.0153		0.0999	0.0126	0.0131		0.0125	0.0136			0.0130	0.8630	0.7060	0.0556	0.0133		0.0122	0.0151		0.0131	0.0118	0.0124			0.0154					
Imidacloprid	0.0124	0.0193	0.0133	0.0121		0.0121	0.0120	0.0249	0.0132		0.0199	0.0147	0.0137	0.0144	0.0128		0.0164	0.0128	0.0128	0.0122	0.0114	0.0129	0.0099							
Indoxacarb (RD)	0.0112	0.0107	0.0109	0.0102	0.0104		0.0115	0.0162	0.0119		0.0115			0.0122	0.0110		0.0105			0.0193	0.0099	0.0111								
Iprodione	0.0311	0.0193		0.0403	0.0268		0.0258	0.0747	0.0287	0.0126	0.2587	0.0203	0.0119	0.0528	0.0796	0.0275	0.0301		0.0169	0.0166	0.0302	0.0315			0.0157					
Iprovalicarb							0.0106	0.0135							0.0145		0.0128					0.0138								
Kresoxim-methyl	0.0137	0.0147		0.0123			0.0120	0.0165	0.0165	0.0158	0.0125	0.0123	0.0122	0.0122	0.0140		0.0130	0.0131	0.0149		0.0147	0.0141								
Lambda-Cyhalothrin	0.0133	0.0141	0.0125	0.0126	0.0106		0.0125	0.0142	0.0160	0.0161	0.0169	0.0119	0.0119	0.0135	0.0144		0.0117		0.0139	0.0182	0.0108	0.0123		0.0117				0.0035		
Lindane					0.0093																					0.0035	0.0036	0.0004		
Linuron					0.0213					0.0131	0.0116		0.0143							0.0156										
Lufenuron	0.0120	0.0100		0.0097			0.0105	0.0145				0.0135	0.0153	0.0111	0.0113		0.0102				0.0136	0.0111								
Malathion (RD)												0.0115	0.0109		0.0114		0.0103		0.0141						0.0122					
Mepanipyrim (RD)								0.0098													0.0184	0.0108								
Mepiquat								0.0160																	0.0297	0.0179				
Metalaxyl (RD)	0.0133	0.0142		0.0150	0.0144	0.0152	0.0147	0.0204	0.0181		0.0186	0.0134	0.0132		0.0138		0.0166	0.0141		0.0158	0.0141	0.0157								
Metconazole	0.0104																													
Methamidophos		0.0098			0.0095			0.0095									0.0096				0.0095									
Methidathion												0.0124	0.0138				0.0114				0.0111									
Methiocarb (RD)		0.0092		0.0101			0.0101	0.0107		0.0099			0.0098	0.0095			0.0096			0.0098	0.0099	0.0093								
Methomyl (RD)	0.0105			0.0121			0.0121	0.0099			0.0129			0.0108	0.0106		0.0107			0.0292	0.0095	0.0101								
Methoxychlor																														
Methoxyfenozide	0.0114	0.0100						0.0171			0.0096			0.0137	0.0117		0.0097					0.0093								
Monocrotophos																														
Myclobutanil	0.0131		0.0152	0.0114	0.0120		0.0140	0.0178			0.0109	0.0136	0.0132	0.0113	0.0139		0.0120	0.0121			0.0153	0.0141		0.0130						
Nitenpyram																														
Oxadixyl								0.0097			0.0121																			
Oxamyl			0.0094	0.0092	0.0091	0.0091	0.0095										0.0093					0.0094								
Oxydemeton-methyl (RD)																														
Paclobutrazol	0.0114												0.0105								0.0111									
Parathion																	0.0126													
Parathion-methyl (RD)																														
Penconazole	0.0127		0.0131	0.0119	0.0130		0.0116	0.0142			0.0128		0.0129		0.0138	0.0256	0.0104				0.0134	0.0123								

Pesticide	Apples	Aubergines	Bananas	Beans (with pods)	Carrots	Cauliflower	Cucumbers	Grapes (table)	Head cabbage	Leek	Lettuce	Mandarins	Oranges	Pears	Peaches	Peas (without pods)	Peppers	Potatoes	Rice	Spinach	Strawberries	Tomatoes	Oats	Rye	Wheat	Chicken eggs	Liver	Milk and milk products	Poultry meat	Swine meat	
Pencycuron											0.0164						0.0110	0.0117		0.0115	0.0104			0.0101							
Pendimethalin	0.0123				0.0130		0.0121		0.0109		0.0118		0.0123		0.0128	0.0153					0.0124	0.0111									
Permethrin (RD)	0.0203			0.0174			0.0171	0.0190						0.0191			0.0229		0.0208			0.0216			0.0227						
Phenthoate																	0.0095														
Phosalone	0.0145		0.0152	0.0138		0.0168		0.0133					0.0136	0.0138							0.0121										
Phosmet (RD)	0.0120			0.0124				0.0118				0.0126	0.0128	0.0105	0.0115		0.0154														
Phoxim																		0.0094								0.0057					
Pirimicarb (RD)	0.0158	0.0205		0.0104			0.0102		0.0117		0.0136	0.0120	0.0114	0.0106	0.0117		0.0119			0.0157	0.0119	0.0127									
Pirimiphos-methyl																	0.0106	0.0123	0.0381			0.0127	0.1061	0.0703	0.0459						
Prochloraz (RD)	0.0154											0.0340	0.0332				0.0152														
Procymidone				0.0144	0.0116		0.0121	0.0122			0.0118			0.0118	0.0120	0.0177	0.0123				0.0116	0.0130									
Profenofos	0.0130	0.0144		0.0117			0.0121						0.0122				0.0142					0.0132									
Propamocarb (RD)		0.0122		0.0145	0.0100	0.0093	0.0620	0.0144	0.0168	0.0116	0.2037		0.0121			0.0112	0.0161	0.0102		0.0449	0.0120	0.0241									
Propargite	0.0210	0.0294		0.0099		0.0096	0.0200					0.0157	0.0173	0.0150	0.0303		0.0253					0.0242									
Propiconazole					0.0124		0.0128					0.0117		0.0114	0.0157		0.0120		0.0122			0.0133									
Propyzamide (RD)							0.0113				0.0130	0.0113								0.0116	0.0107										
Prothioconazole (RD)										0.0183																					
Pyraclostrobin	0.0136			0.0094	0.0092			0.0129	0.0085	0.0112	0.0187	0.0107	0.0104	0.0163	0.0117	0.0101	0.0108			0.0137	0.0192	0.0098	0.0111								
Pyrazophos							0.0161																								
Pyrethrins	0.1280																0.2229		0.0741			0.1892									
Pyridaben	0.0124	0.0136		0.0128			0.0118	0.0109			0.0114	0.0121	0.0127	0.0121			0.0107				0.0109	0.0122									
Pyrimethanil	0.0286	0.0146	0.0152	0.0123	0.0129		0.0137	0.0566		0.0160	0.0159	0.1153	0.0495	0.0413	0.0158	0.0267	0.0132	0.0153		0.0119	0.0210	0.0151									
Pyriproxyfen	0.0127	0.0148								0.0158	0.0122	0.0137	0.0137				0.0127					0.0133									
Quinoxifen							0.0133								0.0125		0.0105				0.0128										
Quintozene (RD)					0.0104						0.0103						0.0099														
Resmethrin (RD)																															
Spinosad (RD)	0.0101	0.0095		0.0112		0.0095	0.0108	0.0118		0.0094	0.0146		0.0105	0.0107	0.0124		0.0100	0.0104		0.0122	0.0131	0.0104									
Spiroxamine (RD)	0.0118		0.0138				0.0135				0.0116				0.0127		0.0107					0.0104		0.0116	0.0144						
tau-Fluvalinate	0.0112			0.0122							0.0120	0.0113			0.0117		0.0094				0.0109										
Tebuconazole	0.0136	0.0147		0.0133	0.0147		0.0132	0.0165	0.0173	0.0201	0.0133	0.0130	0.0133	0.0143	0.0220	0.0243	0.0145		0.0195	0.0134	0.0118	0.0149	0.0146	0.0225	0.0173						
Tebufenozide	0.0115	0.0117				0.0112	0.0110				0.0107	0.0130	0.0123	0.0116	0.0121		0.0109		0.0125	0.0110		0.0105									
Tebufenpyrad	0.0130	0.0134					0.0126	0.0158			0.0123	0.0133	0.0120	0.0108	0.0136		0.0128				0.0122	0.0136									
Tecnazene																															
Teflubenzuron	0.0152			0.0125			0.0139							0.0136	0.0160		0.0199			0.0155	0.0183	0.0196									
Tefluthrin	0.0112			0.0116							0.0106		0.0086								0.0107										
Tetraconazole	0.0109	0.0108		0.0097			0.0106	0.0117			0.0101			0.0107	0.0110		0.0113				0.0102	0.0119			0.0106						
Tetradifon	0.0121											0.0125					0.0122		0.0151			0.0125									
Thiabendazole (RD)	0.0469		0.0959	0.0118	0.0132		0.0119	0.0171			0.0151	0.2726	0.1966	0.0372	0.0131		0.0143	0.0177		0.0123	0.0121	0.0154			0.0194						
Thiacloprid	0.0118	0.0117		0.0101			0.0117	0.0102	0.0106	0.0106	0.0128			0.0153	0.0119		0.0099				0.0100	0.0152	0.0107								
Thiametoxam (RD)	0.0111	0.0100	0.0106	0.0115			0.0111	0.0117			0.0130			0.0106	0.0107		0.0129	0.0104	0.0106	0.0109	0.0109	0.0119	0.0118								
Thiophanate-methyl	0.0145	0.0157		0.0129			0.0120	0.0118			0.0136	0.0114	0.0107	0.0109	0.0150	0.0248	0.0129				0.0115	0.0119									
Tolclofos-methyl					0.0144	0.0161					0.0201		0.0132				0.0115														
Tolylfluanid (RD)			0.0188	0.0164						0.0233									0.0182		0.0156	0.0139									



Pesticide	Apples	Aubergines	Bananas	Beans (with pods)	Carrots	Cauliflower	Cucumbers	Grapes (table)	Head cabbage	Leek	Lettuce	Mandarins	Oranges	Pears	Peaches	Peas (without pods)	Peppers	Potatoes	Rice	Spinach	Strawberries	Tomatoes	Oats	Rye	Wheat	Chicken eggs	Liver	Milk and milk products	Poultry meat	Swine meat
Triadimenol (RD)	0.0189	0.0222		0.0159	0.0167		0.0168	0.0197		0.0259	0.0152			0.0175	0.0208	0.0543	0.0190	0.0191			0.0177	0.0203		0.0188						
Triazole acetic acid																														
Triazole alanine																														
Triazole lactic acid																														
Triazophos																	0.0090		0.0103				0.0091							
Trichlorfon																						0.0128	0.0167							
Trifloxystrobin	0.0130	0.0107		0.0108	0.0109		0.0108	0.0185	0.0125	0.0114	0.0107		0.0109	0.0119	0.0110		0.0111				0.0149	0.0112								
Triflumuron	0.0110							0.0097	0.0094			0.0137		0.0118	0.0109							0.0106								
Trifluralin					0.0151		0.0133						0.0134							0.0144		0.0131								
Triticonazole																														
Vinclozolin (RD)					0.0119						0.0099					0.0093														
Zoxamide								0.0113														0.0104								

#### 4.2.2. Results of the long-term (chronic) risk assessment – individual pesticides

In Table 4-5 the estimated exposure is reported for each pesticide (maximum exposure among the 27 diets included in the PRIMo model). The results are expressed in percent of the ADI.

The detailed results of the calculations are reported separately for each pesticide in calculation spreadsheets which can be found in Appendix V (Table B) of this report.

**Table 4-5:** Results of the long-term dietary exposure assessment

Pesticide	Exposure (in % of the ADI)	Pesticide	Exposure (in % of the ADI)
2,4-D (RD)	0.30	Dicofol (RD)	12.78
Abamectin (RD)	0.67	Dicrotophos	n.c.
Acephate	0.55	Dieldrin (RD)	166.71
Acetamiprid (RD)	0.30	Difenoconazole	2.94
Acrinathrin	3.51	Dimethoate scenario	33.40
Aldicarb (RD)	0.00	Omethoate scenario	57.58
Amitraz (RD)	2.30	Dimethomorph	0.69
Amitrole	0.00	Dinocap (RD)	1.54
Azinphos-ethyl	n.c.	Diphenylamine	0.95
Azinphos-methyl	5.89	Dithiocarbamates (RD) - ziram	90.08
Azoxystrobin	0.23	Dithiocarbamates (RD) - propineb	67.56
Benfuracarb	0.11	Dithiocarbamates (RD) - mancozeb	9.65
Bifenthrin	3.48	Endosulfan (RD)	2.82
Bitertanol	11.86	Endrin	0.00
Boscalid	1.79	EPN	n.c.
Bromide ion	5.37	Epoxiconazole	2.12
Bromopropylate	0.44	Esfenvalerate (RD)	0.19
Bromuconazole (RD)	0.17	Ethephon	5.40
Bupirimate	0.52	Ethion	2.10
Buprofezin	3.73	Ethoprophos	4.95
Captan (RD)	1.00	Etofenprox	0.75
Carbaryl	3.91	Fenamiphos (RD)	7.03
Carbendazim (RD)	2.62	Fenarimol	1.86
Carbofuran (RD)	31.53	Fenazaquin	4.81
Carbosulfan	0.33	Fenbuconazole	4.10
Chlordane (RD)	3.24	Fenbutatin oxide	0.75
Chlorfenapyr	0.54	Fenhexamid	0.32
Chlorfenvinphos	9.45	Fenitrothion	0.69
Chlormequat	4.61	Fenoxycarb	0.43
Chlorobenzilate	0.00	Fenpropathrin	0.28
Chlorothalonil	2.90	Fenpropimorph	7.78
Chlorpropham (RD)	3.23	Fenthion (RD)	0.62
Chlorpyrifos	6.28	Fipronil (RD)	19.97
Chlorpyrifos-methyl	4.52	Fluazifop-P-butyl (RD)	0.76
Clofentezine (RD)	1.10	Fludioxonil	0.12
Clothianidin	0.09	Flufenoxuron	1.82
Cyfluthrin (RD)	10.80	Fluquinconazole	8.99
Cypermethrin (RD)	1.14	Flusilazole	1.20
Cyproconazole	1.56	Flutriafol	2.33
Cyprodinil	1.19	Folpet (RD)	0.49
DDT (RD)	2.46	Formetanate (RD)	2.41
Deltamethrin	4.94	Fosthiazate	1.37
Diazinon	73.43	Glyphosate	0.51
Dichlofluanid	0.01	Haloxypop (RD)	10.88
Dichlorvos	24.68	Heptachlor (RD)	129.15
Dicloran	0.77	Hexachlorobenzene	n.c.

Pesticide	Exposure (in % of the ADI)	Pesticide	Exposure (in % of the ADI)
Hexachlorocyclohexane (alpha)	n.c.	Procymidone	2.71
Hexachlorocyclohexane (beta)	n.c.	Profenofos	0.79
Hexaconazole	1.39	Propamocarb (RD)	0.1
Hexythiazox	1.09	Propargite	n.c.
Imazalil	14.34	Propiconazole	0.19
Imidacloprid	0.58	Propyzamide	0.14
Indoxacarb (RD)	3.77	Prothioconazole (RD)	0.13
Iprodione	1.29	Pyraclostrobin	0.93
Iprovalicarb	0.41	Pyrazophos	0.66
Kresoxim-methyl	0.08	Pyrethrins	4.53
Lambda-cyhalothrin (RD)	7.4	Pyridaben	2.53
Lindane	0.85	Pyrimethanil	0.47
Linuron	3.37	Pyriproxyfen	0.23
Lufenuron	1.76	Quinoxifen	0.01
Malathion (RD)	0.45	Quintozone (RD)	0.28
Mepanipyrim (RD)	0.19	Resmethrin (RD)	0.00
Mepiquat	0.15	Spinosad (RD)	1.02
Metalaxyl (RD)	0.43	Spiroxamine	1.07
Metconazole	1.25	tau-Fluvalinate	0.00
Methamidophos	3.11	Tebuconazole	1.37
Methidathion	6.63	Tebufenozide	1.21
Methiocarb (RD)	0.64	Tebufenpyrad	2.59
Methomyl (RD)	7.24	Tecnazene	0.00
Methoxychlor	0.00	Teflubenzuron	2.42
Methoxyfenozide	0.18	Tefluthrin	3.72
Monocrotophos	0.00	Tetraconazole	5.67
Myclobutanil	1.61	Tetradifon	1.14
Nitenpyram	n.c.	Thiabendazole	1.8
Oxadixyl	0.13	Thiacloprid	2.01
Oxamyl	5.54	Thiametoxam (RD)	0.91
Oxydemeton-methyl (RD)	0.00	Thiophanate-methyl	0.35
Paclobutrazol	0.68	Tolclofos-methyl	0.11
Parathion	1.05	Tolylfluanid (RD)	0.09
Parathion-methyl (RD)	0.00	Triadimenol (RD)	1.35
Penconazole	0.97	Triazole acetic acid	n.d.
Pencycuron	0.04	Triazole alanine	n.d.
Pendimethalin	0.18	Triazole lactic acid	n.d.
Permethrin (RD)	0.84	Triazophos	3.79
Phenthoate	0.16	Trichlorfon	2.63
Phosalone	2.85	Trifloxystrobin	0.27
Phosmet (RD)	2.29	Triflumuron	1.22
Phoxim	1.56	Trifluralin	0.6
Pirimicarb (RD)	0.81	Triticonazole	0.21
Pirimiphos-methyl	16.21	Vinclozolin (RD)	0.68
Prochloraz (RD)	3.31	Zoxamide	0.01

(n.c.): Not calculated as an ADI is not allocated

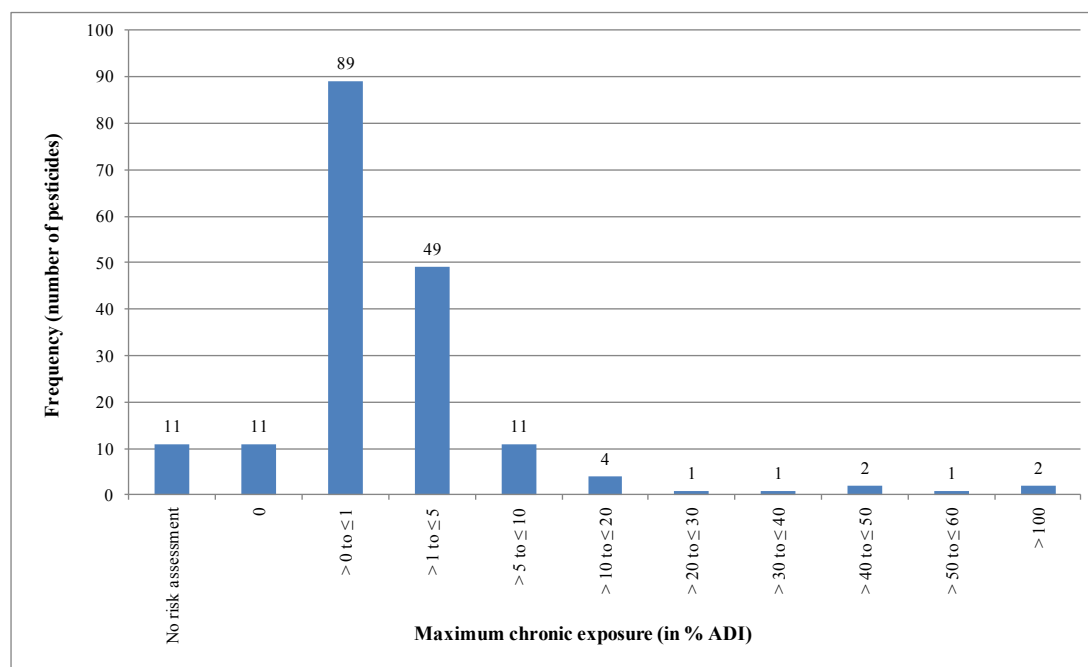
(n.d.): Not calculated as residue results were not reported

For 11 pesticides (aldicarb (RD), amitrole, chlorobenzilate, endrin, methoxychlor, monocrotophos, oxydemeton-methyl (RD), parathion-methyl (RD), resmethrin (RD), tau-fluvalinate and tecnazene) no quantifiable residues were reported in any of the crops/food products considered in the chronic exposure assessment. Thus, it is concluded that the long-term consumer exposure is considered negligible for these pesticides.

The calculated exposure exceeded the ADI for two pesticides, dieldrin (RD) and heptachlor (RD), indicating a potential consumer health concern. In both cases, milk was identified as the main contributor to the overall exposure. Although the mean residue concentrations for dieldrin (RD) and heptachlor (RD) in milk were very low ( $MRC_{\text{dieldrin}}$ : 0.0041 mg/kg,  $MRC_{\text{heptachlor}}$ : 0.0033 mg/kg) the exposure expressed in percent of the ADI was high, since both substances have a high chronic toxicity reflected in low ADI values (ADI for both compounds: 0.0001 mg/kg body weight per day). Neither compound is authorised for use as a pesticide, but due to historical use and the high persistence of the molecules and their capacity to bio-accumulate, they are still present in the food chain and are mainly found in food of animal origin. EFSA noted that the current MRL for dieldrin (RD) in milk is set at the level of 0.006 mg/kg, while the MRL of 0.2 mg/kg refers to other products of animal origin. Considering the high toxicity of dieldrin and aldrin EFSA would strongly recommend revising the dieldrin MRLs. For heptachlor (RD) residues in milk the MRL is 0.004 mg/kg. This pesticide/commodity combination should be monitored also in future control programmes with the view to a possible lowering of the MRL, due to a continuous decline of heptachlor residues in the environment and in milk. This is because the current MRL is set at a level which might not be sufficiently protective for consumer health.

Also for diazinon a relatively high exposure was calculated (73.43 % of the ADI), with apples being the main source of exposure; the same is true for dithiocarbamates measured as CS<sub>2</sub> (ziram and propineb scenario; apples was the food product identified as main contributor to the long-term exposure). Since the source of the CS<sub>2</sub> residues cannot be clearly attributed to a single dithiocarbamate pesticide, the risk assessment of dithiocarbamates is affected by a high level of uncertainty. The ziram and propineb scenarios are likely to overestimate the real long-term exposure of European consumers.

Figure 4-1 presents the results of the long-term risk assessment for the pesticides covered by the EU-coordinated monitoring programme, grouping them in classes according to the percent of the ADI exhaustion. It is noted that for 164 of the substances (92 % of the surveyed substances) the estimated exposure was negligible or accounted for less than 20 % of the ADI.



**Figure 4-1:** Breakdown of the total number of pesticides according to the estimated chronic exposure (expressed in percentage of the ADI)

### 4.3. Assessment of short-term exposure to multiple residues present on pears

According to the WHO methodology and the risk assessment approach used at EU level in the framework of pesticide authorisations and MRL setting, the dietary exposure to pesticide residues is calculated separately for each individual active substance. However, Regulation (EC) No 396/2005 acknowledges that consumers are exposed to multiple residues present on food eaten with one meal, during one day or over a longer period which may lead to cumulative (additive or synergistic) effects on human health. EFSA has worked on the development of a methodology to assess such effects (EFSA, 2008, 2009a, 2012b, 2013a). The work is well advanced, and so far 11 groups<sup>67</sup>, so-called cumulative assessment groups (CAGs), have been derived (EFSA, 2013a). Further CAGs will be established, addressing effects on liver, eyes, adrenal, reproduction and development system. The pesticides belonging to a CAG need to be considered in a cumulative risk assessment of pesticides. The scientific opinion of EFSA also proposes methodologies how the exposure calculations should be performed for different risk assessment scenarios, but further discussions with experts and risk managers are still required on details of the practical implementation of cumulative risk assessment. As the assessment of cumulative exposure goes beyond the scope of this report, the results of the cumulative risk assessment will be reported in future in a separate report, where detailed background information and a detailed discussion of the results will be presented.

In the framework of this report, EFSA performed a risk assessment which focused on an aspect that has not yet been addressed by the risk assessment methodologies developed recently, i.e. the short-term (acute) consumer health risk related to the presence of multiple pesticides belonging to one of the cumulative assessment groups and that were detected in individual food samples. Since this risk assessment is complementary to the case study on multiple residues (see Section 3.4.1), pears were selected as the target food commodity. The consumption of pears containing more than one pesticide belonging to one of the four acute CAG established so far leads to a simultaneous exposure to multiple pesticides within a single meal. Thus, for these cases the approach to assess the individual pesticides separately may not be sufficient to assess the consumer health risk.

Pesticides exhibiting neurotoxic effects were allocated to four CAGs for acute effects (CAG on functional effects on motor division, sensory division, and autonomic division and neurochemical endpoints). For each pesticide belonging to a CAG, EFSA has derived the toxicological endpoint and the related NOAEL (No Observed Adverse Effect Level) for the relevant effects (EFSA, 2013a). The pesticides allocated to the four CAGs are listed in Table 4-6. It is noted that some of the pesticides included in the CAGs are not covered by the 2011 EU-coordinated monitoring programme. Thus, this case study on multiple pesticide residues is restricted to the pesticides covered by the EU-coordinated monitoring programme (see last column of Table 4-6).

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<sup>67</sup> 7 groups for chronic effects and 4 groups for acute effects

**Table 4-6:** Cumulative assessment groups for the nervous system (acute effects)

Pesticides	NOAEL mg/kg bw per day	LOAEL mg/kg bw per day	In 2011 EUCP
<b>CAG 1: Functional effects on motor division</b>			
2,4-D	5 <sup>(i)</sup>	15	Yes
Abamectin	1.5	6	Yes
Acetamiprid	10	30	Yes
Chlorpropham	50	125	Yes
Clothianidin	60	177	Yes
Cyfluthrin	1	2.5	Yes
Cyfluthrin, Beta-	0.5	2	Yes
Cypermethrin	7.5	50	Yes
Cypermethrin, alpha-	2.3	6.8	Yes
Cypermethrin, zeta-	10	50	Yes
Deltamethrin	1	10	Yes
Dicamba	100 <sup>(i)</sup>	300	No
Dimethoate	20	200	Yes
Esfenvalerate	1.8	1.9	Yes
Ethoprophos	5	10	Yes
Fenamiphos	1.25	2.31	Yes
Fipronil	0.5	5	Yes
Flufenacet	25 <sup>(i)</sup>	75	No
Fluquinconazole	0.45	1.79	Yes
Formetanate	1	10	Yes
Fosthiazate	5.4	26.8	Yes
Glufosinate	100	500	No
Imidacloprid	23.5	45.4	Yes
Indoxacarb	50	100	Yes
Lambda-Cyhalothrin	0.52	1.3	Yes
Mepiquat	58	174	Yes
Metalddehyde	25 <sup>(i)</sup>	75	No
Methiocarb	0.83 <sup>(i)</sup>	2.5	Yes
Methomyl	0.75	2	Yes
Milbemectin	10	30	No
Oxamyl	0.1	0.75	Yes
Phosmet	9	36	Yes
Pirimicarb	10	40	Yes
Pirimiphos-methyl	150	1500	Yes
Pyrethrins	20	63	Yes
Pyridate	20	60	No
Tefluthrin	5	10	Yes
Thiamethoxam	100	500	Yes
Thiram	5	150	No
Triadimenol	2	35	Yes
Tri-allate	36	72	No
Ziram	5 <sup>(i)</sup>	15	Yes
<b>CAG 2: Functional effects on autonomic division</b>			
Acetamiprid	10	30	Yes
Cyfluthrin	2.5	7.5	Yes
Cyfluthrin, Beta-	2	10	Yes
Chlorpropham	125	625	Yes
Cypermethrin, Alpha-	4	10	Yes
Cypermethrin	20	60	Yes
Deltamethrin	1	2.5	Yes
Dimethoate	20	200	Yes
Esfenvalerate	1.8	1.9	Yes
Ethephon	166.7 <sup>(i)</sup>	500	Yes
Ethoprophos	12	25	Yes
Fenamiphos	1.52	2.31	Yes
<b>CAG 3: Functional effects on sensory division</b>			
Abamectin	0.5	1.5	Yes
Clothianidin	33.33 <sup>(i)</sup>	100	Yes
Cyfluthrin, Beta-	2	10	Yes
Cypermethrin	7.5	50	Yes
Cypermethrin, zeta-	10	50	Yes
Deltamethrin	0.33 <sup>(i)</sup>	1	Yes
Dicamba	100 <sup>(i)</sup>	300	No
Dimethoate	2	20	Yes
Esfenvalerate	1.8	1.9	Yes
Fipronil	5	25	Yes
Formetanate	1	10	Yes
Imidacloprid	42	151	Yes
Mepiquat	174	697	Yes
Metalddehyde	150	250	No
Methomyl	1	1.9	Yes
Oxamyl	0.1	0.75	Yes
Pyrethrins	63	200	Yes
Thiamethoxam	100	500	Yes
Thiram	5	150	No
<b>CAG 4: Neurochemical endpoints</b>			
Dimethoate	1	2	Yes
Ethephon	22	66	Yes
Ethoprophos	1.67 <sup>(i)</sup>	5	Yes
Fenamiphos	2.7	9.3	Yes
Formetanate	0.1	1	Yes
Fosthiazate	0.5	5.4	Yes
Malathion	10	10	Yes
Methiocarb	0.17 <sup>(i)</sup>	0.5	Yes
Methomyl	0.25	0.5	Yes
Oxamyl	0.1	0.75	Yes
Phosmet	4.5	22.5	Yes
Pirimicarb	0.67 <sup>(i)</sup>	2	Yes

<sup>(i)</sup>:Effect was observed at LOAEL; NOAEL was calculated as 1/3 of LOAEL

The model assumptions for the case study are described in Table 4-7.

**Table 4-7:** Description of the approach used for the assessment of the short-term (acute) exposure to multiple residues present on a single sample

Description of model assumptions	Comment
Exposure to multiple residues present on pears	Pears were selected to complement the case study on multiple residues in pears (Section 3.4.1)
CAGs assessed: Acute CAGs for the nervous system	CAG 1: Functional effects on motor division CAG 2: Functional effects on autonomic division CAG 3: Functional effects on sensory division CAG 4: Neurochemical endpoints
Residue data used for risk assessment to multiple residues: Results of unprocessed pears analysed in the framework of the EU-coordinated monitoring programme	1,364 pear samples analysed in the framework of the EU-coordinated programme. 76 samples contained multiple residues of pesticides assigned to one of the CAGs established so far. Only results above the LOQ were considered in this assessment.
Methodology for calculating exposure: Deterministic approach using the IESTI equation	Same approach as for risk assessment performed for individual substances (Section 4.1) <sup>68</sup> . Large portion consumption data represented in the acute risk assessment of EFSA PRIMo revision 2 (large portion: 14.35 g pears per kg body weight, reported for the German children). The unit weight and the variability factor used in the standard setting of the EFSA PRIMo were applied.
Toxicological reference value used for risk assessment: NOAEL derived for CAG / 100 = adjusted reference value for the group effect (adjusted ARfD) <sup>69</sup>	An adjusted ARfD was calculated for each pesticide allocated in the CAGs by dividing the NOAEL by 100. This adjusted ARfD reflects the relative toxicities of the pesticides included in the CAGs.
Calculation of the acute combined exposure: Summing the exposure derived for the individual pesticides (expressed in % of the adjusted ARfD) <sup>70</sup>	The total combined exposure is calculated by summing up the exposure calculated for the individual pesticides (expressed in % of the adjusted ARfD). Thus, an exposure equal or below 100 % means that the exposure is not likely to pose a consumer health risk.

EFSA is of the opinion that the described approach is sufficiently conservative and is suitable for screening purposes. This will allow to estimate if multiple residues in an individual sample have a potential to pose a consumer health concern.

#### 4.3.1. Results of short-term (acute) risk assessment reflecting multiple residues present on pears

In total 76 pears samples were identified which contained multiple residues of pesticides allocated to the CAGs. No samples of pears was identified which contained two or more residues of the pesticides included in the CAG 4 (neurochemical end-points). 29 samples contained more than one pesticide allocated to CAG 1 (functional effects on motor division), 34 and 13 samples, respectively, contained more than one pesticide allocated to CAG 2 (functional effects on autonomic division) and 3 (functional effects on sensory division).

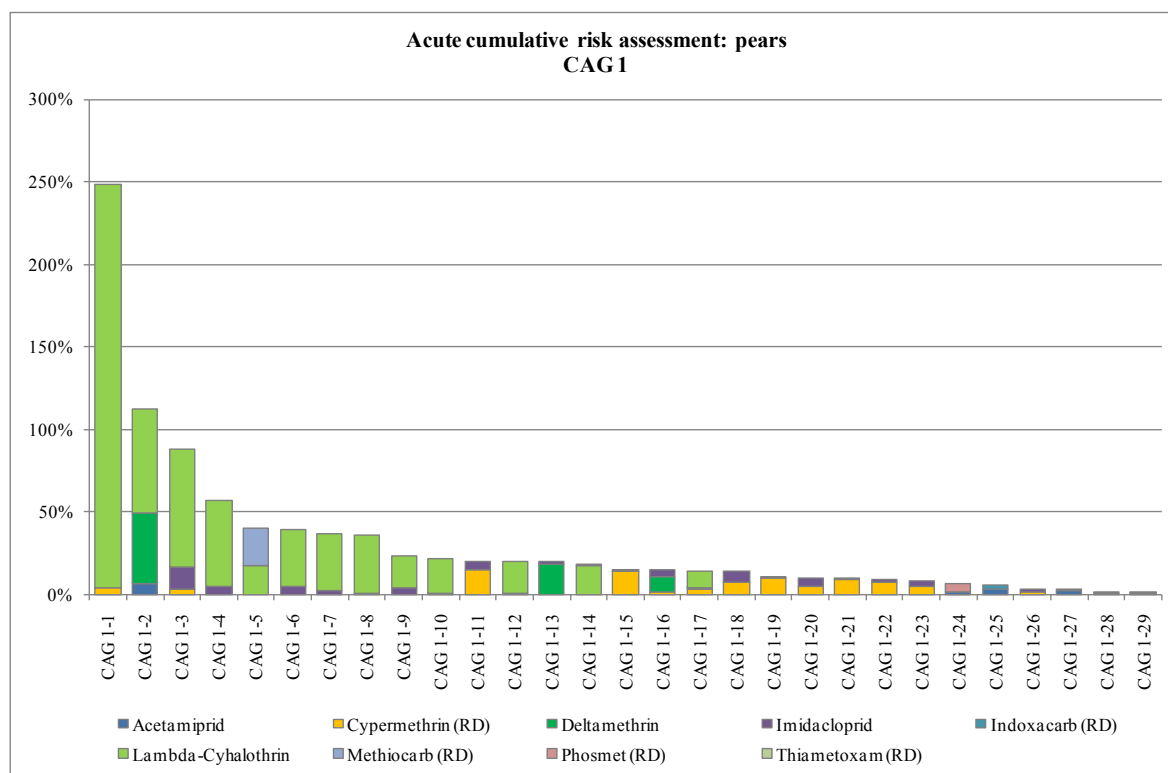
In Figure 4-2, Figure 4-3, and Figure 4-4 the cumulative exposure for the samples containing more than one pesticide allocated to the three CAGs are depicted.

<sup>68</sup> The methodology implies that the measured residues present in the composite sample which contains usually at least 10 units (pears) are present on an individual pear in a concentration which is 7 times higher than the measured concentration.

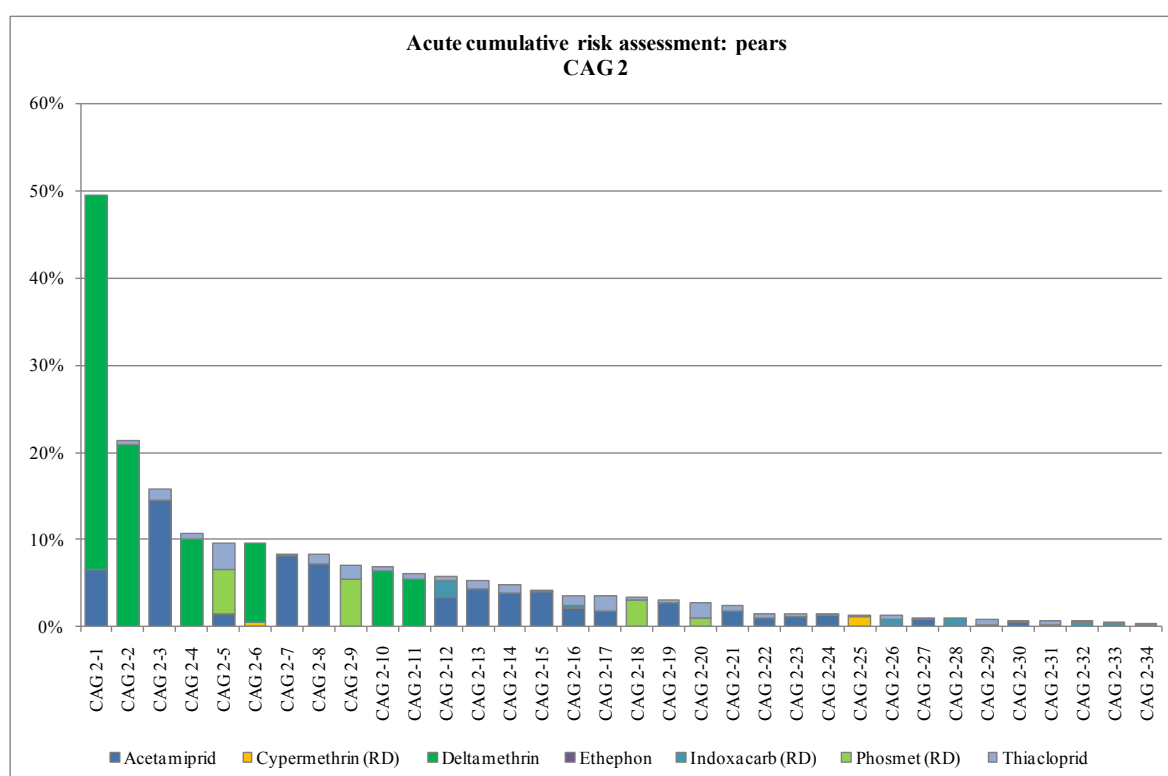
<sup>69</sup> The approach used by EFSA to derive the toxicological reference value for combined exposure assessment is described in the previously published Scientific Opinion of EFSA (EFSA, 2008, p. 16).

<sup>70</sup> The approach is equivalent to the calculation of the hazard index (see EFSA, 2008, p. 17), multiplied by 100.

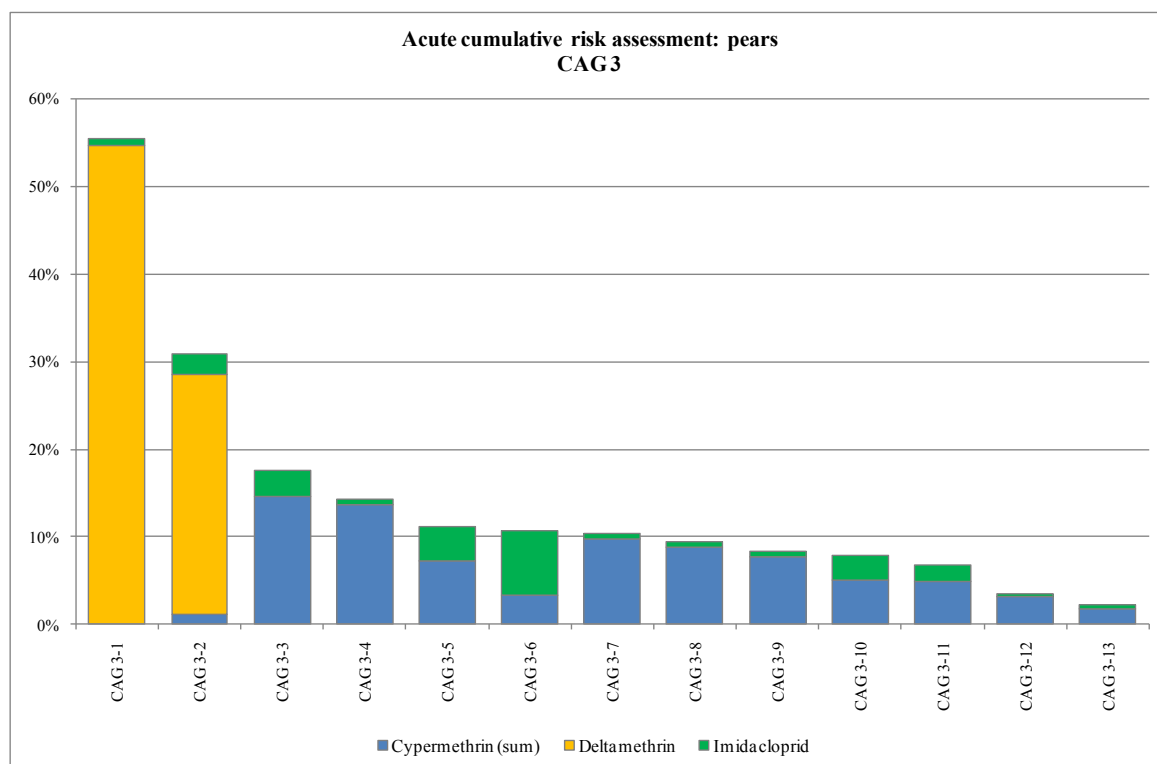




**Figure 4-2:** CAG 1: Results of the acute risk assessment concerning multiple residues in pear samples, expressed in % of the toxicological threshold



**Figure 4-3:** CAG 2: Results of the acute risk assessment concerning multiple residues in pear samples, expressed in % of the toxicological threshold



**Figure 4-4:** CAG 3: Results of the acute risk assessment concerning multiple residues in pear samples, expressed in % of the toxicological threshold

Regarding CAG 1, the toxicological threshold was exceeded for two pear samples; for the first sample the cumulative exposure accounted for 249 % of the toxicological threshold<sup>71</sup> (adjusted ARfD). The sample contained residues of lambda-cyhalothrin (0.14 mg/kg) and cypermethrin (0.03 mg/kg). This sample exceeded the MRL for lambda-cyhalothrin (0.1 mg/kg) and was also identified as a sample that exceeded the ARfD in the risk assessment performed on the individual pesticides (170 % of the ARfD of lambda-cyhalothrin, see Section 4.1). In the second sample the cumulative exposure (113 % of the adjusted ARfD<sup>72</sup>) is related to three pesticides (acetamiprid: 0.073 mg/kg, deltamethrin: 0.047 mg/kg and lambda-cyhalothrin: 0.036 mg/kg). None of these residues individually exceeded the MRLs. The exposure calculated for the individual substances did not exceed the ARfD derived for acetamiprid, deltamethrin and lambda-cyhalothrin, respectively.

The risk assessment for CAG 2 and CAG 3 revealed that none of the pear samples that contained multiple residues posed an acute health concern regarding the co-occurrence of residues contributing to the same toxicological effect. The highest exposure (expressed in % of the adjusted ARfD) accounted for 49.5 % and 55.2 %, respectively.

EFSA concludes that for one of the 1,364 pear samples analysed in the framework of the EU-coordinated monitoring programme the toxicological threshold for short-term exposure was exceeded due to the presence of multiple residues. This sample needs to be added to the 146 pear samples for which a potential consumer health concern was identified in the risk assessment performed for the individual pesticides (see Section 4.1).

Since the work on the CAGs is not yet complete, the results of the assessment are preliminary. As soon as the CAGs on liver, eyes, adrenal, reproduction and development system are established a more comprehensive assessment can be performed.

<sup>71</sup> Equivalent to adjusted hazard index 2.49.

<sup>72</sup> Equivalent to adjusted hazard index 1.13.

#### **4.3.2. Overall conclusions on the assessment of the short-term exposure to multiple residues**

Taking into account the experience gained with the case study on acute risk assessment for multiple residues present on an individual sample, the following recommendations are derived:

- EFSA recommends considering the extension of the EU-coordinated monitoring programmes to include pesticides that were allocated to one or several CAGs and which are currently not part of the control programme. In particular, those pesticides which have a relatively high acute toxicity (reflected by low NOAELs established for the CAGs) should be considered for inclusion in the future monitoring programmes. In order to limit the burden for competent authorities, a screening should be performed to identify pesticides that are likely to be used on crops relevant for cumulative risk assessment.
- The approach used in the case study to assess the acute exposure to multiple residues present on individual samples might be useful to support Member States to decide if multiple residues found in enforcement practice are posing a consumer health risk triggering risk management actions. Since the proposed methodology is considered as a screening tool, further refinements should be considered to verify consumer health concerns (e.g. application of peeling or processing factors, verification of the presence of residues of different pesticides on a single unit (e.g. pear) and unit to unit variability factors).

## SUMMARY CHAPTER 4

The **acute (short-term) consumer exposure** assessment was performed for 136 pesticides covered by the 2011 EU-coordinated programme which were considered relevant for acute risk assessment. The assessment focussed on the 11 unprocessed target food items included in the 2011 monitoring programme. For 24 of these pesticides, no residues were detected in quantifiable concentrations in any of the samples taken: aldicarb (RD), bromuconazole (RD), chlordane (RD), chlorobenzilate, dichlofluanid, dinocap (RD), endrin, fenpropimorph (RD), haloxyfop (RD), heptachlor (RD), mepiquat, metconazole, methoxychlor, monocrotophos, oxydemeton-methyl (RD), parathion-methyl (RD), permethrin (RD), phenthoate, prothioconazole (RD), pyrazophos, resmethrin (RD), tecnazene, trichlorfon and triticonazole. Thus, for these substances the dietary exposure resulting from the food products covered by the EU-coordinated monitoring programme was negligible.

For 79 of the assessed pesticides considered for the acute exposure assessment the measured residue concentrations did not pose a potential health concern.

For 31 pesticides at least one sample was identified which contained residues in concentrations that could pose a consumer health risk. The highest number of samples exceeding the toxicological threshold were identified for pears/dithiocarbamates (93 samples), for pears/imazalil (43 samples) and oranges/imazalil (18 samples).

It is noted that for liver and poultry meat none of the tested samples contained residues in concentrations that pose a consumer health risk.

None of the food samples posing a potential acute consumer concern was organically produced.

The **long-term (chronic) exposure assessment** was performed for 171 substances covered by the EU-coordinated monitoring programme for which toxicological reference values were available. It was based on the residue findings for the 28 most relevant food products in the human diet covered by the 3-years cycle of the EU monitoring programmes.

For 11 pesticides no quantifiable residues were reported in any of the food products considered in the chronic exposure assessment (aldicarb (RD), amitrole, chlorobenzilate, endrin, methoxychlor, monocrotophos, oxydemeton-methyl (RD), parathion-methyl (RD), resmethrin (RD), tau-fluvalinate and tecnazene). Thus, it is concluded that the long-term consumer exposure is negligible for these pesticides.

The calculated exposure exceeded the ADI for two pesticides, dieldrin (RD) and heptachlor (RD), indicating a potential consumer health concern. In both cases, milk was identified as the main contributor to the overall exposure. Neither compound is authorised for use as a pesticide, but due to historical use, the high persistence of the molecules and their capacity to bio-accumulate, they are still present in the food chain.

Overall, for 164 of the substances (92 % of the surveyed substances) the estimated exposure was negligible or accounted for less than 20 % of the ADI.

### **Short-term exposure to multiple residues present on individual samples**

EFSA performed a short-term risk assessment which focused on multiple residues present on individual pear samples. The short-term exposures resulting from the individual pesticides belonging to a Cumulative Assessment Group and present on a single sample were summed up, taking into account the relative toxicity of the pesticides. For two of the 1,364 pear samples analysed in the framework of the EU-coordinated monitoring programme the toxicological threshold for short-term exposure was exceeded due to the presence of multiple residues. One of these two samples also exceeded the ARfD in the risk assessment performed for the single pesticides. For the remaining pear samples the exposure accounted for less than 100 % of the toxicological threshold.

## RECOMMENDATIONS

Based on the detailed analysis of the results reported, EFSA derived the following recommendations to be considered in the future, to improve the enforcement of the pesticide MRL legislation:

EFSA recommends reconsidering the inclusion of the analysis on a voluntary basis of certain pesticides in the EU-coordinated monitoring programme and giving clear guidance on the scope of pesticides to be analysed in baby food in the framework of the future EU-coordinated monitoring programmes.

EFSA recommends avoiding the possibility to analyse alternative products (e.g. oranges or mandarins) and clearly specifying whether processed polished or unprocessed brown rice should be analysed in the framework of the EU-coordinated programmes.

Currently, no residue definition is established for dichlofluanid, since this active substance is not authorised in the EU. The default MRL of 0.01 mg/kg is applicable to all food products. Taking into account the results submitted by Member States, the setting of a specific residue definition should be considered which should include the metabolite DMSA (dimethylphenylsulfamide).

EFSA recommends simplifying the residue definition for vinclozolin since only a few laboratories analysing samples in the framework of the official controls were able to analyse the full residue definition which requires the application of single residue methods.

The residue definition established for bromide ion is not specific for the pesticide methyl bromide. Thus, EFSA recommends exploring an alternative residue definition which would allow tracing the use of methyl bromide unambiguously.

EFSA noted that the current MRL for dieldrin (sum of aldrin and dieldrin, expressed as dieldrin) in animal products except milk is set at the level of 0.2 mg/kg. Considering the high toxicity of dieldrin and aldrin EFSA would strongly recommend revising this MRL. The MRL for heptachlor (RD) residues in milk is 0.004 mg/kg. Heptachlor should be monitored also in future control programmes with the view to a possible lowering of the MRL.

EFSA recommends exploring the possibility to expand the scope of the EU-coordinated monitoring programme to include pesticides that have been allocated to a cumulative assessment group (CAG) taking into account toxicological potencies.

The approach used to calculate the chronic dietary exposure is considered to be rather conservative, leading in general to over-estimations. In order to calculate more realistic exposure scenarios, additional information would be required. It is recommended to discuss with Member States the possibility to provide more information which will allow EFSA to perform more refined exposure calculations (e.g. reporting whether residue concentration was found to be below the limit of detection (LOD), the estimation of percent crop treated with a certain pesticide and the pesticide approvals granted in the different Member States).

EFSA recommends that the European Commission continues funding training programmes and audits tailored to countries where repeatedly MRL exceedances were observed. Also national competent authorities should consider the need of organising training programmes for farmers and other stakeholders involved in the food production and supply chain.

EFSA also recommends continuing monitoring of products which are important for European consumption and in which high frequencies of MRL exceedances were observed (e.g. spinach, lettuce, table grapes, apples, strawberries, peaches, beans with pods and carrots). In addition, crops like chard, parsley, currants, celery and other food products which often exceeded the legal limits should be included in national control programmes.

## REFERENCES

- ATLANTA, 2007. Residues data (citrus fruit) under BfR database  
<http://www.kennzeichnungsrecht.de/docs/>
- BVL (Federal Office of Consumer Protection and Food Safety), 2002. Data from the National Food Monitoring in 2002, published by the Federal Office of Consumer Protection and Food Safety.
- EFSA (European Food Safety Authority), 2007. Reasoned opinion on the potential chronic and acute risk to consumers' health arising from proposed temporary EU MRLs, 15 March 2007. Available online: <http://www.efsa.europa.eu>
- EFSA (European Food Safety Authority), 2008. Scientific Opinion of the Panel on Plant Protection Products and their Residues (PPR Panel) to evaluate the suitability of existing methodologies and, if appropriate, the identification of new approaches to assess cumulative and synergistic risks from pesticides to human health with a view to set MRLs for those pesticides in the frame of Regulation (EC) 396/2005. The EFSA Journal 2008, 704, 1-85.
- EFSA (European Food Safety Authority), 2009a. Scientific Opinion on Risk Assessment for a Selected Group of Pesticides from the Triazole Group to Test Possible Methodologies to Assess Cumulative Effects from Exposure through Food from these Pesticides on Human Health. EFSA Journal 2009;7(9):1167, 187 pp. doi:10.2903/j.efsa.2009.1167
- EFSA (European Food Safety Authority), 2009b. Reasoned opinion of EFSA prepared by the Pesticides Unit (PRAPeR) on the refined risk assessment regarding certain MRLs of concern for the active substances carbendazim and thiophanate-methyl. The EFSA Journal 2009, 289, 1-29. doi:10.2903/j.efsa.2009.289r
- EFSA (European Food Safety Authority), 2010a. Standard sample description for food and feed. EFSA Journal 2010;8(1):1457, 54 pp. doi:10.2903/j.efsa.2010.1457
- EFSA (European Food Safety Authority), 2010b. Conclusion on the peer review of the pesticide risk assessment of the active substance imazalil. EFSA Journal 2010;8(2):1526, 69 pp. doi:10.2903/j.efsa.2010.1526
- EFSA (European Food Safety Authority), 2012a. Report for 2010 on the results from the monitoring of veterinary medicinal product residues and other substances in live animals and animal products. Supporting Publications 2012:212, 65 pp.
- EFSA (European Food Safety Authority), 2012b. Guidance on the Use of Probabilistic Methodology for Modelling Dietary Exposure to Pesticide Residues. EFSA Journal 2012;(10):2839, 95 pp. doi:10.2903/j.efsa.2012.2839
- EFSA (European Food Safety Authority) 2012c. Use of the EFSA Standard Sample Description for the reporting of data on the control of pesticide residues in food and feed according to Regulation (EC) No 396/2005. EFSA Journal 2012;10(3):2628, 52 pp. doi:10.2903/j.efsa.2012.2628
- EFSA (European Food Safety Authority), 2013a. Scientific Opinion of the Panel on Plant Protection Products and their Residues (PPR) on the identification of pesticides to be included in cumulative assessment groups on the basis of their toxicological profile. EFSA Journal 2013;11(7):3293, 131 pp. doi:10.2903/j.efsa.2013.3293
- EFSA (European Food Safety Authority), 2013b. Reasoned Opinion on the review of the existing maximum residue levels (MRLs) for methyl bromide according to Article 12 of Regulation (EC) No 396/2005. EFSA Journal 2013;11(7):3339, 131 pp. doi:10.2903/j.efsa.2013.3339
- FAO (Food and Agriculture Organization of the United Nations), 1998. Pesticide Residues in Food 1998. Evaluations, Part I, Residues, Volume 1. FAO Plant Protection Production and Protection Paper 152/1. Dimethoate, 490 pp.

- FAO (Food and Agriculture Organization of the United Nations), 2000. Joint Meeting of the FAO Panel of Experts on Pesticide Residues in Food and the Environment and the WHO Core Assessment Group. Geneva, 20-29 September 2000. Chlorpyrifos, 347 pp.
- FAO (Food and Agriculture Organization of the United Nations), 2002. Pesticide Residues in Food 2002. Evaluations, Part I, Residues, Volume 1. FAO Plant Protection Production and Protection Paper 175/1. Carbaryl, 88 pp.
- FAO (Food and Agriculture Organization of the United Nations), 2009. Submission and evaluation of pesticide residues data for the estimation of Maximum Residue Levels in food and feed. Pesticide Residues. 2nd Ed. FAO Plant Production and Protection Paper 197, 2009.



## GLOSSARY

This section provides explanations of terms frequently used in this report.

### Acceptable Daily Intake (ADI)

The Acceptable Daily Intake (ADI) is the estimated amount of a substance in food, usually expressed in mg/kg on a body weight basis that can be ingested daily over a lifetime without appreciable chronic long-term risk to any consumer. The ADI is set based on all known facts at the time of evaluation, taking into account sensitive groups within the population (e.g. children).

### Acute Reference Dose (ARfD)

The Acute Reference Dose (ARfD) is the estimated amount of substance in food, usually expressed in mg/kg on a body weight basis that can be ingested over a short period of time, usually over the course of one day, without appreciable risk to the consumer. The ARfD is set based on the data produced by appropriate toxicological studies and takes into account sensitive groups within the population (e.g. children). An ARfD is set only for active substances which have a potential acute toxicity.

### Analytical methods

The analytical methods used in pesticide residue analyses must fulfil certain criteria regarding specificity, sensitivity, precision accuracy, robustness and linearity, as defined in guidance documents<sup>73</sup>. The sensitivity and selectivity of the analytical methods used by enforcement laboratories have an impact on the number of positive findings in samples analysed. If the analytical method applied is not capable of detecting the pesticide or its toxicologically relevant metabolites, the sample may be mistakenly considered to be free of pesticide residues. Additionally, if the analytical method is not sensitive enough, the pesticide will not be detected. Thus, the results have to be considered in connection with the performance of the analytical methods used.

The analytical methods used to detect and quantify pesticide residues in food items fall into two general types of methods: multi-residue and single-residue methods.

Multi-residue methods are able to analyse a high number of different pesticide residues in the same sample in the course of the same analysis. However, certain pesticides and metabolites cannot be included in multi-residue methods because of their physical-chemical properties (e.g. acidic or polar chemicals). In these cases, single-residue methods must be applied.

Single-residue methods allow for the identification and quantification of only one or a few pesticide residues in one sample.

Multi-residue methods are usually preferred, as they are generally more cost efficient, but in order to fulfil the general control obligations for pesticides that cannot be detected with multi-residue methods, single-residue methods must also be used.

### Approval of pesticides/authorisation of plant protection products

Since the active substances used in pesticides can have harmful effects on human health, wildlife and the environment, a strict system of pesticide authorisation and control of use has been established at EU level (Regulation (EC) No 1107/2009<sup>74</sup>). In the framework of the authorisation procedure, companies asking for the authorisation of plant protection products must demonstrate that food treated with these products does not pose a risk to consumer health. The applicants have to prepare an

<sup>73</sup> Method validation and quality control procedures for pesticide residues analysis in food and feed. In 2011 the valid revision of the guidance document was SANCO/10684/2009. The latest version SANCO/12571/2013 is available on the web under

[http://ec.europa.eu/food/plant/plant\\_protection\\_products/guidance\\_documents/docs/qualcontrol\\_en.pdf](http://ec.europa.eu/food/plant/plant_protection_products/guidance_documents/docs/qualcontrol_en.pdf) or

[http://www.eurl-pesticides.eu/library/docs/allcrl/AqcGuidance\\_Sanco\\_2013\\_12571.pdf](http://www.eurl-pesticides.eu/library/docs/allcrl/AqcGuidance_Sanco_2013_12571.pdf)

<sup>74</sup> Regulation (EC) No 1107/2009 has repealed Directive 91/414/EEC. This regulation entered into force on 15.12.2009, but applied from 14 June 2011 on.

application dossier which contains the scientific studies as defined in the EU legislation. During the approval process competent authorities in Member State and EFSA perform an assessment to scrutinise if the approval criteria are fulfilled. The authorisation of plant protection products falls under the national competence.

### **Control programmes**

According to Regulation (EC) No 396/2005, Member States shall carry out official controls on pesticide residues in order to enforce compliance with the regulation, in accordance with the relevant provisions of Community law relating to official controls for food and feed (Regulation (EC) No 882/2004). In this report, the term ‘monitoring programme’ is used as a synonym for ‘control programme’.

Typically, two control programmes are in place:

**Coordinated multiannual control programme (EUCP):** On a yearly basis, the European Commission prepares a specific control programme describing the pesticide/crop combinations that must be analysed. The programme takes into account food items that are relevant for human consumption and pesticides that are relevant for dietary exposure because of their toxicological profile or specific problems identified in previous years. The EU-coordinated programme aims to provide statistically representative data regarding pesticide residues in food available to European consumers.

**National control programmes for pesticide residues (NCP):** Member States set up national control programmes for pesticide residues. Those programmes are often risk-based and focus on items and/or pesticides which are considered to be of particular relevance for consumer safety or MRL compliance. The national control programmes are defined in advance in multiannual programmes which are updated every year.

### **Data collection**

In 2009, EFSA developed the Standard Sample Description (SSD) (EFSA, 2010a), a standardised format for reporting of the results of food control analysis. The SSD is used not only for reporting results on pesticide residues found in food (EFSA, 2012c), but also for other food control like occurrence of contaminants.

The SSD includes a list of standardised data elements, controlled terminologies and validation rules (such as country of origin, product, analytical method, limit of detection, results reported, etc.) that aims to facilitate and harmonise the reporting of the data, enhancing its quality. The collection of these data is supported by a Data Collection Framework (DCF); a web platform conceived to achieve the efficient submission and exchange of data between Member States and EFSA. Data providers can submit their files through the DCF taking care to select appropriate specific file formats for data transmission (i.e. XML) and specific data protocols to support electronic data exchange. After transmission to EFSA, data are cleaned and eventually recoded – if appropriate – to ensure comparability and suitability for statistical analysis.

### **Dietary exposure assessment and risk assessment**

Dietary exposure assessment is the quantitative evaluation of the intake of pesticides via food. In the chronic and acute risk assessment, the estimated long-term and short-term dietary exposure, calculated per kg of body weight, is compared with the relevant toxicological reference values, i.e. the acceptable daily intake (ADI) and the Acute Reference Dose (ARfD), respectively (see ‘ADI’ and ‘ARfD’). A consumer exposure is of concern if the estimated dietary exposure to a pesticide exceeds the ADI and/or the ARfD.

### **European Reference Laboratory (EURL)**

The European Reference Laboratories (EURLs)<sup>75</sup> are appointed by the European Commission to co-ordinate, to train staff, to develop methods of analysis and to organise tests to evaluate the skills of the

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<sup>75</sup> Prior to 2010, the EURLs were called Community Reference Laboratories (CRLs).

different national control laboratories. The overall objective of the EURLs is to improve the quality, accuracy and comparability of the results from national control laboratories. The EURLs have the responsibility to network closely with the National Reference Laboratories (NRLs) in the Member States, who have the same liability on the national level.

The nominated EURLs (Annex VII of Regulation (EC) No 882/2004) for residues of pesticides are:

EURL name	Pesticide Residue Field
Fødevareinstituttet Danmarks Tekniske Universitet København, Denmark	Cereals and feeding stuffs
Chemisches und Veterinäruntersuchungsamt (CVUA) Freiburg Freiburg, Germany	Food products of animal origin and items with high fat content
Laboratorio Agrario de la Generalitat Valenciana (LAGV) Valencia, Spain Grupo de Residuos de Plaguicidas de la Universidad de Almería (PRRG) Almería, Spain	Fruits and vegetables, including high water and high acid content food products
Chemisches und Veterinäruntersuchungsamt (CVUA) Stuttgart Fellbach, Germany	Single residue methods

### Food products

Annex I of Regulation (EC) No 396/2005 defines the food products to which the MRLs are applicable. The description of the food products (referred as ‘products’ in the legislation) and the parts of it to which the MRLs apply can be found in Annex I to Regulation (EC) No 396/2005, published by Regulation (EC) No 178/2006<sup>76</sup>, and amended by Regulation (EU) No 600/2010<sup>77</sup>.

The unprocessed raw agricultural products of plant and animal origin are listed in Annex I, subdivided into 12 subgroups. In total, *ca.* 400 different food items are covered by the Regulation.

The main food classification groups are:

1. Fruit fresh or frozen, nuts
2. Vegetables fresh or frozen
3. Pulses, dry
4. Oilseeds and oil fruits
5. Cereals
6. Tea, coffee, herbal infusions and cocoa
7. Hops (dried), including hop pellets and unconcentrated powder
8. Spices
9. Sugar plants
10. Products of animal origin - terrestrial animals
11. Fish, fish products, molluscs and other marine and freshwater products<sup>78</sup>
12. Crops or parts of crops exclusively used for animal feed<sup>78</sup>

<sup>76</sup> Commission Regulation (EC) No 178/2006 of 1 February 2006 amending Regulation (EC) No 396/2005 of the European Parliament and of the Council to establish Annex I listing the food and feed products to which maximum levels for pesticide residues apply. OJ L 29, 2.2.2006, p. 3-25.

<sup>77</sup> Commission Regulation (EU) No 600/2010 of 8 July 2010 amending Annex I to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards additions and modification of the examples of related varieties or other products to which the same MRL applies. OJ L 174, 9.7.2010, p. 18-39.

<sup>78</sup> For this category, the detailed food classification is not yet established. Thus, currently MRLs are not yet applicable.

With a few exceptions, Annex I of Regulation (EC) No 396/2005 comprises only unprocessed food. In this report, 'processed food' refers to products derived from food products as specified in Annex I of Regulation (EC) No 396/2005 after being processed, e.g. juices produced from fruit and vegetables, other beverages (wine, beer) and flour from cereals.

In some sections of this report the results for individual food products are aggregated and reported for the following classes:

- Fruits and nuts (covering classification group 1, including processed food derived thereof)
- Vegetables (covering classification group 2, including processed food derived thereof)
- Cereals (covering classification group 5, including processed food derived thereof)
- Other plant products (covering classification groups 3, 4, 6, 7, 8 and 9, including processed food derived thereof)
- Animal products (excluding fish, covering classification group 10)
- Fish products (covering classification group 11)
- Baby food (as defined in baby food legislation; see 'MRL' in 'Baby food' section)
- Other products (products which could not be assigned to a certain raw food item or a specific processed food are summarised in this subcategory)

### **Good Agricultural Practice - GAP**

In Regulation (EC) No 396/2005 GAP is defined as follows: 'Good agricultural practice (GAP) means the nationally recommended, authorised or registered safe use of plant protection products under actual conditions at any stage of production, storage, transport, distribution and processing of food and feed. It also implies the application, in conformity with Directive 91/414/EEC (see footnote 74), of the principles of integrated pest control in a given climate zone, as well as using the minimum quantity of pesticides and setting MRLs/temporary MRLs at the lowest level which allows the desired effect to be obtained [...]'

### **Import control**

Article 15 of Regulation (EC) No 882/2004 states that the national competent authority shall carry out regular official controls on feed and food of non-animal origin imported into the territories. They shall organise these controls on the basis of the multiannual national control plan. These controls shall be carried out at appropriate places, including at the point of entry of the goods into one of the territories of the Community.

In addition, for some specific products imported from third countries, Commission Regulation (EC) No 669/2009, amended by Commission Regulation (EC) No 878/2010<sup>79</sup>, lays down rules concerning the increased level of official controls to be carried out on imports of food of non-animal origin at points of entry into the territories. These regulations specify pesticide/food product/country combinations and frequencies of controls.

### **Limit of Quantification (LOQ)/ Limit of Detection (LOD)**

The Limit of Quantification (LOQ) is the lowest residue concentration that can be quantified and reported in routine monitoring with validated methods. In the context of this report, samples reported as having residues below the LOQ are considered to be free of the pertinent residue. The Limit of Detection (LOD) is the lowest residue concentration that can be detected with acceptable certainty but is not quantifiable with a validated method.

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<sup>79</sup> Commission Regulation (EU) No 878/2010 of 6 October 2010 amending Annex I to Regulation (EC) No 669/2009 implementing Regulation (EC) No 882/2004 of the European Parliament and of the Council as regards the increased level of official controls on imports of certain feed and food of non-animal origin. OJ L 264, 7.10.2010, p. 1 – 6.

In the present report, the term Reporting Level (see 'Reporting Level' below) is also used as a synonym for the LOQ<sup>80</sup>.

Furthermore, in the context of this report the terms 'measurable' and 'detectable' are both referring to residue concentrations at or above the LOQ.

## MRL

Maximum Residue Levels (MRLs) for pesticides are defined as the upper legal levels of a pesticide residue concentration (expressed in mg/kg) in or on food or feed, in accordance to Regulation (EC) No 396/2005, based on authorised Good Agricultural Practice (GAP) and the lowest possible consumer exposure to protect vulnerable consumers. Food of plant or animal origin with pesticide residues above the MRL shall not be placed on the market. MRLs are derived by statistical methods from supervised field trials that reflect the intended GAPs.

Before an MRL is established, a risk assessment must prove that the limit is safe for consumer health. In the past, Member States and the European Commission shared responsibility for risk assessment in the process of setting the MRL. Since 2008, EFSA is involved in the MRLs setting process as an independent body responsible for the risk assessment.

MRLs are not primarily toxicological safety limits. In most cases the MRLs are well below the concentrations which are expected to lead to adverse effects on consumer health.

If a pesticide residue is found on a given crop at or below the MRL, then the crop can be considered safe for consumers. On the other hand, if a residue exceeds the MRL, the consumer is not necessarily at risk: a specific assessment must be performed, comparing the expected exposure with the toxicological reference values (ADI, ARfD; see below). If the exposure exceeds the toxicological reference values, a potential consumer health concern is identified.

MRLs are established for Raw Agricultural Commodities (RAC) (see also 'Food products') of plant or animal origin placed on the market as described in Annex I of Regulation (EC) No 396/2005, i.e. fresh or frozen products without processing. In most cases, the MRLs refer to the whole food item as harvested (e.g. bananas with peel, peaches including the stones).

In September 2008, harmonised EU MRLs were established in Annexes II and III of Regulation (EC) No 396/2005, repealing the previously set EU and national MRLs. This regulation covers about 520 pesticides. For pesticides not explicitly mentioned in Annexes II, III or IV<sup>81</sup> of the Regulation, a default MRL of 0.01 mg/kg is applicable. MRLs are established at the limit of quantification (LOQ) if a pesticide is not authorised for use on a specific crop.

For processed or composite food, the MRLs established in the MRL legislation for raw products are applied, taking into account changes in the levels of pesticide residues caused by processing or mixing (processing factors).

No specific MRLs have been established at the EU level for organic products. For these products, the same MRLs as for conventional products apply, but additional production and labelling rules must be respected (Regulation (EC) No 834/2007, Regulation (EC) No 889/2008).

For infant formulae, follow-on formulae and for processed cereal-based foods and baby foods for infants and young children, a default MRL of 0.01 mg/kg is applicable, unless a specific lower MRL has been set in Directives 2006/125/EC and 2006/141/EC.

<sup>80</sup> In the EU MRL legislation, the term LOD (Limit of Detection) is used but refers to the limit of quantification. However, EFSA prefers using the term LOQ in order to avoid possible confusion with the term LOD indicating the Limit of Detection.

<sup>81</sup> Annex IV of Regulation (EC) No 396/2005 contains pesticides that are exempted from the setting of MRLs because of their low risk profile.



Food business operators as defined in the Regulation (EC) No 178/2002<sup>82</sup> ('European food law') must ensure that food or feed satisfies the requirements of the food law that are relevant to their activities at all stages of production, processing and distribution and shall verify that such requirements are met. Member States shall monitor and verify that the relevant requirements of the European food law are fulfilled by food and feed business operators at all stages of production, processing and distribution. Therefore, the control of pesticide residues by the competent authorities in Member States is just one element of control activities that aim to ensure food safety at the European level.

### **MRL exceedance**

In the context of this report the term 'MRL exceedance' refers to a residue concentration measured in food exceeding numerically the legal limit, without considering measurement uncertainty. Thus, this term is not a synonym for MRL non-compliance that triggers legal consequences.

### **MRL compliance/non-compliance**

If the residue level measured in a sample, taking into account generally a 50 % measurement uncertainty exceeds the legal MRL, the sample is considered as non-compliant and the competent national authorities shall apply the sanctions applicable to the infringements. The sanctions must be effective, proportionate and dissuasive.

### **Pesticide residues**

Pesticide residues are the measurable amounts of the active substances used in plant protection products, their metabolites and/or breakdown or reaction products resulting from current or formerly used plant protection products that can be found on harvested crops or in food of animal origin.

Active substances are classified as<sup>83</sup>:

- 'Systemic pesticides': active substances and/or relevant metabolites that are taken up by the plant and transported within the plant.
- 'Non-systemic pesticides': active substances and/or relevant metabolites that are not transported in the plant remaining on the surface. Peeling of these crops may reduce the pesticide concentration on the edible part.

### **Quality assurance**

In accordance with Regulation (EC) No 882/2004, all laboratories performing analysis of pesticide residues in food have to be accredited to certain standards, such as ISO 17025. This standard is on the one hand ISO 17025 (General requirements for the competence of testing and calibration laboratories) and on the other hand the laboratories take into account the AQC Guidance Document of the EURLs (Method Validation and Quality Control Procedures for Pesticide Residues Analysis in Food and Feed).

Commission Regulation (EC) No 901/2009 requires Member States to provide information about the accreditation details of the laboratories which carry out the analysis for the control programme, about the application of the EU Quality Control Procedures for Pesticide Residue Analysis and about their participation in proficiency and ring tests. It also requires the reporting countries to provide the accreditation certificates to the control programme. These provisions should ensure that controls are of consistently high quality.

### **Rapid Alert System for Food and Feed (RASFF)**

If control analysis performed in a Member State identify samples with pesticide concentrations that are of concern for consumer health (e.g. the estimated short-term intake is higher than the acute reference

<sup>82</sup> Regulation (EC) No 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety. OJ L 31, 1.2.2002, P. 1 – 21.

<sup>83</sup> SANCO 7525/VI/95 – Rev. 9, March 2011. <http://ec.europa.eu/food/plant/protection/resources/app-d.pdf>

dose (ARfD) for the substance found), Member States must inform other Member States and the European Commission via the Rapid Alert System for Food and Feed (RASFF).

The RASFF ensures that relevant information is shared with all competent authorities (EU Member States, and Norway, Liechtenstein and Iceland), the European Commission and EFSA without delays to allow Member States to take timely appropriate risk management actions. The European Commission has established the RASFF portal, where relevant information of RASFF-notifications is published<sup>84</sup>.

### Reporting Level (RL)

The Reporting Level is the lowest level at which residues will be reported as absolute numbers. It may coincide with the LOQ, or, in efforts to limit the cost of the analysis, it may be above that level, but it must be at or below the MRL. For those pesticides for which a complex residue definition (e.g. a residue definition which contains more than one compound) is set, the RL may be set at the highest LOQ used for those components in the residue definition.

### Reporting countries

All 27 Member States of the European Union must report their results regarding the coordinated programme and the national control programmes. In addition, the EFTA countries Iceland and Norway report their results according to the EEA-agreement. In total, 29 reporting countries contribute to the current report. Throughout the report, these countries are referred to as EU or reporting countries.

### Residue definition

Often the active substance applied on a crop is not stable, but the molecule undergoes, to a certain extent, a degradation induced by plant enzymes, light, humidity and/or other environmental factors. Thus, chemical substances other than the active substances originally applied (usually referred to as metabolites) may be present on the harvested food item. As not all of these degradation products are harmless, they have to be taken into account during the consumer risk assessment. In some cases, the parent compound (i.e. the substance originally applied on the crop) is not found in the harvested crops at all, but only metabolites, which indicate the use of the parent compound. The residue definition describes the active substance used in plant protection product and its metabolites, degradates and other transformation products relevant for consumer exposure<sup>85</sup>. For each pesticide, two residue definitions are set:

The residue definition for dietary risk assessment (or residue definition for risk assessment) includes the parent compound, its metabolites, derivatives and related compounds that are relevant for consumer exposure.

The residue definition for MRL setting (also referred to as residue definition for MRL enforcement purposes or enforcement residue definition) includes marker compounds that can be analysed, ideally by a multi-residue method, in routine monitoring.

In many cases, these two residue definitions are identical. However, if the residue definition for risk assessment covers more components than the enforcement residue definition, the residue concentrations measured in monitoring programmes and reported according to the enforcement residue definition should not be directly used for calculating the actual consumer exposure. A conversion factor, which is normally derived from supervised field trials or metabolism studies, has to be applied to derive the concentration that is relevant for consumer exposure (e.g. fluazinam: residue definition for monitoring: fluazinam; residue definition for risk assessment: fluazinam, AMPA-fluazinam and AMGT; conversion factor 3). Conversion factors are reported in different sources (e.g. EFSA

<sup>84</sup> [http://ec.europa.eu/food/food/rapidalert/rasff\\_portal\\_database\\_en.htm](http://ec.europa.eu/food/food/rapidalert/rasff_portal_database_en.htm)

<sup>85</sup> In cases where complex residue definitions have been established (i.e. residue definitions which contain more than one chemical element), the results reported in the tables and figures in the present report are labelled with the name of the pesticide and the term 'RD'. For example, when 'endosulfan (RD)' is reported, this refers to the following complex residue definition: sum of alpha- and beta-isomers and endosulfan sulfate expressed as endosulfan.



conclusions, reasoned opinions, JMPR Reports). A comprehensive list of conversion factors is currently not yet established, but would reduce the uncertainties in dietary exposure assessments performed with monitoring data.

### **Sampling methodology**

To ensure that a sample is representative for a given food lot/consignment, the sampling must be performed according to the sampling methodology for the official control of pesticide residues as established by Commission Directive 2002/63/EC<sup>86</sup>. For most plant products, the minimum size of a laboratory sample is between one and two kilograms of the food, which must be selected randomly from the lot or consignment.

### **Sampling strategy**

The sampling strategy is the approach used to select a specific consignment, lot and sample to be analysed under the control programme. Implementation of an efficient, targeted sampling strategy would result in a higher percentage of positive findings and non-compliant results. Thus, for a correct interpretation of the results obtained in control programmes, information about the sampling strategy applied is indispensable. In the report, the following terminology distinguishes between more or less targeted sampling.

**Surveillance sampling:** samples are collected without any particular suspicion towards a particular producer, consignment, etc. Surveillance sampling may target specific food products and countries, but the selection of consignment/lot is randomised. The samples taken in the framework of the EU-coordinated programme are considered to be surveillance samples.

**Enforcement sampling:** samples are taken if to verify a suspicion about the safety or non-compliance of a product and/or as a follow-up of violations found previously. The selection of the consignment/lot is not randomised and therefore cannot be considered representative of the food available on the European market. Follow-up or enforcement sampling is directed to a specific grower/producer or to a specific consignment. In enforcement programmes, the probability of finding samples with positive results or samples exceeding the legal limits is higher than in surveillance programmes. In Appendix II, more details on the general sampling strategies applied at the national level are reported.

### **Threshold residue level/threshold MRL**

In the context of the risk assessment, EFSA introduced the concept of the 'threshold residue level'.

The threshold residue level (edible portion) ( $TRL_{ep}$ ) is the theoretical, calculated maximum residue in the edible part of the crop that would be acceptable from a consumer safety point of view. The threshold residue gives an intake corresponding to 100 % of the ARfD and it is calculated on the basis of the consumer group with the highest consumption per units of body weight (i.e. the most critical consumer) identified among all the national consumer groups for which consumption data are available to EFSA.

The threshold residue level (raw agricultural food product) ( $TRL_{rac}$ ) is the threshold residue level that refers to the whole food item, e.g. the unpeeled orange and gives an intake corresponding to 100 % of the ARfD. For crops that are consumed in peeled and/or processed form, a peeling factor and/or processing factor has to be considered to derive the  $TRL_{rac}$ . If the crop of concern can be consumed as a whole without any processing/peeling, the calculated  $TRL_{ep}$  and the  $TRL_{rac}$  have the same value.

### **Third countries**

Any country that is neither a Member State nor a country from the EEA area.

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<sup>86</sup> Commission Directive 2002/63/EC of 11 July 2002 establishing Community methods of sampling for the official control of pesticide residues in and on products of plant and animal origin and repealing Directive 79/700/EEC. OJ L 187, 16.7.2002, p. 30 – 43.

## ABBREVIATIONS

<b>ADI</b>	Acceptable Daily Intake
<b>ARfD</b>	Acute Reference Dose
<b>AT</b>	Austria
<b>BE</b>	Belgium
<b>BG</b>	Bulgaria
<b>BTSF</b>	Better Training for Safer Food
<b>CAG</b>	Cumulative Assessment Group
<b>CI</b>	Confidence Interval
<b>COM</b>	European Commission
<b>CXY</b>	Codex Maximum Residue Limit
<b>CY</b>	Cyprus
<b>CZ</b>	The Czech Republic
<b>DAR</b>	Draft Assessment Report
<b>DE</b>	Germany
<b>DK</b>	Denmark
<b>EC</b>	European Commission
<b>EE</b>	Estonia
<b>EEA</b>	European Economic Area
<b>EEC</b>	European Economic Community
<b>EFSA</b>	European Food Safety Authority
<b>EFTA</b>	European Free Trade Association
<b>ES</b>	Spain
<b>EU</b>	European Union
<b>EUCP</b>	EU-coordinated programme
<b>EURL</b>	European Union Reference Laboratory
<b>FAO</b>	Food and Agriculture Organization
<b>FI</b>	Finland
<b>FR</b>	France
<b>FVO</b>	Food and Veterinary Office
<b>GAP</b>	Good Agricultural Practice
<b>GR</b>	Greece
<b>HRM</b>	Highest Residue Measured in monitoring samples
<b>HU</b>	Hungary
<b>IE</b>	Ireland
<b>IESTI</b>	International Estimated Short Term Intake
<b>IPM</b>	Integrated Pest Management
<b>IS</b>	Iceland
<b>ISO/IEC</b>	The International Organization for Standardization/International Electrotechnical Commission
<b>IT</b>	Italy
<b>JMPR</b>	Joint FAO/WHO Meeting on Pesticide Residues
<b>LCL</b>	Lower Confidence Limit
<b>LOAEL</b>	Lowest Observed Adverse Effect Level
<b>LOD</b>	Limit of Detection
<b>LOQ</b>	Limit of Quantification
<b>LT</b>	Lithuania
<b>LU</b>	Luxembourg
<b>LV</b>	Latvia
<b>MRL</b>	Maximum Residue Level
<b>MT</b>	Malta
<b>NP</b>	National control programmes for pesticide residues
<b>NL</b>	The Netherlands
<b>NO</b>	Norway

<b>NOAEL</b>	No Observed Adverse Effect Level
<b>NRL</b>	National Reference Laboratory
<b>PL</b>	Poland
<b>POP</b>	Persistent Organic Pollutant
<b>PRIMo</b>	Pesticide Residue Intake Model
<b>PT</b>	Portugal
<b>RAC</b>	Raw Agricultural Food Product
<b>RASFF</b>	Rapid Alert System for Food and Feed
<b>RD</b>	Residue Definition
<b>RO</b>	Romania
<b>SANCO</b>	Directorate General for Health & Consumers
<b>SE</b>	Sweden
<b>SI</b>	Slovenia
<b>SK</b>	Slovakia
<b>SSD</b>	Standard Sample Description
<b>TDM</b>	Triazole Derivative Metabolites
<b>TMDI</b>	Theoretical Maximum Daily Intake
<b>TRL<sub>ep</sub></b>	Threshold Residue Level (edible portion)
<b>TRL<sub>rac</sub></b>	Threshold MRL or Threshold Residue Level (raw agricultural food item)
<b>UCL</b>	Upper Confidence Interval
<b>UK</b>	The United Kingdom
<b>WHO</b>	World Health Organization

## **APPENDICES**

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# APPENDIX I - NATIONAL AUTHORITIES AND INSTITUTES IN EEA AND EU MEMBER STATES RESPONSIBLE FOR PESTICIDE RESIDUE MONITORING

Country	National authority/institution	Web addresses for published national monitoring reports
Austria	Austrian Federal Ministry of Health	<a href="http://bmg.gv.at/home/Schwerpunkte/Verbrauch%20erInnengesundheit/Lebensmittel/Lebensmittelkontrolle/Monitoringprogramme/Nationales_Rueckstandsmonitoring_Obst_und_Gemuese">http://bmg.gv.at/home/Schwerpunkte/Verbrauch erInnengesundheit/Lebensmittel/Lebensmittelkontrolle/Monitoringprogramme/Nationales_Rueckstandsmonitoring_Obst_und_Gemuese</a>
	Austrian Agency for Health and Food Safety	<a href="http://www.ages.at/risikobewertung/ernaehrungssicherheit/rueckstaende-kontaminanten/pflanzenschutzmittel-rueckstaende-in-lebensmittel/pestizidmonitoring/">http://www.ages.at/risikobewertung/ernaehrungssicherheit/rueckstaende-kontaminanten/pflanzenschutzmittel-rueckstaende-in-lebensmittel/pestizidmonitoring/</a>
Belgium	Federal Agency for the Safety of the Food Chain (FASFC)	<a href="http://www.afsca.be">http://www.afsca.be</a>
Bulgaria	Bulgarian Food Safety Agency	<a href="http://www.babh.government.bg">http://www.babh.government.bg</a>
Cyprus	Pesticides Residues Laboratory of the State General Laboratory of Ministry of Health	<a href="http://www.moh.gov.cy/sgl">www.moh.gov.cy/sgl</a>
The Czech Republic	Czech Agriculture and Food Inspection Authority	<a href="http://www.szpi.gov.cz/IstDoc.aspx?nid=11386">http://www.szpi.gov.cz/IstDoc.aspx?nid=11386</a>
	State Veterinary Administration	<a href="http://www.svscr.cz">www.svscr.cz</a>
Denmark	Danish Veterinary and Food Administration	<a href="http://www.foedevarestyrelsen.dk/Foedevare/Kemiske_forurenninger/Pesticider/Kontrol_analyser/Sider/Kontrol_analyser.aspx">http://www.foedevarestyrelsen.dk/Foedevare/Kemiske_forurenninger/Pesticider/Kontrol_analyser/Sider/Kontrol_analyser.aspx</a>
	National Food Institute, Technical University of Denmark	<a href="http://www.food.dtu.dk/Publikationer/F%C3%B8devaresikkerhed/Kemiske_forurenninger/Pesticidrester.aspx">http://www.food.dtu.dk/Publikationer/F%C3%B8devaresikkerhed/Kemiske_forurenninger/Pesticidrester.aspx</a>
Estonia	Veterinary and Food Board and Agricultural Board	<a href="http://www.vet.agri.ee">www.vet.agri.ee</a>
Finland	Finnish Food Safety Authority Evira and Finnish Customs	<a href="http://www.evira.fi/portal/fi/evira/asiakokonaisuudet/vierasaineet/kasvinsuojeluainejaamat/valvonta/">http://www.evira.fi/portal/fi/evira/asiakokonaisuudet/vierasaineet/kasvinsuojeluainejaamat/valvonta/</a>
France	Ministère de l'Économie, des finances et de l'industrie Direction générale de la concurrence, de la consommation et de la répression des fraudes (DGCCRF)	<a href="http://www.economie.gouv.fr/dgccrf/Surveillance-et-contrôle-des-résidus-de-pesticides-552">http://www.economie.gouv.fr/dgccrf/Surveillance-et-contrôle-des-résidus-de-pesticides-552</a>
Germany	Federal Office of Consumer Protection and Food Safety (BVL)	<a href="http://www.bvl.bund.de/berichtsmp">http://www.bvl.bund.de/berichtsmp</a>
Greece	Ministry of Rural Development and Food, General Directorate of Plant Produce, Directorate of Plant Produce Protection, Department of Pesticides	<a href="http://www.minagric.gr/index.php/en/citizen-menu/foodsafety-menu">http://www.minagric.gr/index.php/en/citizen-menu/foodsafety-menu</a>
Hungary	Hungarian Food Safety Office (HFSO)	<a href="http://www.mgszh.gov.hu">www.mgszh.gov.hu</a>
Iceland	The Food and Veterinary Authority	<a href="http://www.mast.is">http://www.mast.is</a>
Ireland	Department of Agriculture food and the Marine	<a href="http://www.pcs.agriculture.gov.ie">www.pcs.agriculture.gov.ie</a>
Italy	Ministero della Salute	<a href="http://www.salute.gov.it/portale/temi/p2_6.jsp?lingua=italiano&amp;id=1105&amp;area=fitosanitari&amp;menu=vegetali">http://www.salute.gov.it/portale/temi/p2_6.jsp?lingua=italiano&amp;id=1105&amp;area=fitosanitari&amp;menu=vegetali</a>

Country	National authority/institution	Web addresses for published national monitoring reports
Latvia	Ministry of Agriculture Food and Veterinary Service of Latvia	<a href="http://www.zm.gov.lv/">http://www.zm.gov.lv/</a>
Lithuania	National Food and Veterinary Risk Assessment Institute	<a href="http://www.nmvrvi.lt">www.nmvrvi.lt</a>
Luxembourg	Food Safety Service	<a href="http://www.securite-alimentaire.public.lu/organisme/pcnp/sc/cs9_prod_phyto/index.html?highlight=pesticides">http://www.securite-alimentaire.public.lu/organisme/pcnp/sc/cs9_prod_phyto/index.html?highlight=pesticides</a>
	Administration of Veterinary Service	<a href="http://www.securite-alimentaire.public.lu/organisme/pcnp/sc/cs9_prod_phyto/index.html?highlight=pesticides">http://www.securite-alimentaire.public.lu/organisme/pcnp/sc/cs9_prod_phyto/index.html?highlight=pesticides</a>
Malta	Malta Competition and Consumers Affairs Authority	<a href="http://www.mccaa.org.mt">www.mccaa.org.mt</a>
The Netherlands	Dutch Food and Consumer product Safety Authority (VWA)	<a href="http://www.vwa.nl">www.vwa.nl</a>
Norway	The Norwegian Food Safety Authority	<a href="http://www.mattilsynet.no/mat/mattrygghet/plantevernmiddelester/_rsrapporter_for_overvaking_av_plantevernmiddelester_i_mat_23932">http://www.mattilsynet.no/mat/mattrygghet/plantevernmiddelester/_rsrapporter_for_overvaking_av_plantevernmiddelester_i_mat_23932</a>
Poland	The State Sanitary Inspection	<a href="http://www.gis.gov.pl">http://www.gis.gov.pl</a>
Portugal	Directorate General of Food and Veterinary (DGAV)	<a href="http://www.dgv.min-agricultura.pt/portal/page/portal/DGV/genericos?generico=4217393&amp;cboui=4217393">http://www.dgv.min-agricultura.pt/portal/page/portal/DGV/genericos?generico=4217393&amp;cboui=4217393</a>
	Pesticide Residues Laboratory of the National Institute of Agrarian and Veterinary Research (LRP-INIAV)	
Romania	National Reference Laboratory for Fruits, Vegetables and Cereals	<a href="http://www.madr.ro">www.madr.ro</a> <a href="http://www.ansvsa.ro">www.ansvsa.ro</a>
	National Sanitary Veterinary and Food Safety Authority	
Slovakia	Ministry of Agriculture and Rural Development	<a href="http://www.svssr.sk/">http://www.svssr.sk/</a>
	Ministry of Health	
Slovenia	State Veterinary and Food Administration of the Slovakia Republic	<a href="http://www.furs.si/svn/ffs/">http://www.furs.si/svn/ffs/</a>
	Public Health Authority of the Slovakia Republic	
	Inspectorate of the Republic of Slovenia for Agriculture, Forestry and Food (IRSAFFE)	
	Health Inspectorate of the Republic of Slovenia (HIRS)	
Spain	Veterinary Administration of the Republic of Slovenia (VARs)	<a href="http://aesan.msssi.gob.es/AESAN/docs/docs/control_oficial_planes_nacionales_especificos/Resultados_2012_plaguicidas.pdf">http://aesan.msssi.gob.es/AESAN/docs/docs/control_oficial_planes_nacionales_especificos/Resultados_2012_plaguicidas.pdf</a>
	Phytosanitary Administration of the Republic of Slovenia (PARs)	
Sweden	Spanish Agency for Consumers, Food Safety and Nutrition (AECOSAN)	
The United Kingdom	National Food Agency	<a href="http://www.slvs.se">www.slvs.se</a>
	Health and Safety Executive – Chemicals Regulation Directorate	<a href="http://www.pesticides.gov.uk/guidance/industries/pesticides/advisorygroups/PRI/PRI_Results_and_Reports/2011_Results_and_Reports">http://www.pesticides.gov.uk/guidance/industries/pesticides/advisorygroups/PRI/PRI_Results_and_Reports/2011_Results_and_Reports</a>

## APPENDIX II – INFORMATION ON THE NATIONAL MONITORING PROGRAMMES

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## 1. Introduction

In addition to analytical results, data providers were asked to enter a textual summary as described in the document 'Use of the EFSA Standard Sample Description for the reporting of data on the control of pesticide residues in food and feed according to Regulation (EC) No 396/2005'.

The text should contain a summary of the results, a description of the organisation of monitoring programmes, of the sampling procedures and of the quality assurance, as well as any other relevant information, structured under the following headings:

1. Country
  - 1.1. Objective and design of the national monitoring programme
    - 1.1.1. Responsibilities
    - 1.1.2. Design of Programmes (priorities, targeting, criteria for the percentage of samples to be taken from the organic sector)
    - 1.1.3. Sampling: personnel, procedures, sampling points
    - 1.1.4. Analytical methods used
  - 1.2. Key findings, interpretation of the results and comparability with the previous year results
  - 1.3. Non-compliant samples: possible reasons and actions taken
  - 1.4. Quality assurance
    - 1.4.1. Status of accreditation of laboratories, number of laboratories
  - 1.5. Additional Information

The information in the following paragraphs is published as reported by the contributing countries to EFSA. EFSA therefore takes no responsibility for the accuracy of this information and for the potential discrepancy between the information provided here in Appendix II and that published in Section 2 of the Annual Report.

The information provided in this section should reflect the information published by the individual competent national authorities on the Internet. The list of web addresses, where the results of national monitoring plans have been published, can be found in Appendix I. It should be noted that upon transmission of the monitoring data, EFSA validated and cleaned the data transmitted; in addition EFSA recoded the names of pesticides and food used by the reporting countries to make them comparable. In case of data inconsistencies the reporting countries were asked for corrections. Therefore, small differences in the data published separately by the national authorities (and here in Appendix II) and the data reported in Section 2 of the Annual Report may occur.

A direct comparability of the MRL compliance rates between reporting countries is not possible for several reasons. In particular, the scope and sampling strategies of the monitoring plans and the analytical performance vary among reporting countries. Especially Iceland had an agreed reduced scope in the coordinated multiannual Community control (EEA Decision 127/2009).

In the reference monitoring period 2011 the pesticide MRLs were fully harmonised among the EU member states.

The only exemption is the comparison with Norway and Iceland; EEA countries have also implemented in their national legislations the legal limits applicable in the European Union. However, the date of entry into force of the EU MRLs in these two countries is delayed in comparison to the application data in the Member States.

## **2. Austria**

### **2.1. Objective and design of the national control programme**

#### **2.1.1. Responsibilities**

The national pesticide monitoring is conducted according to a nation-wide sampling plan designed by the Austrian Agency for Health and Food Safety (Division for Data, Statistics and Risk Assessment) in co-operation with the Austrian Federal Ministry of Health. The plan is based on data concerning dietary consumption, production and import of fruits and vegetables and it takes into account the results of earlier monitoring programmes, as well as the analytical possibilities. The national monitoring programme furthermore covers the co-ordinated programme of the European Commission. In addition, routine samples were taken from the Austrian market by the responsible bodies.

#### **2.1.2. Design of Programmes (priorities, targeting, criteria for the percentage of samples to be taken from the organic sector)**

The collected data are representative for the Austrian market. Based on the results of the previous years, however, a higher risk for pesticide residues was identified for some commodities. These commodities were especially targeted in the monitoring programme and chosen for further examination, with the aim of reflecting the results of the previous years. This year, emphasis was laid on the sampling of fruits and vegetables from organic farming. This type of ‘partially targeted’ monitoring is foreseen for the following years.

#### **2.1.3. Sampling: personnel, procedures, sampling points**

The samples were taken by trained officials from the local Food Inspection Service (‘Lebensmittelaufsicht’) in accordance to the Commission Directive 2002/63/EC, which is implemented in the internal quality assurance system of the officials. The samples were predominantly taken at the retail or wholesale level.

#### **2.1.4. Analytical methods used**

The analytical methods were adopted from published methods of the Dutch federal laboratories (‘Analytical Methods for Pesticide Residues in Foodstuffs’, 6th Ed., General Inspectorate for Health Protection, Ministry of Public Health, Welfare and Sport, The Netherlands) and validated in the laboratories. The samples were analysed up to a maximum of 538 substances (part of sums included). The multiresidue methods were based on QuEChERS method, combined with GC-MS/MS, GC-ECD, GC-NPD, GC-FPD, LC-MS/MS. Single residue methods were used for Dithiocarbamates (GC-MS), Bromide (GC-ECD), Glyphosate/Glyfosinate (LC-MS/MS), Ethephon (LC-MS/MS) and phenoxy acids (LC-MS/MS).

### **2.2. Key findings, interpretation of the results and comparability with the previous year results**

In 2011 a total of 1436 samples of fresh fruits and vegetables were analysed under the coordinated programme, the national pesticide monitoring programme and as routine samples. In addition, other products like cereals (27 samples), processed products (527 samples), animal products (467 samples), fish products (13 samples) and baby food (200 samples) were analysed. In sum, 2670 samples were examined for pesticide residues.

48,8 % of all samples originated from Austria, 29,5 % came from the European market, 17 % from third countries and the rest from an unknown origin. The percentage of surveillance samples with residues above the MRL were 1,7 %, 1,8 %, 1,2 % and 6,3 % respectively (without taking into account the measurement uncertainty).

In 42 % of the samples (surveillance and enforcement) of fruit and vegetables (denoted as ‘plant products’ in the validation report), no pesticide residues could be detected. 54 % of the samples had residues below or at the Maximum Residue Limits (MRL). Disregarding measurement uncertainties, 4 % of the samples of fruits and vegetables contained one or more pesticide(s) above the MRL (57 samples). If, however, measurement uncertainty is taken into account, the number of unprocessed or processed samples of fruits and vegetables containing pesticide residues above the MRL, and thus being non-compliant, is reduced to 40 samples (2,8 %).

In 574 samples (21,5 %) more than one pesticide was found. The maximum number of different pesticides found in one sample was 12 (12 different pesticide residues in two samples of table grapes).

100 samples were taken as enforcement samples, of which 2 samples contained pesticide residues above the MRL and were non-compliant.

Even though the number of substances analysed in the samples increased, the number of non-compliances is similar to the previous years.

### 2.3. Non-compliant samples: possible reasons and actions taken

In 2011, a total of 42 samples (all commodities) were non-compliant with the EU-MRLs, taking into account the measurement uncertainty. For these samples, administrative actions were set by the responsible officials from the local Food Inspection Service.

Number of non-compliant samples	Action taken	Note
36	Administrative Actions	
6	Administrative Actions and RASFF notification	RASFF-ref: 2011.AGY (Sample code: 11007088)
		RASFF-ref: 2011.0749 (Sample code: 11047861)
		RASFF-ref: 2011.0255 (Sample code: 39033-2011)
		RASFF-ref: 2011.0356 (Sample code: 40934-2011 )
		RASFF-ref: 2011.0366 (Sample code: 40936-2011)
		RASFF-ref: 2011.0368 (Sample code: 11-14147)

### 2.4. Quality assurance

#### 2.4.1. Status of accreditation of laboratories, number of laboratories

The analysis of the co-ordinated programme, the national monitoring programme and routine samples was conducted by two laboratories for food control (Austrian Agency for Health and Food Safety, Institute for Food Control, Vienna and Institute for Food Control, Innsbruck together with the competence-centres for pesticide-analyses (CC-RANA, CC-PSRM)). One additional Laboratory in Vienna (Regional Institute for Food Control in Vienna (LUA3)) analysed routine samples. All laboratories received the accreditation in the year 1998 and the methods for pesticide analyses are still accredited.

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
AT	Austrian Agency for Health and Food Safety (Institutes and Competence centres)	CC PSMR CC RANA ILMU-GRZ ILMU-IBK ILMU-LNZ ILMU-SBG ILMU-VIE	01.11.1998	BMWA	IFA Tulln (BOKU), Series H76 (Herbicide) in water EURL-CF, (Denmark), EUPT-C4 (EU Proficiency test for Cereals) EURL FV (Almeria), EUPT-FV12 (EU Proficiency test for Pesticides in Fruits and Vegetables) EURL FV (Almeria), EUPT-FV-SM-02 (EU Proficiency test for Pesticides in Fruits and Vegetables, Screening Methods) EURL SRM (CVUA Stuttgart), EUPT SRM5 (EU Proficiency test for Single Residue Methods) EUPT-C5/SRM6 (rice) EUPT-AO06 (poultry) FAPAS 0578 (oil)
AT	Regional Institute for Food Control in Vienna	LUA3	01.11.1998	BMWA	FAPAS Proficiency Test 19127 Proficiency Test of the Austrian NRL for Pesticide Residues 2011 (Pesticide Residues in Raspberry Homogenate)

### 3. Belgium

#### 3.1. Objective and design of the national control programme

The use of plant protection products during the production of fruit, vegetables and cereals can lead to the presence of residues in food and feed. Maximum residue levels (MRL) are set in the European legislation<sup>1</sup> in order to check the good use of plant protection products (use of authorised products according to their authorization) and to protect the consumers. Food or feed which do not comply with the MRL cannot be put on the market. An MRL exceeding content is the sign of incorrect use of a plant protection product but does not necessarily involve a risk for the health of consumers.

The approach used by the Federal Agency for the Safety of the Food Chain (FASFC) for the control of pesticide residues is risk based. The programme is drawn up following the general statistical approach developed within the FASFC<sup>2</sup>. Several factors are taken into account: the toxicity of the active substances, food consumption statistics, food commodities with a high residues/non-compliance rate in previous monitoring years, origin of food (domestic, EU or third country), RASFF notifications and other useful information.

All groups of fruits and vegetables are included in the programme and a rotation programme is applied for less important commodities. The coordinated control programme<sup>3</sup> of the European Commission and some targeted sampling (mainly targeted sampling at border controls according to Regulation 669/2009<sup>4</sup>) are also included in the national programme.

Adjustments of the programme can be made in the course of the year so that emerging problems can be dealt with.

The FASFC determines the target pesticides for each sample type according to a risk based approach taking into account the active substances authorised in Belgium, the result of previous control programmes in Belgium and other Member States, the RASFF and the analytical possibilities.

Sampling is done in accordance with Directive 2002/63/EC<sup>5</sup> that has been implemented in Belgian legislation. Samples are analysed in ISO 17025 accredited laboratories by means of multi-residues and single-residues methods which allowed in 2011 the detection of more than 600 pesticide residues and metabolites.

#### 3.2. Key findings, interpretation of the results and comparability with the previous year results

In 2011, a total number of 3320 samples of fruits, vegetables, cereals, animal products and processed products (including baby food) were taken by the Federal Agency for the Safety of the Food Chain (FASFC) and analysed for the presence of pesticide residues. The products analysed were of Belgian origin (44,5 %), EU origin (17 %), non-EU origin (36 %) and unknown origin (2,5 %).

Table 1 summarises the results with respect to the sampling strategy.

Table 1: Products analysed for pesticide residues in 2011 with respect to the sampling strategy

Sampling strategy	Samples	Analysed	without residues	with residues at or below MRL	> MRL <sup>6</sup>	> MRL <sup>7</sup> (Non compliant)
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<sup>1</sup> Regulation (EC) No 396/2005 of the European Parliament and of the Council of 23 February 2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC. OJ L 70, 16.3.2005, p. 1-16.

<sup>2</sup> Maudoux J-P, Saegerman C, Rettigner C, Houins G, Van Huffel X and Berkvens D, 2006. Food safety surveillance by a risk based control programming: approach applied by the Belgian federal agency for the safety of the food chain (FASFC). Vet. Quart., 28(4), 140-154. <http://www.favv-afsc.fgov.be/publicationsthematiques/food-safety.asp>

<sup>3</sup> Commission Regulation (EU) No 915/2010 of 12 October 2010 concerning a coordinated multiannual control programme of the Union for 2011, 2012 and 2013 to ensure compliance with maximum levels of and to assess the consumer exposure to pesticide residues in and on food of plant and animal origin. OJ L 269, 13.10.2010, p. 8-18.

<sup>4</sup> Commission Regulation (EC) No 669/2009 of 24 July 2009 implementing Regulation (EC) No 882/2004 of the European Parliament and of the Council as regards the increased level of official controls on imports of certain feed and food of non-animal origin and amending Decision 2006/504/EC (Text with EEA relevance). OJ L 194, 25.7.2009, p. 11 – 21.

<sup>5</sup> Commission Directive 2002/63/EC of 11 July 2002 establishing Community methods of sampling for the official control of pesticide residues in and on products of plant and animal origin and repealing Directive 79/700/EEC (Text with EEA relevance). OJ L 187, 16.07.2002, p. 30–43.

<sup>6</sup> Measurement uncertainty is not taken into account (numerical MRL exceedances).

<sup>7</sup> Measurement uncertainty is taken into account (samples non compliant).

Sampling strategy	Samples	Analysed	without residues	with residues at or below MRL	> MRL <sup>6</sup>	> MRL <sup>7</sup> (Non compliant)
Surveillance	Fruit & vegetables	1891	566 (29,9 %)	1216 (64,3 %)	109 (5,8 %)	<b>51 (2,7 %)</b>
	Cereals	30	7 (23,3 %)	21 (70 %)	2 (6,7 %)	<b>2 (6,7 %)</b>
	Processed products (food)	115	71 (61,7 %)	43 (37,4 %)	1 (0,9 %)	<b>0 %</b>
	Animal products <sup>8</sup>	519	389 (75 %)	130 (25 %)	0 %	<b>0 %</b>
	Baby food	74	70 (94,6 %)	3 (4,1 %)	1 (1,3 %)	<b>0 %</b>
	Feed	94	55 (58,5 %)	38 (40,4 %)	1 (1,1 %)	<b>0 %</b>
	Subtotal	2,723	1,158 (42,5 %)	1,451 (53,3 %)	114 (4,2 %)	53 (1,9 %)
Enforcement	Fruit, vegetables & cereals	594	223 (37,6 %)	299 (50,3 %)	72 (12,1 %)	43 (7,2 %)
	Feed	3	3 (100 %)	0 %	0 %	0 %
	Subtotal	597	226 (37,8 %)	299 (50,1 %)	72 (12,1 %)	42 (7 %)
<b>TOTAL</b>		<b>3,320</b>	<b>1,384 (41,7 %)</b>	<b>1,750 (52,7 %)</b>	<b>186 (5,6 %)</b>	<b>95 (2,9 %)</b>

### Surveillance sampling

2,723 surveillance samples were analysed within the context of the control programme. 98,1 % was compliant with the legislation in force.

Main MRL violations were observed in legume vegetables (peas from Kenya & lentils mainly from France), infusions (among others from China) and leafy vegetables (fresh herbs, spinach, endive and rucola mainly from Belgium). All samples of processed products, babyfood, feed and animal products were compliant. The list of MRL exceedances is available found in table D of the summary report.

As in previous years, more MRL violations were proportionally observed in non-EU products (3,9 %) than in products grown in BE (1,2 %) or the EU (1,8 %) (See table A0 of the summary report). The situation of non-EU products has however improved when compared to 2010 (1,1 %).

In comparison with previous years, the number of samples reported has increased (+ 24 % compared with 2010). This increase is explained by the reporting of samples of animal origin analysed in the framework of Directive 96/23/EC which were not included in the report of previous years. This increase has to be kept in mind when comparing the results with previous years. The total rate of MRL violations in 2011 is lower in comparison with 2010 (- 0,2 %). The rate of MRL violations in fruit and vegetables is however slightly higher in comparison with 2010 (+ 0,3 %) but equivalent to 2009.

### Enforcement sampling

597 enforcement samples were analysed in the case of suspicion about the non compliance of a product with EU MRLs. These products were mainly targeted products analysed according to Regulation 669/2009 (products coming mainly from Thailand, the Dominican Republic, Egypt and China) and products analysed within the context of following up of violations found previously. 93 % were compliant with the legislation

Main MRL violations were observed in fresh mint from Morocco (26 % of the 45 samples analysed). MRL exceedances were also found in products from the Dominican Republic ((chilli-) peppers, beans & aubergines) and Thailand (coriander, basil & eggplants).

Compared to previous years, the rate of non-compliant enforcement samples observed in 2011 is lower than in 2010 (-3,6 %). This can be explained among others by the decrease of MRL violations for chilli peppers.

<sup>8</sup> Some animal products were analysed in the framework of Council Directive 96/23/EC of 29 April 1996 on measures to monitor certain substances and residues thereof in live animals and animal products and repealing Directives 85/358/EEC and 86/469/EEC and Decisions 89/187/EEC and 91/664/EEC. OJ L 125, 23.5.1996, p.10.

### 3.3. Non-compliant samples: possible reasons ARFD exceedances and actions taken

When non-compliant samples are identified, the batch is seized, if available, and prevented from entering the market. An assessment of the risk for consumers is performed on all non-compliant samples and the appropriate measures such as recall and RASFF notification are taken<sup>9</sup>.

Follow-up action is taken to verify the violation and to identify its cause. When non-compliant samples are identified, the producer or importer is subject to enhanced control and an official report is drawn up and sent to the legal department of the FASFC which proposes a fine. If the fine is not paid or in case of repeated offences the matter is taken to court.

Four RASFF messages were issued by Belgium in 2011 for pesticide residues in food and feed<sup>10</sup>.

Notification	Ref. number
fosthiazate (0.091 mg/kg - ppm) in Nicola potatoes from Spain (business self-checking)	2011.0905
fluazifop-p (0.58 mg/kg - ppm) in broccoli from Italy (business self-checking)	2011.0182
unauthorised substance EPN (0.36 mg/kg - ppm) in coriander leaves from Thailand	2011.AQF
omethoate and dimethoate (sum = 0.133 mg/kg - ppm) in aubergine (eggplant) from Uganda	2011.0237
anthraquinone (18 mg/kg - ppm) in wheat fibre produced in the Netherlands, with raw material from Pakistan (business self-checking)	2011.0979

The cause of MRL violations is searched for as far as possible. The table below gives an overview of MRL non compliances found in products of Belgian origin in 2011 and the possible cause of the non compliance.

Product	Residue	Reason for MRL non compliance	Note
Apples	Bromopropylate	GAP probably not respected	The use of bromopropylate is no longer authorised in Europe.
Celeriac	Clomazon	GAP probably not respected	Use of clomazon authorised in celeriac
Celery	Oxadixyl	Contamination: residues resulting from the previous use of a pesticide (soil residues taken up by succeeding crops)	MRL changed in 2012 in order to take this problem into account
Celery	Linuron	GAP probably not respected	Use of linuron authorised in celery
Celery	Cyfluthrin	GAP not respected	Use of cyfluthrin not authorised in celery
Chinese cabbage	Haloxypop (sum)	GAP not respected	Use of haloxypop non-authorised on Chinese cabbage
Chives	Cyfluthrin	GAP not respected	Use of cyfluthrin not authorised in chives
Currants	Lambda-cyhalothrin	GAP probably not respected	Use of lambda-cyhalothrin authorised in currants
Fennel	Prometryn	GAP probably not respected	Use of non- authorised pesticide in all crops
Infusions	Bifenazate	GAP not respected	Use of haloxypop not authorised in infusions
Lamb's lettuce	Dieldrin (sum)	Contamination: residues resulting from the previous use of a pesticide (soil residues taken up by succeeding crops)	
Lentils	Malathion	GAP not respected	use of non-authorised pesticide in all crops
Parsley	Bitertanol	GAP not respected	Use of bitertanol not authorised in parsley
Parsley	Dithiocarbamates	GAP probably not respected	Use of dithiocarbamates authorised in parsley
Rucola	Pymetrozine	GAP probably not respected	Use of pymetrozine authorised in rucola

<sup>9</sup> The actions to be taken when an MRL is exceeded are described in a procedure available on the website of the FASFC (<http://www.afsca.be/publicationsthematiques/inventaire-actions.asp>)

<sup>10</sup> [http://ec.europa.eu/food/food/rapidalert/rasff\\_portal\\_database\\_en.print.htm](http://ec.europa.eu/food/food/rapidalert/rasff_portal_database_en.print.htm)



Product	Residue	Reason for MRL non compliance	Note
Rucola	Thiacloprid	GAP probably not respected	Use of thiacloprid authorised in rucola
Spinach	Dithiocarbamates	GAP not respected	Use of dithiocarbamates not authorised in spinach
Spinach	Iprodione	GAP not respected	use of iprodione not authorised in spinach

### 3.4. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
BE	CENTRE D'ECONOMIE RURALE – LABORATOIRE D'HORMONOLOGIE ANIMALE	CER	073-TEST (version 10.2, dd 2012-06-13)	BELAC	EUPT-AO 06 FAPAS (Test 0581)
BE	FEDERAAL LABORATORIUM VOOR DE VOEDSELVEILIGHEID Tervuren	FLVVT	014-TEST (version 6.2, dd 2011-12-14)	BELAC	EUPT-C5/SRM6 EUPT-C6 EUPT-AO7 FAPAS (Test 19132) CAO FFSD (11-2011) KDLL (PCB11-1; PCB11-2; PCB12-1)
BE	FYTOLAB C.V.B.A.	FYTOLAB	057-TEST (version 10, dd 2012-07-27)	BELAC	EUPT-AO 06 EUPT-AO 07 EUPT-FV 13 EUPT-SRM7 EUPT-SRM6 EUPT-C5/SRM6 EUPT-C5 (total) EUPT-C6 FAPAS Test 0578)
BE	LABORATOIRE FEDERAL POUR LA SECURITE ALIMENTAIRE LIEGE	LFSAL	014-TEST (version 6.2, dd 2011-12-14)	BELAC	AGES (PTPR-H 2011) BIPEA (19G) EUPT-AO 06 FAPAS (Test 0578 ; Test 0583)
DE	LUFA-ITL GmbH	LUFA	D-PL-14082-01-00 (dd 2012-02-17)	DAkkS	EUPT-FV14 EUPT-C5/SRM6
BE	WETENSCHAPPELIJK INSTITUUT VOLKSGEZONDHEID (WIV) – INSTITUT SCIENTIFIQUE DE SANTE PUBLIQUE (ISP)	WIV-PEST	081-TEST (version 12, dd 2012-03-13)	BELAC	AGES (PTPR-H 2011) EUPT-AO 06 EUPT-FV 13 EUPT-SRM6 EUPT-C5 (total)
NL	GROND-, GEWAS- en MILIEU-LABORATORIUM 'ZEEUWS VLAANDEREN' BV	ZEEUWS	L201 (dd 2012-07-20)	RvA	EUPT-FV 13 EUPT-SRM6 FAPAS (Test 19115; Test 19120; Test 19121; Test 19124; Test 19125; Test 19127; Test 19128)



### **3.5. Additional Information**

Only organic food analysed in the frame of the EU coordinated programme are part of this report. Additional controls on organic food are carried out by the Belgian Regional Authorities which are in charge of organic production. The results of these controls are reported separately to the European Commission.

Website FASFC: <http://www.afsca.be>

Contact point: [pesticide.pc@afsca.be](mailto:pesticide.pc@afsca.be)

## 4. Bulgaria

### 4.1. Objective and design of the national control programme

The Bulgarian Food Safety Agency (BFSA) within the Ministry of Agriculture and Food (MAF) is the competent authority for the enforcement of pesticide residues monitoring in Bulgaria and is responsible for drawing up the National monitoring programme for pesticide residues in and on products of animal and plant origin. Therefore the BFSA is responsible for implementation of coordinated multiannual control programme of the Union and taking samples in terms of Commission Regulation No 915/2010.

A coordinated multi-Community monitoring program is included in the National programme on pesticide residues monitoring.

The sampling plan for pesticide residues monitoring is always drawn up for one calendar year. The plan is elaborated by the Headquarter of BFSA and it is distributed to the Regional Food Safety Directorates /RFSD/ which are responsible for its implementation.

Criteria Used for Drawing up the Control Programme

#### Selection of Commodities

The following criteria have been used for the selection of commodities being listed in the national programme on pesticide residues monitoring:

- the overall food consumption of the Bulgarian population /relative share in average Bulgarian's diet;
- the consumption food basket;
- the results of official controls and monitoring of pesticide residues in previous years;
- the foodstuffs intended for risk groups of population (namely infant formula and foods for young children);
- local production/imports of commodities;
- the reports in RASFF system;
- Commission Regulation (EC) No 915/2010 of 12 October 2010 concerning the coordinated multiannual Community control programme for 2011, 2012 and 2013 to ensure compliance with maximum levels of and to assess the consumer exposure to pesticide residues in and on food of plant and animal origin.

### 4.2. Key findings, interpretation of the results and comparability with the previous year results

In 2011, a total number of 4516 samples were analysed: 4400 of fruits and nuts, vegetables and other plant products; 37 processed products; 16 cereals, 21 baby food and 42 animal products– products of domestic and non-domestic origin in the national and co-ordinated monitoring programs. 245 samples were with residues below MRL. 108 samples were exceeding MRL.

Of the total number of analysed samples:

- 4,055 samples were taken as enforcement samples (in line with Regulation (EC) No 669/2009), of which 97 samples contained pesticide residues above the MRL (2,4 %); from them 97 were TC origin.
- 461 samples were taken as surveillance samples (in line with Regulation (EC) No 915/2010), of which 11 samples contained pesticide residues above the MRL (5,9 %); from them 9 were domestic production and 2 were TC origin.

#### Vegetables

To determine the pesticide residues, in total 193 vegetable samples were taken within national and co-ordinated monitoring. From all vegetable samples, 14 were the samples originating from EU countries, 19 were the samples originating from TC countries, 160 were the samples originating from domestic production.

To determine the pesticide residues, in total 4,055 vegetable samples were taken in line with Regulation (EC) No 669/2009: 240 courgettes from TC countries, 2,900 peppers from TC countries, 915 tomatoes from TC countries.

### Fruits and nuts

A total number of 152 samples of fruits were analyzed for the presence of pesticide residues and were taken within national and co-ordinated monitoring. From all taken fruits, 61 were the samples originating from EU countries, 45 were the samples originating from TC countries, 42 were the samples originating from domestic production, 4 were samples with unknown origin.

### Cereals and Cereal Products

A total number of 53 samples of cereal samples (including rice) were analysed for the presence of pesticide residues and were taken within national and co-ordinated monitoring; 6 were the samples originating from EU countries, 3 were the samples originating from TC countries, 43 were the samples originating from domestic production, 1 sample with unknown origin.

### Baby food

Pursuant to Commission Regulation (EU) No 915/2010, the samples of cereal follow-on formulae, fruit-based and vegetables-based follow-on formulae and infant and follow-on formulae for infants and young children were analyzed; 4 were the samples originating from EU countries, 17 were the samples originating from domestic production.

### Food of animal origin

A total number of 42 samples - bovine liver, poultry liver, poultry meat, and swine liver were analyzed for the presence of pesticide residues and were taken within national and co-ordinated monitoring. From them one was the sample originating from TC country, 41 were the samples originating from domestic production.

Table: Overview of the results of the pesticide residue in Bulgaria

Samples	Total	Without residues	With residues below MRL	With residues exceeding MRL	Non Compliant
Animal Products	42	42	0	0	0
Babyfood	21	19	0	2	2
Cereals	16	10	6	0	0
Processed products	37	36	1	0	0
Sum (fruit, vegetables, other plant origin)	4400	4056	238	106	106
<b>Total</b>	<b>4516</b>	<b>4163</b>	<b>245</b>	<b>108</b>	<b>108</b>

### **4.3. Non-compliant samples: possible reasons and actions taken**

In 2011, 108 samples exceeding the MRLs were found (2,4 %):

- 11 surveillance samples were found non-compliant with the EU MRL – 2 samples processed cereal-based baby foods from Bulgaria; 1 sample apples from Bulgaria, 1 sample Beans (with pods) from Bulgaria, 1 sample carrots from Bulgaria, 1 sample peaches from Bulgaria, 1 sample potatoes from Bulgaria, 1 sample Spinach from Bulgaria, 1 sample tomatoes from Bulgaria, 1 sample Oranges from Turkey, 1 sample pears from South Africa.
- 97 enforcement samples were found non-compliant with the EU MRL – 90 peppers from Turkey, 7 tomatoes from Turkey.

Number of non-compliant samples	Action taken	Note
97 non-compliant samples (were taken according to	2 non-compliant consignments – destroyed	2 non-compliant consignments peppers arrived at the DPI in Bulgaria with final destination Bulgaria were

Number of non-compliant samples	Action taken	Note
Regulation (EC) No 669/2009)	95 non-compliant consignments – RASFF notification	destroyed For the remaining 88 non-compliant consignments peppers and 7 non-compliant consignments tomatoes with final destination other Member States- they are allowed further transportation pending the laboratory results. After proving nonconformity they were notified to the competent authorities' destination for corrective action. For all non-conforming samples competent authorities at the Designated Point of Entry in Bulgaria notified via RASFF system.
11 non-compliant samples (were taken according to Regulation (EC) No 915/2010)	Lots destroyed  Administrative sanctions	2 non-complying lots baby foods were withdrawn from the market and destroyed. 1 non-complying lot pears- imposed Act for administrative violations on the food business operator within an administrative procedure. For the remaining 8 non-compliant sampled- the non-complying lot was already sold out in the time when the results were handled. The non-complying lot was not distributed outside the territory of the BG.

Product	Residue	Reason for MRL non compliance	Note
Processed cereal-based baby foods (2 samples)	Pirimiphos-methyl	Contamination: not known	
Apples	Dimethoate	Contamination: not known	
Beans (with pods)	Dimethoate	Contamination: not known	
Carrots	Chlorpyrifos	Contamination: not known	
Oranges	Imazalil	Contamination: not known	
Peaches	Acetamiprid	Contamination: not known	
Pears	Carbendazim and benomyl	Contamination: not known	
Potatoes	Heptachlor (sum of heptachlor and the cis and trans isomers of heptachlor epoxide)	Contamination: not known	
Spinach	Dithiocarbamates	Contamination: not known	
Tomatoes (8 samples)	Procymidone, Oxamyl, Tetradifon	Contamination: not known	
Peppers (90 samples)	Tetradifon, Formetanate, Clofentezine, Dimethoate (sum), Oxamyl, Methomyl and thiodicarb (sum of methomyl and thiocarb expressed as methomyl), Procymidone, Malathion (sum of malathion and malaoxon expressed as malathion)	Contamination: not known	

#### 4.4. Quality assurance in 2011

Eight laboratories have taken part in the national control program in 2011. They are: Central Laboratory for Chemical Testing and Control (CLCTC), Central Laboratory of Veterinary Control and Ecology (CLVCE), Regional Healthy Inspectorate (RHI) – Pleven, RHI – Burgas, RHI – Varna, RHI – Plovdiv, RHI – Veliko Turnovo and RHI – Sofia.

All laboratories have an Accreditation Certificate as per EN ISO/IEC 17025 by the Executive Agency 'Bulgarian Accreditation Service' (EA BAS).

## Implementation of EU quality control procedures

The EC guidelines SANCO/10684/2009 'Method validation and quality control procedures for pesticide residues analysis in food and feed', have been implemented as far as practicable for year 2011.

## Analytical uncertainty

The analytical uncertainty of the results is calculated based on relative standard deviation of recovery rates and results of proficiency testing if available. If the analytical results, without a correction were mathematically above the MRL, the sample was defined as an exceeding. However, before any enforcement actions were taken the analytical uncertainty was subtracted from the measured value. If the corrected analytical results still exceed the MRL enforcement actions could be taken.

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
BG	Central Laboratory for Chemical Testing and Control	CLCTC	The last accreditation 29.06.2012	Executive Agency 'Bulgarian Accreditation Service'	<b>PT 2011:</b> - EUPT SRM6- Organized by EURL (European Union Reference Laboratory for Residues of Pesticides) – Pesticides in Fruit and Vegetables-European Union Proficiency Test on Pesticide Residues Requiring Single Methods in Rice Flour, /Category B/; - EUPT-FV-13 -European Union Proficiency Test in Fruit and Vegetables 13 Pesticide Residues in Mandarin Homogenate; /Category A/.
BG	Central Laboratory of Veterinary Control and Ecology	CLVCE	The last accreditation 02.04.2012	Executive Agency 'Bulgarian Accreditation Service'	<b>PT 2011:</b> - Sixth EU Proficiency Test on Pesticides Poultry Test Material, EUPT AO-06, EURL-Dioxins and PSBs, Freiburg, Germany; - PT Determination of PSDD/Fs and PCBs in dried grass meal, EURL-Dioxins and PSBs, Freiburg, Germany; - PT PCBs and PCDD/Fs in fish, EURL-Dioxins and PSBs, Freiburg Germany.
BG	Regional Healthy Inspectorate – Pleven	MZ15	The last accreditation 12.12.2011	Executive Agency 'Bulgarian Accreditation Service'	<b>PT 2011:</b> EUPT-C5/SRM6, Organized by EURL (European Union Reference Laboratory for Residues of Pesticides) – Pesticides Requiring Single Residue Methods.
BG	Regional Healthy Inspectorate – Burgas	MZ02	The last accreditation 15.03.2012	Executive Agency 'Bulgarian Accreditation Service'	
BG	Regional Healthy Inspectorate – Varna	MZ03	The last accreditation 12.09.2012	Executive Agency 'Bulgarian Accreditation Service'	
BG	Regional Healthy Inspectorate – Plovdiv	MZ16	The last accreditation 15.06.2012	Executive Agency 'Bulgarian Accreditation Service'	
BG	Regional Healthy Inspectorate – Veliko Turnovo	MZ04	The last accreditation 29.07.2011	Executive Agency 'Bulgarian Accreditation Service'	

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
BG	Regional Healthy Inspectorate – Sofia	MZ22	The last accreditation 15.06.2012	Executive Agency ‘Bulgarian Accreditation Service’	

Note: LabCode MZ15\_CLCTC combines lab codes of two laboratories- MZ15 and CLCTC, because they analyzed the same samples according to Regulation 669 for different pesticide residues. The reason is the different laboratory capacity available to both laboratories.

#### 4.5. Additional Information

The laboratories used the multi-residue methods of analysis for pesticide residues in fruits, vegetables, cereals, processed products and baby food:

- BSS EN 12393:2001 ‘Non-fatty foods. Multi-residue methods for the gas chromatographic determination of pesticide residues’ with GC-MS and GC-ECD determination of main part of pesticides.
- BSS EN 15662 Foods of plant origin – Determination of pesticide residues using GC-MS and/or LC-MS/MS following acetonitrile extraction/partitioning and clean-up by dispersive SPE- QuEChERS – method.
- Determination of residues organochlorine compounds in samples of animal origin, waters and forage by GC/ECD
- Determination of residues organophosphorus compounds in samples of animal origin by GC-NPD
- Determination of residues polychlorinated biphenyls (PCBs) in biological samples by GC-ECD

The methodology used in the analysis includes:

- sample homogenization;
- pesticide extraction using a suitable organic solvent;
- purification of the extract by means of chromatographic techniques; the stage of extract purification / concentration involves the application of solid phase extraction, in some cases also gel permeation chromatography;
- instrumental analysis of the purified extract by means of capillary gas chromatography /GC/MSD and GC-ECD/ or high performance liquid chromatography /LC/MS-MS/.

More information regarding pesticide residues in Bulgaria and their control can be found on <http://www.babh.government.bg>

## 5. Cyprus

### 5.1. Objective and design of the national control programme

The Ministry of Health is the competent authority for the enforcement of the Pesticide Residues (PR) Legislation and the execution of the national monitoring and surveillance programs. The enforcement of Legislation and sampling is allocated to the Department of Medical and Public Health Services (MPHS). The Pesticide Residue Lab (PR-SGL) of the State General Laboratory is the Official Laboratory for the Monitoring & Surveillance of PR in Food of Plant and Animal Origin. The PR-SGL Lab and the MPHS design and implement the monitoring program for both local market and imports. The PR-SGL Lab in cooperation with the Department of Agriculture (DA) of Ministry of Agriculture, Natural resources and Environment (MANRE) design the control plan for the exports.

The sampling is focused at the key points of food chain: market, import, processing, primary storage producers, etc. The sampling regime is based on a combination of 'at random' sampling and target oriented sampling focusing towards problematic pesticides/food combination. This combination is, in a way, bias towards problematic products and might end up with higher violation rates. Nevertheless it can provide higher degree of consumer protection and cost-effectiveness. Main criteria used in the sampling design are: EU coordinated program, violations from previous years, information from RASFF, consumption rate especially for children and the needs of exports control.

The increase of the number of compounds monitored is a continuous process. The increase of the pesticides included in the monitoring programme is mainly defined by the requirements of the EU coordinated programme. It should be noted though that the laboratory capacity and the costs of the analysis are the main factors which influence the inclusion of new pesticides in the national monitoring. Rice samples have been subcontracted to be analyzed for glyphosate and ethephon in an external laboratory to fulfil the requirement of EU Monitoring Programme.

### 5.2. Key findings, interpretation of the results and comparability with the previous years results

In 2011 a total of **682** samples were analyzed, **481** were samples of plant origin and **199** were samples of animal origin. Sampling rate was **79** samples /100 000 inhabitants.

#### Plant Origin samples

In **54.9 %** of plant origin samples residues were detected. The number of plant origin products (fresh and dry) other than processed was **451** out of which the number of fruits tested was 144, vegetables 242 and cereals 49. **37.5 %** out of the 451 samples were imported ones (75,2 % of them were from Third Countries) and **14** samples were of organic farming.

Two organic samples of apples were positive, one sample with chlorpyrifos at concentration of 0.012mg/kg and a second sample with spinosad at concentration lower than 0,01 mg/kg. The percentage of the 451 samples exceeding MRLs was **12.4 %** and **7.3 %** were considered as real legal violations.

Twenty (20) samples of baby food (based on fruits and vegetables and cereals) were analyzed. Two samples of baby food based on cereals were positive with Pirimiphos methyl at concentrations lower than 0,01 mg/kg.

Six (6) samples of orange juices were also analyzed under the national monitoring programme. No pesticides were detected in these samples.

The most frequently found pesticides in plant origin samples were

**Bifenthrin** in **14.3 %** and **Cypermethrin** in **13. 6 %** of the samples.

#### Animal Origin Samples

Within 2011, 199 samples of animal origin have been analyzed for pesticides residues: 54 eggs samples, 65 milk samples, 44 samples of meat, 15 samples of liver, 1 fish oil sample and 20 fish samples.



108 samples have been analyzed only for organochlorine pesticides and 30 samples were also analyzed for various pesticides covering the requirements of the Community Monitoring Plan. In 25,4 % of the samples analyzed for organochlorines traces were detected, mostly DDT, at levels less than 0.01mg/kg.

### 5.3. Non-compliant samples: possible reasons and actions taken

In 2011, 12.4 % of the samples of plant origin (56 samples in total out of 451 samples fresh and dry other than processed) were found non-compliant with the EU MRL, whereas the 7.3 % of the samples (33 samples in total) were considered as legal violations (meaning that they were found non-compliant with the legal limits taking into account the measurement uncertainty). The following follow-up actions were taken in cases of non-compliant samples.

Number of non-compliant samples	Action taken	Note
23	Warnings	
31	Warnings and administrative sanctions	
2	RASFF notification	Sample code: - Information Notification Attention:2011.0760 (Sample withdrawal from the market) - Information Notification for Attention:2011.0819 (Sample withdrawal from the market)

Product	Residue	Reason for MRL non compliance	Note
Cherries	Methiocarb (Sum of Methiocarb and Methiocarb sulfoxide and sulfone, expressed as Methiocarb)	Other (please specify in the 'Note' column)	Import Product from TC, EU GAP not respected, RASFF Information: 2011.0760
Carrots	Iprodione	Other (please specify in the 'Note' column)	Import Product from TC, EU GAP not respected, RASFF Information: 2011.0819
Potatoes	Spinosad (Sum of spinosyn A and spinosyn D, expressed as spinosad)	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Potatoes	Spinosad (Sum of spinosyn A and spinosyn D, expressed as spinosad)	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Peaches	Carbendazim (Sum of benomyl and carbendazim expressed as carbendazim)	GAP not respected: use of non-authorised pesticide on all crops	
Melons	Acetamiprid	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Melons	Acetamiprid	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Peaches	Carbendazim (Sum of benomyl and carbendazim expressed as carbendazim)	GAP not respected: use of non-authorised pesticide on all crops	
	Kresoxim methyl	GAP not respected: use of pesticide non-authorised on the specific crop	

Product	Residue	Reason for MRL non compliance	Note
Runner Beans	Acetamiprid	GAP not respected: use of pesticide non-authorised on the specific crop	
	Methomyl (Sum of methomyl and thiodicarb expressed as methomyl)	GAP not respected: use of non-authorised pesticide on all crops	
Runner Beans	Acetamiprid	GAP not respected: use of pesticide non-authorised on the specific crop	
	Indoxacarb (Indoxacarb as sum of the isomers S and R)	GAP not respected: use of pesticide non-authorised on the specific crop	
Runner Beans	Acetamiprid	GAP not respected: use of pesticide non-authorised on the specific crop	
Runner Beans	Acetamiprid	GAP not respected: use of pesticide non-authorised on the specific crop	
	Fluvalinate	GAP not respected: use of pesticide non-authorised on the specific crop	
Runner Beans	Acetamiprid	GAP not respected: use of pesticide non-authorised on the specific crop	
Runner Beans	Methomyl (sum of methomyl and thiodicarb expressed as methomyl)	GAP not respected: use of non-authorised pesticide on all crops	
Parsley	Chlorpyrifos	GAP not respected: use of pesticide non-authorised on the specific crop	
	Diniconazole	GAP not respected: use of non-authorised pesticide on all crops	
Parsley	Cypermethrin (Cypermethrin incl. other mixtures of constituent isomers (sum of isomers))	GAP not respected: use of pesticide non-authorised on the specific crop	
	Triadimefon and Triadimenol (sum of triadimefon and triadimenol)	GAP not respected: use of pesticide non-authorised on the specific crop	
Rocket	Acetamiprid	GAP not respected: use of pesticide non-authorised on the specific crop	
	Cypermethrin (Cypermethrin incl. other mixtures of constituent isomers (sum of isomers))	GAP not respected: use of pesticide non-authorised on the specific crop	
	Penconazole	GAP not respected: use of pesticide non-authorised on the specific crop	
Lettuce	Chlorothalonil	GAP not respected: use of pesticide non-authorised on the specific crop	
Spinach	Maneb group	GAP not respected: use of pesticide non-authorised on the specific crop	
Spinach	Maneb group	GAP not respected: use of pesticide non-authorised on the specific crop	
Spinach	Maneb group	GAP not respected: use of pesticide non-authorised on the specific crop	
Spinach	Maneb group	GAP not respected: use of pesticide non-authorised on the specific crop	
Spinach	Maneb group	GAP not respected: use of pesticide non-authorised on the specific crop	
Spinach	Cypermethrin (Cypermethrin incl. other mixtures of constituent isomers (sum of isomers))	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
	Teflubenzuron	GAP not respected: use of pesticide non-authorised on the specific crop	

Product	Residue	Reason for MRL non compliance	Note
Spinach	Bifenthin	GAP not respected: use of pesticide non-authorised on the specific crop	
	Cypermethrin (Cypermethrin incl. other mixtures of constituent isomers (sum of isomers))	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Spinach	Cypermethrin (Cypermethrin incl. other mixtures of constituent isomers (sum of isomers))	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
	Fenbutatin oxide	GAP not respected: use of pesticide non-authorised on the specific crop	
	Imidacloprid	GAP not respected: use of pesticide non-authorised on the specific crop	
	Teflubenzuron	GAP not respected: use of pesticide non-authorised on the specific crop	
Spinach	Chlorothalonil	GAP not respected: use of pesticide non-authorised on the specific crop	
Spinach	Cypermethrin (Cypermethrin incl. other mixtures of constituent isomers (sum of isomers))	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
	Teflubenzuron	GAP not respected: use of pesticide non-authorised on the specific crop	
Spinach	Methomyl (Sum of methomyl and thiodicarb expressed as methomyl)	GAP not respected: use of non-authorised pesticide on all crops	
Table Grapes	Bifenthin	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
	Chlorpyrifos	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
	Cypermethrin (Cypermethrin incl. other mixtures of constituent isomers (sum of isomers))	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
	Iprodione	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
	Deltamethrin (cis Deltamethrin)	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Table Grapes	Methiocarb (Sum of Methiocarb and Methiocarb sulfoxide and sulfone, expressed as Methiocarb)	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
	Cypermethrin (Cypermethrin incl. other mixtures of constituent isomers (sum of isomers))	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Table Grapes	Carbendazim (Sum of benomyl and carbendazim expressed as carbendazim)	GAP not respected: use of non-authorised pesticide on all crops	

Product	Residue	Reason for MRL non compliance	Note
	Cypermethrin (Cypermethrin incl. other mixtures of constituent isomers (sum of isomers))	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
	Fenbutatin oxide	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
	Thiophanate methyl	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	

#### 5.4. Quality assurance

The PR Lab of the SGL is accredited by the Greek Accreditation body ESYD since 2002 according to EN 45001, from June 2003 according to ISO/IEC 17025 and from July 2006 according to ISO/IEC 17025/2005. The PR-Lab applies Quality Control procedures, which are in line with provisions of 'Method validation and Quality Control Procedures for Pesticides Residues Analysis in Food and Feed'

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
CY	State General Laboratory of Ministry of Health	SGL_CYPRU S_FP	2002	ESYD- Greece	<b>2011:</b> EUPT-C5, EUPT-SRM 6, EUPT-AO06, EUPT-FV13

## 6. The Czech Republic

### 6.1. Objective and design of the national control programme

Pesticide residues monitoring in foodstuffs in the Czech Republic is guided by the Multi-Annual Control Plan for the Control of Pesticide Residues in CR submitted by the Ministry of Health Care, in cooperation with the Ministry of Agriculture and other supervisory bodies (CAFIA, SVA). A coordinated multi-Community monitoring program is included in the plan as required by the European Parliament and Regulation (EC) No. 396/2005. The requirements of a multi-annual control plan are included in the control plans of supervisory authorities (CAFIA and SVA), competent to monitor pesticide residues in foodstuffs of plant and animal origin.

The sampling plan for pesticide residues monitoring is always drawn up for one calendar year. The plan is elaborated by the Headquarters of CAFIA/SVA as internal provision and it is distributed to the CAFIA/SVA regional inspectorates which are responsible for its implementation.

The commodities sampled in the framework of national monitoring program are not included into the coordinated program of monitoring in the year concerned. When choosing commodities and their proportional representation, the data about consumption of foodstuffs in the Czech Republic elaborated by the National Institute of Public Health are taken into consideration. Similarly further information, as for example findings revealed in previous years (in the Czech Republic and other Member States) or RASFF reports.

The number of products sampled from inland and abroad is commensurate to their proportional representation on the market. Commodities coming from third countries, inland and other EU Member States are prioritized when sampling.

#### Criteria Used for Drawing up the Programme

##### Selection of Commodities

The following criteria have been used for the selection of commodities being listed in the national programme on pesticide residues control:

- the overall food consumption in the Czech Republic ([http://www.czso.cz/csu/tz.nsf/i/vychazi\\_spotreba\\_potraviny\\_v\\_roce\\_2007](http://www.czso.cz/csu/tz.nsf/i/vychazi_spotreba_potraviny_v_roce_2007));
- the consumption food basket (<http://www.szu.cz/tema/bezpecnost-potravin>; <http://www.chpr.szu.cz/spotreba-potravin.htm>);
- the results of official controls and monitoring of pesticide residues in previous years (<http://www.svsr.cz/>; <http://www.szpi.gov.cz/>; [www.ukzuz.cz](http://www.ukzuz.cz/));
- the foodstuffs intended for risk groups of population (namely infant formula and foods for young children);
- the products having specific stricter rules on the use of pesticides (organic products);
- the reports in RASFF system;
- the annual report of the European Commission ([http://ec.europa.eu/food/food/rapidalert/index\\_en.htm](http://ec.europa.eu/food/food/rapidalert/index_en.htm));
- Commission Regulation (EC) No 915/2010 of 12 October 2010 concerning the coordinated multiannual Community control programme for 2011, 2012 and 2013 to ensure compliance with maximum levels of and to assess the consumer exposure to pesticide residues in and on food of plant and animal origin
- the final reports on results of monitoring at the Community level ([http://ec.europa.eu/food/fvo/specialreports/pesticides\\_index\\_en.htm](http://ec.europa.eu/food/fvo/specialreports/pesticides_index_en.htm)).

##### Number of Samples

The number of samples is set so as to determine characteristic profiles of pesticide residues content in selected commodities and to map trends in pesticide residues presence and their levels in analyzed commodities with respect to statistical evaluation. The multiannual Community programme laid down in the Regulation (EC) No 915/2010 forms a part of this control programme.

The number of samples is set as a minimum. It is possible to change and update the number of samples according to the current situation. It can be expected that the number of samples of some commodities will have to be increased.

### Pesticide Residues to be analysed

The following factors have been considered in the selection of pesticide residues to be analysed:

- the most frequently used pesticides (the source – the database of SPA CR) The database of used plant protection preparations is managed by the State Plant Administration. The database contains active substances and their used amounts as both the total amount and the amounts used for main agricultural crops.
- the results of official controls and monitoring of pesticide residues in previous years (<http://www.svscr.cz>; <http://www.szpi.gov.cz/>)
- information in RASFF system – EC annual reports ([http://ec.europa.eu/food/food/rapidalert/index\\_en.htm](http://ec.europa.eu/food/food/rapidalert/index_en.htm))
- Commission Regulation (EC) No 915/2010 of 12 October 2010 concerning the coordinated multiannual Community control programme for 2011, 2012 and 2013 to ensure compliance with maximum levels of and to assess the consumer exposure to
- pesticide residues in and on food of plant and animal origin
- the final report on EC monitoring results ([http://ec.europa.eu/food/fvo/specialreports/pesticides\\_index\\_en.htm](http://ec.europa.eu/food/fvo/specialreports/pesticides_index_en.htm))
- the consumer food basket (<http://www.szu.cz/tema/bezpecnost-potravin>; <http://www.chhpr.szu.cz/spotreba-potravin.htm>)
- toxicological profiles of pesticides (National Institute of Public Health, Prague)
- the laboratory capacity

## **6.2. Key findings, interpretation of the results and comparability with the previous year results**

Within the official inspection in 2011, the Czech Agriculture and Food Inspection Authority took a total of 1,230 samples to determine the pesticide residues. National and co-ordinated monitoring comprised 1,101 collected samples, of which 1.3 % (14 samples) was found to exceed MRLs. The largest proportion of total number of taken samples sorted by national and co-ordinated monitoring, was represented by samples from EU countries (54.7 %) followed by samples from the Czech Republic (hereinafter ‘CZ’ only) (26.3 %), and by samples from third countries (16.0 %). In 3.0 % of the samples, the country of origin was not specified.

### Vegetables

To determine the pesticide residues, in total 465 vegetable samples were taken within national and co-ordinated monitoring. Out of all taken vegetable samples, almost 70 % were the samples originating from EU countries. The samples from the CZ comprised 20 % out of all taken samples, 10 % originated from third countries. A major proportion of vegetable samples in the view of individual countries have Spain (17.6 %), the Netherlands (12.0 %), Italy (11.2 %), Poland (8.4 %) and Belgium (7.1 %).

In the vegetable samples, the most detected active substances were boscalid (15.6 %), bromides (15.6 %), dithiocarbamates (13.8 %), propamocarb (12.4 %), azoxystrobin (12.2 %), and metalaxyl (10.4 %).

### Fruits

A total number of 271 samples of fresh fruits were analysed for the presence of pesticide residues. The largest proportion of the total number of fruit samples were from EU countries 60.9 %, the samples from third countries 34.7 % and the smallest proportion the samples from the CZ 4.4 %. The largest proportion of fruit samples represented samples from Italy (25.8 %), Spain (17.7 %), CZ (7.8 %), South Africa (6.6 %) and Argentina (5.5 %).

Active substances which appeared in the highest percentage of positive findings in samples of fruit were: chlorpyrifos (29.7 %), dithiocarbamates (23.3 %), imazalil (19.9 %), boscalid (17.5 %) and thiabendazol (14.2 %).

### Cereals and Cereal Products

There were 155 cereal samples (including rice) analysed by multiresidues methods to detect the presence of pesticide residues. The positive pesticide finding reached more than 40 % analysed cereal samples, however, the MRL was not exceeded. The largest proportion of collected cereal samples represented samples from the CZ (65.8 %), EU countries (20.7 %) and from third countries (5.8 %). At 12 samples the country of origin was not identified.

In terms of representation of individual types of cereals, the analyses showed following results: 32 samples of wheat where pesticides were detected in 18 cases (56.3 %); 32 samples of rye with 16 identified positive findings (50.0 %); 20 samples of oat with 3 positive samples (15.0 %), 20 samples of barley with 10 positive findings (50.0 %), 14 corn samples with 2 positive samples (14.3 %), and 37 samples of rice with 14 positive cases (37.8 %).

Within the co-ordinated monitoring of the EU, analyses on presence of bromides were carried out at rice and flour. Positive findings of bromides were proved in two samples of wheat flour and rice samples. MRL was not exceeded.

Pursuant to Regulation (EC) No. 901/2009 concerning a coordinated multiannual Community control programme, at 12 wheat samples and 12 rye samples chlormequat and mepiquat analyses were carried out. 4 positive findings of chlormequat were identified in wheat. The detected value ranked from 0.062 to 0.20 mg/kg. In the case of rye, the chlormequat was detected in 7 samples. The detected values are ranging between 0.48 and 2.7 mg/kg. All the samples were found out as satisfactory.

The most commonly detected active substances in cereals were chlormequat, chlorpyrifos-methyl, bromides and primiphos-methyl.

### Baby food

Pursuant to Commission Regulation (EU) No. 915/2010, the samples of cereal follow-on formulae, fruit-based and vegetables-based follow-on formulae and infant and follow-on formulae for infants and young children were analyzed. Out of the 39 evaluated samples, positive findings were detected in 4 samples. Nevertheless, the maximum residue limit was not exceeded.

### Food of animal origin

In 2011 State Veterinary Administration collected a total of 70 samples of the animal origin, of which 20 samples were found with residues below the MRL. Only DDT and hexachlorbenzene were detected in products of animal origin (situation is similar to the previous years). The MRLs were not exceeded in samples of animal origin (as well as in the previous years).

Table: Overview of the results of the pesticide residue national and coordinated monitoring programme in the Czech Republic

Samples	Total	Without residues	With residues below MRL	With residues exceeding MRL	Non Compliant
Animal Products	50	43	7	0	0
Babyfood	39	35	4	0	0
Cereals	166	102	61	3	0
Fish products	5	2	3	0	0
Processed products	134	68	61	5	2
Sum (fruit, vegetables, other plant origin)	906	321	557	28	12
<b>Total</b>	<b>1300</b>	<b>571</b>	<b>693</b>	<b>36</b>	<b>14</b>



### 6.3. Non-compliant samples: possible reasons and actions taken

In 2011, 14 samples exceeding the MRLs were found. The information on findings of active substances was forwarded to the RASFF in the following cases: fluazifop-P-butyl in broccoli from Italy (2011.0554), formetanate in salad cucumbers from Spain (2011.0373), methomyl and thiodicarb in papaya from Ecuador (2011.1082) and methomyl, thiocarb and oxamyl in peppermint from Israel (2011.0572).

Furthermore, there were over-the-limit findings of iprodione in celery (D002-70154/11/A01), procymidone in tomatoes (D004-40464/11/A02), formetanate in salad cucumbers (D003-30391/11/A05), phosmet in peaches (D015-30514/11/A03), dimethoate in Chinese cabbage (D021-80738/11/A08) and acephate, acetamiprid, imidacloprid in green tea (D039-40157/11/A01), however, based on the risk assessment carried out by the National Institute of Public Health, these cases were not reported to the RASFF.

In the case of two samples of lettuce (D013-70154/11/A01, P123-60059/11/A03), sample of savoy cabbage (D085-40294/11/A02) and non-perishable bakery products (D003-51024/11/A01) originating from the CZ, which were found to exceed MRLs, the subject lots were neither distributed outside the Czech Republic nor delivered to public catering establishments. For this reason, findings were not notified to the RASFF.

Number of non-compliant samples	Action taken	Note
10	Warnings and administrative sanctions	<p>D004-40464/11/A02 – A fine was imposed on the food business operator within an administrative procedure. Ban on sale was not imposed as the non-complying foodstuff was sold out.</p> <p>D003-30391/11/A05 - Ban on sale was not imposed as the non-complying foodstuff was sold out. A fine was imposed on the food business operator within an administrative procedure.</p> <p>D003-51024/11/A01 - The non-complying foodstuff was disposed of. The lot was placed neither on the market outside the territory of the CR nor onto the public catering sector. A fine was imposed on the food business operator within an administrative procedure.</p> <p>D002-70154/11/A01 – In the time when the results were handled, the non-complying foodstuff was not on the store anymore. A fine was imposed on the food business operator within an administrative procedure.</p> <p>D085-40294/11/A02 - Ban on sale was not imposed as the non-complying foodstuff was sold out. The foodstuff was not exported outside the territory of the CR. A fine was imposed on the food business operator within an administrative procedure.</p> <p>D013-70154/11/A01- Ban on sale was not imposed. Measure to provide information on the substances used during treatment of vineyards and herbs in the neighbourhood of growing areas of the food business operator was imposed. A fine was imposed on the food business operator within an administrative procedure.</p> <p>P123-60059/11/A03 - The non-complying lot was already sold out in the time when the results were handled. The non-complying lot was not distributed outside the territory of the CR. A fine was imposed on the food business operator within an administrative procedure.</p> <p>D015-30514/11/A03- The non-complying lot was already sold out in the time when the results were handled. The lot was neither supplied neither within the public catering sector nor exported outside the CR. A fine was imposed on the food business operator within an administrative procedure.</p> <p>D039-40157/11/A01- The non-complying lot was already sold out in the time when the results were handled, the ban on sale was not imposed. Measure to inform on the distribution of the non-complying foodstuff was imposed. A fine was imposed on the food business operator within an administrative procedure.</p> <p>D021-80738/11/A08- The non-complying foodstuff was not found in the time of inspection. The foodstuff in question was not placed on the market of another EU country. A fine was imposed on the food business operator within an administrative procedure.</p>

Number of non-compliant samples	Action taken	Note
4	RASFF notification	<p>Sample code: D003-30087/11/A02 RASFF ref: 2011.0554 Measure to withdraw the non-complying lot was not imposed as the foodstuff in question was not on the store anymore. Broccoli was neither supplied into the public catering sector nor distributed outside the territory of the CR. A fine was imposed on the food business operator within an administrative procedure.</p> <p>Sample code: D002-80131/11/A04 RASFF ref: 2011.0373 The lot in question was already sold out in the time of inspection. According to the food business operator, the foodstuff in question was neither placed on the public catering sector nor another EU country. A fine was imposed on the food business operator within an administrative procedure.</p> <p>Sample code: D005-80295/11/A07 RASFF ref: 2011.1082 Measure to provide CAFIA with information whether the non-complying lot was distributed outside the territory of the CR was imposed. A fine was imposed on the food business operator within an administrative procedure.</p> <p>Sample code: D028-80336/11/A03 RASFF ref: 2011.1581 The lot in question was already sold out in the time of inspection. A fine was imposed on the food business operator within an administrative procedure.</p>

Product	Residue	Reason for MRL non compliance	Note
Broccoli	Fluazifop-P-butyl	Contamination: not known	
Cucumber	Formetanate	Contamination: not known	
Tomato	Procymidone	Contamination: not known	
Celery	Iprodione	Contamination: not known	
Papaya	Methomyl and thiodicarb	Contamination: not known	
Kale	Dimethomorph	Contamination: not known	
Lettuce	Spiroxamine, Tebuconazole	Contamination: Adventitious contamination	There is a vineyard where preparation Falcon containing effective substances that were detected in lettuce which was grown in close distance to that vineyard. This was probably a case of adventitious contamination.
Lettuce	Chlorpyrifos	Contamination: not known	
Mentha piperita	Methomyl and thiodicarb, Oxamyl	Contamination: not known	
Chinese cabbage	Dimethoate	Contamination: not known	
Peaches	Phosmet	Contamination: not known	
Tea	Acephate, Acetamiprid, Imidacloprid	Contamination: not known	
Bakery products	Fipronil	Contamination: not known	

#### 6.4. Quality assurance

For each laboratory participating in the control programme complete the table below. Ensure that the laboratory code corresponds with the values submitted in the <labCode> element of the control results transmitted in XML files.

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
CZ	Czech Agriculture and Food Inspection Authority	Praha 5	2002 EN ISO/IEC 17025 (1993 EN 45001)	CAI – Prague, the Czech Republic	PT 2011: EUPT SRM6, EUPT C5, EUPT FV13
CZ	State Veterinary Institute Prague	V01	First accreditation 1997; valid accreditation issued 21/03/2011 and 21/06/2012 (Accreditation expires on February 25, 2016)	CIA – Prague, the Czech Republic	PT 2011: EUPT AO-06; FAPAS 0972; FAPAS 0581

#### 6.5. Additional Information

Please report any additional data and information that is considered important and relevant by the reporting country.

## 7. Denmark

### 7.1. Objective and design of the national control programme

The National Food Institute, Technical University of Denmark, designed the monitoring programme in cooperation with the Danish Veterinary and Food Administration. Since 2006 the sampling plan has been based on dietary consumption pattern with regard to pesticide intake from a previous report<sup>[11]</sup>, which analysed monitoring data from 1998-2003. This report showed that 25 commodities were responsible for more than 95 % of the intake of pesticide residues (Top25 commodities). These commodities were included in the sampling plan along with commodities included in the EU coordinated control programme. The focus on the Top25 commodities will provide a better basis for comparison between years, so that trends in pesticide residues found may be analysed. In addition to these samples, a broad range of commodities common on the Danish market was analysed, including processed foods, food for infants and organically grown products. Most sampling projects were designed to cover surveillance as well as control in combination and the sampling strategy for these samples is listed as objective or selective sampling. A project was set up to cover direct import via Copenhagen Airport. Another project was set up to follow glyphosate in organically grown pulses. These two projects were included in the surveillance samples. A third project was set up to cover sampling and analysis according to Regulation (EC) No 669/2009. Sampling strategy for this project is listed as suspect sampling.

Samples of animal origin were not analysed for all pesticides included in the coordinated programme due to lack of validated analytical methods for all relevant pesticides.

Sampling was performed by authorised personnel from the 10 Danish Regional Veterinary and Food Control Authorities. Directive 2002/63/EC on sampling procedures for control of pesticide residues is implemented in Danish legislation. All samples for control of the MRL, except the directly imported samples were sampled on the market, primarily at wholesalers or importers. A few (53 samples of fruit and vegetables) were taken as raw materials at food processing plants. Meat was sampled at slaughterhouses.

Reporting includes samples analysed for pesticides from projects, based on Directive 96/23.

### 7.2. Key findings, interpretation of the results and comparability with the previous year results

In 2011 a total of 2,466 surveillance samples of fruit, vegetables, cereals, processed products (including baby food) and animal products were analysed. Included in these were 50 samples taken from direct import from third countries at the Copenhagen Airport. Results from these samples are reported separately and not included in the following general statistics.

Of the remaining 2,416 samples, 747 were produced in Denmark, 827 samples were produced in EU, 730 samples were produced outside the EU and 112 of the samples were of unknown origin (non-domestic). The samples included 1,749 samples of fruit and vegetables, 311 samples of cereals, 263 samples of animal origin and 93 samples of processed foods including 17 samples of baby foods.

134 (8 %) of the fruit and vegetable samples and 70 (23 %) of the cereal samples were organically produced.

All samples of fruit and vegetables were analysed for about 255 pesticides including isomers and metabolites. In addition, part of the samples (1,008) were analysed for dithiocarbamates and others for bromide ion (29 samples). Due to the methodology applied it was not possible to distinguish between the specific dithiocarbamates included in the MRL definition. Most cereal samples were analysed for 195 pesticides, including isomers and metabolites. As part of a programme to assess the declaration 'produced without straw-shortener' 25 cereal samples were tested for chlormequat and mepiquat only. In a targeted control for glyphosate, 24 samples of organically grown pulses were analysed for glyphosate in additions to the normal analytical program.

Pesticide residues were found in 49 % of the conventionally grown fruit and vegetables (2010: 55 %) and in 30 % of the conventionally grown cereal samples (2010: 26 %). Residues exceeding the MRL were found in

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<sup>11</sup> M.E. Poulsen, J.H. Andersen, A. Petersen, H. Hartkopp (2005). Pesticide Food Monitoring, 1998-2003 Part2. ISBN 87-91569-54-0. [http://www.fodevarestyrelsen.dk/Publikationer/Alle\\_publicationer/2005/002.htm](http://www.fodevarestyrelsen.dk/Publikationer/Alle_publicationer/2005/002.htm)

2.7 % of the conventionally grown fruit and vegetables samples (44 samples) (2010: 2.7 %). Of these, 24 samples (1.5 %) had non-compliant residues. No residue was found exceeding the MRL in cereals (2010: 0.4 %). As in 2010, no exceedings of the MRLs were found in baby food or processed commodities.

The frequency of residues was higher in samples of fruits (66 %) compared to samples of vegetables (29 %). For fruits, pesticide residues were found in 66 % and 71% of the samples produced in EU and outside EU, respectively, whereas pesticide residues only was found in 38 % of the samples from Denmark. For vegetables, residues were found in 44 % and 35 % of the samples produced in EU and outside EU, respectively, while residues were found in 9 % of the samples from Denmark. In Danish produced fruits, the frequency fell back from 52 % to the same level as in 2009. Otherwise, frequencies were near to the levels from 2010 and 2009.

The frequency of conventionally grown samples exceeding the MRLs was 1.3 % and 3.7 % for fruit produced in EU and outside the EU, respectively. For vegetables the frequency of samples exceeding the MRL was 1.4 % and 10 % for vegetables originating from EU and outside the EU, respectively. No residues in Danish grown fruit or vegetables were found exceeding the MRLs.

Results from sampling of fruit and vegetables from direct import via Copenhagen Airport (50 samples) were excluded from the statistics above. About half of these samples were commodities usually not a significant part of a Danish diet (Lemon grass, Galangal, Coriander leaves, Rambutan, Jambolan, Sapota, Water spinach and other exotic vegetables and herbs). The rate of samples with residues exceeding the MRL was very high (17 out of 50 samples or 34 %).

Residues were found in eight organically produced samples: Endosulfan (endosulfan-A) (0.01 mg/kg) was found in one sample of parsley from Denmark, Acetamiprid (0.03 mg/kg) was found in one sample of chives from Israel and carbendazim was found in one sample of tea from India and in one sample of herbal tea from Egypt (0.13 and 0.01 mg/kg respectively). Clomazon (0.05 mg/kg) was found in one sample of tea from Macedonian. Malathion (0.04 mg/kg) was found in a sample of dried beans from Uganda. Chlormequat was found in two samples from Germany: One sample of oats and one sample of wheat flour (0.11 and 0.016 mg/kg respectively). The residues of malathion in dried beans and clomazon in tea was significantly higher than the MRL, indicating that the crops were not grown and stored according to rules for organic production. The residues of chlormequat in oat and in wheat flour were in the same range as in conventionally grown crops, indicating that the crops were not grown according to rules for organic production. The residue of carbendazim in tea from India was also exceeding the MRL and it was evaluated that it was not grown according to rules for organic production. The residue of endosulfan was low and might be carry-over from previous use on the soil; the residues of carbendazim in herbal tea and acetamiprid in chives were low and might be contamination from conventionally grown lots.

Using sampling strategy 'suspect' covering both conventionally and organically grown crops a total of 65 samples<sup>12</sup> were taken. Non-compliant residues were found in nine samples (From Thailand: one sample each of aubergines, basil, broccoli and green beans and four samples of coriander leaves; from China: one sample of organically grown pomelo).

### 7.3. Non-compliant samples: possible reasons and actions taken

In 2011, residues were found to exceed the EU MRL in 1.9 % of the samples (47 samples, 53 residues) taken by objective or selective sample strategy. Of these samples 1.1 % (26 samples, 27 residues) was found non-compliant with the EU MRL.

For samples taken by suspect sampling strategy, residues in 9 samples were found to exceed the EU MRL. Of these, 7 samples were found non-compliant with the EU MRL.

For samples taken from direct import via Copenhagen Airport, residues in 17 samples were found to exceed the EU MRL. Of these, 12 samples were found non-compliant with the EU MRL.

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<sup>12</sup> Thailand: Aubergines (12), basil (4), broccoli (1), green beans (10), chilli (3) and coriander leaves (26). China: Pomelo (3 + 1 organic), tea (3), herbal tea (1). Turkey: Sweet pepper (1).

The following follow-up actions were taken in case of samples non-compliant with the EU MRL (measurement uncertainty taken into consideration):

Number of MRL non-compliant samples	Action taken	Note
1 (+ 1 suspect <sup>a</sup> )	Administrative consequences	
3	Administrative consequences	Fine issued to company
6 suspect	Administrative consequences and other sanctions	Products discarded or recalled
8	Warnings	
6	Other sanctions	
16	None	
4	Information on action taken not yet available	

<sup>a</sup> Sampling strategy: Suspect

The table below includes samples that are non-compliant with Danish legislation even where measured pesticide residues did not exceed the EU-MRL.

Number of non-compliant samples (measured residue do not exceed the MRL)	Action taken	Note
2	Warnings	Chlormequat (0.02 mg/kg) in Rye flour from Denmark (Use not in agreement with declaration.) Chlormequat (0.11 mg/kg) in Rolled oat from Germany (Residues in organic crop)
1	Other sanctions	Chlormequat (0.02 mg/kg) in Wheat, wholemeal from Denmark (Use not in agreement with declaration.)
8	None	Chlormequat (0.02 mg/kg) in Wheat flour from Unknown country (Use not in agreement with declaration.) Chlormequat (0.04 mg/kg) in Pears from Denmark Chlormequat (0.016 mg/kg) in Wheat flour from Germany (Residues in organic crop) Endosulfan (0.01 mg/kg) in Parsley from Denmark (Residues in organic crop) Acetamiprid (0.03 mg/kg) in Chives from Israel (Residues in organic crop) Carbendazim (0.13 mg/kg) in Teas from India (Residues in organic crop) Clomazon (0.05 mg/kg) in tea from Macedonian (Residues in organic crop) Malathion (0.04 mg/kg) in dried beans from Uganda (Residues in organic crop)
1	Information on action taken not yet available	Chlormequat (0.03 mg/kg) in Wheat flour from Denmark (Use not in agreement with declaration.)

In case of imported samples, reasons for MRL non-compliances are unknown and outside the jurisdiction of the National Food Authority.

Non-complaint residues in Danish grown commodities were found in one organically grown sample (endosulfan in parsley), one sample of pears (chlormequat not approved for use on pears) and chlormequat in three cereal samples which had a declaration of 'No straw shortener used'. The reasons for these residue levels are not known. In general residues were low, and carry over from previous use (parsley, pears) or conventional grown lots (cereals) may not be excluded.

#### 7.4. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
DK	Danish Veterinary and Food Administration, Region East	FVST Region East	30. September 2008 (DANAK)	DANAK, Denmark	FAPAS: 0974, 0973, 0971, 0972,

#405)					19128, 19127, 19124, 19123, 19120, 19119, 19114 EUP: C5, FV13, SRM6, FV SM03, AO06
DK	National Food Institute, Technical University of Denmark	DTU Food	20 April 1995 (DANAK #350)	DANAK, Denmark	EUP: AO6, SM03, FV13, SRM06 FAPAS: 0969, 0972 EUP-C5 (as provider)

## 7.5. Additional Information

The analytical methods have been developed and/or validated by the National Food Institute, Technical University of Denmark. Most samples were analysed at the laboratory of the Regional Veterinary and Food Control in Ringsted. Both laboratories are accredited to pesticide analysis in compliance with EN 45001/ISO17025 by the Danish Accreditation body, DANAK. Furthermore, the laboratories participated in the relevant FAPAS proficiency test scheme and in all EU-proficiency tests.

For all the methods the guidelines concerning 'Quality Control Procedures for Pesticide Residue Analysis' has been applied. Mass selective confirmation was performed for part of the GC multi methods and for the LC/MS-MS methods for fruit and vegetables. Analytical uncertainty is not applied in monitoring reports, but is always applied in case of enforcement actions.

Each year, the National Food Institute, Technical University of Denmark, and the Danish Veterinary and Food Administration prepare a report on pesticide residues in foods on the Danish market. Since 1 January 2011, the annual pesticide report has been supplemented with the regular publication of control data from each quarter. The quarterly reporting comprises results from samples of fresh and frozen fruit and vegetables as well as cereals – both conventionally and organically grown. The National Food Institute, Technical University of Denmark, prepares and publishes the quarterly reports.

A risk assessment was performed of all findings above the MRL by the National Food Institute. It was concluded in all cases that there was no risk for the consumers. In addition, all samples, where more than one pesticide residue were found, were evaluated by using a Hazard Index type of calculation using the sum of each residue in relation to the ADI and ARfD, respectively, taken into account the estimated consumption of the sample commodity for an adult and a child. For all samples in 2011 it was concluded that the residues were not expected to result in any risk for the consumer.

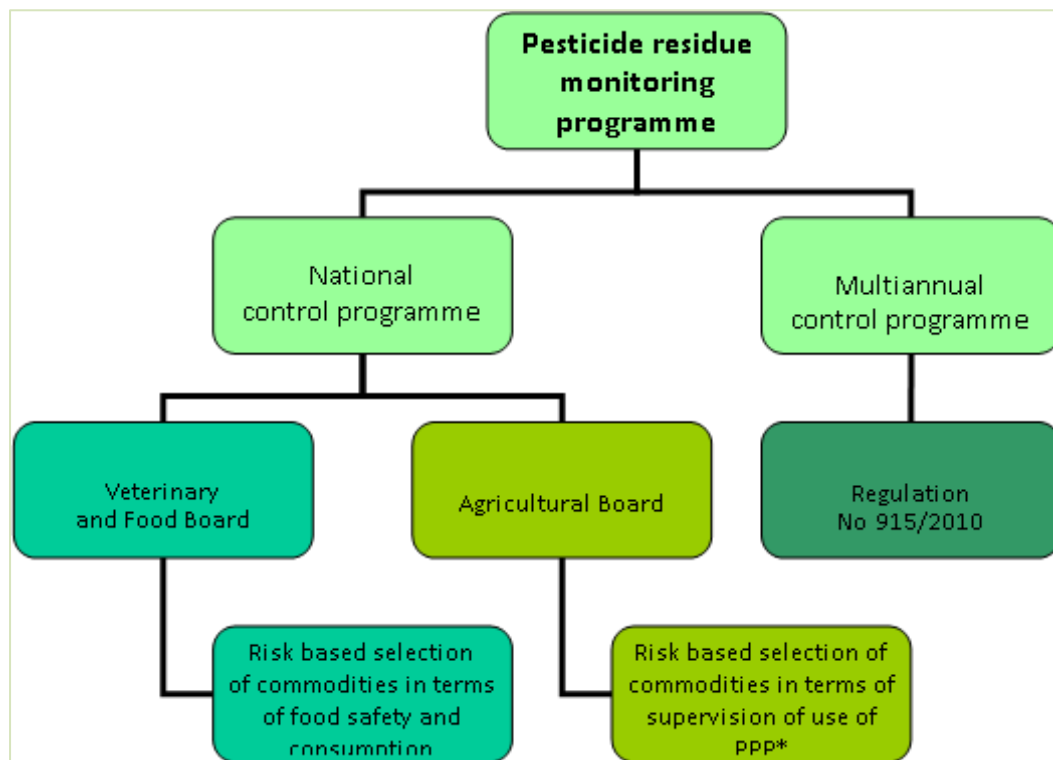


## 8. Estonia

### 8.1. Objective and design of the national control programme

Veterinary and Food Board is responsible for drawing up the pesticide residue monitoring programme which contains two parts. One is the coordinated multiannual control programme of the Union (a legal requirement from Commission Regulation No 915/2010) and it gives the list of commodities and pesticide residues to be analysed and the number of samples to be taken for year 2011. Another important part of the pesticide residue monitoring programme is the national control programme. It contains two inputs prepared by two different competent authorities Veterinary and Food Board (VFB) and Agricultural Board (AB).

The design of the pesticide residue monitoring programme is shown in Chart below.



\*PPP – plant protection products

VFB is a competent authority for food safety and is responsible for implementation of coordinated multiannual control programme of the Union and taking samples in terms of Commission Regulation No 915/2010. VFB is also taking samples in terms of national control programme and the programme contains commodities which are important for local consumption (e.g. turnip, beetroot etc) and commodities where the MRL-s were exceeded in previous years. In 2009 there was MRL exceedances in broccoli and radish samples (all cases dithiocarbamates). In year 2010 these commodities were also included and again there was non-compliance with dithiocarbamates in broccoli. Two RASFF information notifications were issued regarding dithiocarbamates (Spanish broccoli and Turkish apricots) in year 2010. Due to reduction of financial resources it was not possible to include these commodities into sampling plan in year 2011. Only commodities important for local consumption were included.

For AB taking samples is part of the supervision of compliance of using plant protection products at primary production level and contains the most cultivated crops. AB's sampling is based on evaluated risks and the results of previous year's sampling attached in annual control plan. The results are also included in the national control programme.

In year 2011 VFB took 180 and AB 88 samples, all together 268 samples. 28 different food commodities were analyzed.

Proportion of sampling at different marketing level is represented in the Table below.

Level of sampling	% of all samples
Primary production	35
Storage	30
Retail	16
Meat establishments	9
Non-animal origin food processing establishments (industry)	10

## 8.2. Key findings, interpretation of the results and comparability with the previous year results

Broccoli and radish were included into 2010 programme because there was MRL exceedences in previous years and/or RASFF notifications issued.

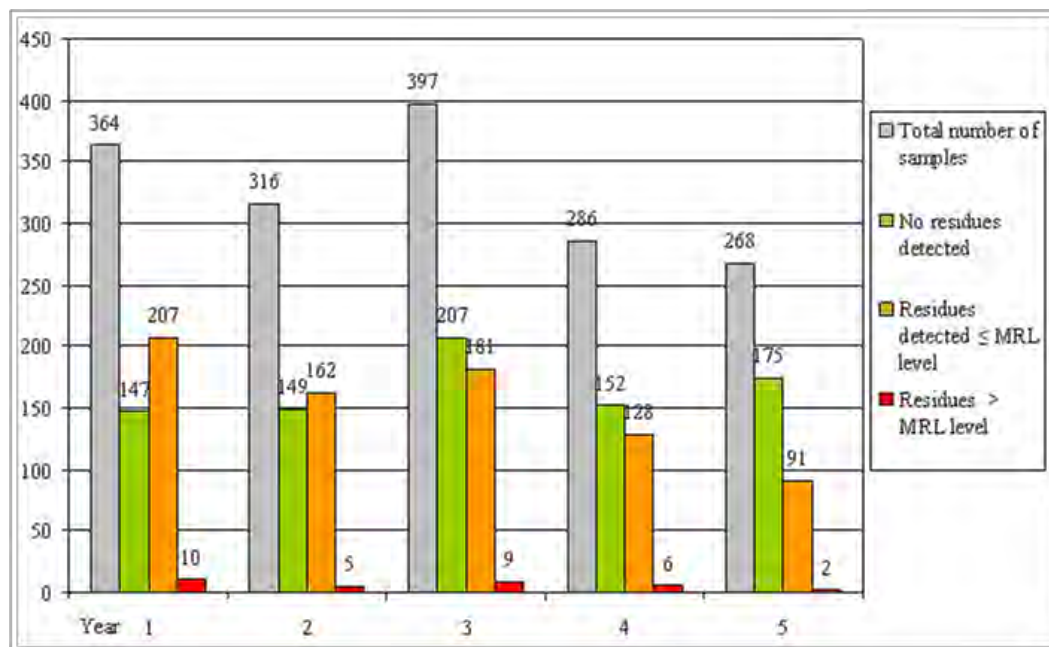
In 2010 samples were taken from broccoli, apricots and Indian grapes because there was MRL exceedences in previous years and/or RASFF notifications issued.

Due to reduction of financial resources it was not possible to include these commodities into sampling plan in year 2011. Only commodities important for local consumption were included.

The level of non-compliant samples (results above MRL) was about the same in years 2009 (2,3 % of samples) and 2010 (2,1 % of samples) and in year 2011 this number decreased to 0,7 % out of all samples.

The overall percentage of samples with no residues detected increases every year. In the year 2009, 207 (52,1 %) samples out of 397 had no detectable residues, in the year 2010 this number was 152 samples (53,1 %) out of 286 and in the year 2011 this number was 175 samples (65,3 %) out of 268.

The total number of samples analyzed, number of samples with no detected residues, number of samples with detected residues and the number of samples with residues above MRL since year 2007 is represented in the Chart below.



Important difference between the results of years 2009, 2010 and 2011 was the distribution of samples which originated from Third countries and it is mainly due to the commodities listed in the coordinated multiannual control programme of the Union because this is the major part of the pesticide residue monitoring programme. In 2009 there was an opportunity to take samples and analyze many commodities originated from Third countries (e.g. table grapes, oranges and bananas), but in year 2010 and year 2011 the commodities were

suitable for taking the largest number of samples from domestic and EU production. The distribution of samples by its origin in year 2011 was divided into three groups: domestic products 66 %, other EU origin 25 % and third countries 9 % of all samples taken. In year 2011 the commodities analyzed from Third countries were mainly oranges, mandarins, rice and pears.

For comparison, see the Table which gives a summary of samples taken in 2009 and 2010 and 2011 by region of origin.

Region of origin	2009 (% of samples)	2010 (% of samples)	2011 (% of samples)
Domestic products	50	66	66
Other EU origin products	32	30	25
Products from Third countries	18	4	9

The proportion of organic samples in year 2011 was 2,2 %.

In 2009 the number of residues and active substances measured was 326 and in year 2010 it increased to 383. In 2011 the number decreased due to the fact that the laboratories gave the results according to the residue definitions not separately for each active substance or residue like in previous years.

In 2011 the laboratories could measure 333 different residue definitions and residues

### 8.3. Non-compliant samples: possible reasons and actions taken

In 2011 total 268 samples were taken, from which two were non-compliant (0,7 % of all) due to exceeding MRL and in one case unauthorised pesticide uses was detected.

One sample of Estonian beans with pods (Sample code 11-011688JSL/TK). And it was a case where unauthorised pesticide was used by a small farmer due to lack of knowledge and residue propargite was also found above MRL. Product was sold out by the time of receiving analytical results, there was nothing to withdraw.

One sample of Estonian spinach (Sample code 11-021097JSL/TK) contained residues above MRL and it was a case where iprodione was found above MRL. Product was sold out by the time of receiving analytical results, there was nothing to withdraw.

Two samples of Estonian spinach (Sample codes 11-004069JSL/TK, 11-021097JSL/TK) contained residues of substances of pesticide that are not allowed to use on spinach. The reason of finding residues of iprodione and thiamethoxam in final product was the fact that seeds used by the producer were treated with plant protection products containing these substances. In both cases the product came from the same producer.

There was one case with potatoes (Sample code 11-020622JSL/TK) where authorized pesticide of unauthorized use was detected. The reason of finding residues of MCPA in final product was investigated and according to the statement of the farmer it got there due to sprayer equipment that was not cleaned sufficiently. Potatoes contained the residue above MRL value; the result was compliant due to measurement uncertainty.

Number of non-compliant samples	Action taken	Note
1	Administrative sanctions. Product was sold out, nothing to withdraw.	Sample code: 11-011688JSL/TK
1	Administrative sanctions. Product was sold out, nothing to withdraw.	Sample code: 11-021097JSL/TK
2	Administrative sanctions.	Sample codes: 11-004069JSL/TK, 11-021097JSL/TK
1	Administrative sanctions.	Sample code: 11-020622JSL/TK

Product	Residue	Reason for MRL non compliance	Note
Beans with pods	Propargite	GAP not respected: use of non-authorised pesticide on all crops	
Spinach	Iprodione	Contamination: residues resulting from previous use of a pesticide (e.g. persistent pesticides no longer authorised, soil residues taken up in succeeding crops)	Seed dressing preparation
Potatoes	MCPA	GAP not respected: use of pesticide non-authorised on the specific crop	The result was compliant due to measurement uncertainty.

#### 8.4. Quality assurance

According to Regulation No 882/2004 the competent authority shall designate laboratories that may carry out the analysis of samples taken during official controls. And designated laboratories are assessed and accredited in accordance with the EN ISO/IEC 17025 on 'General requirements for the competence of testing and calibration laboratories'. The laboratories are accredited by the Estonian Accreditation Centre (EAC) and designated by Veterinary and Food Board for all analytical methods (and residues within these methods) used for official control of pesticide residues in food.

The EC guideline SANCO/10684/2009 'Method Validation and Quality Control procedures for Pesticide Residues Analysis in Food and Feed' was implemented as far as practicable for year 2011.

There are two accredited and designated laboratories analyze pesticide residues: Health Board Tartu laboratory in Tartu (HB) and Agricultural Research Centre Laboratory for Residues and Contaminants in Saku (ARC).

HB analyses commodities of animal origin and non-animal origin. ARC analyses commodities of non-animal origin.

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
EE	Laboratory for Residues and Contaminants, Agricultural Research Centre	L003	28.08.1996	EAC – Estonian Accreditation Centre	2011: EUPT – FV-13 EUPT – FV-SM3 EUPT – C5 EUPT – SRM6
EE	Tartu Laboratory of Health Board	L019	28.12.1999	EAC – Estonian Accreditation Centre	2011: EU PT FV 13 EU PT C5/SRM 6 EU PT AO 6

The results of the ARC: the participation in European Proficiency Tests (EUPT) classified into Category A group 'Good'.

## 9. Finland

### 9.1. Objective and design of the national control programme

In the design of the monitoring plan in Finland, the following factors have been considered:

- EU-commissions Regulation concerning a coordinated multiannual control programme of the Union
- Importance of a commodity in national food consumption
- Food commodities with high residues/non-compliance rate in previous years
- Number of organic/conventional production samples reflects the market shares
- Origin of food: domestic, EU or third country
- RASFF notifications
- Co-operation possibilities in sampling with different contaminant projects
- Needs of the national risk assessment projects

The selection criteria for pesticide residues and metabolites included into the control program are the following:

- Those pesticides which are commonly used and which are known to leave residues in foods are included. Frequency of pesticide findings in the EU-monitoring reports is used as selection criteria.
- Pesticides listed in the Regulation concerning a coordinated multiannual control programme are included as far as possible.
- Toxicity of the active substances is considered. E.g. many toxic OP-compounds which are not commonly used anymore are still included (they may occur in samples originating from the developing countries )
- Pesticides that are authorized for use in Finland are included into the program when relevant
- Multiresidue analyses are preferred, as the cost of analysis in case of single residue methods is higher. If many single residue analyses are performed the total number of samples to be analysed is decreased.
- Single residue methods are run as required by the EU coordinated programme and a limited number of other samples. Instrument and personnel capacity in the laboratories is limiting the number of single residue analyses.

### 9.2. Key findings, interpretation of the results and comparability with the previous year results

- The total number of samples analysed under the national and EU coordinated programs was 2104, almost same number as year before. This total number includes 402 follow-up enforcement samples or samples based on the Regulation (EC) No. 669/2009. The number of samples taken under the EU coordinated program was 229.
- 53 % of all samples had residues of one or more pesticide active ingredients. Exceedances of MRLs were found in 125 samples and 66 of them were non-compliant (measurement uncertainty taken in to consideration). The percentage of non-compliances (3.1 %) decreased compared to previous years – 6.9 % in 2009 and 4.5 % in 2010. The reasons of the improvement are not obvious but there has been clear improvement in Egyptian oranges as 28 lots were non-complying in 2010 and only 2 this year. The non-complying lots originated from 13 different countries. Most of them came from Thailand (32) but the number decreased from 2010 (46). Many non-complying samples were found also in Chinese (8), Greek (5), and Indian (4) products. Only 9 non-complying samples originated from EEA countries. All domestic samples were compliant. Three samples (strawberry, raspberry and bean) had residues of pesticides which are not authorized in Finland to be used on these plants. Information of these misuses was forwarded to the authorities responsible for the control of pesticide usage.
- The commodity groups with most non compliances were fresh herbs, bulb vegetables, legume vegetables and exotic fruit. Three tea samples and one cereal sample (rice) were non-compliant. The baby food samples and samples of foods of animal origin did not contain any residues.

- This year almost two times more follow-up enforcement samples (402) were taken compared to previous year. The number of non-compliances was 44 (10.9 %). Among the enforcement samples there were 197 samples taken in the framework of regulation 669/2009. Eight samples (4.1 %) were non-complying.
- 229 samples were taken under the EU coordinated program. The number of samples with residues was 126 (55 %). All samples were compliant but one sample had residue exceeding the MRL slightly.
- A total of 167 samples from organic production were analysed. Three samples had residues of pesticides but none exceeded the MRL.
- The number of multiresidue compounds analysed from samples of plant origin increased from 295 (in 2010) to 310 active ingredients and metabolites (in 2011). From animal products 47 compounds were analysed.

### 9.3. Non-compliant samples: possible reasons, ARfD exceedances and actions taken

- In 2011, 3.1 % of the samples (66 samples in total) were found to be non-compliant with the EU MRLs.
- For 3 samples RASFF notifications were issued.
- The following follow-up actions were taken in case of sample non compliant with the EU MRL (measurement uncertainty taken into consideration):

Number of non compliant samples	Action taken	Note
44	Administrative sanctions	Enforcement samples, the lots were detained and destroyed under customs control or sent back to the seller by permission of authorities in the country of origin.
24	Administrative sanctions	The lot partly or totally consumed. The remaining part detained and destroyed or sent back to the seller by permission of authorities in the country of origin. Enforcement sampling on next coming lots.
3	RASFF notification – border control - lot detained- no distribution	Sample code: 11-00469 - RASFF ref: 2011.ANN, Sample code: 11-04733 - RASFF ref: 2011.CFI Sample code: 11-04993 - RASFF ref: 2011.CKR

Pesticide	Crop	Sample number	Sample origin	Residue level (mg/kg)	ARfD (mg/kg bw)	ARfD %	Population exposed (worst case scenario)	Model used	RASFF notification
Methomyl	Onion flower	11-00469	Thailand	0.35	0.0025	132 - 315	no distribution	UK	2011.ANN
Carbendazim	Eggplant	11-04733	Thailand	2.1	0.02	102 - 263	no distribution	UK	2011.CFI
Amitraz	Chili pepper	11-04993	Malaysia	1.1	0.01	105 - 180	no distribution	UK	2011.CKR

Product	Residue	Reason for MRL non compliance	Note
Mushroom	Amitraz	GAP not respected: use of non-authorised pesticide on all crops	TH
	Carbofuran	GAP not respected: use of non-authorised pesticide on all crops	TH
Chili pepper	Amitraz	GAP not respected: use of non-authorised pesticide on all crops	MY
	Dicofol	GAP not respected: use of non-authorised pesticide on all crops	TH
	EPN	GAP not respected: use of non-authorised pesticide on all crops	MY
	Ethion	GAP not respected: use of non-authorised pesticide on all crops	TH, IN
	Triazofos	GAP not respected: use of non-authorised pesticide on all crops	TH
Water mimosa	Acephate	GAP not respected: use of non-authorised pesticide on all crops	TH
	Methamidophos	GAP not respected: use of non-authorised pesticide on all crops	TH
Oranges	Dimethoate	GAP not respected: use of non-authorised pesticide on the specific crop	EG
	Phenthoate	GAP not respected: use of non-authorised pesticide on all crops	EG

Product	Residue	Reason for MRL non compliance	Note
Aubergine	Dimethoate	GAP not respected: use of pesticide non-authorised on the specific crop	TH
Rice	Isoprothiolane	GAP not respected: use of non-authorised pesticide on all crops	IN
Mint	Dichlorvos	GAP not respected: use of non-authorised pesticide on all crops	IL, CO
Basil	Dichlorvos	GAP not respected: use of non-authorised pesticide on all crops	MY
Pomelo	Phenthoate	GAP not respected: use of non-authorised pesticide on all crops	CN
Rucola	Prothiofos	GAP not respected: use of non-authorised pesticide on all crops	IL
Asiatic Pennyworth	Profenofos	GAP not respected: use of non-authorised pesticide on all crops	VN
Onion	Procymidone	GAP not respected: use of non-authorised pesticide on all crops	TH
Chives, dried	Procymidone	GAP not respected: use of non-authorised pesticide on all crops	CN
Grape leaves (processed)	Procymidone	GAP not respected: use of non-authorised pesticide on all crops	GR
Curry leaves	Triazofos	GAP not respected: use of non-authorised pesticide on all crops	IN
Chinese leek leaf	Carbendazim	GAP not respected: use of pesticide non-authorised on the specific crop	TH

#### 9.4. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
FI	Finnish Customs Laboratory	FI01	20/04/2012	FINAS-Espoo, Finland	EUPT-FV13, EUPT-C5, EUPT-SRM6, EUPT-FV-SM3, FAPAS 19116, FAPAS 0578, BIPEA 02-3219, COOP Round 1
FI	MetropoliLab Oy	FI02	28/05/2012 17/09/2010	FINAS-Espoo, Finland	EUPT-FV13
FI	Finnish Food Safety Authority	FI03	29/05/2012	FINAS-Espoo, Finland	FAPAS 0574, FAPAS 0580, FAPAS 0577, EUPT AO-06, EUPT SRM6



## 10. France

### A - Vegetable origin product

#### 10.1. Objective and design of the national control programme

The monitoring programme for plant pesticide residues is planned and carried out by the *Direction Générale de la Concurrence, de la Consommation et de la Répression des Fraudes* (DGCCRF – General Directorate for Competition Policy, Consumer Affairs and Fraud Control). Seven laboratories, belonging to the *Service Commun des Laboratoires* (SCL – Common Laboratory Network for both DGCCRF and Customs affairs) analyse the samples. Two of these labs are located in overseas islands (Reunion and Guadeloupe) and focused mainly on local production. The other five analyse all types of plant commodities available on the French market, including both unprocessed and processed products.

The programme distinguishes two sampling strategies called ‘surveillance’ – ST10A - for random samples (including the EU coordinated programme) and ‘control’ – ST 20A for targeted samples (based on high probability of non compliance, e.g. winter salad, or chlordecone in root vegetables).

Samples taken according to Regulation (EC) No 669/2009 on the increased level of official controls on imports of certain food of non-animal origin was reported with the sampling strategy: ST30A

Sampling is performed by trained inspectors of the local services of the DGCCRF. Procedures refer to Directive 2002/63/EC, transposed in national legislation.

The plant pesticide residue sampling scheme is developed with support of ANSES (French Agency for Food, Environmental and Labour Safety). It takes in account besides the requirements of the European Union coordinated programme:

- the dietary proportion of plant products in French consumption,
- the results of former monitoring plans,
- the calculation of exposure at the risk: frequency of detection of various active substances, balanced by the importance of their matrix in the consumption of the French people and the chronic and acute risks associated for various segments of the population.

A specific programme is established for organic products: 8,6 % of the total samples

Beyond the takings planned in the initial plans, additional analyses can be made on products having been the object of an alert in the RASFF, or for which a non-compliance was noticed during a previous taking.

The point of sampling, if possible, depends on the strategy. When available, commodities for surveillance are sampled as close as possible of the consumer (i.e. mainly retail), and those for control are sampled as close as possible of the growing or the import point (i.e. mainly packagers, wholesalers or processing plants). Products, nevertheless, must be on the market already, because primary production (on field) is Ministry of Agriculture answerable.

Finally, laboratories used official methods. With the acquisition of new apparatus – LC-MS, the laboratories of the SCL widened the range of their analytical possibilities and were so able to implement single residue methods (e.g.: quaternary ammonium, phenoxy acids, glyphosate, ethephon, etc.).

The Quechers method is used by all laboratories. However, for very specific or punctual analyses (case of the alerts), the laboratories of the SCL designed generally an experimental laboratory, the NRL, to make analyses and if necessary for a development of the method. In the lack of an official protocol, laboratories also follow the recommendations of community reference laboratories when a specific method is updated

All five metropolitan labs are accredited by the French Committee for Accreditation (COFRAC), but for a part of their activities only. The obviousness is that the accreditation for multiresidue methods is appreciably difficult and expensive, because it needs validation for each pesticide and each class of matrix. Nevertheless, the accreditation field is focused on often found residues or the most relevant

Overseas laboratories are not accredited, for the same reasons as above and for their low participation in monitoring programmes.

## 10.2. Key findings, interpretation of the results and comparability with the previous year results

Lab Sample Code	Matrices	Active Substance	Results (mg/kg)	
BOR-2011-4245	Epinard	Tefluthrine	0.11	MRL overrun
BOR-2011-4818	Pommes bio	Orthophenylphenol (opp)	0.189	MRL overrun - organic labelled
BOR-2011-5146	Haricots blancs	Pyrimiphos methyl	0.13	MRL overrun
BOR-2011-5974	Concombre	Oxadixyl	0.027	MRL overrun
BOR-2011-6056	Melon	Chlorthal dimethyl	0.024	illegal use in France and MRL overrun
BOR-2011-6381	Haricots coco	Triadimefon and triadimenol [sum]	0.68	MRL overrun
BOR-2011-6424	Raisin	Dimethoate and omethoate [sum express as dimethoate]	0.14	MRL overrun
BOR-2011-6602	Persil	Procymidone	0.43	MRL overrun
BOR-2011-6658	Persil	Tebuconazole	2.4	MRL overrun
IDF-2011-1227	Haricot vert	Chlorpyrifos ethyl	0.25	MRL overrun
IDF-2011-1227	Haricot vert	Methomyl and thiodicarb (sum of methomyl and thiodicarb expressed as methomyl)	0.73	MRL overrun
IDF-2011-1229	Celeri rave	Iprodione	0.104	MRL overrun
IDF-2011-1230	Celeri branche	Etofenprox	0.08	MRL overrun
IDF-2011-1635	Poivron vert	Hexaconazole	0.055	MRL overrun
IDF-2011-1664	Carottes	Acephate	0.83	MRL overrun
IDF-2011-1664	Carottes	Methamidophos	0.064	MRL overrun
IDF-2011-1883	Celeri	Diazinon	0.24	MRL overrun
IDF-2011-2086	Laitue	Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	0.78	MRL overrun
IDF-2011-2258	Fibre de ble	Anthraquinone	850.0	illegal use
IDF-2011-2574	Farine de sarrazin	Pyrimiphos methyl	6.0	MRL recalculated with processing factor de 0.2
IDF-2011-3094	The vert	Buprofezine	0.15	MRL overrun
IDF-2011-3094	The vert	Imidaclopride	0.13	MRL overrun
IDF-2011-3586	Carottes	Linuron	0.4	MRL overrun
IDF-2011-3632	Celeri branche	Iprodione	0.4	MRL overrun
IDF-2011-3718	Celeris raves	Spinosad [sum of spinosyn a and spinosyn d]	0.091	MRL overrun
IDF-2011-576	Persil	Propiconazole	0.11	MRL overrun
IDF-2011-917	Oranges	Carbaryl	0.27	MRL overrun
IDF-2011-977	Oranges	Carbaryl	0.84	MRL overrun
MON-2011-1206	Laitue	Fosthiazate	0.092	MRL overrun
MON-2011-1299	Feuilles de curry	Ethion (diethion)	0.19	MRL overrun
MON-2011-1299	Feuilles de curry	Propargite	1.3	MRL overrun
MON-2011-1299	Feuilles de curry	Triazophos	2.4	MRL overrun
MON-2011-1325	Fraise	Acetamipride	0.043	MRL overrun
MON-2011-1571	Feuille de celeri	Thiamethoxam and clothianidine [sum expressed as thiamethoxam]	0.42	MRL overrun
MON-2011-1656	Celeri branche	Iprodione	0.06	MRL overrun
MON-2011-1938	Concombre	Endosulfan [sum of alpha, beta and sulfate expressed as endosulfan]	0.66	MRL overrun
MON-2011-1938	Concombre	Methomyl et thiodicarbe [sum expressed as methomyl]	0.07	MRL overrun
MON-2011-2018	Fraise	Thiophanate methyl	0.22	MRL overrun
MON-2011-2019	Fraise	Thiophanate methyl	0.3	MRL overrun
MON-2011-2705	Piment	Permethrine [sum of isomeres]	0.42	MRL overrun

MON-2011-2903	Concombre	Carbendazim and benomyl [ sum expressed as carbendazim]	0.47	MRL overrun
MON-2011-2903	Concombre	Methomyl and thiodicarb [ sum expressed as methomyl]	0.28	MRL overrun
MON-2011-3235	Persil	Chlorpyrifos ethyl	0.21	MRL overrun
MON-2011-330	Bette	Iprodione	3.3	MRL overrun
MON-2011-3361	Asperge dolique	Methamidophos	0.054	MRL overrun
MON-2011-340	Celeri rave	Ethion (diethion)	0.031	MRL overrun
MON-2011-3442	Basilic	Chlorpyrifos ethyl	0.71	MRL overrun
MON-2011-3444	Piment	Permethrine [sum of isomeres]	0.14	MRL overrun
MON-2011-3739	Raisin de table	Dimethoate and omethoate [ sum expressed as dimethoate]	0.28	MRL overrun
MON-2011-4886	Estragon	Bupirimate	2.5	MRL overrun
MON-2011-4886	Estragon	Orthophenylphenol (opp)	0.15	MRL overrun
MON-2011-4998	Arachides	Chlorpyrifos ethyl	0.12	MRL overrun
MON-2011-5134	Gombo	Methomyl and thiodicarb [ sum expressed as methomyl]	1.2	MRL overrun
MON-2011-5135	Feuilles de curry	Chlorpyrifos ethyl	0.26	MRL overrun
MON-2011-5135	Feuilles de curry	Dimethoate et omethoate [somme. Exprimee en dimethoate]	0.088	MRL overrun
MON-2011-5135	Feuilles de curry	Propiconazole	0.28	MRL overrun
MON-2011-5147	Raisin de table	Dimethoate and omethoate [ sum expressed as dimethoate]	0.11	MRL overrun
MON-2011-5147	Raisin de table	Folpet (folpel)	0.1	MRL overrun
MON-2011-5272	Potiron	Methomyl and thiodicarb [ sum expressed as methomyl]	0.075	MRL overrun
MON-2011-5457	Feuilles de curry	Acephate	0.17	MRL overrun
MON-2011-5457	Feuilles de curry	Carbendazim and benomyl [ sum expressed as carbendazim]	5.5	MRL overrun
MON-2011-5457	Feuilles de curry	Ethion (diethion)	0.49	MRL overrun
MON-2011-5457	Feuilles de curry	Methamidophos	0.053	MRL overrun
MON-2011-5457	Feuilles de curry	Triazophos	4.9	MRL overrun
MON-2011-5460	Feuilles de curry	Acephate	0.155	MRL overrun
MON-2011-5460	Feuilles de curry	Bifenthrine	3.5	MRL overrun
MON-2011-5460	Feuilles de curry	Methamidophos	0.037	MRL overrun
MON-2011-5460	Feuilles de curry	Triazophos	7.6	MRL overrun
MON-2011-5524	Infusion	Cypermethrine [sum of isomeres]	1.6	MRL overrun
MON-2011-5528	Bette	Indoxacarbe [sum of isomeres]	0.066	MRL overrun
MON-2011-5665	Feuilles de curry	Carbendazim and benomyl [sum expressed as carbendazim]	2.9	MRL overrun
MON-2011-5665	Feuilles de curry	Chlorpyrifos ethyl	0.2	MRL overrun
MON-2011-5665	Feuilles de curry	Ethion (diethion)	3.3	MRL overrun
MON-2011-5666	Feuilles de curry	Acephate	2.9	MRL overrun
MON-2011-5666	Feuilles de curry	Acetamipride	2.3	MRL overrun
MON-2011-5666	Feuilles de curry	Carbendazim and benomyl [ sum expressed as carbendazim]	0.58	MRL overrun
MON-2011-5666	Feuilles de curry	Methamidophos	0.97	MRL overrun
MON-2011-5666	Feuilles de curry	Triazophos	1.1	MRL overrun
MON-2011-5688	Aubergine	Captane	0.1	MRL overrun
MON-2011-5704	Piment	Ethion (diethion)	0.22	MRL overrun
MON-2011-5704	Piment	Flusilazole	0.22	MRL overrun
MON-2011-5727	Lentilles seches	Iprodione	0.23	MRL overrun
MON-2011-5735	Feuilles de curry	Carbendazim and benomyl [sum expressed as carbendazim]	0.22	MRL overrun
MON-2011-5735	Feuilles de curry	Chlorpyrifos ethyl	0.13	MRL overrun
MON-2011-5735	Feuilles de curry	Hexaconazole	0.32	MRL overrun
MON-2011-5735	Feuilles de curry	Profenophos	3.3	MRL overrun
MON-2011-5735	Feuilles de curry	Propiconazole	0.22	MRL overrun
MON-2011-5779	Feuilles de curry	Chlorpyrifos ethyl	0.32	MRL overrun
MON-2011-5779	Feuilles de curry	Ethion (diethion)	0.94	MRL overrun
MON-2011-5779	Feuilles de curry	Profenophos	0.31	MRL overrun
MON-2011-5779	Feuilles de curry	Propiconazole	0.13	MRL overrun
MON-2011-5780	Feuilles de curry	Chlorpyrifos ethyl	0.45	MRL overrun

MON-2011-5780	Feuilles de curry	Ethion (diethion)	0.91	MRL overrun
MON-2011-5780	Feuilles de curry	Profenophos	0.5	MRL overrun
MON-2011-5780	Feuilles de curry	Propargite	0.091	MRL overrun
MON-2011-5803	Feuilles de curry	Carbendazim and benomyl [sum expressed as carbendazim]	0.3	MRL overrun
MON-2011-5803	Feuilles de curry	Chlorpyrifos ethyl	0.59	MRL overrun
MON-2011-5803	Feuilles de curry	Ethion (diethion)	0.72	MRL overrun
MON-2011-5803	Feuilles de curry	Profenophos	1.9	MRL overrun
MON-2011-5803	Feuilles de curry	Propiconazole	0.21	MRL overrun
MON-2011-5923	The	Acetamipride	0.21	MRL overrun
MON-2011-5936	Lentilles seches	Pyrimiphos methyl	0.27	MRL overrun
MON-2011-6228	Pomelo	Methidathion	0.065	MRL overrun
MON-2011-6241	Gombo	Acetamipride	0.37	MRL overrun
MON-2011-6241	Gombo	Endosulfan [sum of alpha, beta and sulfate expressed as endosulfan]	0.25	MRL overrun
MON-2011-6243	Asperge dolique	Epn	0.065	MRL overrun
MON-2011-6420	Feuilles de curry	Acephate	0.4	MRL overrun
MON-2011-6420	Feuilles de curry	Carbendazim and benomyl [sum expressed as carbendazim]	0.49	MRL overrun
MON-2011-6420	Feuilles de curry	Ethion (diethion)	1.5	MRL overrun
MON-2011-6420	Feuilles de curry	Hexaconazole	0.34	MRL overrun
MON-2011-6420	Feuilles de curry	Profenophos	1.6	MRL overrun
MON-2011-6421	Feuilles de curry	Acephate	2.4	MRL overrun
MON-2011-6421	Feuilles de curry	Carbendazim and benomyl [sum expressed as carbendazim]	0.29	MRL overrun
MON-2011-6421	Feuilles de curry	Ethion (diethion)	1.6	MRL overrun
MON-2011-6421	Feuilles de curry	Hexaconazole	0.89	MRL overrun
MON-2011-6421	Feuilles de curry	Methamidophos	0.34	MRL overrun
MON-2011-6421	Feuilles de curry	Triazophos	4.8	MRL overrun
MON-2011-6490	Pomelo	Methidathion	0.078	MRL overrun
MON-2011-6666	Piment	Endosulfan [sum of alpha, beta and sulfate expressed as endosulfan]	0.102	MRL overrun
MON-2011-6667	Concombre	Oxamyl	0.083	MRL overrun
MON-2011-6692	Gombo	Acephate	0.29	MRL overrun
MON-2011-6692	Gombo	Methamidophos	0.04	MRL overrun
MON-2011-6752	Infusion	Cypermethrine [somme des isomeres]	1.6	MRL overrun
MON-2011-6845	Gombo	Methomyl and thiodicarb [sum expressed as methomyl]	0.12	MRL overrun
MON-2011-6846	Feuilles de curry	Acephate	6.4	MRL overrun
MON-2011-6846	Feuilles de curry	Bifenthrine	6.6	MRL overrun
MON-2011-6846	Feuilles de curry	Ethion (diethion)	10.9	MRL overrun
MON-2011-6846	Feuilles de curry	Methamidophos	0.29	MRL overrun
MON-2011-6846	Feuilles de curry	Profenophos	20.3	MRL overrun
MON-2011-6846	Feuilles de curry	Propargite	0.12	MRL overrun
MON-2011-6846	Feuilles de curry	Triazophos	27.8	MRL overrun
MON-2011-6882	Lentilles seches	Pyrimiphos methyl	0.3	MRL overrun
MON-2011-6883	Lentilles seches	Pyrimiphos methyl	0.32	MRL overrun
MON-2011-6890	Gombo	Monocrotophos	0.094	MRL overrun
MON-2011-6891	Feuilles de curry	Acephate	7.8	MRL overrun
MON-2011-6891	Feuilles de curry	Acetamipride	11.0	MRL overrun
MON-2011-6891	Feuilles de curry	Bifenthrine	5.3	MRL overrun
MON-2011-6891	Feuilles de curry	Ethion (diethion)	10.2	MRL overrun
MON-2011-6891	Feuilles de curry	Methamidophos	0.27	MRL overrun
MON-2011-6891	Feuilles de curry	Profenophos	19.0	MRL overrun
MON-2011-6891	Feuilles de curry	Triazophos	38.0	MRL overrun
MON-2011-6892	Aubergine	Dimethoate and omethoate [sum expressed as dimethoate]	0.17	MRL overrun
MON-2011-6907	Gombo	Acetamipride	0.14	MRL overrun
MON-2011-798	Aubergine	Carbaryl	0.063	MRL overrun
MON-2011-839	Bette	Iprodione	5.5	MRL overrun
REN-2011-1406	The	Buprofezine	0.17	MRL overrun
REN-2011-159	Feuilles de chene	Iprodione	23.7	MRL overrun

REN-2011-1770	Fraises	Thiophanate methyl	0.34	illegal use in France - MRL overrun
REN-2011-1800	Epinard	Pencycuron	1	illegal use in France - MRL overrun
REN-2011-1928	Epinard	Linuron	0.9	illegal use in France - MRL overrun
REN-2011-2172	Carottes	Linuron	0.41	MRL overrun
REN-2011-2324	Issues de mais	Pyrimiphos methyl	14.7	MRL overrun - composite with high percent of maize - MRL is above the MRL in maize
REN-2011-2431	Navets	Chlorprophame [parent]	0.17	MRL overrun
REN-2011-3059	Raisin	Folpet (folpel)	0.063	MRL overrun
REN-2011-3060	Navets	Chlorfenvinphos	0.042	MRL overrun
REN-2011-3857	Clementine	Malathion [sum including malaoxon expressed as malathion]	0.088	MRL overrun
REN-2011-4651	Celeri branche	Dimethoate and omethoate [sum expressed as dimethoate]	0.08	illegal use in France - MRL overrun
REN-2011-5274	Cresson de fontaine	Lambda-cyhalothrine	0.17	MRL overrun
REN-2011-5318	Endives	Dimethoate and omethoate [sum expressed as dimethoate]	0.072	MRL overrun
REN-2011-5418	Feuille de chene	Cyprodinil	34	MRL overrun
REN-2011-5418	Feuille de chene	Fludioxonil	31	MRL overrun
REN-2011-5418	Feuille de chene	Folpet (folpel)	7.0	MRL overrun
REN-2011-5466	Haricots verts	Methomyl and thiodicarb [sum expressed as methomyl]	0.085	MRL overrun
REN-2011-5466	Haricots verts	Oxamyl	0.11	MRL overrun
REN-2011-648	The	Triadimefon and triadimenol [sum]	0.43	MRL overrun
REU-2011-358	Lemons	BROMOPROPYLATE	0.23	MRL overrun
REU-2011-554	Strawberries	Prochloraz	0.29	MRL overrun
STR-2011-1026	Fraises	Cyproconazole	0.25	MRL overrun
STR-2011-1509	Thé vert	Fenvalerate	0.24	MRL overrun
STR-2011-2683	Haricots verts	Dimethoate and omethoate [sum expressed as dimethoate]	0.1	MRL overrun
STR-2011-3826	Raisin de table	Fenvalerate	0.40	MRL overrun
STR-2011-4285	Poires	Thiacloprid	0.71	MRL overrun
ANT-2011-396	Cive	Chlordecone	0.172	MRL overrun
ANT-2011-397	Cive	Chlordecone	0.059	MRL overrun
ANT-2011-670	Cive	Chlordecone	0.063	MRL overrun
MON-2011-6872	Laitue	Dithiocarbamates (Dithiocarbamates expressed as CS <sub>2</sub> , including Maneb, Mancozeb, Metiram, Propineb, Thiram and Ziram)	13	MRL overrun
MON-2011-1772	Lentilles seches	Glyphosate	0.53	MRL overrun
MON-2011-1773	Lentilles seches	Glyphosate	0.91	MRL overrun
MON-2011-1774	Lentilles seches bio	Glyphosate	0.79	MRL overrun

The number of samples made in 2011 is in very light increase with compared with 2010 (5,270 against 5,182, + 1,7 %):

Commodities	Number of analysed samples	Number of samples without residue	> MRL	Non compliant
Fruits and Vegetables	4,036	2,213 (58 %)	188 (4,7 %)	104 (2,6 %)
Processed Products	803	521 (65 %)	11 (1,4 %)	0
Cereals	404	254 (63 %)	6 (1,5 %)	2 (0,5 %)
Baby Food	27	27 (100 %)	0 (0 %)	0
<b>TOTAL</b>	<b>5,270</b>	<b>3,015 (58 %)</b>	<b>205 (3,9 %)</b>	<b>106 (2 %)</b>

The rate of non-compliances is little different from that of the 2011 (3,6 %). On the other hand, the rate of

samples without residues decreased slightly from 61 % in 2011 to 58 % in 2012. This decrease is understandable by the increase of the number of active substances looked for further to the implementation of the new researches by LC-MS.

The data indicated above are the ones data by EFSA. All the samples coded with: ST10A: Objective Sampling and ST20A: Selective Sampling was classified in the 'Surveillance' category. Only data coded with the 'suspect sampling' – ST30A were classified in the 'Enforcement' category.

Samples taken according to Regulation (EC) No 669/2009 on the official controls on imports of certain food of non-animal origin were reported with the code: ST30A

	Number of analysed samples	Number of samples without residue	> MRL	Non compliant
Surveillance	3,352	1949 – 58 %	73 – 2,2 %	51 – 1,5 %
Enforcement	1,628	945 – 58 %	39 – 2,4 %	25 – 1,5 %
Border Inspection	290	121 – 42 %	93 – 32 %	32 – 11%

### 10.3. Non-compliant samples: possible reasons and actions taken

On 108 non-compliance noticed in 2011, 15 gave rise to description in the RASFF. The actions led further non-compliances are recapitulated in the following board:

Number of non-compliant samples	Action taken	Note
74	Rappel de réglementation - Reminder in law	
7	Mesure de police administrative - Measure of administrative police	
13	Intention de procès-verbal	
7	Contentieux	
14	Destruction aux frontières - Destruction on the borders	
15	Signalement au RASFF - RASFF notification	

The total is not equal to 108, because several actions(shares) were able to be led for the same sample

The voluntary measures taken by the operators are not taken into account, except for the controls of imported food.

### 10.4. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
FR	SCL – Laboratoire de Montpellier	SCL34	1997	Comité Français d'accréditation - Cofrac	PT 2011: FV 13, C5, SRM04, SM 03, FAPAS, Bipea
FR	SCL – Laboratoire de Massy	SCL91	1996	Comité Français d'accréditation - Cofrac	PT2011: FV13, C5, SRM04, SM03, FAPAS, Bipea
FR	SCL – Laboratoire de Rennes	SCL35	2008	Comité Français d'accréditation - Cofrac	PT2011: FV13, C5, BIPEA
FR	SCL - Laboratoire de Strasbourg	SCL67	2001	Comité Français d'accréditation - Cofrac	PT2011: FV13, BIPEA
FR	SCL - Laboratoire de Bordeaux	SCL33	2002	Comité Français d'accréditation - Cofrac	PT2011: FV13, FAPAS, BIPEA



FR	SCL – Laboratoire de Saint Denis de la Réunion	SCL974	The laboratory is not accredited - analyses were made by the Laboratory SCL of Massy.
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## B - Animal origin products

### 10.5. Objective and design of the national control programme

The monitoring programme for pesticide residues in animal origin products is planned and carried out by the Direction Générale l'Alimentation (DGAL). Twelve approved laboratories analyzed these samples.

### 10.6. Key findings, interpretation of the results and comparability with the previous year results

Categories	Number of samples	Number of samples without residue	> MRL	Non compliant
Animal origin products	59	56 (95 %)	0	0



## 10.7. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
FR	Laboratoire départemental france duncombe (14)	LVD014		Comité Français d'accréditation	Proficiency test: EUPT AO 04- EUPT AO 05- EUPT AO 06- EUPT AO 07 Interlaboratory test: EILA2006 (fish) – EILA 2007 (fat) – EILA 2009 (milk) – EILA 2011 (fat)
FR	Laboratoire d'analyses départemental de la correze (19)	LVD019		Comité Français d'accréditation	Proficiency test: EUPT AO 04- EUPT AO 05- EUPT AO 06- EUPT AO 07 Interlaboratory test: EILA2006 (fish) – EILA 2007 (fat) – EILA 2009 (milk) – EILA 2011 (fat)
FR	Laboratoire départemental de la cote d'or (21)	LVD021		Comité Français d'accréditation	Proficiency test: EUPT AO 04- EUPT AO 05- EUPT AO 06- EUPT AO 07 Interlaboratory test: EILA2006 (fish) – EILA 2007 (fat) – EILA 2009 (milk) – EILA 2011 (fat)
FR	Laboratoire de developpement et d'analyses (22)	LVD022		Comité Français d'accréditation	Proficiency test: EUPT AO 04- EUPT AO 05- EUPT AO 06- EUPT AO 07 Interlaboratory test: EILA2006 (fish) – EILA 2007 (fat) – EILA 2009 (milk) – EILA 2011 (fat)
FR	Idhesa bretagne oceane (29)	LVD029		Comité Français d'accréditation	Proficiency test: EUPT AO 04- EUPT AO 05- EUPT AO 06- EUPT AO 07 Interlaboratory test: EILA2006 (fish) – EILA 2007 (fat) – EILA 2009 (milk) – EILA 2011 (fat)
FR	Laboratoire veterinaire departemental de la haute-garonne (31)	LVD031		Comité Français d'accréditation	Proficiency test: EUPT AO 04- EUPT AO 05- EUPT AO 06- EUPT AO 07 Interlaboratory test: EILA2006 (fish) – EILA 2007 (fat) – EILA 2009 (milk) – EILA 2011 (fat)
FR	Laboratoire departemental (40)	LVD040		Comité Français d'accréditation	Proficiency test: EUPT AO 04- EUPT AO 05- EUPT AO 06- EUPT AO 07 Interlaboratory test: EILA2006 (fish) – EILA 2007 (fat) – EILA 2009 (milk) – EILA 2011 (fat)
FR	Laboratoire departemental d'analyses du morbihan (56)	LVD056		Comité Français d'accréditation	Proficiency test: EUPT AO 04- EUPT AO 05- EUPT AO 06- EUPT AO 07 Interlaboratory test: EILA2006 (fish) – EILA 2007 (fat) – EILA 2009 (milk) – EILA 2011 (fat)
FR	Laboratoire departemental de la sarthe (72)	LVD072		Comité Français d'accréditation	Proficiency test: EUPT AO 04- EUPT AO 05- EUPT AO 06- EUPT AO 07 Interlaboratory test: EILA2006 (fish) – EILA 2007 (fat) – EILA 2009 (milk) – EILA 2011 (fat)
FR	Laboratoire veterinaire departemental (79)	LVD079		Comité Français d'accréditation	Proficiency test: EUPT AO 04- EUPT AO 05- EUPT AO 06- EUPT AO 07 Interlaboratory test: EILA2006 (fish) – EILA 2007 (fat) – EILA 2009 (milk) – EILA 2011 (fat)

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
FR	Laboratoire départemental (85)	LVD085		Comité Français d'accréditation	Proficiency test: EUPT AO 04- EUPT A0 05- EUPT AO 06- EUPT AO 07 Interlaboratory test: EILA2006 (fish) – EILA 2007 (fat) – EILA 2009 (milk) – EILA 2011 (fat)
FR	Laboratoire départemental (87)	LVD087		Comité Français d'accréditation	Proficiency test: EUPT AO 04- EUPT A0 05- EUPT AO 06- EUPT AO 07 Interlaboratory test: EILA2006 (fish) – EILA 2007 (fat) – EILA 2009 (milk) – EILA 2011 (fat)

## 11. Germany

### 11.1. Objective and design of the national control programme

Germany's multi-annual national programme for control of pesticide residues in and on foodstuffs serves the planning of official controls to make sure that residues in food of animal or vegetal origin do not lead to unacceptable risks to health. Investigations under this programme aim to evaluate consumers' exposure to pesticide residues and control compliance with legal regulations.

The control programme is jointly developed by the Federal Government and the Federal states (*Länder*). Each programme covers a period of three years and is updated each year and submitted to the commission and EFSA three months before the end of the current calendar year at the latest, in accordance with Article 30 (1) 2 of Regulation (EC) No. 396/2005.

To reach both the aim of evaluating consumer exposure and of monitoring legal compliance, part of the samples are analysed following the provisions set out in a multi-annual national monitoring plan which has been specifically conceived to measure pesticide residues, to the end of determining consumers' exposure on a national scale. Sampling is made at random and is based on the conditions of the German market, as regards the origin of samples and their distribution over conventional and ecological farming.

A much larger amount of samples is taken and analysed on a risk basis and at all levels of trade (import, wholesale, retail sale, production), on the basis of uniform criteria, which allows to integrate the sampling plans separately developed by the *Länder* into one national sampling plan.

The following criteria have been set up for the selection of products to be sampled, in order to allow a uniform approach to developing the multi-annual national control plan, and integration of the *Länder*'s plans into a national sampling plan in a transparent manner:

a) 'Hard' criteria:

- Product risk as defined in a health risk assessment of the respective product (risk to population, risk to sensitive consumer groups, food with potential risks), while considering the product's dietary importance
- Amount of production/import/distribution of the food product in question
- Frequency of non-compliance with residue levels, frequency of complaints
- Frequency of findings (distribution of frequency), frequency of multiple residues
- Findings under the monitoring programme; findings reported in the Annual Report pursuant to Article 32 of Regulation (EC) No. 396/2005

b) 'Soft' criteria:

- Seasonal particularities (for instance, early strawberries: sampling should be concentrated at the beginning of the season, to allow forecasts of trends in residue findings)
- Origin and regional particularities (for instance, regional prevalence of certain crops)
- Consideration of findings in controls performed by the Crop Protection Services of the *Länder* (for instance, findings about improper or unauthorised use of plant protection products, or suspicion of residues of unauthorised use of plant protection products or use of banned products)
- Information of the public/public perception of pesticide residues
- Type of farming (such as ecological/conventional, small-scale/large-scale cropping)
- Efficiency of producers'/suppliers' self-control systems

With both control programmes, sampling and actual analyses are performed by the competent authorities of the *Länder*. Analytic results are delivered to the BVL. The BVL compiles the data delivered by the *Länder*, makes an assessment, and sends the data to the European Commission, to EFSA, and to the other Member States, in accordance with Article 31(1) of Regulation (EC) No. 396/2005. In addition, the programme results are published annually in a 'National Report about Residues of Plant Protection Products in Foodstuffs'. They serve as a basis for discussing risk-minimising measures in the field of food safety.

## 11.2. Key findings, interpretation of the results and comparability with the previous year results

In 2011 in Germany a total of 17,157 samples (16,661 surveillance and 496 follow-up enforcement samples) were tested for pesticide residues. Of these samples, 6,924 were from products produced in Germany, 5,255 samples came from within the EU, 3,487 samples were produced outside of the EU and 1,491 of the samples had an unknown origin. The samples included 15,027 samples of fruits, vegetables and other plant origin, 481 samples of cereals, 1,062 samples of animal products, 251 samples of baby food and 336 samples of processed products.

The participating laboratories reported a total of 5,423,227 analyses for the food samples. The samples were analysed for a total of 856 different pesticides (excluding isomers and metabolites) from which 361 were detected at least in one sample. Residues of 144 individual pesticides exceeded MRLs.

In 6,625 (39.8 %) surveillance samples no residues of pesticides could be quantified (2010: 41.4 %). In 9,579 (57.5 %) surveillance samples residues of pesticides were quantified at or below MRLs (2010: 55.9 %). 457 (2.7 %) surveillance samples contained residues of pesticides exceeding MRLs (2010: 2.7 %). 268 (1.6 %) samples had residues non-compliant with the MRL (2010: 1.7 %).

In 251 (50.6 %) follow-up enforcement samples no residues of pesticides could be quantified (2010: 31.1 %). In 210 (42.3 %) follow-up enforcement samples residues of pesticides were quantified at or below MRLs (2010: 62.4 %). 35 (7.1 %) follow-up enforcement samples contained residues of pesticides exceeding MRLs (2010: 6.5 %). 26 (5.2 %) samples had residues non-compliant with the MRL (2010: 5.4 %).

1,419 samples of 17,157 (8.3 %) were from products produced under the rules of organic farming. In 253 (17.8 %) samples residues of pesticides could be quantified. Only 11 (0.8 %) of organic samples contained residues of pesticides exceeding MRLs. The sampling strategies for these products varied between the States. Some have special programs; others take samples rather by chance.

Multiple residues were found and quantified in 40.7 % of all samples (2010: 40.3 %).

## 11.3. Non-compliant samples: possible reasons and actions taken

In 2011, 1.7 % of the samples (294 samples in total) were found non-compliant with the EU MRL. For 23 samples RASFF notifications were issued.

The following follow-up actions were taken in case of sample non-compliant with the EC MRL (measurement uncertainty taken into consideration):

Number of non-compliant samples	Action taken	Note
65	Administrative consequences	
20	Rapid Alert Notification	Sample codes: 4413629463423025557; 6058886; 6058896; 6058990; 6088663; 6088694; 6088730; 6088880; 6058397; 6089075; 3245491414806527178; 6058603; 2182157806176271363; 6050427; 6064480; 6090372; 6050425; 6064485; 6061496; 6061498
3	RASFF notification/Lot rejected at the border	Sample codes: 2856781671448168529; 6061017; 5920843
22	Warnings	
14	Warnings and administrative sanctions	
12	No action	
90	Other	Forwarded to competent authority
15	Other	Lot rejected at the border
2	Other	Destruction of the commodity
51	Other	Next three consignments are withheld at Frankfurt Border Inspection Post (BIP) and tested for pesticides. Release only after negative test results. Administrative offence by Local Competent Authorities.

For the findings reported in the below table ‘ARfD exceedances’ an acute risk for the consumers’ health could not be excluded (ARfD exceedance):

Pesticide	Crop	Sample No	Sample origin	Residue level (mg/kg)	ARfD (mg/kg bw)	ARfD %	Population exposed (worst case scenario)	Model used	RASFF notification	Note
Carbaryl	Apricots	115402164	New Zealand	1,9	0,01	588	German children	VELS	2011/0741	
Carbendazim and benomyl (sum of benomyl and carbendazim expressed as carbendazim)	Broccoli	115402463	Vietnam	4,1	0,02	730	German children	VELS	2011/0761	
Carbofuran (sum of carbofuran and 3-hydroxy-carbofuran expressed as carbofuran)	Basil	115406094	Malaysia	0,982	0,00015	449	German children	VELS		
Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	Apples	1152410X GO 578	Germany	0,28	0,01	27463	Children adult	VELS EFSA-Primo	Recommendation	
Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	Apples	1152410X GO 621	Germany	0,31	0,01	30470	Children adult	VELS EFSA-Primo	Recommendation	
Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	Kale	11251517	Germany	0.26	0.01	123 1014	German children Dutch children	VELS EFSA-Primo	no	only regional distribution and sale
Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	Lettuce	11191823	Germany	0.48	0.01	163 163	German children German children	VELS EFSA-Primo	no	only regional distribution and sale
Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	Lettuce	11-01575257	Germany	0,64 (sum) 0,40 (dimethoate) 0,22 (omethoate)	0,01 (dimethoate) 0,002 (omethoate)	463 (sum)	yes	VELS-model	Forwarded to competent authority, Procedure was initiated	
Ethephon	Grapes	000000201 100326	South Africa	1,61	0,05	210,8	toddlers	VELS		
Ethephon	Peppers	1152410X GO 83	Spain	5	0,05	630 163	Children adult	VELS EFSA-Primo	Recommendation	
Ethephon	Peppers	11008013	Spain	2.0	0.05	252 252	German children German children	VELS EFSA-Primo	2011/0101	
Ethephon	Peppers	11007996	Spain	01. Mrz	0.05	164 164	German children German children	VELS EFSA-Primo	2011/0112	
Ethephon	Tomatoes	11022554	Italy	2.5	0.05	234 295	German children Belgian children	VELS EFSA-Primo	2011/0263	
Fenamiphos (sum of fenamiphos and its sulphoxide and sulphone expressed as fenamiphos)	Cucumbers	1152410X GO 701	Spain	0,11	0,0025	25787	Children adult	VELS EFSA-Primo	Recommendation	

Fenamiphos (sum of fenamiphos and its sulphoxide and sulphone expressed as fenamiphos)	Oranges	2011MEL038761	Spain	0,359	0,0025	1114		BfR VELS-Model (Akut)	no	No residues in the fruit flesh
Formetanate (sum of formetanate and its salts expressed as formetanate (hydrochloride))	Peppers	11121219	Turkey	0.13	0,005	164 164	German children German children	VELS EFSA Primo	2011/0990	
Formetanat-hydrochlorid	Cucumbers	1152410X GO 115	Spain	0,13	0,005	15251	children adult	VELS EFSA-Primo	no	
Formetanat-hydrochlorid	Peppers	1152410X LB 271	Turkey	3,5	0,005	4408 1144	children adult	VELS EFSA-Primo	Recommendation	Destruction of the commodity
Imazalil	Limes	L-2011-01221	unknown	5,27	0,05	101,4		BfR VELS-Model (Akut)	no	
Methidathion	Pomelos	L/2011/02 2108	China	0,2	0,01	178	Children (2-5 y)	VELS 2.0 (BfR)	no	no methidathion was found in the flesh; consumption of the skin unlikely
Monocrotophos	Okra	115402090	India	0,83	0,002	274	German children	VELS	2011/0562	
Monocrotophos	Okra	115404040	India	0,6	0,002	198	German children	VELS	2011/0728	
Monocrotophos	Okra	115400490	India	0,48	0,002	158	German children	VELS	2011/ALM	
Oxamyl	Melons	11098579	Morocco	0.039	0.001	284 592	German children Belgian children	VELS EFSA Primo	2011/0772	
Oxamyl	Peppers	L-2011-05638	Turkey	0,27	0,001	1700		BfR VELS-Model (Akut)	no	Destruction of the commodity
Oxamyl	Tomatoes	11023111	Morocco	0.030	0.001	138 174	German children Belgian children	VELS EFSA Primo	no	The maximum residue limit was not exceeded beyond reasonable doubt after taking into account the measurement uncertainty
Oxamyl	Tomatoes	11005334	Morocco	0.030	0.001	138 174	German children Belgian children	VELS EFSA Primo	no	The maximum residue limit was not exceeded beyond reasonable doubt after taking into account the measurement uncertainty

The possible reasons for the MRL exceedances were submitted in only 26 cases from the competent authorities in the Federal States. In all other cases the information was not available.

Product	Residue	Reason for MRL non compliance	Note (Reason for MRL noncompliance)
Apples	Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	GAP not respected: use of pesticide non-authorised on the specific crop (4 Samples)	
Celeriac	Spinosad (sum of Spinosyn A and Spinosyn D, expressed as Spinosad)	Contamination: spray drift	suspected, but not proven
Cherries	Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	Contamination: spray drift	
Cucumbers	Heptachlor (sum of heptachlor and heptachlor epoxide expressed as heptachlor)	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Fresh herbs	Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	GAP not respected: use of pesticide non-authorised on the specific crop (2 Samples)	
Fresh herbs	Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	Contamination: spray drift	suspected, but not proven
Grapefruit	Iprobenfos	GAP not respected: use of pesticide non-authorised on the specific crop	
Grapefruit	Methidathion	Residues resulting from other origin than plant protection treatment (e.g. biocides, veterinary medicines)	
Herbal infusions, dried	DDT (sum of p,p'-DDT, o,p'-DDT, p-p'-DDE and p,p'-TDE (DDD) expressed as DDT)	Other (please specify in the 'Note' column)	no application of DDT, relics of the wood preservative in the old oast
Hops, dried, including hop pellets unconcentrated	Fluopicolide	GAP not respected: use of pesticide non-authorised on the specific crop (3 Samples)	
Hops, dried, including hop pellets unconcentrated	Folpet	Use of pesticide according to authorised GAP: unexpected slow degradation of residues (e.g. unfavourable weather conditions)	
Hops, dried, including hop pellets unconcentrated	Propamocarb (Sum of propamocarb and its salt expressed as propamocarb)	GAP not respected: use of pesticide non-authorised on the specific crop	
Hops, dried, including hop pellets unconcentrated	Trifloxystrobin	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Kale	Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	GAP not respected: use of pesticide non-authorised on the specific crop	
Kale	Dimethomorph	GAP not respected: use of pesticide non-authorised on the specific crop	
Kale	Pymetrozine	GAP not respected: use of pesticide non-authorised on the specific crop	
Lettuce	Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	GAP not respected: use of pesticide non-authorised on the specific crop	
Okra, lady's fingers	Acetamiprid	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	



Product	Residue	Reason for MRL non compliance	Note (Reason for MRL noncompliance)
Peas (with pods)	Metalaxyl (Metalaxyl including other mixtures of constituent isomers including Metalaxyl-M)	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Peaches	Captan	Contamination: spray drift	suspected, but not proven

#### 11.4. Quality assurance

28 accredited laboratories took part in the national control programme for 2011.

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
DE	Chemisches und Veterinäruntersuchungsamt Freiburg 79114 Freiburg Bissierstr. 5	082102	02/12/2008	SAL-Wiesbaden	FAPAS 0578 (Olive Oil) FAPAS 0580 (Fischöl) EURL Dioxine und PCBs (Fisch)
DE	Chemisches und Veterinäruntersuchungsamt Sigmaringen 72488 Sigmaringen Hedinger Str. 2 / 1	082106	05/01/2009	SAL-Wiesbaden	EUPT 2011: FV 13 QS Morpholine, Diethanolamine and Triethanolamine in Apple and Orange
DE	Chemisches und Veterinäruntersuchungsamt Stuttgart 70736 Fellbach Schaflandstr. 3/2	082107	05/01/2009	SAL-Wiesbaden	EUPT 2011: FV 13 QS Morpholine, Diethanolamine and Triethanolamine in Apple and Orange
DE	Bayerisches Landesamt für Gesundheit und Lebensmittelsicherheit Dienststelle Oberschleißheim 85764 Oberschleißheim Veterinärstraße 2	092811	29/06/2009	SAL-Wiesbaden	EUPT 2011: AO 06
DE	Bayerisches Landesamt für Gesundheit und Lebensmittelsicherheit 91058 Erlangen Eggenreuther Weg 43	092821	29/06/2009	SAL-Wiesbaden	EUPT 2011: C5/SRM6, FV-SM03, FV13 COIPT-11 (Pesticide Residues in olive oil)
DE	Landeslabor Berlin-Brandenburg Dienstszitz Berlin 10557 Berlin Invalidenstr. 60	112001	20/04/2009	AKS-Hannover	EUPT 2011: AO 06
DE	Landeslabor Berlin-Brandenburg Dienstszitz Frankfurt (Oder) 15236 Frankfurt (Oder) Gerhard-Naumann-Straße 2/3	122104	20/04/2009	AKS-Hannover	EUPT 2011: FV 13, C5
DE	Landesuntersuchungsamt für Chemie, Hygiene und Veterinärmedizin 28217 Bremen Lloydstraße 4	042101	12/05/2009	AKS-Hannover	EUPT 2011: FV 13 Pesticide residues in mandarin homogenate
DE	Institut für Hygiene und Umwelt 20539 Hamburg Marckmannstr. 129a	022020	26/09/2008	AKS-Hannover	EUPT 2011: FV 13, AO 06, C5/SRM6 BVL-PAK_09/09

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
DE	Landesbetrieb Hessisches Landeslabor FG I.3 Datenmeldestelle 65203 Wiesbaden Glarusstraße 6	062109	02/12/2008	SAL- Wiesbaden	EUPT 2011: FV 13
DE	Landesamt für Landwirtschaft, Lebensmittelsicherheit und Fischerei Mecklenburg-Vorpommern 18059 Rostock Thierfelderstr. 18	132101	10/03/2009	AKS- Hannover	EUPT 2011: FV-13, AO-06, C5/SRM 6 Bonner Enquete 2010 (Futtermittel, Durchführung Jan-Feb 2011)
DE	Niedersächsisches Landesamt für Verbraucherschutz und Lebensmittelsicherheit -Lebensmittelinstitut Oldenburg- 26133 Oldenburg Martin-Niemöller-Straße 2	032002	12/09/2008	AKS- Hannover	EUPT 2011: FV13, AO 06, COIPT-11 C5/SRM6, SM03
DE	Stadt Bochum Chemisches Untersuchungsamt 44793 Bochum Carolinenglückstr. 27	052107	23/04/2009	SAL- Wiesbaden	EURL (University of Almeria) ES EURL (University of Søborg) DK
DE	Chemisches und Lebensmitteluntersuchungsamt 44791 Bochum Westhoffstraße 17	052109	23/04/2009	SAL- Wiesbaden	EURL (University of Almeria) ES; EURL (University of Søborg) DK
DE	Stadt Hamm Chemisches Untersuchungsamt 59073 Hamm Sachsenweg 6	052115	23/04/2009	SAL- Wiesbaden	EURL (University of Almeria) ES; EURL (University of Søborg) DK
DE	Chemisches und Veterinäruntersuchungsamt Ostwestfalen-Lippe CVUA-OWL 32717 Detmold Postfach 2754	052203	05/01/2009	SAL- Wiesbaden	EUPT 2011: FV 13
DE	Chemisches und Veterinäruntersuchungsamt Rhein-Ruhr-Wupper CVUA-RRW 47798 Krefeld Deutscher Ring 100	052306	05/01/2009	SAL- Wiesbaden	EUPT 2011: FV13, C5/SRM6
DE	Landeshauptstadt Düsseldorf Amt für Verbraucherschutz Chemische und Lebensmitteluntersuchung 40468 Düsseldorf Ulmenstraße 215	052311	16/12/2009	SAL- Wiesbaden	EUPT 2011: FV 13
DE	Kreisverwaltung Mettmann Amt für Verbraucherschutz Chemische und Lebensmitteluntersuchungen 40822 Mettmann Düsseldorfer Str. 26	052319	16/12/2009	SAL- Wiesbaden	EUPT 2011: FV 13
DE	CVUARheinland 52068 Aachen Blücherplatz 43	052403	12/08/2008	SAL- Wiesbaden	EUPT 2011: FV 13, AO 06, C5/SRM6

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
DE	Chemisches und Veterinäruntersuchungsamt Münsterland-Emscher-Lippe CVUA-MEL 48147 Münster Joseph-König-Straße 40	052502	23/04/2009	SAL- Wiesbaden	EUPT 2011: FV 13, AO 06, C5/SRM6
DE	Landesuntersuchungsamt Abteilung Tiermedizin 56073 Koblenz Blücherstr. 34	072104	05/01/2009	SAL- Wiesbaden	EUPT 2011: FV 13, AO 06, C5/SRM6 Austrian National Reference Laboratory for Pesticide Residues in Products of Animal Origin, 2011, GC-MS-Multi-Residue Method in Honey
DE	Landesuntersuchungsamt Institut für Lebensmittelchemie 67346 Speyer Nikolaus-von-Weis-Str. 1	072107	05/01/2009	SAL- Wiesbaden	EUPT 2011: FV 13, AO 06, C5/SRM6 Austrian National Reference Laboratory for Pesticide Residues in Products of Animal Origin, 2011, GC-MS-Multi-Residue Method in Honey
DE	Landesamt für Soziales, Gesundheit und Verbraucherschutz Abt. G (Lebensmittelchemie) 66115 Saarbrücken Hochstrasse 67	101101	29/06/2009	SAL- Wiesbaden	EUPT 2011: FV 13
DE	Landesuntersuchungsanstalt für das Gesundheits- und Veterinärwesen Sachsen Standort Dresden 01099 Dresden Jägerstraße 8/10	142262	02/12/2008	SAL- Wiesbaden	EUPT 2011: FV13, AO 06, C5/SRM6, SM03 AGES PTPR 2011 (raspberries);
DE	Landesamt für Verbraucher-schutz Sachsen-Anhalt Fachbereich 3 06112 Halle Freiimfelder Str. 68	152200	29/08/2008	AKS- Hannover	EUPT 2011: FV 13, AO 06, C5/SRM6
DE	Landeslabor Schleswig-Holstein (Lebensmittel-, Veterinär- und Umweltuntersuchungsamt) Postfach 2743 24537 Neumünster Max-Eyth-Str. 5	012001	10/10/2008	AKS- Hannover	EUPT 2011: FV 13, AO 06, C5/SRM6 FAPAS 19118; , Quasimeme BT-8 Ex 922 Rd 64 (QSPO37 BT, QSPO36 BT)
DE	Thüringer Landesamt für Lebensmittelsicherheit und Verbraucherschutz Standort Bad Langensalza 99947 Bad Langensalza Tennstedter Str. 8/9	162104	12/08/2008	SAL- Wiesbaden	EUPT 2011: FV 13

## 12. Greece

### 12.1. Objective and design of the national control programme

National control programme of 2011 for pesticide residues (monitoring) as part of the Multi Annual Control Programme of 2011-2013 has been established according to terms and conditions of Articles 26-35 of Regulation (EC) No 396/2005 of the European Parliament and the Council, of 23.02.2005 on Maximum Residue Levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC.

The monitoring programme was designed and coordinated by the Ministry of Rural Development and Food (Directorate of Plant Produce Protection). The programme was based on several risk analysis criteria and parameters: number of samples (domestic and imported) for each product, agricultural produce, cultivation area per culture, expected imports, results from previous years' monitoring programmes, dietary intake contribution of each product, sampling location, community control programme, pesticides used in practice by the farmers, relevant RASFF notifications for pesticide residues, personnel and analytical capacity of the official laboratories. It aims at ensuring compliance with maximum levels and assessing consumer exposure in order to achieve a high level of protection and application of good agricultural practice in all stages of production and harvest of agricultural products.

The responsibilities of the laboratories involved, regarding the number of samples of each commodity that should be analysed and the areas of sampling were well defined. The responsible for the EU co-ordinated program laboratories were clearly stated. The sampling was carried out by the responsible for sampling regional and local authorities.

Sampling strategy was based on 'from the farm to the fork' rationale, taking into account the specificities of each region of the country. The sampling methods, necessary for carrying out such controls of pesticide residues, were those provided for in JMD 91972/2003 (Directive 2002/63/EC). Samples were taken by domestic production and imports, proportionally, covering points of collection, storage, packing and trade of products of plant origin.

The official laboratories, analysing samples for pesticide residues are accredited and participate in the Community Proficiency Tests. The methods of analysis used by the laboratories comply with the criteria set out in relevant EU law provisions and other adopted technical guidelines.

In a case of an MRL exceedance, before any administrative and punitive enforcement action is taken, a default analytical uncertainty of 50 % is subtracted from the measured value. If this figure still exceeds the MRL, enforcement action relevant to the case is taken.

### 12.2. Key findings, interpretation of the results and comparability with the previous year results

#### *Surveillance*

Category	Total number of samples		Number of samples without detectable residues		Number of samples with residues at or below EU MRL or for which no MRL is set		Number of Samples with residues exceeding EU-MRL	
Fruits and Vegetables	2,130		1,558		510		57	
Cereals	30		28		0		2	
Plant Origin Processed products	281		232		48		1	
Baby Food	31		31		0		0	
Food of Animal origin	72		68		4		0	
Feed	14		6		8		0	
<b>Total</b>	Year 2010: 2,380	<b>2558</b>	Year 2010: 1,774	<b>1923</b>	Year 2010: 413	<b>570</b>	Year 2010: 57	<b>60</b>

## Suspect

Category	Total number of samples	Number of samples without detectable residues	Number of samples with residues at or below EU MRL or for which no MRL is set	Number of Samples with residues exceeding EU-MRL
Fruits and Vegetables	145	51	80	14
Cereals	1	1	0	0
Plant Origin Processed products	4	3	1	0
Baby Food	0	0	0	0
Food of Animal origin	0	0	0	0
Feed	7	5	2	0
<b>Total</b>	Year 2010: 164 <b>157</b>	Year 2010: 66 <b>60</b>	Year 2010: 79 <b>83</b>	Year 2010: 19 <b>14</b>

### 12.3. Non-compliant samples: possible reasons and actions taken

In 2011, from the 2,558 surveillance samples analysed, 60 samples (2.34 %) were exceeding the EU MRLs and 34 samples were non compliant (1.33 %). In 2010, 78 samples out of 2,380 (3.27 %) were exceeding the EU MRLs.

In 2011, 14 suspect samples out of 157 were exceeding the EU MRLs (8.9 %) while in 2010 19 suspect samples out of 164 were exceeding the EU MRLs (11.6 %).

Analytical information about the samples and the actions taken regarding non compliant samples and unauthorised uses (for compliant and non compliant samples) are given at the tables below (Tables 1 and 2).

A separate table (Table 3) provides information on RASFF notifications.

**Table 1:** Non-compliant samples for which administrative actions were taken.

a/a	LabSampCode	Product	Residue	Reason for MRL non compliance	Note
1	GR-002-11-433	Apples	dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	Reason unknown	Imported (Serbia)
2	GR-007-11-148	Apples	dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	GAP not respected Not authorized use	
3	GR-001-11-263	Beans (with pods)	acetamiprid	GAP not respected Not authorized use	
4	GR-001-11-812	Beans (with pods)	dimethomorph, pyraclostrobin	GAP not respected Not authorized use	
5	GR-002-11-146	Beans (with pods)	chlorpyrifos	GAP not respected Not authorized use	
6	GR-001-11-023	Carrots	chlorpyrifos	GAP not respected: application rate and/or application method not respected	
7	GR-001-11-103	Cucumbers	oxamyl	GAP not respected: application rate and/or application method not respected	
8	GR-002-11-056	Cucumbers	procymidone	Reason unknown	Imported (Jordan)
9	GR-002-11-323	Cucumbers	oxamyl	GAP not respected: application rate and/or application method not respected	
10	GR-004-11-159	Cucumbers	procymidone	Reason unknown	Imported (Bulgaria)

a/a	LabSampCode	Product	Residue	Reason for MRL non compliance	Note
11	GR-005-11-003	Cucumbers	dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	GAP not respected Not authorized use	
12	GR-007-11-104	Cucumbers	dichlorvos	GAP not respected: not authorized	
13	GR-002-11-059	Lettuce	chlorothalonil	GAP not respected: not authorized use	
14	GR-007-11-118	Lettuce	methamidophos	GAP not respected: not authorized	
15	GR-007-11-132	Lettuce	penconazole	GAP not respected: not authorized use	
16	GR-002-11-245	Okra, ladys fingers	indoxacarb as sum of the isomers S and R	GAP not respected: not authorized use	
17	GR-005-11-096	Peaches	captan/folpet (sum)	GAP not respected: application rate and/or application method not respected	
18	GR-001-11-177	Pears	chlormequat	Reason unknown	Imported (Italy)
19	GR-001-11-097	Peppers	ethion	Reason unknown	Imported (Egypt)
20	GR-002-11-275	Peppers	formetanate (Sum of formetanate and its salts expressed as formetanate (hydrochloride))	GAP not respected: not authorized use	
21	GR-001-11-435	Rice	bromide ion	Reason unknown	Administrative actions in progress
22	GR-001-11-165	Spinach	acrinathrin	GAP not respected: not authorized use	
23	GR-001-11-492	Spinach	clothianidin	GAP not respected: not authorized use	Administrative actions in progress
24	GR-002-11-110	Spinach	imidacloprid	Reason unknown	Imported (Turkey)
25	GR-002-11-133	Spinach	chlorpyrifos	GAP not respected: not authorized use	
26	GR-009-11-033	Spinach	chlorpyrifos	GAP not respected: not authorized use	
27	GR-001-11-108	Spinach (New Zealand)	clothianidin	GAP not respected: not authorized use	Administrative actions in progress
28	GR-001-11-016	Vine leaves (grape leaves)	fenpyroximate, lufenuron		
29	GR-001-11-049	Vine leaves (grape leaves)	azoxystrobin, boscalid, cypermethrin (cypermethrin including other mixtures of constituent isomers (sum of isomers), cyprodinil, fenarimol, flufenoxuron, hexaconazole, lambda-cyhalothrin, methoxyfenozide, myclobutanil, penconazole, , propargite, pyrimethanil, trifloxystrobin,	Reason unknown	Imported (Turkey)

a/a	LabSampCode	Product	Residue	Reason for MRL non compliance	Note
30	GR-001-11-050	Vine leaves (grape leaves)	azoxystrobin, boscalid, cypermethrin (cypermethrin including other mixtures of constituent isomers (sum of isomers), cyprodinil, flufenoxuron, kresoxim-methyl, methoxyfenozide, myclobutanil, penconazole, procymidone, propargite, pyrimethanil, trifloxystrobin,	Reason unknown	Imported (Turkey)
31	GR-001-11-051	Vine leaves (grape leaves)	azoxystrobin, boscalid, flusilazole, kresoxim-methyl, lambda-cyhalothrin, methoxyfenozide, myclobutanil, propargite, pyrimethanil, trifloxystrobin	Reason unknown	Imported (Turkey)
32	GR-001-11-197	Vine leaves (grape leaves)	ethion, fenproparthrin, lambda-cyhalothrin	Reason unknown	Imported (Turkey) Administrative in progress
33	GR-008-11-083	Table Grapes	methamidophos	GAP not respected: not authorized use	
34	GR-008-11-084	Table grapes	methamidophos	GAP not respected: not authorized use	
35	GR-001-11-192	cucumber	oxamyl	application rate and/or application method not respected	
36	GR-001-11-106	okra	acephate, triazophos	Reason unknown	Imported (India)
37	GR-001-11-172	pears	chlormequat	Reason unknown	Imported (Italy)
38	GR-001-11-200	pepper	clofentezine, chlormequat	Reason unknown	Imported (Turkey)
39	GR-002-11-093	pepper	procymidone	Reason unknown	Imported (Turkey)
40	GR-002-11-151	pepper	methomyl	Reason unknown	Imported (Turkey) Administrative actions in progress

**Table 2:** Not authorised uses for which administrative actions were taken.

No.	labSampCode	Product	Residue	Reason of non-authorised pesticide	Note
1	GR-002-11-59	lettuce	chlorothalonil	GAP not respected – use of pesticide non authorised on the specific crop	
2	GR-001-11-113	lettuce	metalaxyl	GAP not respected – use of pesticide non authorised on the specific crop	
3	GR-001-11-161	spinach	acrinathrin	GAP not respected – use of pesticide non authorised on the specific crop	
4	GR-001-11-64	bean	imidacloprid myclobutanil	GAP not respected – use of pesticide non authorised on the specific crop	
5	GR-005-11-03	cucumber	dimethoate fosthiazate	GAP not respected – use of pesticide non authorised on the specific crop	
6	GR-002-11-133	spinach	chlorpyrifos	GAP not respected – use of pesticide non authorised on the specific crop	



No.	labSampCode	Product	Residue	Reason of non-authorised pesticide	Note
7	GR-001-11-165	spinach	acrinathrin	GAP not respected – use of pesticide non authorised on the specific crop	
8	GR-002-11-190	cherry	bifenthrin	GAP not respected – use of pesticide non authorised on the specific crop	
9	GR-005-11-22	cherry	λ-cyhalothrin	GAP not respected – use of pesticide non authorised on the specific crop	
10	GR-009-11-5	spinach	cypermethrin	GAP not respected – use of pesticide non authorised on the specific crop	
11	GR-002-11-222	apricot	tebuconazole	GAP not respected – use of pesticide non authorised on the specific crop	
12	GR-002-11-223	apricot	tebuconazole	GAP not respected – use of pesticide non authorised on the specific crop	
13	GR-002-11-221	apricot	tebuconazole	GAP not respected – use of pesticide non authorised on the specific crop	
14	GR-001-11-264	orange	dimethomorph	GAP not respected – use of pesticide non authorised on the specific crop	
15	GR-005-11-32	cherry	bifenthrin	GAP not respected – use of pesticide non authorised on the specific crop	
16	GR-007-11-54	peas	chlorpyrifos	GAP not respected – use of pesticide non authorised on the specific crop	
17	GR-001-11-268	orange	dimethomorph	GAP not respected – use of pesticide non authorised on the specific crop	
18	GR-009-11-9	spinach	cypermethrin	GAP not respected – use of pesticide non authorised on the specific crop	
19	GR-002-11-245	okra	indoxacarb	GAP not respected – use of pesticide non authorised on the specific crop	
20	GR-002-11-192	cherry	bifenthrin	GAP not respected – use of pesticide non authorised on the specific crop	
21	GR-001-11-313	cauliflower plants	famoxadone linuron	GAP not respected – use of pesticide non authorised on the specific crop	
22	GR-001-11-314	cauliflower plants	famoxadone	GAP not respected – use of pesticide non authorised on the specific crop	
23	GR-005-11-59	cucumber greenhouse	dieldrin	GAP not respected – use of pesticide non authorised on all crops	
24	GR-002-11-246	cucumber greenhouse	dieldrin	GAP not respected – use of pesticide non authorised on all crops	
25	GR-009-11-15	spinach	cypermethrin	GAP not respected – use of pesticide non authorised on the specific crop	
26	GR-009-11-8	spinach	cypermethrin	GAP not respected – use of pesticide non authorised on the specific crop	
27	GR-001-11-263	bean with pods	acetamiprid	GAP not respected – use of pesticide non authorised on the specific crop	
28	GR-005-11-17	squash	endosulfan	GAP not respected – use of pesticide non authorised on all crops	
29	GR-001-11-501	cucumber	dieldrin	GAP not respected – use of pesticide non authorised on all crops	
30	GR-002-11-323	cucumber	oxamyl	GAP not respected – use of pesticide non authorised on the specific crop	
31	GR-002-11-316	peppers	fenbuconazole formetanate	GAP not respected – use of pesticide non authorised on the specific crop	
32	GR-001-11-573	tomato shoots & plants	cyfluthrin	GAP not respected – use of pesticide non authorised on the specific crop	
33	GR-001-11-546	cotton plants	thiodicarb	GAP not respected – use of pesticide non authorised on all crops	
34	GR-001-11-609	olives	chlorpyrifos	GAP not respected – use of pesticide non authorised on the specific crop	
35	GR-001-11-46	oranges	dimethoate	GAP not respected – use of pesticide non authorised on the specific crop	
36	GR-008-11-107	cucumber	ethoprophos	GAP not respected – use of pesticide non authorised on the specific crop	

No.	labSampCode	Product	Residue	Reason of non-authorised pesticide	Note
37	GR-001-11-518	cotton plants	flufenoxuron	GAP not respected – use of pesticide non authorised on the specific crop	
38	GR-007-11-132	lettuce	penconazole	GAP not respected – use of pesticide non authorised on the specific crop	
39	GR-001-11-499	squash	endosulfan	GAP not respected – use of pesticide non authorised on all crops	
40	GR-007-11-104	cucumber	dichlorvos	GAP not respected – use of pesticide non authorised on all crops	
41	GR-001-11-904	lettuce leaves & plants	carbendazim	GAP not respected – use of pesticide non authorised on all crops	
			chlorpyrifos	GAP not respected – use of pesticide non authorised on the specific crop	
			thiophanate methyl		
42	GR-001-11-906	tomato leaves	paclobutrazol	GAP not respected – use of pesticide non authorised on all crops	
			fenbuconazole		
			myclobutanil	GAP not respected – use of pesticide non authorised on the specific crop	
			penconazole		
43	GR-007-11-118	lettuce	methamidophos	GAP not respected – use of pesticide non authorised on all crops	
44	GR-001-11-812	beans with pod	propamocarb	GAP not respected – use of pesticide non authorised on the specific crop	
45	GR-009-11-32	spinach	dimethomorph		
46	GR-008-11-083	table grapes	pyraclostrobin	GAP not respected – use of pesticide non authorised on all crops	
47	GR-008-11-084	table grapes	chlorpyrifos	GAP not respected – use of pesticide non authorised on all crops	
48	GR-009-11-33	spinach	cypermethrin	GAP not respected – use of pesticide non authorised on the specific crop	
49	GR-001-11-491	beans	azoxystrobin	GAP not respected – use of pesticide non authorised on the specific crop	
50	GR-007-11-120	lettuce	bifenthrin	GAP not respected – use of pesticide non authorised on the specific crop	
51	GR-007-11-148	apples	dimethoate	GAP not respected – use of pesticide non authorised on the specific crop	
52	GR-001-11-1043	spinach	boscalid	GAP not respected – use of pesticide non authorised on the specific crop	
53	GR-009-11-017	spinach	cypermethrin	GAP not respected – use of pesticide non authorised on the specific crop	
54	GR-001-11-639	beans with pod	difenoconazole	GAP not respected – use of pesticide non authorised on the specific crop	
55	GR-005-11-211	kiwi	chlorpyrifos	GAP not respected – use of pesticide non authorised on the specific crop	
56	GR-002-11-470	beans	dimethomorph	GAP not respected – use of pesticide non authorised on the specific crop	Administrative actions in progress
57	GR-009-11-42	spinach	pyraclostrobin		
58	GR-006-11-92	melon	chlorpyrifos	GAP not respected – use of pesticide non authorised on the specific crop	Administrative actions in progress
59	GR-009-11-38	spinach	cypermethrin	GAP not respected – use of pesticide non authorised on the specific crop	Administrative actions in progress
60	GR-007-11-157	mandarin	dimethoate	GAP not respected – use of pesticide non authorised on the specific crop	Administrative actions in progress

No.	labSampCode	Product	Residue	Reason of non-authorised pesticide	Note
61	GR-007-11-250	olive oil	endosulfan sulfate	GAP not respected – use of pesticide non authorised on all crops	Administrative actions in progress
62	GR-009-11-56	spinach	cypermethrin	GAP not respected – use of pesticide non authorised on the specific crop	Administrative actions in progress
63	GR-00711-276	olive oil	chlorpyrifos	GAP not respected – use of pesticide non authorised on the specific crop	Administrative actions in progress

**Table 3:** Rasff notifications

Pesticide	Crop	Sample number	Sample origin	Residue level (mg/kg)	ARfD (mg/kg bw)	ARfD %	Model used	RASFF notification
oxamyl	cucumber	GR-002-11-323	GR	0.42	0.001	2456,1	PRIMO	2011.1455
methomyl	pepper	GR-002-11-151	TR	0.24	0.0025	907	PRIMO	2011.BES
acrinathrin	spinach	GR-001-11-165	GR	1.05	0.01	354,8	PRIMO	2011.0657
dimethoate	cucumber	GR-005-11-003	GR	0.172	0.01	150,9	PRIMO	2011.0620
formetanate	pepper	GR-001-11-200	TR	1.6	0.005	3023	PRIMO	2011.0621
procymidone	pepper	GR-001-11-093	TR	0.05	0.012	39,4	PRIMO	2011.BAA
tetradifon	pepper	GR-002-11-034	TR	0.09	-	-	-	2011.AZS
methomyl	pepper	GR-002-11-052	TR	0.04	0.0025	151,1	PRIMO	2011.APN

#### 12.4. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
GR	Benaki Phytopathological Institute, Laboratory of Pesticide Residues	GR-001	09-07-2002	ESYD S.A. (Hellenic Accreditation System S.A.)	EUPT-FV13, EUPT-C065, EUPT-AO06, EUPT-SRM6,
GR	Regional Center of Plant Protection and quality control of <b>Thessaloniki</b> Laboratory of pesticide residues	GR-002	08-09-2009	ESYD S.A. (Hellenic Accreditation System S.A.)	EUPT-FV13
GR	Regional Center of Plant Protection and quality control of <b>Kavala</b> Laboratory of Pesticide residues	GR-003	08-09-2009	ESYD S.A. (Hellenic Accreditation System S.A.)	EUPT-FV13
GR	Regional Center of Plant Protection and quality control of <b>Ioannina</b> Laboratory of pesticide residues	GR-004	08-09-2009	ESYD S.A. (Hellenic Accreditation System S.A.)	EUPR-FV13, EUPT-C5

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
GR	Regional Center of Plant Protection and quality control of <b>Magnesia</b> Laboratory of pesticide residues	GR-005	08-09-2009	ESYD S.A. (Hellenic Accreditation System S.A.)	EUPT-FV13
GR	Regional Centre of Plant Protection and Quality Control of <b>Achaia</b> Laboratory of pesticide residues	GR-006	23-10-2009	ESYD S.A. (Hellenic Accreditation System S.A.)	EUPT-FV13
GR	Regional Centre of Plant Protection and Quality Control of <b>Pireaus</b> Laboratory of Pesticide Residues Analysis	GR-007	23-10-2009	ESYD S.A. (Hellenic Accreditation System S.A.)	EUPT-FV12, EUPT C5, COIPT 11
GR	Regional Center of Plant Protection and Quality Control of <b>Iraklion</b> Laboratory of pesticide residues	GR-008	08-9-2009	ESYD S.A. (Hellenic Accreditation System S.A.)	EUPT-FV-13, COIPT11
GR	Regional Center of Plant Protection and Quality Control of <b>Argolida</b> Laboratory of pesticide residues	GR-009	23-10-2009	ESYD S.A. (Hellenic Accreditation System S.A.)	EUPT-FV13
GR	General Chemical State Laboratory D Chemical Division of Athens, Pesticide Residues Laboratory	GR-010	10-11-1999	UKAS	EUPT-FV13, EUPT-FV-SM-03, EUPT-C5/SRM6, EUPR-AO-06, COI-PT-11

### **13. Hungary**

#### **13.1. Objective and design of the national control programme**

##### **13.1.1. Responsibilities**

Central Agricultural Office Directorate of Plant Protection, Soil Conservation and Agri-environment (CAO DPPSCA) is responsible for coordination of testing pesticide residues in unprocessed agriculture commodities, and processed food of plant origin; heavy metals and organic contaminants in soil and raw agriculture food commodities, quality control of agrochemicals, as well as for the diagnosis of pests and control of pest management technologies during production.

Raw agriculture food commodities of plant origin: coordinating institute is CAO DPPSCA supervising 6 regional laboratories.

Central Agricultural Office Food and Feed Safety Directorate (CAO FFSD) is responsible for coordination of testing pesticide residues in processed food and feed. Processed food commodities of animal origin: coordinating institute is CAO FFSD. The directorate has 2 central and 2 regional laboratories.

##### **13.1.2. Design of Programmes (priorities, targeting, criteria for the percentage of samples to be taken from the organic sector)**

The annual monitoring programme is based on risk assessment. The programme covers all important commodities of fruit and vegetables, cereals, selected processed products of plant origin and several products of animal origin. In addition, some other crops of concerned also included. The sampling frequency of different commodities is determined taking into consideration the production and food consumption figures as well as the results of previous monitoring programmes. The coordinated programme of the European Commission was included in the national programme.

The sampling plans prepared by the responsible directorates are harmonised and approved at CAO level.

##### **13.1.3. Sampling: personnel, procedures, sampling points**

Sampling is carried out in accordance with 66/2010 order issued by MARD based on Commission Directive 2002/63/EC for pesticide residues.

The programme for official sampling made by the analytical network covered mostly the produces representing the main consumption habits, but other crops were also included. *Sampling points*: Border Station Offices, wholesales, markets, places of production.

*Personal*: border, plant protection inspectors, food safety inspectors within the country.

##### **13.1.4. Analytical methods used**

#### **13.2. Key findings, interpretation of the results and comparability with the previous year results**

In 2011, the programme for controlling the residues was made in the 10 (from 1 July 8) pesticide residue analytical laboratories.

In 2011, 3,955 samples were analysed - in the frame of the official sampling programme – for a higher number of compounds (436 pesticides and metabolites). 2,338 samples of fresh fruits and vegetables, 1,112 samples of processed products, 107 samples of cereals, 43 samples of baby foods and 355 samples of animal products were examined for pesticides residues.

Among them, there were 2,690 samples from Hungary, 767 samples from European market and 498 samples from third countries.

Out of the tested 3955 samples 66 % (2,598) did not contain pesticide residues above the level of detection. Altogether 0.6 % (22) of the samples were objected because of pesticide residues detected above the MRL.

All of these exceedances (20 samples) in the fruit and vegetable category with the greatest proportion in the cucumbers, tomatoes, mandarins and cherries surveys.

The percentage of samples containing pesticide residues over the level of detection was 4,9 % of the 1,112 samples of processed food, 2 samples exceeded the MRL (0,2 %).

In 9 samples more than one pesticide was analysed. In 3 samples 3 compounds, in further 3 samples 2 compounds, in 1 sample 4 and in 1 sample 6 different pesticide residues were found. The most frequently found pesticides in 2011 as % of fruit and vegetable samples sought were: dithiocarbamates, captan, chlorpyrifos, azoxystrobin, boscalid and fenhexamid.

The most frequently found pesticides in cereal samples were pirimiphos-methyl, tebuconazole and chlorpyrifos-methyl.

### **13.3. Quality assurance**

#### **13.3.1. Status of accreditation of laboratories, number of laboratories**

In the first six months 6, from 1 July 4 laboratories (**CAO DPPSCA**) analysing pesticide residues in commodities of plant origin have GLP accreditation. Three of them also accredited according to MSZ EN ISO 17025.

The laboratories are able to carry out a quick screening examination giving information on presence of a great number of pesticides. They have facilities for selective and confirmatory determinations, too. For analysis of the most components they use the foods of plant origin. Determination of pesticide residues using GC-MS and/or LC-MS/MS following acetonitrile extraction/partitioning and clean-up by dispersive SPE. QuEChERS-method, which is European and Hungarian standard method: MSZ EN 15662:2009, MSZ EN 12396-2:2000 Determination of dithiocarbamate and thiuram disulfide residues and accredited multiresidue methods (in-house) for determination of residues of pesticide groups. They have detailed quality assurance programme which complies with the DG SANCO Guidelines for 'Method Validation and Quality Control Procedures for Pesticide Residues Analysis in Food and Feed' and the requirements of joint decree 9/2001 (III.30.) MH-MARD.

All (4) laboratories (CAO FFSD) analysing pesticide residues in food of animal origin and commodities with high fat content have accreditation according to MSZ EN ISO 17025. They have detailed quality assurance programme which complies with the DG SANCO Guidelines mentioned and the requirements of joint decree too.

The methods using for pesticide residues in food of animal origin and commodities are European and Hungarian standard method: MSZ EN 1528 1-4:1998 and in-house developed methods.

#### **International proficiency tests**

In 2011, the laboratories participated in the European Proficiency tests - EUPT-FV13 (fruit and vegetables), EUPT-SM03 (screening methods), EUPT-C5 (cereals and feeding stuff), EUPT- SRM06 (single residue methods) - which were organised by the CRLs for fruit, vegetables and cereal. The Hungarian Analytical Laboratories obtained very good results (Category A).

In 2011 two of laboratories participated in the European Proficiency test EUPT AO6 organised by the EURL for food of animal origin and commodities with high fat content, other one in Hungarian collaborative study organized by Hungarian NRL.

#### **Analytical uncertainty**

The laboratories established their own values for measurement uncertainty, but applied the larger default value of 50 % (ref. SANCO/12495/2011) in the decision making process.

### **Other Information**

Hungary did not carry out the homogeneity exercise in 2011.

**Details of risk assessment:** are carried out by Hungarian Food Safety Office (HFSO) in cooperation with CAO DPPSCA.

MRD (MARD) – Ministry of Rural Development

MH - Ministry of Health



## 14. Iceland

### 14.1. Objective and design of the national control programme

The Icelandic Food and Veterinary Authority is the competent authority for the pesticide residues monitoring and designed the monitoring programme. The Environmental and Public Health office in Reykjavik collected the samples and is responsible for enforcement action when necessary.

Vegetables are imported in large quantities to Iceland and only imported fruits can be found in stores, except for strawberries during the summer. Vegetables are grown in greenhouses and with the use of electrical illumination this allows fresh domestically grown vegetables through largest part of the year. However there is no export of domestically grown vegetables (or fruits). The market for organic products is growing but not large.

A multi-annual sampling plan is revised every year. An emphasis is laid on the products consumed on daily basis by many and a random sampling regime. It is based on information extracted from customs tariff on import volumes and domestic production and the co-ordinated EU programme in Regulation (EC) no. 1274/2011 was also taken into consideration. Organic fruits and vegetables are imported mostly by specialty stores. They are included in the monitoring programme, but not identified as organic in the data. Experience of residues found in prior samples is also taken into account. One quarter of the samples are of domestic produce, one quarter of samples are imported from third countries and the rest are from EC countries.

The Environmental and Public Health office in Reykjavik collected the samples according to national regulation no. 736/2003 on sampling methods for contaminants in foodstuffs, which is based on EC directives. Samples were taken at wholesaler's warehouses in Reykjavik and occasionally at retailer's. Sampling according to Regulation (EC) No 669/2009 was none, as import from the listed countries is not direct, but through EU MS

A limited number of pesticides are included in the monitoring program. Laboratory capacity is the deciding factor but since 2008 the number of pesticides has risen from 44 to 61 pesticide residues in 2010. Laboratory capacity is also a deciding factor in why only samples were taken of fruits and vegetables. No samples were included of animal origin, nuts or grains. High costs with increased Laboratory capacity and also high costs and logistics of shipping samples overseas for another laboratory are the main limiting factors when it comes to increasing the number of residues and fulfilling the EU co-ordinated programme.

Reporting does not include samples in the NRCP based on Directive (EC) no. 96/23 that were analysed for pesticides.

### 14.2. Key findings, interpretation of the results and comparability with the previous year results

A total of 276 samples of fruits and vegetables were taken and analysed for pesticide residues in Iceland. 8 samples were to follow-up on a non-compliant sample.

In 34 % of the samples one or more residues analysed for were detected. Thirteen samples had residues of 3 different pesticide and four samples had residues of 4 different pesticides. Ten samples had residues that measured above MRL and 8 samples were considered a true non-compliant after measurement uncertainty was taken into consideration. Only one exceedance is of a sample from the EU coordinated program.

The residues most often detected were: Imazalil in 44 samples (16 %), Phosalone in 24 samples (9 %), Thiabendazole in 16 samples (6 %), Cyprodinil in 15 samples (5 %) and Chlorpyrifos in 8 samples (3 %).

When it comes to organic products, some samples were taken but could not be distinguished from other samples in the data.

Higher rate of exceedances this year is contributed to the randomness of a very small program. In 2009 Iceland had only 1 true exceedance but this year they were eight.

### 14.3. Non-compliant samples: possible reasons and actions taken

In 2011, 8 samples (3 %) were found to be non-compliant with the MRLs. They were given warnings and administrative consequences were that they are obligated to notify authorities of the next two shipments from the offending producer. These shipments are then sampled and not allowed to be distributed until lab results have confirmed that they comply with the MRLs. In additions 2 samples measured with residues above MRLs but are considered compliant due to measurement uncertainty. The retailer/importer of the two samples was given warnings.

Number of non-compliant samples	Action taken	Note
2	Warnings	
6	Warnings and administrative sanctions	

Product	Residue	Reason for MRL non compliance	Note
Oranges	Imazalil	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Apples	Dimethoate	Other (please specify in the 'Note' column)	Imported from Brazil.
Swedes	Dimethoate	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	Harvested too soon after application.
Apples	Dimethoate	Other (please specify in the 'Note' column)	Imported from Chile.
Cauliflower	Phosalone	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Onions	Chlorpropham	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	

### 14.4. Quality assurance

The laboratory Matis ohf. is accredited since May 2007 by SWEDAC on behalf of ISAC - Iceland according to ISO/IEC 17025/2005. The method used is extraction with organic solvents followed by GC-MS analysis. Matis ohf. applies Quality Control procedures in line with the provisions of 'Method validation and Quality Control Procedures for Pesticides Residues Analysis in Food and Feed'

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
IS	Matis ohf.	Matis	01/05/2007	SWEDAC - Sweden	EUPT- FV13 EUPT- SRM6

## 15. Ireland

### 15.1. Objective and design of the national control programme

The 2011 Irish national monitoring programme for pesticide residues in food was carried out by the Pesticide Registration and Controls Division (PRCD) of the Department of Agriculture, Food and the Marine with the co-operation of the Pesticide Control Laboratory and under the terms of a service contract with the Food Safety Authority of Ireland (FSAI). The programme was designed to monitor up to 359 pesticides and metabolites in different food groups for which MRLs have been established: fruit and vegetables, cereals, food of animal origin and baby food. It involved sampling of produce at distribution outlets, collection, storage, processing or slaughter premises and the analysis of those samples for the presence of pesticide residues at the Pesticide Control Laboratory in Ireland.

The monitoring programme for 2011 took into consideration

- the co-ordinated programme required by the European Commission<sup>13</sup>,
- dietary intake patterns of Irish consumers<sup>14</sup> (adult and children),
- the residue profile of commodities as established from the results of the monitoring programme in previous years,
- monitoring results from other Member States in the EFSA annual reports
- handling/processing of food prior to consumption.
- the capacity of the laboratory.

The planned number of monitoring samples (1,460) for the 2011 monitoring programme was agreed with the Food Safety Authority of Ireland (FSAI). A major contribution to the planned number of samples for food of animal origin (420) was decided in conjunction with the Veterinary Medicine Unit of the Department of Agriculture, Food and the Marine (DAFM), as part of the National Residue Plan required under Directive 96/23/EC.

Table 1 provides a breakdown of the number of samples for each of the crop commodity groups which were planned and achieved. A total of 1,489 routine or objective monitoring samples were taken in 2011 in line with the overall planned number of samples for the major food groupings of 'fruit and vegetables', 'cereals', 'food of animal origin' and 'baby food'. Some 50 samples were taken from consignments labelled as 'organically produced'. All other consignments sampled were considered to be produced by 'conventional cultural methods'.

As follow up to non-compliant samples and invalid uses detected in 2010 and 2011, and increased control of imported produce under Regulation (EC) No 669/2009, an additional 29 targeted or suspect samples were identified and analysed in 2011 bringing the overall sample number of objective and enforcement samples to 1,518.

**Table 1:** Number of samples planned and achieved in the 2011 monitoring programme

Commodities	Planned	Achieved
Citrus fruits	130	130
Pome fruits	120	120
Stone fruits	45	43
Berries and small fruits	80	80
Miscellaneous fruits	100	101
Root/ tuber vegetables	85	85
Bulb vegetables	10	9
Fruiting vegetables	60	59

<sup>13</sup> Commission Regulation of 12<sup>th</sup> of October 2010, concerning a coordinated multiannual Community control programme for 2011, 2012 and 2013, Commission Regulation (EC) No 915/2010 OJ No L 269/8.

<sup>14</sup> IUNA, Irish Universities Nutrition Alliance. North South Food Consumption Database, 2001 and National Children's Food Survey 2005.

Commodities	Planned	Achieved
Brassica vegetables	40	40
Leafy vegetables	75	76
Legume vegetables	30	31
Stem vegetables	20	20
Fungi	20	19
Oilseeds/Spice	5	2
Cereals	105	120
Processed fruit and vegs.	60	65
Processed cereals	15	25
Food of animal origin	420	424
Baby food	40	40
Targeted samples	15+	29
<b>Total</b>	<b>1460</b>	<b>1518</b>

## 15.2. Key findings, interpretation of the results and comparability with the previous year results

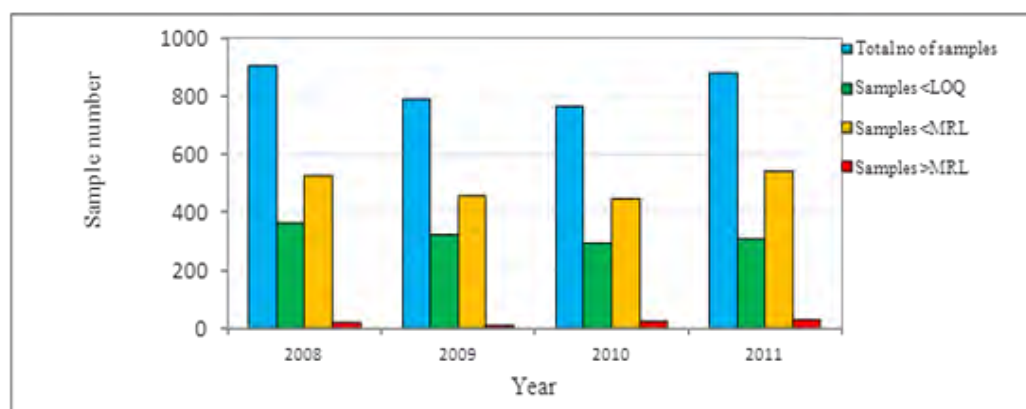
### 15.2.1. Routine or objective sampling

Table 2 gives the breakdown of the origin and the residue profiles for the routine or objective sampling strategy. Forty nine percent of the 1,489 samples taken in this sampling strategy of the Control Plan in 2011 were of domestic origin. The remaining samples, 25.9 %, were from EU countries (Spain being a major source of fruits), 20.4 % from non EU countries and 4.7 % from unknown sources (mainly processed produce). Of these samples taken and analysed, 55.6 % had no detectable residues, 42.3 % with residues at or below the MRL and 2.1 % above the MRL.

**Table 2:** Summary of origins and results for the routine or objective sampling strategy

Sampling	Commodity	Total	Sample Origin				Residue		
			Domestic	EU	Non EU	Unknown	<LOQ	≤MRL	>MRL
Objective	Fruit/veg	880	182	359	295	44	308	543	29
	Cereal	145	90	22	9	24	67	76	2
	Animal origin	424	416	5	0	3	412	12	0
	Baby food	40	40	0	0	0	40	0	0
	<b>Total</b>	<b>1,489</b>	<b>728</b>	<b>386</b>	<b>304</b>	<b>71</b>	<b>828</b>	<b>630</b>	<b>31</b>
<b>% Total</b>			<b>48,9 %</b>	<b>25,9 %</b>	<b>20,4 %</b>	<b>4,7 %</b>	<b>55,6 %</b>	<b>42,3 %</b>	<b>2,1 %</b>

Fruit and vegetable samples contributed most to the MRL breaches in 2011. Of the 880 fruit and vegetable samples analysed in the objective programme for 2011, 308 (35 %) contained no detectable pesticide residue, 543 (61.7 %) contained one or more detectable residues at or below the MRL and 29 samples (3.3 %), were in excess of EU MRLs. The percentage of samples with detectable residues remained consistent at around 60 %. The number of MRL breaches for fruit and vegetables ranged from 2.2 % in 2008, 1.3 % in 2009, 3.3 % in 2010 and 2.1 % in 2011 (Figure 1).



**Figure 1:** Fruit and vegetables with residues (non detectable, detectable and exceeding the MRLs)

Imazalil was the most frequently detected pesticide, detected in 16.9 % of the 880 fruit and vegetable samples analysed, followed by thiabendazole at 12.8 %. Both pesticides were mainly detected in citrus and pome fruits. Chlorpyrifos, the third most frequently detected pesticide, was found on citrus, pome fruits and grapes (Table 3).

**Table 3:** Ten most frequently detected pesticides in all fruit and vegetables samples (raw and processed)

Pesticide	% frequency	Commodities frequently found in
Imazalil	16.9 %	Citrus and Pome fruits
Thiabendazole	12.8 %	Citrus and Pome fruits
Chlorpyrifos	12.0 %	Citrus, Pome fruits and table grapes
Iprodione	8.9 %	Pome, Stone fruits, table grapes, and berries
Boscalid	8.6 %	Pome fruits, berries and lettuce
Fludioxonil	7.3 %	Apples
Fenhexamid	6.5 %	Berries, Stone fruit and kiwi
Ortho-phenylphenol	6.3 %	Citrus fruit
Azoxystrobin	6.0 %	Banana and strawberries
pyrimethanil	5.2 %	Citrus, Pome fruits and berries

### Targeted or Suspect samples

Table 4 summarises the results and origins of the suspect samples taken in 2011.

**Table 4:** Summary of origins and results for the suspect samples

Sampling	Commodity	Total	Sample Origin				Residue		
			Domestic	EU	Non EU	Unknown	<LOQ	≤MRL	>MRL
Suspect	Fruit/veg	20	11	0	9	0	7	13	0
	Cereal	9	7	2	0	0	5	2	2
<b>Total</b>		<b>29</b>	<b>18</b>	<b>2</b>	<b>9</b>	<b>0</b>	<b>12</b>	<b>15</b>	<b>2</b>
<b>% Total</b>			<b>62.1 %</b>	<b>6.9 %</b>	<b>31.0 %</b>	<b>0</b>	<b>41.4 %</b>	<b>51.7 %</b>	<b>6.9 %</b>

The 29 samples were taken as part of the targeted or suspect programme in 2011 for the following reasons

Five consignments of commodities (3 consignments of oranges from Egypt and 2 consignments of peppers from Turkey) listed in Annex I to Regulation (EC) No 669/2009 were targeted at the Designated Point of Entry. All 5 were found to have residue levels in compliance with legislation and no further enforcement action was required.

As follow up to MRL breaches in 2010, five (4 imported and one domestic) samples were analysed in 2011. There was no repeated non-compliance and no further enforcement action was required.

In the case of non-registered uses of pesticides on Irish produce detected in 2010 which did not exceed the EU MRLs, 10 samples were taken as part of the targeting programme. There was no repeated non-compliance and no further enforcement action was required.

Following the detection of chlorpropham in wheat flour and chlormequat in oats during the 2011 objective programme, nine follow up samples were taken. The composite wheat flour samples which originated from one source were non-compliant with the MRL legislation. Remaining stocks of the wheat flour were used in the production of pet food. Follow-up analysis of the oats samples confirmed the presence of chlormequat in excess of the MRL. Remaining stocks were removed from the feed market and were used instead as biofuel.

### 15.3. Non-compliant samples: possible reasons and actions taken

Thirty three (2.2 %) of all 1518 objective and suspect samples taken in 2011 contained residues above the legal limit (MRL) set in Regulation (EC) No 396/2005 and Commission Regulation (EU) No 37/2010. The majority (29) of the breaches was found in fruit and vegetable samples, taken as part of the objective monitoring programme. The other four samples were cereals, taken as part of the objective and follow-up suspect sampling strategies.

#### Comments on the 2011 MRL breaches

The majority (26) of the MRL breaches related to substances where the MRL was set to the LOQ.

In the case of the 22 non-compliant imported samples (16 non-EU and 6 EU sources), warning letters were issued to the Irish FBOs (food business operators) where the samples were taken and to the contact points in the countries of origin.

Inspections were carried out on the farms/sites in the case of 9 non-compliant domestic samples. Produce from these domestic growers was placed on the targeted list for 2012.

A summary of the follow-up actions taken in case of samples found to be non-compliant with the EC MRL legislation, without taking the measurement uncertainty into consideration, is provided in Table 5 below.

**Table 5:** Summary of MRL breaches and follow-up actions taken

Number of non-compliant samples	Action taken	Note
9	Inspections carried out and warnings issued to domestic producers.	Target sampling for 1 year.
22	Warnings issued to food business operators (FBOs). Contact point in country of origin informed	These will be targeted in 2012
2	Removal of food from the market following non compliant results from targeted sampling on cereals	

The possible reasons, if known, for the MRL non-compliances are provided in Table 6.

**Table 6:** Details of reasons for MRL non-compliances, (if known) in 2011

Produce	Country	Residue	Reason for the MRL non compliance	Notes
Apple	France	Fenhexamid	Imported produce from EU MS. Reason for non compliance not established.	MRL set at LOQ
Apple	France	Dimethoate	Imported produce from EU MS. Reason for non compliance not established	MRL set at LOQ
Apple	Chile	Pyrimethanil	Imported produce from non-EU MS. Reason for non compliance not established.	MRL set at LOQ
Apples	Ireland	Fenpropimorph	Possible drift from neighbouring cereal plot treated with fenpropimorph	MRL set at LOQ

Produce	Country	Residue	Reason for the MRL non compliance	Notes
Bean with pod	Kenya	Methomyl	Imported produce from non-EU MS. Reason for non compliance not established.	MRL set at LOQ
Bean with pod	Morocco	Endosulfan	Imported produce from non-EU MS. Reason for non compliance not established.	MRL set at LOQ
Bean with pod	Ireland	Dimethoate	Sprayer not sufficiently washed out after use on sunflower	MRL set at LOQ
Blackberry	Guatemala	Famoxadone	Imported produce from non-EU MS. Reason for non compliance not established.	MRL set at LOQ
Blueberry	USA	Malathion	Imported produce from non-EU MS. Reason for non compliance not established.	MRL set at LOQ
Cabbage	Ireland	Omethoate	GAP not followed and PHI not observed	MRL set at LOQ
Cabbage	Ireland	Dimethoate	Investigation inconclusive, contamination possible due to drift	MRL set at LOQ
Celery	Ireland	Dimethoate	Possible drift from neighbouring plot of Chinese cabbage treated with dimethoate	MRL set at LOQ
Celery	Ireland	Dithiocarbamate	Non registered use on celery	MRL set at LOQ
Chayote	Costa Rica	Thiametoxam	Imported produce from non-EU MS. Reason for non compliance not established.	MRL set at 0.3 ppm
Cherry	Turkey	Monocrotophos	Imported produce from non-EU MS. Reason for non compliance not established.	MRL set at LOQ
Clementine	Spain	Imazalil	Imported produce from EU MS. Reason for non compliance not established.	MRL set at 5ppm
Clementine	Morocco	Diazinon	Imported produce from non-EU MS. Reason for non compliance not established.	MRL set at LOQ
Dragon fruit	Vietnam	Cypermethrin	Imported produce from non-EU MS. Reason for non compliance not established.	MRL set at LOQ
Lettuce	Ireland	Dimethoate	Possible cross contamination of sprayer equipment or mixing drums between spraying programmes	MRL set at LOQ
Minneola	Peru	Orthophenylphenol	Imported produce from non-EU MS. Reason for non compliance not established.	MRL set at 5 ppm
Minneola	Peru	Chlorfenapyr	Imported produce from non-EU MS. Reason for non compliance not established.	MRL set at LOQ
Pea with pod	Guatemala	Dimethoate	Imported produce from non-EU MS. Reason for non compliance not established.	MRL set at LOQ
Pomegranate	Egypt	Dimethoate	Imported produce from non-EU MS. Reason for non compliance not established.	MRL set at LOQ
Pomegranate	Egypt	Ethion	Imported produce from non-EU MS. Reason for non compliance not established.	MRL set at LOQ
Oat	Ireland	Chlormequat	For feed only. Remainder of crop used as bio fuel	MRL set at 5 ppm
Oat	Ireland	Chlormequat	For feed only. Remainder of crop used as bio fuel	MRL set at 5 ppm
Oat	Ireland	Chlormequat	For feed only. Remainder of crop used as bio fuel	MRL set at 5 ppm
Orange	Morocco	Chlorpyrifos	Imported produce from non-EU MS. Reason for non compliance not established.	MRL set at 3 ppm
Satsuma	S. Africa	Malathion	Imported produce from non-EU MS. Reason for non compliance not established.	MRL set at LOQ
Sharon fruit	Spain	Iprodione	Imported produce from EU MS. Reason for non compliance not established.	MRL set at LOQ
Turnip	Ireland	Chlorpyrifos	Un-authorised use. Grower unaware of current permitted uses.	MRL set at LOQ
Turnip	UK	Chlorpyrifos	Imported produce from EU MS. Reason for non compliance not established.	MRL set at LOQ



Produce	Country	Residue	Reason for the MRL non compliance	Notes
Wheat flour	UK	Chlorpropham	Imported produce from EU MS. Reason for non compliance not established.	MRL set at LOQ

#### 15.4. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or inter-laboratory tests
IE	Pesticide Control Laboratory	121T	01/01/2011	Irish National Accreditation Board	EUPT 13 – Mandarin EUPTC 5/SRM 6 – Rice EUPT AO 6 – Poultry meat FAPAS 19117 Grapes FAPAS 19118 – Cucumber FAPAS 19127 – Lettuce FAPAS 0579 – Vegetable oil COIPT 11 – Olive oil PTPR – H 2011 – Honey

#### 15.5. Additional Information

Risk assessments were carried out on all findings above the MRL by the PRCD and the FSAI. In all cases, no unacceptable intake of pesticide residues by the consumers was identified.

## 16. Italy

### 16.1. Objective and design of the national control programme

The national control program is defined by Ministerial Decree 23 December 1992 (transposing Directive 90/642/EEC) as integrated by Ministerial Decree 30 July 1993 concerning the programming of official controls for imports coming from Third Countries.

The National Program Pesticide Residues foresees a detailed programme implementing the checks to be carried out by Regions and Autonomous Provinces of Trento and Bolzano, with indication of the minimum number and the type of samples to be analyzed.

The breakdown of the number of samples to be taken for each Region/Province is calculated according to the data on consumption and production of a given foodstuffs in the concerned Region or autonomous Province concerned.

The numbers of samples to be taken for each Region/Province for the following foodstuffs: *vegetables, fruits, cereals, wine, oils* are provided by the Decree.

The programme also foresees as priority the research of residues of plant protection products in foodstuffs of vegetable origin.

The 'Uffici di Sanità Marittima, Aerea e di Frontiera' (USMAF) of Ministry of Health perform the sampling on products of vegetable origin imported from Third Countries, in at least 3 % of the consignments of imported food.

The national program doesn't specify the types of residues of pesticide that the Laboratories have to search, the Laboratories identify the type of residues using the data on sale of the pesticide, and they also take into consideration the 'RASFF notifications'. They refer to the results of the proficiency test performed.

The choice of the types of residues and the number of samples is made according to their technical and equipment capacities.

### 16.2. Key findings, interpretation of the results and comparability with the previous year results

Out of a total of 6,864 samples (Tab.1 and Tab.2), 2,494 (36.3 %) with residues not exceeding permitted levels were found; while 26 (0.4 %) were found with residues exceeding permitted levels; no residues were detected in 4,344 samples (63.3 %). The percentage of irregular samples is equal to 0.4 % of which 0.5 % for fruit and vegetables; 0.4 % for cereals; 0.0 % for oil and wine, 0.0 % for baby food (Infant formulae/follow-on formulae and baby food) 0.2 % for other food (bread, pasta, transformed tomatoes, tea, coffee, herbal infusions, and cocoa, sugar plants, spices, oilseeds and oilfruits).

Tab.1 Summary of Data – Year 2011

	<b>Fruit and Vegetables</b>	<b>Cereals</b>	<b>Processed Products (wine and oil)</b>	<b>All baby food</b>	<b>Other food</b>	<b>Total</b>
No of samples	4,761	513	483	163	944	6,864
Regular samples	4,739	511	483	163	942	6,838
Irregular samples	22	2	0	0	2	26
Irregular samples in %	0.5	0.4	0.0	0.0	0.2	0.4

Tab.2 Pesticides Residues in Regular Samples

	<b>Fruit and Vegetables</b>	<b>Cereals</b>	<b>Processed Products (wine and oil)</b>	<b>All baby food</b>	<b>Other food</b>	<b>Total</b>
No of samples without residues	2,743	345	330	163	763	4,344

No of samples without residues in %	57.6	67.2	68.3	100	80.8	63.3
No of samples with residues within legal limits	1,996	166	153	0	179	2,494
No of samples with residues within legal limits in %	41.9	32.4	31.7	0	19.0	36.3

### 16.3. Non-compliant samples: possible reasons and actions taken

In 2011, 0.4 % of the samples (26 samples in total) were found non-compliant with the EU MRL. Three samples have generated RASFF notifications, for other sampling Health authority adopts the penalty sanction or perform follow up actions.

Number of non-compliant samples	Action taken	Note
3 samples	Rapid alert	The samples are okra, lemon and maize for pop corn
13 samples	Other action	Notification of offense and other ongoing checks
10 samples	Not action	Foods not yet on sale and other not specified

Product	Residue	Reason for MRL non compliance	Note
Peaches	Chlorpyrifos		
Peaches	Dimethoate		
Peaches	Phosmet (phosmet and phosmet oxon expressed as phosmet)		
Miscellaneous of fruit	Procymidone		
Pear	Methomyl		
Pear	Azinphos-methyl		
Stones fruit	Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)		
Table grape and wine grape	Fenitrothion		
Table grape	Fenitrothion		
Lemon	Bromopropylate		
Other small fruit and berries	Fenazaquin		
Beet leaves (chard)	Imidacloprid		
Beet leaves (chard)	Difenoconazole		
Beet leaves (chard)	Propyzamide		
Lettuce and other salad plants including Brassicacea	Indoxacarb as sum of the isomers S and R		
Lettuce and other salad plants including Brassicacea	Imidacloprid		
Celery	Linuron		
Celery	Etofenprox		
Celery	Endosulfan, alpha-		
Celery leaves	Methiocarb		
Okra	Monocrotophos		
Leaf vegetables & fresh herbs	Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)		
Peppers	Chlorpyrifos		
Peppers	Tetradifon		
Tomatoes	Procymidone		
Wheat	Chlorpyrifos		
Mais	Pirimiphos-methyl		
Herbs and Infusions	Dithianon		
Canned product	Tebuconazole		

#### 16.4. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
IT	IZS PIEMONTE E LIGURIA	I0100000	29/10/1998	Accredia	
IT	IZS LOMBARDIA E EMILIA	I0200000	03/04/1997	Accredia	EUPT-FV13- EUPT –AO06
IT	IZS DELLE VENEZIE	I0300000	18/07/1997	Accredia	EUPT-FV13
IT	IZS LAZIO E TOSCANA	I0500000	1998	Accredia	EUPT –AO06
IT	IZS UMBRIA E MARCHE	I0600000	14/12/1998	Accredia	EUPT –AO06
IT	IZS ABRUZZO E MOLISE	I0700000	18/12/2003	Accredia	EUPT –AO06
IT	IZS DELLA SICILIA	I1000000	08/07/1999	Accredia	
IT	ARPA TORINO	P0101010	1998	Accredia	EUPT: FV-13; C2; C6; I, II, 3,4,5,6,7
IT	ARPA AOSTA	P0201010	03/10/2007	Accredia	EUPT-FV13
IT	ASL BERGAMO	P0302510	19/06/2009	Accredia	EUPT-FV13 -2011; C5 - COIPT OIL 2011- CCIAA Savona 2011 - CCIAA Roma 2011
IT	APPA BOLZANO	P0411010	05/12/2001	Accredia	EUPT-FV13
IT	APPA TRENTO	P0421010	02/04/2001	Accredia	EUPT: C5; FV13
IT	ARPAV VERONA	P0501200	09/07/2008	Accredia	EUPT-FV13
IT	ARPA PORDENONE	P0601060	18/11/2004	Accredia	EUPT-FV13
IT	ARPAL LA SPEZIA	P0701050	25/06/2002	Accredia	EUPT-FV-13
IT	ARPA FERRARA	P0801090	1997	Accredia	EUPT-FV13
IT	ARPA PERUGIA	P1001020	2003	Accredia	EUPT-FV13
IT	ARPAM MACERATA	P1101090	December 1999	Accredia	EUPT-FV13
IT	ARPA ROMA	P1200020	18/03/2004	Accredia	EUPT-FV13
IT	ARPA LATINA	P1201110	18/03/2004	Accredia	EUPT-FV13
IT	ARPA BARI	P1601040	25/02/2010	Accredia	EUPT-FV13
IT	ARPA BRINDISI	P1601060	18/12/2001	Accredia	
IT	ASP PALERMO	P1901100	21/12/2010	Accredia	

## 17. Latvia

### 17.1. Objective and design of the national control programme

The Ministry of Agriculture in collaboration with the Food and Veterinary Service and the State Plant Protection Service updated the National control program for pesticide residues control in plant products for 2011 according to Article 30 Part 1 of Regulation (EC) No 396/2005 of the European Parliament and of the Council of 23 February 2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC.

Plant products have been chosen according to statistical information of National Food Consumption Survey of Latvia (2007-2009). Fresh plant products of domestic origin from conventional farms are included in National control program for pesticide residues control in plant products for 2011. Above mentioned plant products have a high importance for agricultural production and consumption in Latvia. The food of organic production is not included in the National control program for pesticide residues control in plant products for 2011. The food for sensitive groups of the population, e.g. baby food is not included in the National control program for pesticide residues control in plant products for 2011. Taking into account the importance of the commodity in the production of the Latvia, samples of potatoes and carrots were both included in the National control programme and EU coordinated program for 2011. In other cases the planning of program the following approach was used – the products included in the EU coordinated program were not included in National program.

Pesticide residues have been chosen on the basis of application of plant protection products in Latvia. Mostly pesticide residues are not included in the EU coordinated program have been chosen for National control program for 2011.

Sampling was carried out at different marketing levels (farm gates, wholesalers) by trained inspectors and samples are taken in regional offices of the Food and Veterinary Service (FVS) according to Commission Directive 2002/63/EC of 11 July 2002 establishing Community methods of sampling for the official control of pesticide residues in and on products of plant and animal origin.

The Food and Veterinary Service and The Institute of Food Safety, Animal Health and Environment 'BIOR' are responsible of implementation of National pesticides residues control program.

### 17.2. Key findings, interpretation of the results and comparability with the previous year results

Coordinated programme – In 2011 a total of 225 samples of fruit, vegetables, cereals animal products and baby food were analysed for the pesticides residues: 99 samples of domestic origin, 91 samples from other EU countries, 35 samples from non – European countries.

National programme – Total of 22 samples of fruit, vegetables, honey were analysed for pesticides residues, all samples of domestic origin.

The most frequently found pesticides residues are imazalil, thiabendazole, boscalid, chlormequat, linuron, propamocarb (above LOQ, but under MRL).

### 17.3. Non-compliant samples: possible reasons and actions taken

Number of non-compliant samples	Action taken	Note
2	Administrative sanction	Sample codes: 11672-2011 and 11673-2011

Product	Residue	Reason for MRL non compliance	Note
Honey	Dimethoate	Other (please specify in the 'Note' column)	Dusting of rape with unauthorized plant protection product.
Honey	Dimethoate	Other (please specify in the 'Note' column)	Dusting of rape with unauthorized plant protection product.

#### 17.4. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
LV	Institute of Food Safety, Animal Health and Environment 'BIOR'	90009235333	08/06/2011	Latvian National Accreditation Bureau – LATAK	EUPT-2010: FV-12;AO-05;SRM-05;C-04
DE	Eurofins GfA Lab Service GmbH	Eurofins Analytik GmbH	02/08/2011	German Accreditation Body – DAKKS	FAPAS-04/2010/19106F; FAPAS-09/2010/19110F; FAPAS-11/2010/19114F;

## 18. Lithuania

### 18.1. Objective and design of the national control programme

Please indicate here the factors which have been taking into account in designing the national control plan. For example:

- Importance of a commodity in national food consumption;
- Food commodities with high residues/non-compliance rate in previous monitoring years;
- Food consumed fresh or in processed form;
- Origin of food: domestic, EU or third country;
- Sampling at different marketing levels: farm gates, wholesaler, retailer, processing industry, schools or restaurants;
- Seasonal availability of food commodities;
- RASFF notifications;
- Food for sensitive groups of the population, e.g. baby food;
- Importance of the commodity in the production of the reporting country;
- Food produced by producers, whose product samples were found non-compliant with the legal limits in the past;
- Food commodities not included in the EU coordinated programme.

Regarding the pesticides included in the national control programmes, the reporting countries consider:

- Use pattern of pesticides;
- Toxicity of the active substances;
- Cost of the analysis: single methods /multiple methods;
- Capacity of laboratories.

In this section you can also highlight the difference between the current and the past programme design. *There were no principal differences. The differences were resulted by changes of EU regulations on Pesticide residue monitoring.*

### 18.2. Key findings, interpretation of the results and comparability with the previous year results

- Selection of commodities for control programme based on previous RASFF notifications, consequently rate of exceedances is higher than for a programme based on objective sampling;
- The results include a programme to assess the declaration 'produced without straw shortener' consequently 71 cereal samples were tested only for chlormequat and mepiquat;
- There has been a targeted programme for certain Asian commodities at border controls (in line with Regulation 669/2009); this has resulted in increased MRL exceedance rates in 2010 for fruits, especially tropical fruits and fresh herbs;
- High exceedances in spinach are considered to be due to lack of authorised phytosanitary products;
- A new QuEChers extraction method and LC-MS/MS detection method and new individual methods have been implemented in our laboratories increasing the number of residue measure in food of plant origin to 324 compared with 284 pesticides in the previous year. This may justify an higher percentage of samples with positive detections;
- The change to harmonised MRLs this year has resulted in a change in the rate of exceedances and as a consequence the results cannot be directly compared with results from previous years;



### 18.3. Non-compliant samples: possible reasons and actions taken

The total number of samples which were found to *be non-compliant<sup>15</sup> with the MRLs* should be reported in this section.

For sample *non-compliant with the legal limits* the reporting countries are asked to *summarise* the follow-up actions taken. As an example:

- In 2011, 3,3 % of the samples (16 samples in total) were found non-compliant with the EU MRL. For 5 samples RASF notifications were issued; for all but two samples the retailer and the competent authority in the country of sample origin were advised; for 8 samples administrative consequences were taken. 6 import and wholesale lots from which samples were found MRL non-compliant were not released on the market; 2 lots were released on the market before analysis were done
- The following follow-up actions were taken in case of sample non compliant with the EC MRL (measurement uncertainty taken into consideration):

Number of non-compliant samples	Action taken	Note
3	Warnings	
8	Warnings and administrative sanctions	
5	RASFF notification	Sample code: 1930 RASFF ref 2011.0415 9283 RASFF ref 2011.BYM 9473 RASFF ref 2011.1374 11848 RASFF ref 2011.CJD 13070 RASFF ref 2011.1809 1 Not released on the market

The reporting countries are encouraged to do their best to report the reasons for *MRL non compliances* since it a legal requirement to include in the Annual Report a statement on the possible reasons why the MRLs were exceeded.

Where investigations were undertaken to elucidate the reasons for the MRL non compliances, please report the findings in the table below (two examples are provided in the table). In the column 'Reasons for MRL non compliance' a drop down menu can be used to select some potential reasons. Additional reasons can be proposed in the 'Note' column.

If the summary results of the actions taken and/or the table below cannot be completed the reason why the information is not available should be described.

Product	Residue	Reason for MRL non compliance	Note
Cucumber	Dichlorvos		
Rice	Hexaconazole		
Grapefruit	Diphenylamine		
Grapefruit	Fipronil		
Oranges	Cyfluthrin		
Mandarins	Malathion		
Table grapes	Fenpropathrin, fenvalerate		
Table grapes	Thiodicarb,		
Cranberries	Acetamiprid		
Pomegranate	Fenpropathrin,		
Pomegranate	Dimethoate, methomyl		
Pomegranate	Acetamiprid		

<sup>15</sup> If the national competent authorities consider that the measured residues in a sample, *taking into account the measurement uncertainty*, exceed the legal EU MRLs, the sample is considered as MRL 'non-compliant' and the competent authorities shall take enforcement measures, where permitted by national legislation.

Product	Residue	Reason for MRL non compliance	Note
Sunflowers	Malathion		
Tea	Alpha-hexachlorocyclohexane, monocrotophos		
Herbal	Propargite		
Table grapes	Dichlorvos		

#### 18.4. Quality assurance

For *each* laboratory participating in the control programme complete the table below. Ensure that the laboratory code corresponds with the values submitted in the <labCode> element of the control results transmitted in XML files.

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
LT	National Food and Veterinary Risk Assessment Institute	NFVRAI	07,05,2010	DAkks Germany	EUPT FV 13, Spain

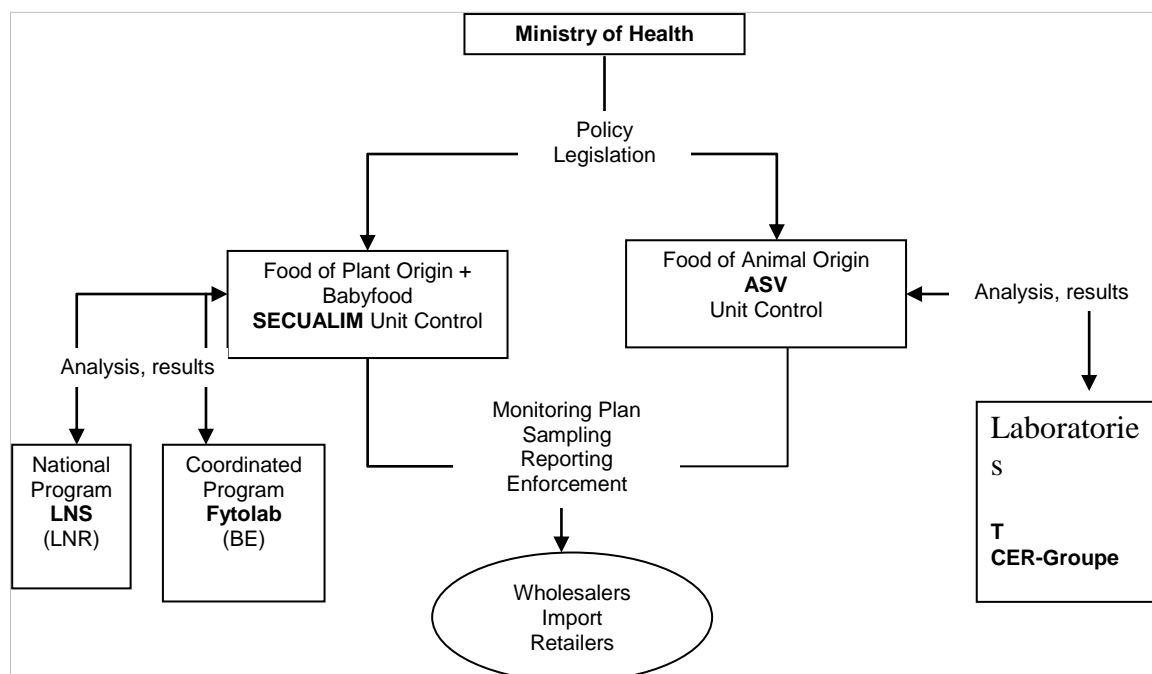
#### 18.5. Additional Information

Analytical uncertainty: laboratory uses the 50 % figure to take consideration inter-laboratory variations for MRL breaches.

## 19. Luxembourg

Role	Organisation name	Organisation Address	Products
Official Reporting Organisation Residue programme design Sample Collection Enforcement agencies	Food Safety Service	9 Avenue Victor Hugo L-1750 Luxembourg	Food, Fruit, vegetables, cereals, baby food
Official Reporting Organisation Residue programme design Sample Collection Enforcement agencies	Administration of Veterinary Service	211 route d'Esch L-1014 Luxembourg	Animal Product

The Ministry of Health is the competent authority for the control of the pesticide residues in food of plant and animal origin, including baby food and cereals. Within this ministry, the Food safety service of the Direction for public health is the executive competent authority for the control of the pesticide residues in food of plant origin, including baby food and is also responsible for the operation of notifications the Rapid Alert System via the national contact point (OSQCA) for the same categories of food. The veterinary service under the Ministry of Health is the executive competent authority for the control of pesticide residues in food of animal origin.



*Secualim: Food safety service of the Direction of public health*

*ASV: administration of Veterinary service*

*LNS: National health laboratory*

### 19.1. Objective and design of the national control programme

#### Food of plant origin, cereals, baby food

The Food safety service is responsible for drafting the programme for the sampling and for the control of presence of pesticides residues in fruit, vegetables, cereals and baby food. The national control program included two different programs:

- The Coordinated community control programme based on the Commission Regulation (EC) N° 915/2010 of 12 October 2010 concerning a coordinated multiannual control programme and
- The national programme based on a risk assessment where several factors were taken into account: results from previous checks, toxicological data of residues, national production and food consumption figures. The risk assessment which produces the national coordinated multiannual programme for

pesticides 2010-2012 is available on the internet site:

[http://www.securite-alimentaire.public.lu/organisme/pcnp/sc/cs9\\_prod\\_phyto/ppp\\_residus\\_pesticides/fiche\\_ppp\\_pesticides.PDF](http://www.securite-alimentaire.public.lu/organisme/pcnp/sc/cs9_prod_phyto/ppp_residus_pesticides/fiche_ppp_pesticides.PDF)

The EU coordinated programme is the main part of the control programme.

For the national programme, wine grapes, Parsley, tomatoes, were chosen in relation with the national production.

Sampling was carried out mainly at wholesalers but also at the retail level. Since 2010 controls are also done at import through Luxembourg airport. All samples collected by inspectors of the Food safety service were disposed at the laboratory of National health of Luxembourg

- Since 2009, the samples for the coordinated community control have been sent to an external laboratory in Belgium (Fytolab).
- The samples for the national annual programme are analysed by the pesticide laboratory of the National health of Luxembourg.

All results for food of plant origin are reported to the Food safety service.

#### **Food of animal origin:**

The annual control programme for food of animal origin is drafted by the Veterinary services administration (ASV).

The monitoring is in compliance with directive (CE) N° 96/23 and decision (CE) N° 97/747. The number of samples per matrix to be analysed is defined by these regulations.

All results were transmitted to the DG SANCO unit 5 through a special database application available online 'Residues – Monitoring plan and result'

### **19.2. Key findings, interpretation of the results and comparability with the previous year results**

In 2011, a total of 245 samples (155 samples under the coordinated community control programme and 86 samples under the national programme, 2 samples at import, 2 samples under enforcement), were tested for pesticide residues. 29 % were domestic sample, 45 % originated from other EU member states, 18 % from third countries and 7.8 % had an unknown origin (mainly tea and baby food).

For the national programme, 361 different pesticides were analysed for wine grapes and 152 for the other fruits and vegetables matrix. The number of pesticide residues analysed per matrix for the national programme is higher than in 2010.

For the coordinated programme, the samples included 100 samples of fruits and vegetables (with 346 pesticides analysed), 30 samples of cereals (with 224 pesticides analysed), 15 of liver (with 41 pesticides analysed) and 10 samples of baby food (with 467 pesticides analysed).

#### **Summary of results for samples without the 2 samples under enforcement**

Matrix	Total samples	Result without Residues	Result with residues <MRL	Result >MRL but compliance with uncertainty	Result non compliant
Bovine, Sheep, Swine Liver	15	100 %	0 %	0 %	0 %
Wheat flour	15	33.3 %	66.7 %	0 %	0 %
Rice	15	73.3 %	13.3 %	0 %	13.3 %
Baby food	10	100 %	0 %	0 %	0 %
Fruits	55	51 %	43.6 %	1.8 %	3.6 %
Wine grapes	14	0 %	100 %	0 %	0 %

Matrix	Total samples	Result without Residues	Result with residues <MRL	Result >MRL but compliance with uncertainty	Result non compliant
Vegetables	119	69.7 %	26 %	1.7 %	2.5 %
<b>Total</b>	<b>243</b>	<b>62.6 %</b>	<b>33.3 %</b>	<b>1.2 %</b>	<b>2.9 %</b>

In 56.3 % of non-organic surveillance samples, no pesticide residue was detected. In 38.8 % of non-organic surveillance samples, residues of pesticides were quantified but were in compliance with MRLs. The maximum residue level (MRLs) was exceeded in ten (4.8 %) non-organic surveillance samples of which three was compliant when measurement uncertainty was considered. In baby food, and liver samples, no pesticide residue was detected. We found pesticide residues in all samples of wine grapes but in compliance with the legal limit. In one of the thirty seven samples taken from organic products, pesticide residue was detected.

Two samples were taken in the framework of enforcement and two samples at import.

### 19.3. Non-compliant samples: possible reasons and actions taken

For all samples, a report with analytical results and evaluation of the compliance is systematically sent to the holder of the product for information or action. In addition, for surveillance samples exceeding the MRL, the competent authorities apply adequate measures (e.g. follow-up examinations, warnings, withdrawal from market). Furthermore, the competent authorities follow up the responsible companies. If the risk assessment indicates an acute toxicological risk to the consumer, a rapid alert is issued to RASFF.

In 2011, 2.9 % of the samples (seven samples in total) were found non-compliant with the EU MRLs. For four of them, a RASFF notification was issued and for the other, an administrative warning was issued. All lots from which samples were found MRLs non-compliant were withdrawn from the market;

Number of non-compliant samples	Action taken	Note
3	No action	Result >MRLs but compliant due to measurement uncertainty
3	Warnings and withdraw	No acute toxicological risk 2 parsley, 1 Fig
4	RASFF notification	2 rices; isoprothiolane 1 potatoes, fluazinam 1 orange, dimethomorph

Product	Residue	Reason for MRL non compliance	Note
Rice	isoprothiolane	GAP not respected: use of pesticide non-authorised on the specific crop	authorized by the regulation 592/2012 entered into force 26/07/2012
Rice	isoprothiolane	GAP not respected: use of pesticide non-authorised on the specific crop	authorized by the regulation 592/2012 entered into force 26/07/2012
Potatoes	fluazinam	GAP not respected: use of pesticide non-authorised on the specific crop	follow-up by the rapid alert 2011.0199
Parsley	Pendimethalin	GAP not respected: use of pesticide non-authorised on the specific crop	authorized by the regulation 322/2012 entered into force 07.05.2012
Parsley	myclobutanil	GAP not respected: use of pesticide non-authorised on the specific crop	
Orange	dimethoate	GAP not respected: use of pesticide non-authorised on the specific crop	
Fig	dimethomorph/Fenazaquin	GAP not respected: use of pesticide non-authorised on the specific crop	

#### 19.4. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
BE	Centre d'économie rurale - BE	CER	073-TEST 13/06/2012	BELAC - Belgium	EUPT-AO 06; FAPAS (test 0581)
BE	Fytolab - BE	FYTOLAB	057-TEST 09.06.2009 (V4) 26.4.2011 (v7) 21.06.2011 (v8)	BELAC - Belgium	EUPT-FV-SM03; EUPT FV 13; EUPT-C5;
LU	Laboratoire National de Santé, contrôle des denrées alimentaires - LU	LNS-CDA	1/002 27.05.2008	OLAS – Luxembourg	EUPT-C5; EUPT-SRM6; EUPT-FV13

## **20. Malta**

### **20.1. Objective and design of the national control programme**

The National Monitoring Programme for pesticide residues in produce of plant and animal origin 2011 was based on a number of factors which determined the type and frequency of monitoring for the particular produce. These factors included:

- Commission Regulation 915/2010/EC concerning a Coordinated Multiannual Community Control Programme
- Local production/Imports of commodities
- Past findings that may indicate a historical residue problem
- In the light of new risks (e.g. knowledge on use of banned pesticides) or other country monitoring schemes.

A total of 18 different food commodities (including fruit and vegetables, food of animal origin and baby food) were analysed during 2011. The commodities analysed included the following: Bovine liver, Poultry liver, Swine liver, Rabbit liver, Poultry meat, Processed cereal-based baby foods, Wheat, figs, Mandarins, Oranges, Pears, Strawberries, Beans (with pods), Carrots, Cucumbers, Potatoes, Spinach. The sampling strategy adopted was mainly objective sampling except where there was a reasonable suspicion on specific produce and thus a Selective or Suspect sampling strategy was adopted.

### **20.2. Key findings, interpretation of the results and comparability with the previous year results**

In 2011 a total of 170 products have been analysed for pesticide residues compared to a total of 169 products analysed in 2010 and 170 in 2009. Out of the 170 samples, 163 samples were objective sampling, 7 samples were suspect sampling. The 75 suspect samples included 1 sample basil, 1 sample courgette, 1 sample cucumbers and 4 samples tomatoes. These suspect samples were analysed since the first sample taken had revealed levels of pesticide residues exceeding the MRL levels, pesticide residues of active ingredients not included in Annex 1 and/or pesticide residues which do not occur in any of the plant protection products registered in Malta.

Out of the 170 samples analysed in 2011, 3 samples were of organic production origin, 65 samples were of non-organic production origin whilst for 102 samples the production method was unknown. These were mainly imported samples, samples of food of animal origin and processed cereal-based baby foods.

In 2011 the percentage of domestic samples amounted to 58.8 % compared to 73.9 % in 2010 and 52 % in 2009. Samples from other member states amounted to 36.5 % and the amount of samples from Third Countries amounted to 4.7 % compared to 2.4 % in 2010. This difference is mainly because some of the commodities included in the 2011 EU/National Coordinated Programme were not grown in Malta but originated from Member States and/or Third Countries such as wheat.

In 2011, 62 % of the samples analysed resulted without pesticide residues. 33 % of the samples analysed resulted with pesticide residues below the EC-MRL. 5.3 % of the samples analysed had pesticide residues exceeding the EC-MRL compared to the 3.6 % in 2010 and the 1.8 % of samples that exceeded the EC-MRL in 2009.

### **20.3. Non-compliant samples: possible reasons and actions taken**

In 2011, 5.3 % of the samples (9 samples in total) were found non-complaint with the EU MRL. They were all of domestic production. RASFF notifications were not necessary since the PSTI calculated in each case resulted lower than the ADI and/or ARfD. However a warning letter was issued to all the producers informing them of the results. Eight of the lots from which samples were found MRL non-complaint were released on the market after testing on a regular basis the commodity till the pesticide residue decreased below the EC-MRL. Only one case of the sampled lot found with high MRL level was destroyed.

The following 'follow-up' actions were taken in case of non compliant samples with the EC MRL (measurement uncertainty taken into consideration):



Number of non-compliant samples	Action taken	Note
7	Warnings	
1	Warnings and lot destroyed	
1	Court Action	

Product	Residue	Number of commodities	Reason for MRL non compliance	Note
Cucumbers	Procymidone	3	GAP not respected: Use of pesticide non authorised on the specific crop	Sample of domestic origin. The use of procymidone is no longer authorised in Europe.
Cucumbers	Captan	1	GAP not respected: Use of pesticide authorised on the specific crop – application rate and/or application method not respected.	
Courgettes	Chlorothalonil	1	GAP not respected: Use of pesticide authorised on the specific crop – application rate and/or application method not respected.	
Basil	Chlorothalonil Procymidone Fludioxonil Iprovalicarb	1	GAP not respected: Use of pesticide either authorised on the specific crop – application rate and/or application method not respected or not authorised such as procymidone.	Lot destroyed
Spinach	Chlorpyrifos	2	GAP not respected: Use of pesticide authorised on the specific crop – application rate and/or application method not respected.	
Tomatoes	Chlorothalonil	1	GAP not respected: Use of pesticide authorised on the specific crop – application rate and/or application method not respected.	

#### 20.4. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
IT	CE.FI.T S.r.l	Cefit	December 2010	ACCREDIA	Yes
DE	Eurofins GFA	GFA	October 2010	Akkreditierungsstelle GmbH	Yes
UK	LGC Limited	LGC	September 2011	The United Kingdom Accreditation Services	Yes

## 21. The Netherlands

### 21.1. Objective and design of the national control programme

In the national control program choices were made concerning kind and number of samples to be taken for analysis as many different pesticides, vegetables and fruits are involved. Therefore, a number of considerations are of importance:

1. Consumption of the commodity.
2. Production or import volume of the commodity.
3. Experience from the previous years concerning violations.
4. The occurrence of pesticide/crop combinations that might lead to exceedances of the acute reference dose (ARfD).
5. The degree of sampling and analysis, performed by the producer/importer.
6. Availability of cost-effective analytical methods, preferably multi-residue method (MRM).

The regulation mentions two main objectives of the official control program: enforcement of MRLs and obtaining data to be able to assess consumer exposure. For the latter objective representative sampling is a prerequisite, whereas the first objective is optimised by searching for high risk products. The Dutch program is a mixture of both strategies. Sampling in the market is in general representative for the product present in the market at that time and can be used for intake calculations. The choice of products to be sampled, however, is risk based. Products sampled at border control and importers of high risk products are typically non-representative and selected from an enforcement point of view. High violation rates can indicate both an efficient sampling strategy and problems in the agricultural practice.

The national control program is primarily directed to major products in the consumption pattern. These products are in line with the products the EU has chosen for the multi annual rolling program of the control regulation 915/2010/EC. In addition endive, broccoli, red beet and kiwi were planned to be sampled as major Dutch consumption items. The latter two are of special interest, because they are frequently eaten by young children. Some capacity is reserved to minor products, for 2011 this number was 900 samples of fruits and vegetables within the total number of 4000.

The main sampling points are distribution centres of retail chains, importers, warehouses and for both domestic and non-domestic products and the premises of the auction system for Dutch products. At those inspection points, it is clear who is responsible for the product, so that appropriate legal action can be taken in case of non-compliance. A number of samples were taken in retail shops as part of a pilot project to provide public information on samples, results and responsible companies.

The control program involves both Dutch and foreign production. The EU-harmonisation results in such a lowering of exceedance rates of EU-products that less attention is needed for that market segment and can be redistributed to more riskless imports from non-EU countries. As the main consumption products come from the European market, their sampling has been reduced, unless a reasonable high violation rate exists. In 2011 the attention has been shifted from sampling of imported products at border control to sampling at importers after entry of the product into the EU.

In general control based on the primary product is preferred over that of processed food. It is useful to monitor processed products in the following cases:

- toxic metabolites can originate (ETU, PTU)
- the primary product is not accessible. Examples are:
  - products processed in other countries, e.g. fruit juices, wines and vegetable oil.
  - products obtained by the processing industry directly from the grower.
- processed food gives a good overview of the situation of the market as to dietary intake, e.g. flour and baby food

The NVWA applies as much as possible MRMs for the analysis of pesticide residues. The main procedure is

extraction with acetone, followed by solvent partitioning with dichloromethane/petroleum ether. The extract is analysed with GC/MS(ITD) and LC/MS-MS. These methods comprise about 300 and 170 pesticides, respectively. Because of some overlap in scope, these methods together have a scope of about 400 active substances. For pesticides outside the scope of MRMs Single Residue Methods (SRMs) must be applied. As these give only information on one analyte, they are much less cost-effective than MRMs, and only applied when the following criteria are met:

- For the commodity-pesticide combination an MRL above the LOQ exist, indicating that residues may be expected.
- For the commodity-pesticide combination improper use of the pesticide is expected.
- The pesticide is part of the EU coordinated control program

## 21.2. Key findings, interpretation of the results and comparability with the previous year results

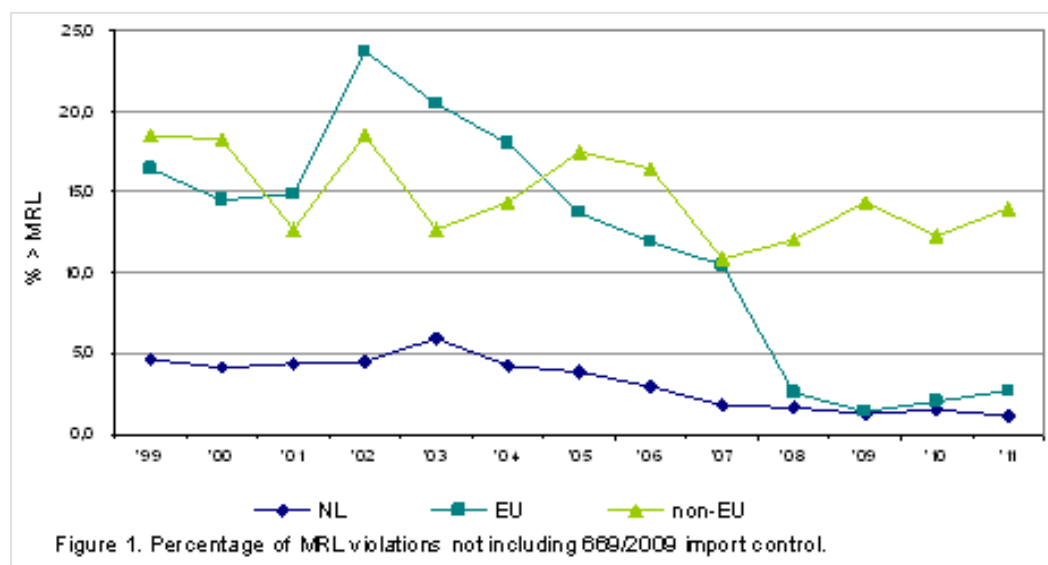
During 2011 about 4,500 samples, both domestic and non-domestic products, were analysed for pesticide residues. The national and co-ordinated control plan accounted for about 3,250 samples. In the framework of the import control regulation 669/2009/EU about 1,250 samples were analysed. Within the national control plan domestic fresh produce made up 28 % of the samples, 26 % of the samples came from other EU countries and 46 % from non-EU countries. Dutch products show residues above the reporting limit in about 46 % of the samples, whereas non-domestic products contain residues in 64 % (EU) and 63 % (non-EU) of the cases, respectively. These percentages are comparable with the year before, slightly less for Dutch and EU-products and slightly higher for non-EU-products.

In about 4,450 samples of plant origin 6,909 residues of 159 different analytes were found. The scope of the EU-coordinated program comprised 95 % of the residues found. The extension of the scope in 2010 enlarged the coverage considerably. For a majority of the results it has been established whether an Acute Reference Dose (ARfD) is necessary or not (table 3). When food safety issues are involved in pesticide residues, it is mainly with respect to acute effects. Therefore, it is important to notice to what extent pesticides that give acute intake hazards are used. For product/pesticide combinations the Critical Crop/Pesticide Concentration (CCPC) has been evaluated. At the CCPC-limit 100 % of the ARfD is reached based on a point-estimate and a product is considered to be unsafe and 'injurious to health' in the meaning of the General Food Law (Regulation EC/178/2002). In such cases the product is recalled when possible, and a Rapid Alert is issued. The Netherlands issued eighteen rapid or information alerts on pesticide residues, as indicated in table 1.

**Table 1:** Pesticide residues found in the EU-coordinated and Dutch monitoring program.

Program	active substances	number of residues of pesticides in samples			Total
		with ARfD	no ARfD needed	ARfD unknown	
EU-coordinated	129	4,772	1,788	0	6,590
Dutch national	29	67	272	10	349
Total	158	4,839	2,060	10	6,909

### 21.3. Non-compliant samples: possible reasons and actions taken



As a result of the harmonisation of the MRLs in the EU, the percentage of non-compliances of products from EU countries has decreased strongly since 2008. In 2011 MRL violations remained at this low level. A few cases of illegal use could be identified (diphenylamine/cherry, carbaryl/blackberry, carbendazim/shallot, metalaxyl and iprodione/spinach, flutolanil/barley, chlorpropham/barley) or improper use (linuron/celery, pirimicarb/spinach). Imports from third countries showed a slight increase in MRL-violations. This might be related to intensifying border control of higher risk products with new additions into the 669/2009 program. Products from South-East Asia still often violate limits. Table 2 gives the most frequently non-complying pesticide/crop combinations with the main countries of origin for the samples in the national control plan. Table 3 gives this overview for the 669/2009 regulated imports. It is remarkable that old organophosphates and carbamates as omethoate (without dimethoate), triazophos and carbofuran are still in use. In spite of these measures for some products the new import regime still detects considerable numbers of non-compliances (table 3). On the other hand, some other products in the 669/2009 scheme like strawberry from the Egypt did not show any violation. However, because of two RASFF notifications from other member states these products are still listed in Annex 1 of this Regulation.

Table 4 gives results on main products in the year 2011. A comparison is made with the results of previous years. For the main products in the national program, fewer violations were observed with most of the products, as in general compliance increased.

Some minor products, not planned within the national program show still a considerable violation rate. Examples are tropical products, like herbs and egg plant.

**Table 2:** Main products with high percentages of non-compliances, with corresponding pesticides and countries of origin of national control plan samples.

Product	Pesticides	% > MRL	Countries
Pepper	carbendazim, difenoconazole, various	42,9	Vietnam
Various leafy vegetables	dimethoate	53,8	Vietnam
Yard long bean, black-eyed pea	chlorpyrifos, carbendazim, fipronil, methamidophos, diazinon, acephate, various	11,3	Various
Orange	methidathion, imazalil, fenthion	13,5	South Africa, Uruguay, Morocco

**Table 3:** Main products with high percentages of non-compliances, with corresponding pesticides and countries of origin for samples in the framework of 669/2009import control.

Product	Pesticides	% > MRL	Countries
Pomelo	triazophos	26,5	China
Yard long bean, black-eyed pea	various	12,2	Dominican Rep.
Pepper	various	22,5	Dominican Rep.
Orange	malathion, various	13,4	Egypt
Various leafy vegetables, herbs	various	11,9	Thailand

**Table 4:** Samples of products of plant origin taken in the national control program 2011, with trends in percentage MRL violations, comparing origin and previous years.

Product	Consumption (g/day)	EU- coordinated program year	Dutch program 2011	Samples realised 2011	% samples > MRL 2011	% samples > MRL 2011 Dutch	% samples > MRL 2011 EU	% samples > MRL 2011 non -EU	Samples year 2006- 2010	% samples > MRL 2006- 2010
Tangerines	11,2	05/08/11	100	82	3,7	0,0	0,0	7,3	95	5,9
Orange	15,6	05/08/11	150	111	10,8	0,0	2,1	17,7	161	6,1
Apple	64,8	07/10	100	91	0,0	0,0	0,0	0,0	137	2,5
Pear	12,2	05/08/11	50	50	0,0	0,0	0,0	0,0	74	0,8
Peach/nectarine	2,8	07/10	100	31	6,5	0,0	7,4	0,0	37	5,9
Plum	2,5		50	48	2,1	0,0	5,0	0,0	45	3,6
Grape	16,5	06/09/12	150	151	0,7	0,0	0,0	0,8	197	13,0
Strawberry	5,6	07/10	125	65	3,1	0,0	4,8	10,0	97	3,5
Banana	19,2	06/09/12	50	40	0,0	0,0	0,0	0,0	54	0,4
Kiwi fruit	3,4		50	43	2,3	0,0	5,3	0,0	52	2,3
Beetroot	4,1		50	17	0,0	0,0	0,0	0,0	30	1,3
Carrot	14,2	05/08/11	75	61	3,3	2,2	7,1	0,0	87	3,0
Onion	14,4	04	75	37	2,7	0,0	0,0	7,1	59	1,7
Tomato	27,6	07/10	125	125	0,0	0,0	0,0	0,0	133	3,5
Sweet pepper	3,5	06/09/12	125	96	2,1	0,0	0,0	10,5	135	8,0
Pepper	0,0	06/09/12	75	63	41,3	0,0	0,0	46,4	97	34,4
Cucumber	8,0	05/08/11	150	72	2,8	0,0	4,5	12,5	118	5,2
Melon	2,8	99/03	50	48	6,3	0,0	9,1	3,8	56	4,3
Broccoli	3,7		50	54	1,9	0,0	0,0	33,3	68	5,6
Cauliflower	12,6	06/09/12		52	0,0	0,0	0,0	0,0	58	0,0
Red Cabbage	3,8	07/10	18	10	0,0	0,0	0,0	0,0	18	0,0
White Cabbage	5,5	07/10	17	10	0,0	0,0	0,0	0,0	20	0,0
Lettuce	2,8	05/08/11	150	70	1,4	0,0	4,0	0,0	104	3,5
Iceberg lettuce	3,3	05/08/11	0	60	0,0	0,0	0,0	0,0	85	4,9
Endive	6,5		150	56	0,0	0,0	0,0	0,0	80	4,8
Spinach	10,0	05/08/11	125	45	4,4	7,1	0,0	0,0	61	2,6
Beans(fresh)	16,4	05/08/11	50	103	13,6	0,0	0,0	16,5	171	12,5
Peas (fresh)	4,8	06/09/12	100	26	19,2	0,0	0,0	20,8	47	14,2
Leek	8,4	07/10	50	35	0,0	0,0	0,0	0,0	66	1,8
Potato	159,9	05/08/11	75	34	0,0	0,0	0,0	0,0	65	2,2
Rice	8,9	05/08/11	25	44	4,5	0,0	11,1	2,9	30	1,3
Cereals	127,2	07/10/12	165	43	0,0	0,0	0,0	0,0	32	1,3
Babyfood			120	36	0,0	0,0	0,0	0,0	76	0,0
Processed products			500	108	2,8	2,4	0,0	3,6	310	3,2
Products in program	695,4		3,280	2,017	4,3	0,6	2,0	9,6	2,954	5,9
Total	838,8		4,000	3,201	7,1	1,1	2,4	13,3	4,021	7,3

**Table 5:** Notifications to the RASFF system issued by the Netherlands.

Product	Pesticide	Country
Tayer leaf	diazinon (1,4 mg/kg)	Dominican Republic
Papaya	methomyl (0,074 mg/kg)	Thailand
Papaya	carbendazim (1,2 mg/kg)	Dominican Republic
Tayer leaf	diazinon (0,93 mg/kg)	Dominican Republic
Bitter lemon	methomyl (0,35 mg/kg)	Dominican Republic
Bitter leaf	lambda-cyhalothrin (2 mg/kg)	Suriname
Long beans	omethoate (1,9 mg/kg)	Thailand
Kaki	di-/omethoate (0,42 mg/kg)	Spain
Long beans	di-/omethoate (sum 0,29 mg/kg)	Dominican Republic
Papaya	methomyl (0,18 mg/kg)	Thailand
Tayer leaf	lambda-cyhalothrin (0,86 mg/kg)	Suriname
Water mimosa	omethoate (0,21 mg/kg)	Thailand
Coriander	carbofuran (0,91 mg/kg)	Thailand
Water mimosa	carbofuran (0,35 mg/kg)	Thailand
Long beans	di-/omethoate (sum 1,6 mg/kg)	Dominican Republic
Pomelo	triazophos (0,8 mg/kg)	China
Pomelo	triazophos (0,036 mg/kg)	China
Pomelo	triazophos (0,029 mg/kg)	China
Pomelo	triazophos (0,035 mg/kg)	China
Cucumber	oxamyl (0,16 mg/kg)	Spain

**Table 6:** Action taken in case of non compliances.

Number of non-compliant samples	Action taken	Note
113	Administrative sanctions	
20	RASFF notification	12 in the framework of the national control plan, 8 as a result of 669/2009 import control
15	None	Anonymous survey sample
94	Import refused	8 samples led to a RASFF-notification as well

#### 21.4. Quality Control

**Table 7:** Information about the laboratory

Country Code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
NL	Dutch Food and Consumer Product Safety Authority	NVWA	1-8-1998	RVA	EU-RL, FAPAS

## 22. Norway

### 22.1. Objective and design of the national control programme

The Norwegian Food Safety Authority (NFSA) is the competent authority for the enforcement of pesticide residues monitoring in Norway.

The Norwegian monitoring programme for pesticide residues in fresh fruit and vegetables, cereals, baby food, animal products and some other products has the last years included approximately 1500 samples. In addition to the monitoring program, this report also includes official controls on imports of certain feed and food of non-animal origin, EU-regulation No. 669/2009 (border control samples).

The number of each commodity and the percentage of imported vs. domestic samples are based on Norwegian statistic of food consumption rates, the risk for residues, previous RASFF notifications and the national three years plan. The criteria for taking organic grown samples are dependent on their market share and the availability on the market. The sampling includes products which are important in the Norwegian diet, but more sporadic products are included as well.

The National program includes projects which focus on residues in specified commodities. In 2011 three projects were included in the monitoring: Orange juice, products from Southeast-Asia (Nordic project) and potatoes for industrial use.

The balance of organic and conventional products in the national monitoring program was almost like earlier years in Norway. In 2011 a number of 113 organic samples were analysed.

The inspectors from the Norwegian Food Safety Authority are taking the monitoring samples mainly at importers' and wholesalers' warehouses in different parts of Norway. Some samples were also collected at farmers or retail sale.

In 2011 Norway gave ten RASFF notification, three of them from the national monitoring programme and seven from the border control.

The Norwegian Institute for Agricultural and Environmental Research (Bioforsk) was responsible for the analyses of the samples of fruit, vegetables, baby food and cereals. The sampling plans and the annual reports were produced by Bioforsk in cooperation with the NFSA. Norwegian School of Veterinary Science analysed samples of animal origin.

### 22.2. Key findings, interpretation of the results and comparability with the previous year results

A total of 1623 samples were analysed for pesticide residues in Norway 2011. 152 of these samples were from the border control (in line with Regulation (EC) No. 669/2009), the rest of the samples (1471) was from the national monitoring program.

In the ordinary monitoring programme (border control not included) 30 samples had residues above the MRLs. It was found 36 pesticide residues in these 30 samples, and 18 of these exceeding's was consider as non-compliant<sup>16</sup> after the measurement uncertainty was taken into account. The samples came from 59 countries and included about 90 different commodities. Three of the exceeding's assessed to cause acute health risk (two of these were aimed at children). In 2011 there were five follow-up samples in the monitoring program.

In addition to the samples from the monitoring programme, samples from border control shows findings above MRLs of 44 different pesticides in 16 samples. All samples under this regulation are stopped until documents and analyses results are accepted. Seven of the samples from border control had RASFF notifications in 2011.

There were no findings of pesticide residues in the samples of animal origin, or baby food.

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<sup>16</sup> If the national competent authorities consider that the measured residues in a sample, taking into account the measurement uncertainty, exceed the legal EU MRLs, the sample is considered as MRL 'non-compliant' and the competent authorities shall take enforcement measures, where permitted by national legislation.



Every sample, except samples of animal origin, were analysed by two multi methods and covering 300 pesticides including some isomers and breakdown products (metabolites). Some samples were also analysed by single residue methods. No domestic samples had residue levels that exceeded the MRLs, but 3.2 % of imported samples had residue levels above the MRLs. This gives almost same results like previous years. There have not been domestic samples exceeding the MRLs since 2007.

The reported higher MRL exceedance rate in enforcement samples of imported food (especially tropical fruits and fresh herbs) is ascribed to the increased control of certain imported food according to Regulation (EC) No. 669/2009.

### 22.3. Non-compliant samples: possible reasons and actions taken

Totally 1,91 % of the samples (1623 samples in total) were found non-compliant with the EU MRL. There were made RASFF notifications for ten of the samples. All lots from the monitoring program (not from the border control) which samples were found MRL non-compliant were released on the market. These consignments were withdrawal as soon as possible from the market. The pesticides found are compared with the MRLs and the measurement uncertainty has been taken into consideration for all samples.

Number of non-compliant samples	Action taken	Note
23	Warnings	
13	Warnings and administrative sanctions	
10	RASFF notification	(RASFF ref: 2011.1663; 2011.1679; 2011.1844; 2011.ATX; 2011.APJ; 2011.BAF; 2011.BJF; 2011.CMY; 2011.CNY; 2012.AAG)

Product	Residue	Number of commodities	Reason for MRL non compliance	Note
Basil (balm leaves, mint, peppermint)	Dichlorvos	1	NFSA has non comment on the cause of the exceedance	669- samples
	Profenophos	1	NFSA has non comment on the cause of the exceedance	Samples from monitoring
Beans (with pods) (Green bean (French bean))	Dimethoate	5	NFSA has non comment on the cause of the exceedance	2 from 669-samples, 3 from monitoring program
	Metalaxyl	2	NFSA has non comment on the cause of the exceedance	669- samples
	Triazophos	3	NFSA has non comment on the cause of the exceedance	669- samples
Coriander	Amitraz (sum)	1	NFSA has non comment on the cause of the exceedance	669- samples
	Carbendazim and benomyl	1	NFSA has non comment on the cause of the exceedance	669- samples
	Carbofuran	1	NFSA has non comment on the cause of the exceedance	669- samples
	Carbosulfan	1	NFSA has non comment on the cause of the exceedance	669- samples
	Chlorpyrifos	1	NFSA has non comment on the cause of the exceedance	669- samples
	Fenpropathrin	1	NFSA has non comment on the cause of the exceedance	669- samples
	Methomyl/thiodicarb	1	NFSA has non comment on the cause of the exceedance	669- samples
	Quintozene	1	NFSA has non comment on the cause of the exceedance	669- samples
Fresh herbs other	Acephate	3	NFSA has non comment on the cause of the exceedance	2 from 669-samples, 1 from monitoring program
	Acetamiprid	2	NFSA has non comment on the cause of the exceedance	669- samples
	Bifenthrin	2	NFSA has non comment on the	669- samples

Product	Residue	Number of commodities	Reason for MRL non compliance	Note
			cause of the exceedance	
	Carbendazim and benomyl	1	NFSA has non comment on the cause of the exceedance	669- samples
	Clothianidin	1	NFSA has non comment on the cause of the exceedance	669- samples
	Endosulfan	1	NFSA has non comment on the cause of the exceedance	669- samples
	Ethion	2	NFSA has non comment on the cause of the exceedance	One of two from 669 - samples
	Methamidophos	3	NFSA has non comment on the cause of the exceedance	Two of three from 669- samples
	Monocrotophos	1	NFSA has non comment on the cause of the exceedance	669- samples
	Profenophos	2	NFSA has non comment on the cause of the exceedance	669- samples
	Propargite	2	NFSA has non comment on the cause of the exceedance	One of two from 669- samples
	Sulfotep	2	NFSA has non comment on the cause of the exceedance	669- samples
	Triazophos	3	NFSA has non comment on the cause of the exceedance	Two of three from 669- samples
Mint	Propiconazole	1	NFSA has non comment on the cause of the exceedance	Samples from monitoring
Okra	Triazophos	1	NFSA has non comment on the cause of the exceedance	669- samples
Peas (with pods) (Mangetout (sugar peas))	Dimethoate	6	NFSA has non comment on the cause of the exceedance	Samples from monitoring
	Cyproconazole	1	NFSA has non comment on the cause of the exceedance	Samples from monitoring
Peppers (Chilli peppers)	Difenoconazole	1	NFSA has non comment on the cause of the exceedance	Samples from monitoring
	Hexaconazole	1	NFSA has non comment on the cause of the exceedance	Samples from monitoring
Pineapples	Aldicarb (sum)	1	NFSA has non comment on the cause of the exceedance	Samples from monitoring
Raspberries (Wine berries )	Procymidone	1	NFSA has non comment on the cause of the exceedance	Samples from monitoring
Tea (dried leaves and stalks, fermented)	Buprofezin	1	NFSA has non comment on the cause of the exceedance	Samples from monitoring
	Imidacloprid	1	NFSA has non comment on the cause of the exceedance	Samples from monitoring
	Acetamiprid	1	NFSA has non comment on the cause of the exceedance	669- samples
Young kale	Imidacloprid	1	NFSA has non comment on the cause of the exceedance	669- samples
	Profenophos	1	NFSA has non comment on the cause of the exceedance	669- samples

#### 22.4. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
NO	Bioforsk Pesticidkjemi	BIOFORSK	27.04.1995 Valid to 19.02.2013	Norsk Akkreditering	EUPT-C4, EUPT FV 12, EUPT SRM5, AGES, EUPT-FV-SM-02
NO	Norwegian School of Veterinary Science (NVH)	NVH 971 033 525	30.06.1999 Valid to 18.01.2013	Norsk Akkreditering	EUPT-AO-05

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
DE	GBA-Food	GBA-Food AKS-P- 20216-EU	Unknown	Staatliche Akkreditierung sstelle Hannover (AKS) registrationsnr AKS-P- 20216-EU	

## 22.5. Additional Information

Pesticide residues on voluntary basis in 2011, that are included in the multi methods, are analyzed on all samples. Voluntary pesticide residues which have to be analyzed with single residue methods were analyzed in small amount and some were not analyzed at all.

Norway has a delay in implementing new legislations because the new legislation must be agreed by the EEA-committee.

## **23. Poland**

### **23.1. Objective and design of the national control programme**

The State Sanitary Inspection acting under the Ministry of Health authority is competent for the control of pesticide residues in food of plant and animal origin, including baby food. It is also responsible for the elaboration of the national programme for pesticide residue control and coordination of all activities. The national control plan includes monitoring and official control as well as coordinated EU monitoring programme.

The objectives of this programme is to control food available in the Polish market for the possible presence of pesticide residues in order to establish levels of compliance with the MRLs and to monitor pesticide residues surpassing admissible level as a basis for follow-up and enforcement actions.

The 2011 national programme was designed to monitor 228 compounds, including isomers, breakdown products and metabolites, in 41 different food commodities.

The National Plan for 2011 was developed taking into considerations several factors: specific conditions of Polish agriculture, consumption data, findings for previous years, the balance of organic and conventional production, origin of food, reports of the RASFF system. Food consumed by infants and children and the capacity of laboratories were also taken into account.

The food samples were collected, according to the sampling plane, by trained inspectors of Sanitary-Epidemiological Stations mainly from the market, at wholesalers or importers, sometimes from food producers. The sampling strategy was mainly random sampling except when it was suspected that the product does not meet the requirements.

### **23.2. Key findings, interpretation of the results and comparability with the previous year results**

In 2011, a total number of 2,222 samples (2,190 surveillance samples and 32 enforcement samples) of food commodities, including fresh and frozen fruit and vegetables, cereals, processed food (including baby food) and animal products were taken and analysed for the presence of pesticide residues. The samples included: 1,544 samples of fruit, vegetables and other samples of plant origin, 146 samples of cereals, 342 samples of animal products and 190 samples of baby food. Above figures include 16 samples of ecological products.

Out of the total number 1,679 (75,6 %) samples taken were of domestic origin, 322 (14,5 %) samples originated from EU countries and 221 (9,9 %) samples were from third countries.

No residues were found in 1,821 (82 %) of all samples including samples from organic production and baby food. The residue level at or below the MRL was found in 384 (17,3 % of the samples) and was lower than in 2010 (21,2 %). The residues exceeding MRL set in EU legislation were found in 11 samples (0,5 %).

In 2011 a range of pesticides tested was wider than in 2010. Despite of an increase in the number of pesticides sought, the number of samples with detectable residues was not increased. In total, 74 different pesticides out of 228 sought were detected. The residue most commonly found were: chlorpiriphos (6,5 % of the samples), imazalil (6,3 %), carbendazim and azoxystrobin (5,8 %). The highest number of pesticides found was 14 and these were found in one sample of tea from China. In two samples of pears from Portugal were detected 10 pesticides in a single sample.

In 2010, 30 enforcement samples were analysed: 27 samples of fruit, vegetables and tea, 1 sample of cereals and 2 samples of milk. The majority of those samples were taken as 'border control samples' (tea, fresh herbs, pomelo) in the framework of the Regulation 669/2009. Pesticide residues at or below the MRL were detected in 15 samples but no exceedances were found.

### **23.3. Non-compliant samples: possible reasons and actions taken**

In 2011, 10 surveillance samples (0,45 %) were found exceeding the MRL after inclusion of 50 % uncertainty of measurements. In the case of 8 samples from domestic production warnings and appropriate administrative

procedures were taken. For two samples from Morocco: tomatoes and strawberries, RASFF notifications were issued.

It was observed that part of the samples contained both carbendazim (unauthorized to use) and thiophanate-methyl (allowed to use). Residues of carbendazim can occur as a consequence of use of an authorized pesticide - thiophanate-methyl as it decomposes to carbendazim. Producers claimed not to use carbendazim but only authorized to use thiophanate methyl. In such cases it was a problematic to draw the consequences when carbendazim was found above the MRL. This was the case when the residues of carbendazim (1,17 mg/kg) and thiophanate methyl (2,68 mg/kg) were found in one sample of lettuce.

Risk assessment for acute exposure was carried out in the case of 4 domestic samples: carrots, lettuce and 2 samples of strawberries. The remaining samples have not been subjected to estimation of risk for consumers because the whole volume has been already sold.

The following follow-up actions were taken in case of sample non-compliant with the EC MRL (measurement uncertainty taken into consideration):

Number of non-compliant samples	Action taken	Note
8	Warnings and administrative sanctions	
2	RASFF notification	Tomatoes and strawberries from Morocco

The information for possible reasons for the MRL exceedances in most cases was not available.

Product	Residue	Reason for MRL non compliance	Note
carrots	diazinon	GAP not respected: use of non- authorised pesticide on all crops	the whole volume has been sold
cucumbers	carbendazim and benomyl expressed as carbendazim		the whole volume has been sold
tomatoes	procymidone	GAP not respected: use of non- authorised pesticide on all crops	
lettuce	carbendazim and benomyl expressed as carbendazim		the whole volume has been sold
lettuce	carbendazim, thiophanate- methyl	Other (please specify in the 'Note' column)	Residues of carbendazim can occur as a consequence of use of authorized thiophanate-methyl as it decomposes to carbendazim.
spinach	azoxystrobin		the whole volume has been sold, enforcement sample was collected from producer
strawberry	dimethoate (sum of dimethoate and omethoate expressed as dimethoate)		
strawberry	procymidone	GAP not respected: use of non- authorised pesticide on all crops	
strawberry	propargite	GAP not respected: use of non- authorised pesticide on all crops	the whole volume has been sold
strawberry	procymidone	GAP not respected: use of non- authorised pesticide on all crops	

#### 23.4. Quality assurance

5 accredited laboratories took part in the national control programme for 2011.

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
PL	Voivodship Sanitary – Epidemiological Station in Warszawa	Lab No 1	19/10/2004	The Polish Centre of Accreditation	PT 2011: EUPT-C5/SRM6
PL	Voivodship Sanitary – Epidemiological Station in Łódź	Lab No 2	03/01/2006	The Polish Centre of Accreditation	PT 2011: EUPT-FV-13
PL	Voivodship Sanitary – Epidemiological Station in Opole	Lab No 3	15/11/2004	The Polish Centre of Accreditation	PT 2011: EUPT-C5/SRM6
PL	Voivodship Sanitary – Epidemiological Station in Rzeszów	Lab No 4	18/06/2004	The Polish Centre of Accreditation	PT 2011: EUPT AO-06
PL	Voivodship Sanitary – Epidemiological Station in Wrocław	Lab No 5	08/12/2005	The Polish Centre of Accreditation	PT 2011: EUPT-FV-13

## 24. Portugal

### 24.1. Objective and design of the national control programme

The department of Plant Protection Products from the newly created Directorate General for Food and Veterinary (DGAV), from the Ministry of Agriculture, Sea, Environment and Land Management is the National Competent Authority for Pesticide Residue Control in Food of Plant Origin.

The National Competent Authority responsible for the elaboration of the specific programmes for samples of plant origin like baby food and import controls, are the Normalization and Food Safety Services of DGAV.

In Portugal different bodies and services are involved in the National Pesticide Residues Control Programme in Products of Plant Origin, they are:

- DGAV - Department of Plant Protection Products is responsible to prepare and promote the implementation and execution of the pesticide residues program in products of plant origin;
- DGAV - Normalization and Food Safety Services are responsible for the coordination of the Multiannual National Integrated Control Plan and for specific control programmes, like Baby food and Import Controls;
- INIAV (Ex-INRB-INIA) - Pesticide Residues Laboratory, the National Reference Laboratory for Fruits, Vegetables and Cereals, is responsible for the execution of part of the analysis as well as responsible to coordinate and compile the results of all the national laboratories participating in the Pesticide Residues Official Control in Food of Plant Origin and for submitting this results to EFSA;
- Laboratory from the North Regional Directorate (L-DRAPN) –is responsible for the execution of part of the analysis;
- From the Autonomous Region of Madeira, the Veterinary and Food Safety Laboratory of the Regional Directorate of Agriculture and Rural Development of Madeira (LRVSA-Madeira or L-DAR) is responsible for the execution of part of the analysis;
- ASAE, the National Authority for Food and Economical Safety, from Ministry of Economy and Employment, responsible for sampling collection in the mainland, according to the procedures laid down in Directive 2002/63/EC, and for enforcement actions;
- In the autonomic region of Madeira sampling was carried out by the Agricultural Department for Markets and Food Safety (DSMSA) and by the Regional Inspectorate of Economical Activities (IRAE), that is the regional body responsible for enforcement actions;
- The autonomic region of Açores also participated in the programme, with sampling carried out by the Department of Agriculture and Veterinary and by the respective IRAE, the regional body responsible for enforcement actions.

The 2011 National Monitoring Programme was elaborated with the participation and collaboration of representatives of all the intervening bodies in the control (DGAV- Department of Plant Protection Products and Normalization and Food Safety Services, ASAE and corresponding regional services, INIAV - Pesticide Residues Laboratory and analysts from all the Laboratories participating in the control).

National Monitoring Planes are designed taking into consideration the following objectives:

- To comply as much as possible with the multiannual coordinated pesticide residues control programme of the European Commission (Regulation n° 915/2010 of 12 of October);
- To follow the binomials plant product/pesticide with repeated infractions in the previous years;
- To take in consideration the capacities of the laboratories;
- To have a representative sampling plan that includes national products and products deriving from the EU and from third countries proportional to the consumption of those products;
- To collect the national products as much as possible near of the production in proportion with the market share.



So, the National Monitoring Programme for Products of Plant origin for 2011 was based on the EU coordinated monitoring programme, which was extended to other pesticides, according to the capabilities of the laboratories and with the cost of the analysis (single methods /multiple methods), and to other commodities, such as lettuce, kiwi, cauliflower, wine grapes, bananas, pineapple, small melon, passion fruit, cherimoya, sweet potatoes, onions, garlic, aubergines and turnips according to the national and regional needs.

The programme of target sampling for bananas and wine grapes grown in Madeira Island was decided to continue with a view to correction the agricultural practice in that region, as previous results have shown that some small farmers have continued to use plant protection products which are no longer approved for those commodities or no longer approved at all.

Every year we intend to include some organic products in the control programmes, but attending to difficulties in sampling this product type was not included in the planned programme, however when possible it is sampled.

Concerning the specific control of baby food, 10 samples of processed cereal based baby food were planned to 2011 by the Normalization and Food Safety Services from DGAV (Ex-GPP).

#### **24.2. Key findings, interpretation of the results and comparability with the previous year results**

In 2011, a total of 865 samples were analysed for residues of up to 250 pesticides and relevant metabolites. This number of samples comprised 724 fruits and nuts and vegetables, 64 not processed cereals, 62 processed products (wheat flour) and 15 baby foods.

The total number of samples analysed in 2011 increased relatively to 2010 despite some of the programmed samples were not performed due to difficulties in sampling, however this number is similar to 2009. In 2010 the total number of samples decreased because only 68 % of the programmed samples were effectively performed. In 2011 we also had samples programmed that were not performed, but in a minor number, all the samples to be analyse by the Pesticide Residues Laboratory from INIAV (Ex-INRB-LRP), only 11 of the 20 programmed samples of wine grapes were sampled and none of the planned 20 samples of passion fruit were collected.

We should also noted that the analysis program for the Pesticide Residues Laboratory from INIAV (Ex-INRB-LRP) was not fulfilled in part due to budgetary and restructuring problems, which meant that about half of the samples were not analysed for all the methods/pesticides programmed.

From the 865 samples analysed, in 531 samples (61 %) no residues were detected, 310 (36 %) with residues below the MRL and 24 samples (2,8 %) with residues exceeding the MRL, from this 20 samples (2,3 %) were non compliant samples.

Comparing with 2010, the number of samples without residues was increasing (51 % in 2010 and 61 % in 2011) and the number of samples with residues was decreasing proportionally, the number of samples exceeding the MRL was slightly smaller than 2010 (3,9 % in 2010 and 2,8 % in 2011). The percentage of non-compliances samples was slightly smaller too than 2010 (2,9 % in 2010 and 2,3 % in 2011).

The majority of the samples of fruits, vegetables and cereals were analysed in the framework of the EU coordinated monitoring programme and were from surveillance strategy.

Over half of the 865 samples were of domestic origin (70 %), 18 % from EEA and 9,5 % from Third Countries. This difference is mainly because the commodities included in the 2011 coordinated programme are predominantly of domestic production.

For this reason, practically all the non-compliant samples were from domestic production.

We should also noted, that this year we had a higher number of samples with unknown origin, 16 samples (1,8 %), that occurred mainly because of the difficulties to obtained the origin of the wheat flour.

For fruit, vegetables and other plant origin a total of 724 samples were analysed, in 426 samples (59 %) no residues were detected, 274 samples (38 %) with residues below the MRL and 24 samples (3,3 %) with residues

exceeding the MRL, from this 20 samples (2,8 %) were non compliant samples, which is according to the fact that fruit and vegetables were the majority of the samples.

For cereals (processed and unprocessed) no infringements to the respective MRL occurred, the same situation from 2009 and 2010.

Concerning the 64 samples of unprocessed cereals (rice), in 59 samples (92 %) no residues were detected and we had 5 samples (8 %) with residues below the MRL. No samples with residues exceeding the MRL occurred in these samples.

From the 62 samples of processed cereals (wheat flour), in 31 samples (50 %) no residues were detected and 31 samples (50 %) with residues below the MRL. No samples with residues exceeding the MRL occurred.

Relatively to baby food, 15 samples were collected (baby food and cereals based baby food), in all the 15 samples (100 %) no residues were detected.

Residues were detected in 4 of the 8 samples analysed from organic production (1 sample of carrots with linuron, 1 sample of beans with pods with spinosad and 2 bananas with thiabendazole and/or acrinathrin), all compounds not authorized in organic production. These samples were from domestic origin.

Concerning the programme of target sampling for bananas and wine grapes grown in Madeira Island, the results from 2011 corroborate the decreasing of non-compliances in banana and wine grapes samples from Madeira initialized in 2010, however this target programme will continue for more some time until the situation will be corrected.

Residues of at least one of the pesticides sought were found in about 40 % of the fruits and vegetables and in about 70 % of cereals (processed and unprocessed) of the surveillance samples.

The two most frequent residues detected in fruits and vegetables from the national programme were dithiocarbamates and thiabendazol, which were followed by chlorpropham, chlorpyrifos and acrinathrin.

For the coordinated programme, the two most frequent residues detected in fruits and vegetables were dithiocarbamates (in different cultures) followed by chlorpropham (in potatoes), chlorpyrifos (in carrots and mandarins) and thiacloprid (in pears).

For cereals the two most frequent residues detected were pirimiphos-methyl and deltamethrin.

Multiple residues occurred in 99 samples of fruits and vegetables and in 10 samples of cereals (wheat flour). The maximum number of residues found was 6 (captan, dithiocarbamates, folpet, imazalil, phosmet and thiabendazole) in one sample of pears, which was followed by 1 sample of apples with 5 residues and 2 samples of oranges with 5 residues.

#### **24.3. Non-compliant samples: possible reasons and actions taken**

In 2011, 2,3 % of the samples analyse in the framework of the National Monitoring Programme for Products of Plant Origin (20 samples in a total of 865 samples) were found non-compliant with the EU MRL, one proportion slightly smaller than 2010 and 2009.

All these non-compliant samples were fruit and vegetables samples, one part from the coordinated monitoring programme and other from the national and regional programme. The majority of these samples were from domestic production, excepting one sample of oranges that is from Spain.

Two of the non-compliant samples were enforcement samples.

In addition to these non-compliant samples, we should also note that we found other non-compliant sample from the samples analysed in the framework of the Import Programme, was a sample of dried beans from Peru.

The use of non-authorized products was associated with almost all the non compliances except in two, the case of acrinathrin in bananas and dithiocarbamates in turnips.

Most of the non-compliances occurred as a result of the recent changes in a great number of agricultural practices due to the withdrawal of many active substances that have been used for many years and related to substances where the MRL was set to the LOD. The use of a product previously authorized for a long time and still authorized for some commodities, was the main reason for the cases of the consumer's risk. It is the case of dimethoate.

ASAE, IRAE-Madeira and IRAE-Açores have the responsibility for the enforcement actions, such as official warnings, levying of fines or preparation of prosecutions to the court (criminal-proceedings), according to the severity of infringements.

Administrative consequences were applied to 12 infringements cases occurred in 2011 samples. In the 7 cases without risk to consumers warnings are applied and in cases with estimated risk to consumers the destruction of the product was occurred.

In other cases legal proceedings are occurred, but in these cases no process is finished yet.

Values detected above MRL are reported as non-compliant, if the achieved value minus the respective estimated uncertainty exceeds the MRL. Nevertheless, every time the uncertainty does not allow ensuring an exceedance of the MRL, an official warning is issued in order to alert the producer that there is also a probability of the value being above the legal limit.

The following follow-up actions were taken in cases of samples non-compliant with the EC MRL:

Number of non-compliant samples		Action taken	Note
12 (5 with estimated risk to some consumers; 7 without estimated risk to consumers)		Warnings and in some cases the destruction of the product	Proceeded a follow-up sampling and in the case of repetition of the infraction, the product was destroyed
9 (no consumer's risk identified)		Legal proceedings	No process is finished yet.

Product	Residue	Reason for MRL non compliance	Note
oranges	dimethoate (twice)	GAP not respected: use of pesticide non-authorized on the specific crop	
oranges	penconazole	GAP not respected: use of pesticide non-authorized on the specific crop	Product from Spain. Not found as authorized in the official site of Spain.
apples	dimethoate (twice)	GAP not respected: use of pesticide non-authorized on the specific crop	
apples	fenthion (four times)	GAP not respected: use of non-authorized pesticide on all crops	
bananas	acrinathrin (twice)	GAP not respected: use of pesticide authorized on the specific crop - application rate and/or application method not respected	
bananas	dimethoate (twice)	GAP not respected: use of pesticide non-authorized on the specific crop	
cherimoyas	chlorpyrifos	GAP not respected: use of pesticide non-authorized on the specific crop	
carrots	folpet	GAP not respected: use of pesticide non-authorized on the specific crop	
carrots	chlorpyrifos	GAP not respected: use of pesticide non-authorized on the specific crop	
turnips	chlorpyrifos	GAP not respected: use of pesticide non-authorized on the specific crop	
turnips	dithiocarbamates (twice)	GAP not respected: use of pesticide authorized on the specific crop - application rate and/or application method not respected	
spinaches	dithiocarbamates (twice)	GAP not respected: use of pesticide non-authorized on the specific crop	

Product	Residue	Reason for MRL non compliance	Note
beans without pods	chlorpyrifos		Sample from Import control. Product from Peru. The Codex MRL was also exceeded

#### 24.4. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
PT	Pesticide Residues Laboratory from INIAV (LRP-INIAV); Ex-INRB-INIA-LRP	LRP INRB	03/06/2005	IPAC Portugal	– PT 2011: EUPT-FV13, EUPT-C5, EUPT-SRM6
PT	Veterinary and Food Safety Laboratory of the Regional Directorate of Agriculture and Rural Development of Madeira (LRVSA-Madeira)	DAR	08/07/2011	IPAC Portugal	– PT 2011: EUPT-FV13, EUPT-C5, EUPT-SRM6
PT	Laboratory of the Northern Regional Agricultural Directorate (L-DRAPN)	L-DRAPN	14/12/2011*	IPAC Portugal	– PT 2011: EUPT-FV13, EUPT-C5, EUPT-SRM6
IT	Private laboratory in Italy - NEOTRON Spa**	NEOTRON		ACCREDIA – Italian Accreditation System (Accreditation n° 0026)	

Notes:

\*- The Laboratory of the Northern Regional Agricultural Directorate had the audit of the grant on 16/03/2011, but the certificate of accreditation only arrived at 14/12/2012.

\*\* - This external Laboratory was contracted by the body responsible for the Baby food control, DGAV (Ex-GPP), to analyse the 10 samples of cereals based baby food.

The Pesticide Residues Laboratory from INIAV (National Reference Laboratory) is accredited by the Portuguese Accreditation body (IPAC) since June 2005 for the majority of compounds analyzed and holds flexible accreditation since May 2008.

#### 24.5. Additional Information

Please be informed that recently the Ministry of Agriculture was restructured which resulted in the renaming of some services and bodies involved in the pesticide residues control, in this situation are:

- -DGAV (Ex-DGADR) – The department of Plant Protection Products from the preceding Directorate General of Agriculture and Rural Development (DGADR), the National Competent Authority for Pesticide Residue Control in Food of Plant Origin, is now part of a new body, the Directorate General for Food and Veterinary (DGAV) that also incorporates the National Competent Authority for Pesticide Residue Control in Food of Animal Origin.
- INIAV (Ex-INRB) – The National Institute of Biological Resources (INRB), to which the Pesticide Residues Laboratory (National Reference Laboratory) belonged, is now called National Institute of Agrarian and Veterinary Research (INIAV).
- DGAV (Ex-GPP) - The Normalization and Food Safety Services, responsible for the coordination of the Multiannual National Integrated Control Plan and for specific control programmes like Baby food and Import Controls, which previously belonged to the National Office for Planning and Policies (GPP) now belongs to the Directorate General for Food and Veterinary (DGAV).

## 25. Romania

### 25.1. Objective and design of the national control programme

In Romania three Competent Authorities are involved in elaboration and implementation of National Control Programme for pesticides residues: National Sanitary Veterinary and Food Safety Authority (NSVFSA), Ministry of Agriculture and Rural Development (MARD) and Ministry of Health (MH).

National Sanitary Veterinary and Food Safety Authority (coordinator) has the responsibility for preparing the National Multiannual Control Programme for pesticides residues in cooperation with the other two CAs. NSVFSA also has the responsibility for elaboration and implementation of its own National Programme for Surveillance and Control for food of plant and animal origin.

Implementation of National Programme for Surveillance and Control for food of plant and animal origin is performed by Sanitary Veterinary and Food Safety County Divisions and .BIPs.

The Programme specifies samples of food of plant origin from Member States and third countries, the point of sampling, the active substances to be analyzed.

34 commodities have been included in monitoring programme on 2011(32 in 2010) and the number of active substances has been increased from 66 (in 2010) to 145.

Romanian Ministry of Agriculture and Rural Development has the responsibility for national monitoring plan of pesticides residues in fruits, vegetables, cereals from domestic market. Implementation of monitoring plan is performed by Central Phytosanitary Laboratory - Laboratory for Pesticides Residues Control in Plants and Vegetable Products, which analyses the samples taken by Counties and Bucharest Phytosanitary Units.

In the monitoring programme of MARD for 2011 2500 samples from 46 agricultural products were planned and 2450 samples were analyzed. The number of active substances has been increased from 117 to 158.

Ministry of Health is responsible for food for special nutritional purposes.

MH realises monitoring and control of pesticide residues in food for special nutritional purposes within the National Program for monitoring of environmental and work life determinants – Subprogram for public health protection by preventing diseases associated with food and nutrition risks factors.

Ministry of Health analysed 84 samples in 2011. All of them complied with the legislative provisions.

The following factors were considered in designing the national control plan:

- *Importance of a commodity in national food consumption.* The selections of the products that are tested for pesticide residues determination are based on the data provided by National Institute of Statistics (*Yearly average consumption – for the main food products and beverages/inhabitant*). Thus a great number of samples were planned for cereals, potatoes, vegetables, fruits and table and wine grapes.
- *Food commodities with high residues/non-compliance rate in previous monitoring years.* All data from the last three years were compared and the products with high residues levels were selected to be analysed: apples, grapefruits, lemons, table grapes and wine grapes. The number of the samples from these products was considerable increased.
- *Origin of food.* The highest number of samples analysed for pesticide residues in 2010 were from domestic origin (~ 62 %), but there were also analysed samples from other food economic area as: (~ 15%) European Economic Area, (~ 15 %) Third Countries and (~ 8 %) Unknown.

Compared with 2010, in 2011 the number of samples analysed for pesticide residues are originated from domestic market (~ 64 %), but from the other food economic area were (~ 17 %) from European Economic Area, (~ 18 %) Third Countries and (~ 1 %) Unknown.

- *Sampling at different marketing levels: farm gates, wholesaler, import activities, border inspection activities, farming, slaughtering,*
- *Seasonal availability of food commodities,*
- *RASFF notifications*
- *Food for the sensitive consumer groups, e.g. baby food;*
- *Importance of the commodity in the country production;*

The selection of the products that were tested for pesticides residues determination is made taking into consideration the statistical data presented by National Institute of Statistics (*Production of the main agricultural products per inhabitant*). Thus a great number of samples were planned for cereals and cereal products, potatoes, vegetables and vegetable products, fruits and fruit products.

- *Food commodities not included in the EU coordinated programme*

For the pesticides from the national control programmes, the reporting country consider for inclusion or non-inclusion in this programme as very important factors: use pattern of pesticides, cost of the analysis: multiple methods, capacity of laboratories.

## **25.2. Key findings, interpretation of the results and comparability with the previous year results**

In 2011 a total number of 3,775 samples were taken in order to check the MRL's compliance of pesticide residues in different crops. From these, 3,771 samples there were sampled under surveillance strategy and 4 samples were under enforcement strategy.

From the total number of the 3,771 surveillance samples that include fruit, vegetables, cereals, processed products (including baby food), animal products, 2429 were produced in Romania, 630 samples were produced in EU, and 686 samples were produced outside of the EU.

A number of 1,611 samples were vegetables, 1,435 fruits and nuts, 225 cereals and 362 samples of animal origin.

All the fruits and vegetables samples were analysed for about 145 pesticides including isomers and metabolites.

From the 3,775 analysed samples 2,812 (74 %) were without pesticides residues founding's, 926 (25 %) had residues below MRL, 37 (1 %) had residues exceeding MRL's 9 (0.2 %) of them were non-compliant. The most frequent pesticides detected in the analysed samples were (carbendazim, methidathion, chlorothalonil, procymidone, acetamidrid); the highest concentration was for chlorothalonil 9,820 mg/kg detected in lettuce.

From the total number of samples, 211 foodstuffs samples had 2 or more founding's. Below there are mentioned some products with different number of pesticide residues:

- grapefruit – 55 samples with a number of residues from 2 up to 5, 40 of them (72,72 %) were originated from Turkey;
- lemons – 51 samples with a number of residues from 2 up to 4, 32 of them (62,74 %) were originated from Turkey;
- apples – 42 samples a number of residues from 2 up to 5, 24 of them (57,14 %) were originated from Romania
- wine grapes - 34 samples with a number of different residues from 2 up to 7, all products were from domestic production;
- table grapes – 29 samples with 2 to 5 residues, 13 of them (44,82 %) were originated from Romania.

All the data presented above will be taken into account in amending of the National Control Programme for pesticides residues during the next years.

The results indicate the use of unauthorised pesticides has decreased;



High exceedances in lettuce are considered to be due to use of pesticide non-authorised on the specific crops;

### 25.3. Non-compliant samples: possible reasons, ARFD exceedances and actions taken

In 2011, 0.2 % of the samples (9 samples in total) were found non-compliant with the EU MRL. According to the analytical reports seven RASFF notifications have been issued and specific measures were taken: withdrawal from the market and official detained in order to be destroyed or officially detained until the level of pesticide residue would reach the legal MRL.

In most of the non-compliance cases the analytical report had been issued after the product had been already consumed.

The following follow-up actions were taken in case of sample non-compliant with the EU MRL (measurement of uncertainty was considered):

Number of non compliant samples	Action taken	Note
9	RASFF notification	<b>Sample code:</b> LCCRPP_11_0502; LCCRPP_11_0505; LCCRPP_11_0562; LCCRPP_11_0784 RO-321-ANSVSA-30174; RO-321-ANSVSA-30282 RO-321-ANSVSA-31433-2; RO-321-ANSVSA-31433-3 RO-321-ANSVSA-31433-4 <b>RASFFref:</b> ACU/19.04.2011; ACT/19.04.2011; ACZ/02/05/2011; ALI/26.05.2011; AMC/09.06.2011; AMD/09.06.2011; ARX/24.10.2011 Not released on the market

Product	Residue	Reason for MRL non compliance	Note
Lettuce	Chlorothalonil	GAP not respected: use of pesticide non-authorised on the specific crop	The use of chlorothalonil is not authorised for lettuce.
Spinach	Thiacloprid	MRL exceedance	
Mangoes	Imazalil	MRL exceedance	
Wine grapes	Captan	MRL exceedance	

### 25.4. Quality control

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
RO	Laboratory for Control Pesticide Residues in Plants and Products Plants	RO_321_LC CRPPPV	16.01.2006 /11.01.2010	RENAR	PT 2011: C5, FV13, SM 03.
RO	Bucharest Sanitary Veterinary and Food Safety Laboratory	RO-321-ANSVSA	11.04.2007 /18.04.2011	RENAR	PT 2011: C5, FV13, SM 03.
RO	Environmental and food chemistry and microbiology laboratory Bucharest	MS-RO-321-MS	LI 353 /2011	RENAR	
RO	Calarasi Sanitary Veterinary and Food Safety Laboratory	RO312-ANSVSA	28.11.2005 /19.12.2011	RENAR	PT2011: EUPT-AO 06
RO	Constanta Sanitary Veterinary and Food Safety Laboratory	RO223-ANSVSA	24.05.2004 /08.06.2011	RENAR	PT2011: EUPT-AO 06
RO	Suceava Sanitary Veterinary and Food Safety Laboratory	RO215-ANSVSA	05.03.2007 /25.07.2011	RENAR	PT2011: EUPT-AO 06
RO	Institute of Hygiene and Veterinary Public Health	RO321-IISPV	01.04.2003 /09.05.2011	RENAR	PT2011: EUPT-AO 06; EUPT-C5/SRM6.
RO	Iasi Sanitary Veterinary and Food Safety Laboratory	RO213-ANSVSA	17.04.2006 /03.06.2011	RENAR	PT2011: EUPT-C5



## 26. Slovakia

### 26.1. Objective and design of the national control programme

Pesticide residue monitoring in 2011 was conducted in compliance with the Multi-annual Control Programme for Pesticide Residues in Food and Baby Food in the SR, issued for the years 2011-2013 (hereinafter referred to as the 'Programme'), implementing Commission Regulation No 915/2010/EU. In developing the national plan we focused on several priorities. For a selection process as regards types and number of samples to be collected and analyzed certain criteria were set: analysis results from the previous year, consumption and production of a given commodity in Slovakia, as well as the RASFF information. In selection of commodities we focused on fresh fruit and vegetables. Within the scope of the EU monitoring 2011, the following commodities were sampled: beans with pods, carrots, cucumbers, oranges or mandarins, pears, potatoes, rice, spinach, wheat flour, poultry meat, and beef or pork liver. A total of 15 samples from each food type were tested. The number of orange or mandarin samples was increased to 25 in light of the fact that this food is associated with a higher consumption in Slovakia. Within the scope of the Programme further food types were sampled and analyzed, the number of samples being collected ranged from 5 to 25 for each food type. In compliance with legislative requirements, a total of 16 samples of organic foods and 40 samples of foods for infants and young children were collected and analyzed. Within the sampling in trade network, the samples from third countries were preferred. Sampling of food of domestic origin was preferentially done at growers' distribution warehouse but also at trade network level. The percentage of samples upon their origin for the purpose of pesticide residue analysis reflected food offer in the Slovak market and herewith consumption trends in the country (food of domestic origin – 23,5 %, third countries – 28,4 %, EU countries – 46,9 %). The number of samples being collected was limited by capacity of the laboratory analyzing pesticide residues as well as its technical capabilities.

The extension of analyses in 2011 with other types of pesticides was based on the requirements of Regulation No 915/2010/EU. New pesticides that had not been analyzed under the national control programme in 2010 were included in routine analyses. Besides the extension of analysed range with pesticides (active substances), we also went for the extension with substances that fall under the definition 'pesticide residues' (metabolites and/or breakdown or reaction products) that are characterized by highly toxic properties. The number of analytes (pesticides, metabolites or isomers) was extended with 26 new analytes and reached the number of 334 (comparing to 308 in 2010).

Collected samples were analyzed in two official laboratories. Food samples were analyzed in the State Veterinary and Food Institute Bratislava and food for infants and young children samples were analyzed in the Laboratory of the Public Health Authority of the SR. Two multiresidue methods (MRM) and seven 'single' residue methods (SRM) were used for food analyses (besides foods for infants and young children). Four MRMs and three SRMs were used to analyze foods for infants and young children samples. The determination of glyphosate (GLY) residues in rice and wheat flour was carried out by an accredited method at the Institute of Chemical Technology, Department of Food Chemistry and Analysis, Prague.

Owing to the fact that the number of pesticides to be analyzed is continuously coming up, equally financial demands for analyses are going up. This is especially valid with those analytes that must be determined by single residue methods that are financially demanding. The samples covered by the EU monitoring were analyzed for pesticide residues to the extent required by legislation. MRM methods were preferentially applied to analyze most other food samples.

### 26.2. Key findings, interpretation of the results and comparability with the previous year results

A total of 612 samples were analyzed in 2011, thereof 485 samples of fresh or frozen fruit and fresh or frozen vegetables and potatoes. No pesticide residues were detected in 283 samples to represent 46,2 % of all analysed samples (the values below the LOQ). One or more pesticide residues under the MRL\* were detected in 329 samples to represent 53,8 % of all analyzed samples. Residues exceeding the MRL were found in 19 analysed samples, thereof 8 samples of fruit, 8 samples of vegetables, 1 sample of processed food (after taken in the account a 50 % measurement uncertainty in the results). In two samples of organic food was detected a pesticide that is not permitted for use in organic agriculture.

Year	Total number of samples	Samples with no measurable residues (%)	Samples below the MRL (%)*	Samples with MRL exceedances (%)
2011	612	42,6	53,8	3,1
2010	657	48,1	50,1	1,8

\* including the samples with MRL exceedances after taken in the account a 50 % measurement uncertainty in the results

As it is evident from the above Table, lower total number of samples being analyzed in 2011 (compared to 2010) resulted in a higher percentage of samples tested positive for pesticide residues. Also the rate of non-compliant samples rose from 1.8 % in 2010 to 3.1 % in 2011.

The monitoring of pesticide residues in food was governed by Regulation 669/2009/EC. On food import monitoring, a total of 49 food samples originating from third countries were collected.

Multiple pesticide residues were detected in 209 samples which is an increase by 21 samples from 2010 to 2011. The finding of multiple residues with the highest number of detected pesticides (15 different types) was detected in a strawberry sample originated from Belgium.

In compliance with the legislative requirements, a total of 16 samples of organic foods were collected, thereof 5 samples of domestic origin, 6 samples of EU origin and 5 samples of third country origin.

### 26.3. Non-compliant samples: possible reasons and actions taken

In 2011, 3,1 % samples, resp. 19 samples were non-compliant:

Food	Number of over-limit samples	Country of origin	Pesticide residues above the MRL Name/Amount of pesticide detected (mg/kg)
Peaches	1	Spain	captan/(0,054)
Lemons	1	Spain	bromopropylate/(0,099)
Beans with pods	1	Morocco	oxamyl/(0,109)
Pomegranate	1	Turkey	acetamiprid/(0,044)
Pears	1	Holland	chlormequat/(1,5)
Strawberries frozen	1	China	ethion/(0,063)
Tangerines	1	Turkey	malathion/(0,062)
Paprika	1	Macedonia	methomyl/(0,042)
Oranges	1	Egypt	diazinon/(0,024)
Pomelo	1	China	pentoate /(0,041)
Lettuce	1	Poland	chlorpyrifos/(0,48), dithiocarbamate/(13,7)
Lettuce	1	Slovakia	clothianidin/(0,85)
Spinach	1	Spain	azoxystrobin/(0,26)
Cucumbers	1	Bulgaria	oxamyl/(0,16)
Cucumbers	1	Bulgaria	oxamyl/(0,202)
Cucumbers	1	Bulgaria	carbendazim/(0,29)
Dried marjoram	1	Egypt	chlorpyrifos/(0,648), methomyl/(1,05)
Organic Basmati rice	1	Pakistan	bromides/(above the LOQ, presence)
Organic Basmati rice	1	Pakistan	chlorpyrifos/(above the LOQ, presence)

In line with the national food legislation, appropriate administrative channels were used against all subjects being non-compliant. In most cases it was a matter of initiation of an administrative proceeding and imposing a fine. There were 5 RASFF notifications.

Number of non-compliant samples	Action taken	Note
6	Administrative consequences	
8	Administrative sanctions	A fine was imposed.
5	Administrative sanctions and RASFF notification	Sample codes: BA17013_11, BA20220_11, BA20493_11, BA22825_11, BA17012_11

Pesticide	Crop	Sample number	Sample origin	Residue level (mg/kg)	ARfD (mg/kg bw)	ARfD %	Population exposed (worst case scenario)	Model used	RASFF notification	Note
chlormequat	Pears	BA170 12_11	Holland	1,5	0,09	162	Children	SANCO/3346/2001 rev 7	2011.1372	
oxamyl	Cucumbers	BA170 13_11	Bulgaria	0,202	0,00 1	720 150	Children Adults	SANCO/3346/2001 rev 7	2011.1371	
oxamyl	Cucumbers	BA202 20_11	Bulgaria	0,16	0,00 1	570 118	Children Adults	SANCO/3346/2001 rev 7	2011.1484	Suspect sample

Detecting the reason for MRL violation may be possible only in food of domestic origin. In 2011, only in 1 sample of domestic origin we were able to trace the cause of violation. It was a case of lettuce being declared 'non-compliant' because revealing the presence of clothianidin residues above the MRL.

Product	Residue	Reason for MRL non compliance	Note
Lettuce	clothianidin	GAP not respected: use of pesticide non-authorised on the specific crop	

#### 26.4. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
SK	State Veterinary and Food Institute Bratislava	156434	5.5.2011 Last re-accreditation	SNAS	EUPT C5SRM6, EUPT FV13, EUPT AO6, Fapas 19119, COIPT11
SK	Public Health Authority of the SR	607223	1.6.2009	SNAS	EUPT-FV12, EUPT-C4
CZ	Metrological and testing laboratory, ICT Prague	68407700	25/06/2012*	CAI Prague, the Czech republic	PT 2011: A0-06, FV14, FV-SM02, C5-SRM6

\* recent accreditation certificate version (laboratory accredited since 01/08/2000)

#### 26.5. Additional Information

We were not able to identify the country of origin in 7 food samples. In most cases, it was a matter of rice samples collected from retail chain stores. The Slovak, resp. Czech packing brand were named on each consumer packaging. However, the real rice's country of origin (rice is grown neither in the Slovak Republic nor in the Czech Republic) was not given on the packages.

## 27. Slovenia

### 27.1. Objective and design of the national control programme

The selection of commodities included into the monitoring programme was based on the following criteria:

- staple food (presenting most important food in national food consumption as well as food for sensitive group of population-baby food),
- food included in EU coordinated programme,
- food offered on the Slovenian market, where also data of Statistical Office of RS on average annual quantity of purchased food and beverages per household member are taken into account, this is covered as part of national rolling programme,
- commodities found non-compliant previous year,
- problematic commodities as evident within the CIRCA -RASFF database.

The inspection services responsible for official control sampled commodities at primary production and at other stages of the food chain - wholesale, retail, open markets, and shops. Sampling had taken into account seasonal availability of product however if commodities were present on the market throughout of the year then sampling period was extended. For this reason samples taken were of domestic, EU and of third countries origin. Where commodities from organic production were available, they were included into sampling. Beside fresh commodities also processed products were included into the sampling program.

The selection of pesticides to be sought was primarily determined on data on national use of pesticides, potential for residues based on use pattern, toxicological profiles of pesticides, preference list of active substance prepared by reference laboratories, data from CIRCA RASFF database, analytical capabilities of the laboratories and those mentioned in Commission Regulation (EU) No 915/2010 on EU coordinating programme and financial constraints as well.

### 27.2. Key findings, interpretation of the results and comparability with the previous year results

In 2011 total 1125 samples of food were analysed on pesticide residues in Slovenia, 5 of them were follow up samples. Samples included: 76 samples of animal products, 60 samples of baby food, 69 samples of cereals, 418 samples of fruits and nuts, 397 samples of vegetables, 25 samples of oilseeds, 30 samples of spices, 2 samples of tea and 48 samples of other processed products of plant origin. There were 616 (55 %) samples without detectable residues, 474 (42 %) samples with residues below or at EU-MRL and 35 (3.1 %) samples with residues exceeding the EU-MRL, out of this 15 (1.3 %) samples were non compliant. 484 (43 %) samples originated from domestic production, 452 (40 %) originated from EEA countries, and 189 (17 %) from Third Countries.

Samples of animal products were analysed for the presence of up to 38 (38 in 2010) pesticides. From 76 surveillance samples 75 (98.7 %) samples were without detectable residues and 1 (1.3 %) with residues below or at EU-MRL.

Samples of baby food were analysed for the presence of up to 274 (268 in 2010) pesticides. From 60 surveillance samples 59 (98.3 %) samples were without detectable residues and 1 (1.7 %) with residues below or at EU-MRL.

Samples of cereals were analysed for the presence of up to 265 (252 in 2010) pesticides. From 69 surveillance samples 46 (66.7 %) samples were without detectable residues and 23 (33.3 %) with residues below or at EU-MRL.

Samples of fruits and nuts were analysed for the presence of up to 265 (251 in 2010) pesticides. From 416 surveillance samples 111 (26.7 %) samples were without detectable residues, 300 (72.1 %) with residues below or at EU-MRL and 5 (1.2 %) with residues exceeding the EU MRL.

Samples of infusion were analysed for the presence of up to 259 pesticides. Both surveillance samples (100 %) were with residues below or at EU-MRL.

Samples of oil plants were analysed up to 208 pesticides. From 25 surveillance samples all (100 %) samples were without detectable residues.

Samples of spices were analysed up to 208 pesticides. From 30 surveillance samples 23 (76.7 %) samples were without detectable residues, 6 (20.0 %) samples with residues below or at EU-MRL and 1 (3.3 %) with residues exceeding the EU-MRL.

Samples of vegetables were analysed for the presence of up to 264 (250 in 2010) pesticides. From 395 surveillance samples 232 (58.7 %) samples were without detectable residues, 154 (39.0 %) with residues below or at EU-MRL and 9 (2.3 %) with residues exceeding the EU-MRL.

Samples of other processed products of plant origin were analysed up to 265 (247 in 2010) pesticides. From 47 surveillance samples 43 (91.5 %) samples were without detectable residues, 4 (8.5 %) with residues below or at EU-MRL.

### 27.3. Non-compliant samples: possible reasons and actions taken

For non-compliant samples with exceeded legal limits the follow-up actions were taken:

- In 2011, 1.3 % of the samples (15 samples in total, from 1125 samples taken) were found non-compliant with the EU-MRL and two of them were assessed as unsafe for the consumers. One unsafe consignment was rejected at border (oranges) for which RASFF notification was issued and one consignment of Slovenian origin had been already consumed (escarole). For 12 samples administrative sanctions and follow-up activities were undertaken and for 3 samples the reinforced control followed.
- The following actions were taken in case of samples non-compliant with the EU-MRL: control inspections for checking internal control of the FBO.

Number of non-compliant samples	Action taken	Note
3	Reinforced control	
12	Warning and/or administrative sanctions 1 RASFF notification	RASFF Ref.: 2012.ADU (border rejection)

Product	Residue	Reason for MRL non compliance	Note
Pears	Mandipropamid Dimethomorph	GAP not respected; drift during application techniques from the neighbouring plots grown with vineyards	
Beans (with pods)	Chlorpyrifos-ethyl	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Mangold	Imidacloprid	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Beans (with pods)	Fenazaquin	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Spinach	Dimethoate (sum of dimethoate and omethoate expressed as dimethoate) Dithiocarbamates	GAP not respected: use of pesticide not authorised on the specific crop - application rate and/or application method not respected	
Turnips	Dithiocarbamates	Scientific opinion of the Phytosanitary Administration of Republic of Slovenia (PARS) on synthesis of CS <sub>2</sub> group by metabolism of the family Brassicaceae – Cruciferae.	
Turnips	Dithiocarbamates	Scientific opinion of the Phytosanitary Administration of Republic of Slovenia (PARS) on synthesis of CS <sub>2</sub> group by metabolism of the family Brassicaceae – Cruciferae.	

Product	Residue	Reason for MRL non compliance	Note
Turnips	Dithiocarbamates	Scientific opinion of the Phytosanitary Administration of Republic of Slovenia (PARS) on synthesis of CS2 group by metabolism of the family Brassicaceae – Cruciferae.	
Table grapes	Folpet	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Spinach	Thiametoxam (sum of thiametoxam and clothianidin expressed as thiametoxam) Clothianidin	GAP not respected: use of pesticide not authorised on the specific crop - application rate and/or application method not respected	
Pears	Permethrin (sum of isomers)	GAP not respected: use of non-authorised pesticide on all crops	
Oranges	Fenitrothion	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Spices	Carbendazim and benomyl (sum of benomyl and carbendazim expressed as carbendazim)	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Oranges	Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Scarole (broad-leaf endive)	Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	

#### 27.4. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
SI	National Institute of Public Health, Ljubljana	IPH Ljubljana	22.Aug.2003 Last update 19. Aug. 2011	SA – Ljubljana, Slovenia	- PT2011: EUPF FV13, EUPF C5, EUPF SRM6 - Aquacheck: Group 8 (Round 400, 420) Group 1H, 2H, 3 (Round 405, 417)
SI	Institute of Public Health Maribor	IPH Maribor	December 2001 Last update 19. Jun 2012	SA – Ljubljana, Slovenia	- PT2012: FAPAS 19135, EUPF C6, EUPF FV14, EUPF SRM7, EUPF FV-SM04

## **28. Spain**

### **28.1. Objective and design of the national control programme**

1. To ensure that official controls are carried out in order not to place on the market food products treated by unauthorized pesticides.
2. To ensure that official controls are carried out in order not to place on the market food products with pesticide residues levels above those established in regulations in force, so they can pose a health risk for consumers.

#### **28.1.1. Responsibilities**

The elaboration and implementation of the National Control Programme involves the following units:

1. The Directorate General of Agricultural and Livestock Resources (in Spanish, DGRAG) from Ministry of Agriculture, Environment and Food (in Spanish, MAGRAMA)
2. The competent authorities of Agriculture and Health from Autonomous Communities (ACs) (Ministries of Agriculture and Ministries of Health).
3. The Directorate General of Health Affairs of the Ministry of Health, Social Services and equal opportunities (in Spanish MSSSI)
4. The General Directorate for the Coordination of Food Alerts and Programming Official Control of Spanish Nutrition and Food Safety Agency (in Spanish AESAN).

Each unit has assigned its duties about coordination or execution within its scope.

AESAN is an autonomous body under the Ministry of Health, Social Services and Equal opportunities and acts as liaison with the Commission and the European Food Safety Authority (EFSA).

#### **28.1.2. Design of Programmes**

This National Programme is made up of three sub-programmes based on the stage of the food chain where the samples are collected:

- Primary production Sub-program, coordinated by MAGRAMA.
- Market Sub-program, coordinated by AESAN.
- Imports Sub-program, coordinated by MSSSI.

#### **28.1.3. Official Controls on residues:**

The National Pesticide Residues Control Programme integrates controls performed by the ACs. DGRAG is responsible for the co-ordination of controls ‘at origin’, while AESAN is responsible for the co-ordination of controls on the market. The programme of controls ‘at-origin’ sets a number of samples to be taken at points where farmers deliver their crops to secondary operators. Non-compliances from controls ‘at-origin’ lead to controls on farms, and increased checks during the ‘at-origin’, and marketing stages. The annual plans developed by ACs and coordinated by AESAN include monitoring of unauthorised products. The authorities plan to have a single control plan for the whole food chain.

#### **28.1.4. Criteria taken into account in program design:**

- The products listed in the Regulation concerning a coordinated multiannual Community control for 2011, 2012 and 2013, aimed at ensuring the enforcement of maximum residue limits pesticides in food of animal or plant origin and on them, and to assess the degree of consumer exposure to these residues
- Annual data on production of agricultural statistics from different Autonomous Communities (kind of crop and production).
- Consumption data of the ‘Study on diet and eating habits in the Spanish population’ by the Department of Nutrition, Faculty of Pharmacy, University Complutense of Madrid for the Nuclear Safety Council, in collaboration with the Energy, Environment and Technology Centre.
- The Spanish diet model for determining exposure to consumer chemicals.



- Food for populations at risk (baby food).
- Products with a high consumption in each region.
- RASFF notifications.
- Non compliant results obtained in previous years.

### 28.1.5. Sampling

Staff responsible for sampling is the inspectors of the Autonomous Communities.

Those samples taken at the border inspection posts/points of entry are taken by staff from the Directorate General of Health Affairs.

### 28.2. Key findings, interpretation of the results and comparability with the previous year results

- In 2011 a total of 2757 samples were analysed for pesticide residues compared to a total of 2785 samples analysed in 2010. Out of the 2757 samples, 2703 were surveillance samples and 54 were enforcement samples. Regarding sampling strategy, 95,5 % were objective, 1,9 % were suspects and 2.6 % were selective. The 1,9 % (54 samples in total) suspect samples included 10 domestic samples and 44 samples from Third Countries, mainly fruits and vegetables.
- In 2011, 2.1 % of the samples analysed shown pesticide residues levels exceeding the EC-MRL , compared with 2.6 % of the samples which exceeded EC-MRL in 2010.
- Some new detection methods were implemented in Spanish laboratories in order to increase the number of pesticide residues measured and to bring down some of their Detection Limit.
- Most of the samples were analysed by multiresidue's methods.
- The methods used were: High Performance Liquid Chromatography (HPLC)/Liquid Chromatography (LC), Mass Spectroscopy and hyphenated methods without chromatography, Gas chromatography (GC), GC hyphenated methods, GC-(P)FPD, GC with standard detection methods, GC-ECD, GC-FID, GC-MS, GC-MS-MS, HG-(CT)GC-AFS, HPLC/LC hyphenated methods, HPLC with standard detection methods, HPLC-MS-MS, HPLC-UV, LC-MS, LC-MS/MS, Nuclear magnetic resonance (NMR) and Electron Spin Resonance (ESR), Organoleptic (sensoric) food tests, Traditional analytical techniques (wet chemical tests) and some other methods not included in EFSA catalogues.
- All the labs have procedures to estimate analytical uncertainty which is taken into account to decide any enforcement action. Document SANCO/2009/10684 is also considered.
- In 2011, 88 % of the analytical determinations were performed in accredited labs. The main objective remains to reach 100 %.

### 28.3. Non-compliant samples: possible reasons, ARfD exceedances and actions taken

- The total number of samples in the Co-ordinate Programme and the National Spanish Programme 2011 was 2,757; 1,721 (62,5 %) samples were taken from fruits, vegetables and other plant products, 204 (7,4 %) from processed product, 46 (1,7 %) from fish products, 80 (2,9 %) from cereals, 207 (7,5 %) from baby food, 499 (18 %) from animal products.
- 1.5 % of the samples (40 samples in total) were found non-complaint with the EU MRL. For fruits, vegetables and other plant products the number of samples that exceeded the MLRs was 36 (2.1 %), for animal products was 2 (0,4 %), for baby food 2 (1,0 %). No samples for cereals, fish products and processed products were above the MRL. Out of the 40 samples non-compliant, 31 were from domestic production and 9 were imported samples.
- Pesticides found above the MLRs were:
  - In/on fresh or frozen fruit: Dicofol (sum), Dimethoate, Tetradifon, Phosmet, Imazalil, Cypermethrin, Procymidone, Carbendazim and Benomyl, Malathion, Dimethoate, Bifenthrin, Lambda Cyalothrin, Orthophenylphenol, Pyraclostrobin, Metamitron, Isophenphos-methyl, Methomyl, Cyproconazole.
  - In/on vegetables fresh or frozen: Glyphosate, Cypermethrin (sum), Permethrin (sum of isomers), Oxamyl, Chlorpyrifos, Dimethoate, Chlorothalonil, Iprodione, Cyproconazole, Procymidone, Chlorpyrifos methyl, Spiromesifen, Pyriproxifen, Fenhexamid, Dithiocarbamates, Carbofuran,

Myclobutalin, Thiocyclam.

- In/on baby food: Heptachloroepoxide- trans.
- In/on animal products: Hexachlorocyclohexane (HCH, alpha-isomer) and Lindane (Gamma-isomer of hexachlorocyclohexane (HCH)).

Information about samples, reason for MRL non-compliance and actions taken regarding non compliant samples are given at the tables below: (Table 1 and 2)

**Table 1- Action taken**

Number of non-compliant samples	Action taken	Note
8	<i>Warnings</i>	Samples codes:
		11ES300-000000007290
		11ES300-000000007284
		11ES300-000000007270
		11ES300-000000007239
		11ES300-000000006659
		11ES111-000000005894
		11ES111-000000005893
3	<i>Warnings and administrative sanctions</i>	11ES521-000000006531
		Samples codes:
		11ES300-000000007252
		11ES111-000000005895
2	<i>RASFF notification</i>	11ES611-000000005394
		Sample code:
		11ES212-000000006267
		RASFF ref: 2011.0323
2	<i>No action taken</i>	11ES213-000000006239
		RASFF ref: 2011.0324
		11ES418-000000005706
		11ES521-000000006553
25	<i>Others*</i> <i>*Special follow</i> <i>*Official sampling</i> <i>*Communication to the Competent Authority of sample's origin</i>	11ESZZZ-000000007871
		11ESZZZ-000000007853
		11ESZZZ-000000007840
		11ESZZZ-000000007797
		11ESZZZ-000000007743
		11ESZZZ-000000007619
		11ES521-000000007163
		11ES523-000000007159
		11ES521-000000007142
		11ES521-000000007141
		11ES620-000000007107
		11ES620-000000007096
		11ES243-000000007072
		11ES243-000000007057
		11ES243-000000007063
		11ES620-000000006958
		11ES523-000000006945
		11ES523-000000006895
		11ES618-000000005577
		11ES617-000000005557
		11ES614-000000005501
		11ES220-000000007348
		11ES220-000000007393
		11ES431-000000008074
		11ES511-000000005998

**Table 2: Reason for MRL non compliance.**

Product	Residue	Reason for MRL non compliance / Notes
Dill	Chlorpyrifos	Bad practice
Coriander	Procymidone	Bad practice
Parsley	Procymidone	Bad practice
Spinach	Dimethoate	Bad practice
Potatoes	Chlorpyrifos	Bad practice
Apples	Dicofol (sum of p, p' and o,p' isomers). Dimethoate. Tetradifon	Incorrect use, e.g. use of too concentrated solution and incorrect dosage.
Apples	Dicofol (sum of p, p' and o, p' isomers). Dimethoate. Tetradifon	Incorrect use, e.g. use of too concentrated solution and incorrect dosage.
Spinach	Dimethoate	Bad practice. Note: Pesticide used in other crops into de farm, cross-contamination due to poor cleaning of application equipment.
Onions	Fenhexamid	Incorrect use, e.g. use of too concentrated solution and incorrect dosage.
Tomatoes	Thiocyclam	Bad practice
Baby food for infants and young children.	Heptachlorepoxyde, trans-	Drift
Baby food for infants and young children.	Heptachlorepoxyde, trans-	Drift
Poultry — chicken, geese, duck, turkey and Guinea fowl — ostrich, pigeon Meat	Ethoxyquin	Change in EU MRLs
Borages	Carbofuran. Myclobutanil	Pesticide misuses
Borages	Iprodione	Pesticide misuses
Peppers	Permethrin (sum of isomers)	Pesticide misuses
Beans (with pods)	Chlorpyrifos	Pesticide misuses
Dry Lentils	Glyphosate	Pesticide misuses
Peppers	Cypermethrin (Cypermethrin including other mixtures of constituent isomers (sum of isomers))	Pesticide misuses
Lemons	Imazalil	Pesticide misuses
Melons	Procymidone	Pesticide misuses
Pears	Orthophenylphenol	Bad Practices
Pears	Imazalil	Bad Practices
Cucumbers	Chlorpyrifos	Bad Practices
Cucumbers	Chlorpyrifos	Bad Practices
Oranges	Dimethoate	Incorrect use, e.g. use of too concentrated solution and incorrect dosage.
Celery	Iprodione	Pesticide misuses
Swiss chard	Dimethoate	Pesticide misuses
Artichoke	Chlorothalonil, Pyriproxifen	Incorrect use, e.g. use of too concentrated solution and incorrect dosage.
Apples	Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	Bad practices
Beans (with pods)	Oxamyl	Bad practices
Pears	Isofenphos-methyl	Bad practices
Pears	Isofenphos-methyl	Bad practices
Pears	Metamitron	Bad practices
Lettuce	Chlorothalonil	Bad practices
Pears	Procymidone	Bad practices
Meat	Lindane	Drift
Swiss chard	Chlorothalonil	Bad practices
Oranges	Malathion	Bad practices
Oranges	Carbendazim and Benomyl	Pesticide misuses

The table 3 includes the information available regarding risk assessment (ARfD exceedance):

**Table 3:** ARfD exceedance

Pesticide	Crop	Sample number	Sample origin	Residue level (mg/kg)	ARfD (mg/kg bw)	ARfD %	Model used	RASFF notification
Metamitron	Pears	11ES614-000000005501	Spain	0.49	0.1	32.1	PRIMO	
Methomyl	Pears	11ES617-000000005557	Spain	0.047	0.0025	123.1	PRIMO	
Heptachlor-epoxide, trans-	Baby food for infants and young children	11ES213-000000006239	Spain	0.013	0.0001	240	PRIMO	2011.0324
Heptachlor-epoxide, trans-	Baby food for infants and young children	11ES212-000000006267	Germany	0.009	0.0001	170	PRIMO	2011.0323
Chlorpyrifos	Potatoes	11ES300-000000006659	France	0.52	0.1	15.5	PRIMO	
Chlorothalonil	Artichokes	11ES620-000000006958	Spain	1.60	0.6	0.5	PRIMO	
Myclobutanil	Borage	11ES243-000000007057	Spain	0.075	0.31	0.2	PRIMO	
Carbofuran	Borage	11ES243-000000007057	Spain	0.075	0.00015	370.9	PRIMO	
Iprodione	Borage	11ES243-000000007063	Spain	0.93	0.06	11.5	PRIMO	
Dimethoate	Swiss chard	11ES243-000000007072	Spain	0.27	0.01	19	PRIMO	
Dimethoate	Oranges	11ES620-000000007107	Spain	0.041	0.01		PRIMO	
Dimethoate	Spinach	11ES300-000000007239	Spain	0.04	0.01	9	PRIMO	
Dimethoate	Spinach	11ES300-000000007252	Spain	1.4	0.01	125.1	PRIMO	
Procymidone	Parsley	11ES300-000000007270	Spain	0.06	0.012	0.4	PRIMO	
Procymidone	Coriander	11ES300-000000007284	Spain	0.06	0.012	2.9	PRIMO	
Lindane	Meat	11ES431-000000008074	Spain	0.051	0.06	1.1	PRIMO	
Chlorpyrifos	Dill	11ES300-000000007290	Spain	0.38	0.1	2.2	PRIMO	
Pyriproxifen	Artichokes	11620-000000006958	Spain	0.056	10		PRIMO	

#### 28.4. Quality assurance (Table 4)

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
ES	Labs & technological Services AGQ, S.L.	Labs & technological Services AGQ, S.L.	19.01.07	ENAC n° exp 305/LE1323	FAPAS, Test-Qual, EUPT
ES	Laboratorio Tecnológico de las Palmas de Gran Canarias (Gobierno de Canarias)	Laboratorio Tecnológico de las Palmas de Gran Canarias (Gobierno de Canarias)	yes	ENAC n° exp 937/LE 1845	FAPAS, EUPT
ES	Laboratorios ECOSUR, S.A.L.	Laboratorios ECOSUR, S.A.L.	14.03.03	ENAC n° exp 354/LE709	FAPAS, Test-Qual, EUPT
ES	Laboratorio Regional de la Dirección General de Salud Pública de la Región de Murcia	Laboratorio Regional de la Dirección General de Salud Pública de la Región de Murcia	Unaccredited		

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
ES	Laboratorio Regional de la Comunidad Autónoma de La Rioja	Laboratorio Regional de la Comunidad Autónoma de La Rioja	Unaccredited		FAPAS, EUPT
ES	Laboratorio Oficial de Salud Pública de la Delegación de Salud y Bienestar Social de Cuenca	Laboratorio Oficial de Salud Pública de la Delegación de Salud y Bienestar Social de Cuenca	2.12.11	ENAC nº exp 952/LE 1862	FAPAS
ES	Laboratorio KUDAM S.L	Laboratorio KUDAM S.L	24.05.02	ENAC nº exp 324/LE670	FAPAS, Test-Qual
ES	Laboratorio de Salud Pública de Valencia	Laboratorio de Salud Pública de Valencia	Unaccredited		FAPAS, EUPT
ES	Laboratorio de Salud Pública de Palma de Mallorca	Laboratorio de Salud Pública de Palma de Mallorca	Unaccredited		FAPAS, EUPT
ES	Laboratorio de Salud Pública de Almería (Junta de Andalucía)	Laboratorio de Salud Pública de Almería (Junta de Andalucía)	27.03.09	ENAC nº exp 480/LE568	FAPAS, EUPT, Test-Qual
ES	Laboratorio de la Agencia de Salud Pública de Barcelona (LASPB)	Laboratorio de la Agencia de Salud Pública de Barcelona (LASPB)	27.06.03	ENAC nº exp 227/LE459	FAPAS, EUPT, Test-Qual
ES	Laboratorio COEXPHAL de El Viso (Almería)	Laboratorio COEXPHAL de El Viso (Almería)	16.02.01	ENAC nº exp 254/LE537	FAPAS, Test-Qual
ES	Laboratorio Arbitral Agroalimentario (Madrid) MARM	Laboratorio Arbitral Agroalimentario (Madrid) MARM	19.11.10	ENAC nº exp 181/LE390	FAPAS, EUPT, Test-Qual
ES	Laboratorio Agroalimentario y de Sanidad Animal (LAYSA) de Murcia	Laboratorio Agroalimentario y de Sanidad Animal (LAYSA) de Murcia	16.10.09	ENAC nº exp 745/LE1502	FAPAS, EUPT, Test-Qual
ES	Laboratorio Agroalimentario de Zaragoza	Laboratorio Agroalimentario de Zaragoza	18.12.09	ENAC nº exp 758/LE1462	EUPT
ES	Laboratorio Agroalimentario de Burjasot-Valencia (Comunidad Valenciana)	Laboratorio Agroalimentario de Burjasot-Valencia (Comunidad Valenciana)	22.10.99	ENAC nº exp 184/LE405	FAPAS, EUPT, Test-Qual
ES	Laboratorio Agrario y Fitopatológico de Galicia	Laboratorio Agrario y Fitopatológico de Galicia	Unaccredited		EUPT, Test-Qual
ES	Laboratorio Agrario de Villava-Navarra NASERSA	Laboratorio Agrario de Villava-Navarra / NASERSA	31.07.09	ENAC nº exp 641/LE1375	FAPAS, EUPT, Test-Qual
ES	Laboratorio de Salud Pública de Badajoz	Laboratorio de Salud Pública de Badajoz	Unaccredited		EUPT
ES	Laboratorio de Salud Pública Madrid Salud. Ayuntamiento de Madrid	Laboratorio de Salud Pública Madrid Salud. Ayuntamiento de Madrid	04.01.06	ENAC nº esp 215/LE/406	EUPT, Test-Qual
ES	Analytica Alimentaria GmbH Sucursal en España	Analytica Alimentaria GmbH Sucursal en España		DAKKS nº exp D-PL-14156-01-00	Test-Qual

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
ES	Laboratorio Químico Microbiológico S.A. de Mairena de Aljarafe, Sevilla.	Laboratorio Químico Microbiológico S.A. de Mairena de Aljarafe, Sevilla.	16.12.05	ENAC nº exp 498/LE/767	FAPAS, Test-Qual
ES	Laboratorio Analítico bioclínico S.L.	Laboratorio Analítico bioclínico S.L.		ENAC nº exp 493/LE1019 y 493/LE1255	FAPAS
ES	Agroalimentario APPLUS Norcontrol S.L.U (Madrid)	Agroalimentario APPLUS Norcontrol S.L.U (Madrid)	20.01.06	ENAC nº exp 76/LE221	FAPAS, Test-Qual
ES	Laboratorio AGRAMA S.L.	Laboratorio AGRAMA S.L.	28.12.06	ENAC nº exp 423/LE1170	FAPAS

## **29. Sweden**

### **29.1. Objective and design of the national control programme**

NFA uses a score method for the selection of the products to be included annually or intermittently in the national control programme. Twenty of the products with the highest scores will be included each year and the remaining products will be included in a frequency of every three years.

The criteria of setting plus and minus scores are based on consumption rate, the importance of the foodstuff in the diets of infants and young children, residues found in prior samples, RASFF notifications, edible or inedible peel, processing or not processing etc.

The sampling distribution between the origins of the food was roughly 30 % domestic, 30 % EU and 40 % from third country.

The sampling points for fresh fruits and vegetables were sampled at wholesalers' warehouses in the first trade channel. The imported cereal grains were sampled at the port where the shipment was discharged. Samples of domestic produced cereal grains were collected at the milling plants. Most of the samples of processed or frozen fruit and vegetables, juices, fruit drinks, rice, cereal products and vegetable oils were collected in retail shops or department stores.

The number of samples from the organic sector was roughly dependent on its share of the market and availability on the market.

All samples were analysed by multi-residue method, depending on the use pattern of pesticides and the products to be analysed we complement the multi residue method by using one or more single residue methods. Overall we used 16 analytical methods. In all, by using both multi-residue methods and single residue methods it was possible to determine 339 pesticides corresponding to 444 analytes. Compared with 2010 we have increased the scoop with 23 new analytes. The priority given to new analytes has been to supplementing those pesticides which have a residue definition and to incorporate the pesticides included in the Multiannual control programme

### **29.2. Key findings, interpretation of the results and comparability with the previous year results**

In 2011, a total of 1 661 selective samples of fruits, vegetables, baby food, juices, cereal grains, poultry meat, liver, eggs and honey were analysed for residues of 339 pesticides (444 analytes). EU harmonized Maximum Residue Limits (EC-MRLs) were exceeded in 59 samples (3,5 %). The exceeding level for the selective samples have decreased by more than half compared to 2010 level of 7.9 %. The main reason is that the sampling of vegetables from Thailand is no covered by the Reg. (EC) 669/2009.

A total of 225 samples of cereal grains were analysed. Most of the samples (86 %) contained no residues but seven samples (3 %) exceeded MRLs.

No residues were found in the 45 samples of foods for infants and young children.

The suspect samples was 92 included 40 enforcement samples and 52 samples according to Regulation (EC) No 669/2009. Six (5,4 %) respectively 9 (9,8 %) of those samples contained residues above the MRLs.

The short-term intake was estimated for all pesticides with an acute reference dose (ARfD) set by EU or WHO. The calculation was based on the residue found in a selective (composite) sample and EFSA calculation model PRIMO was used. Four samples exceeding the ARfD a RASFF notification has been sent to the Commissions RASFF-team.



### 29.3. Non-compliant samples: possible reasons, ARFD exceedances and actions taken

In 2011, 2,2 % of the samples (40 samples in total) were found non-compliant<sup>17</sup> with the EU MRL. In all cases where administrative action was taken the competent authority in the country of origin was informed through their embassies

RASFF-notification was issued in four cases. Three were due to health risk and the last one because dicofol use in spinach from EU. The use of dicofol is no longer authorised in Europe

All lots from the selective sampling which were found non-compliant with the MRL were released on the market;

The following follow-up actions were taken in case of sample non-compliant with the EU MRL (measurement uncertainty taken into consideration):

Number of non compliant samples	Action taken	Note
40	Warnings and administrative sanctions	Sanctions in terms of enforcement sampling on next coming consignments from the same origin.
4	RASFF notification	Sample code:81839, RASFF ref: 2011.0135, Released on the market Sample code:82464, RASFF ref: 2011.0714, Released on the market Sample code:83203, RASFF ref: 2011.1476, Released on the market Sample code:83413, RASFF ref: 2011.1736, Not released on the market
2	RASFF notification /Lot rejected at the border	Within the frame of Reg. (EC) 669/2009

Pesticide	Crop	Sample number	Sample origin	Residue level (mg/kg)	ARFD (mg/kg bw)	ARFD %	Population exposed (worst case scenario)	Model used	RASFF notification
Procymidone	Tomatoes	81839	Morocco	0,51	0,012	247	DE-child 16,15 bw (kg)	PRIMO	2011.0135
Phosmet	Apples	83203	France	0,59	0,0045	128	UK-child 8,70 bw (kg)	PRIMO	2011.1476
Omethoate	Kale	83413	Sweden	0,20	0,002	676	NL-child 17,1bw *(kg)	PRIMO	2011.1736

Product	Residue	Reason for MRL non compliance	Note
Apple (variety: Golden Delicious)	Phosmet	GAP not respected: use of pesticide authorised on the specific crop - application rate and/or application method not respected	
Apple (variety: Red Chief)	Methomyl	GAP not respected: use of pesticide non-authorised on the specific crop	
Bananas	Carbendazim (Sum)	GAP not respected: use of pesticide non-authorised on the specific crop	
Basil	Profenofos Acephate Methamidophos	GAP not respected: use of pesticide non-authorised on the specific crop	
Basil (variety, sweet)	Dichlorvos	GAP not respected: use of pesticide non-authorised on the specific crop	
Basil (variety, sweet)	Hexaconazole	GAP not respected: use of pesticide non-authorised on the specific crop	

<sup>17</sup> If the national competent authorities consider that the measured residues in a sample, taking into account the measurement uncertainty, exceed the legal EU MRLs, the sample is considered as MRL 'non-compliant' and the competent authorities shall take enforcement measures, where permitted by national legislation.

Basil (variety, sweet)	Thiamethoxam	GAP not respected: use of pesticide non-authorised on the specific crop	
Basil (variety, sweet)	Profenofos	GAP not respected: use of pesticide non-authorised on the specific crop	
Basil (variety, sweet)	Chlorpyrifos	GAP not respected: use of pesticide non-authorised on the specific crop	
Beans (with pods)	Propargite	GAP not respected: use of pesticide non-authorised on the specific crop	
Celery leaves	Profenofos Cyproconazole	GAP not respected: use of pesticide non-authorised on the specific crop	
Coriander leaves	Hexaconazole	GAP not respected: use of pesticide non-authorised on the specific crop	
Dill	Cyfluthrin	GAP not respected: use of pesticide non-authorised on the specific crop	
Fennel	Iprodione	GAP not respected: use of pesticide non-authorised on the specific crop	
Kale	Dimethoate (Sum)	GAP not respected: use of pesticide non-authorised on the specific crop	
Mint (variety, peppermint)	Carbendazim(Sum) Cypermethrin Hexaconazole Tiophanate-methyl Chlorpyrifos	GAP not respected: use of pesticide non (except Cypermethrin) -authorised on the specific crop	
Okra	Abamectin	GAP not respected: use of pesticide non-authorised on the specific crop	
Okra	Etofenprox	GAP not respected: use of pesticide non-authorised on the specific crop	
Orange	Malathion	GAP not respected: use of pesticide non-authorised on the specific crop	
Passion fruit	Chlorothalonil	GAP not respected: use of pesticide non-authorised on the specific crop	
Passion fruit	Lambda-cyhalothrin	GAP not respected: use of pesticide non-authorised on the specific crop	
Passion fruit	Cypermethrin	GAP not respected: use of pesticide non-authorised on the specific crop	
Pears (variety; Anjou)	Bifenazate	GAP not respected: use of pesticide non-authorised on the specific crop	
Peppers (variety, kapia)	Tiophanate-methyl	GAP not respected: use of pesticide non-authorised on the specific crop	
Pomegranate	Dimethoate (Sum)	GAP not respected: use of pesticide non-authorised on the specific crop	
Preaw leaf (persicaria odorata)	Phenthoate	GAP not respected: use of pesticide non-authorised on the specific crop	
Raisin	Procymidone	GAP not respected: use of pesticide non-authorised on the specific crop	
Raisin	Procymidone	GAP not respected: use of pesticide non-authorised on the specific crop	
Rice, glutinous	Isoprothiolane	GAP not respected: use of pesticide non-authorised on the specific crop	
Spinach	Dicofol	GAP not respected: use of pesticide non-authorised.	Sample of EU origin. The use of dicofol is no longer authorised in Europe
Spinach	Clothianidin	GAP not respected: use of pesticide non-authorised on the specific crop	
Strawberries	Methomyl	GAP not respected: use of pesticide non-authorised on the specific crop	
Sweet lemon	Carbendazim (Sum)	GAP not respected: application rate and/or application method not respected	
Table grapes (Variety: Sugraone)	Captan	GAP not respected: use of pesticide non-authorised on the specific crop	
Tomatoes	Procymidone	GAP not respected: use of pesticide non-authorised on the specific crop	

## 29.4. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
SE	Eurofins Food & Agro Sweden AB	Eurofins	02/09/1991	SWEDAC	- EUPT 2011: C5, A06, FV13, SRM6, FV-SM3, EU-RL PT PCB 2011 - FAPAS 2011: Test19113-green beans Test0574-chicken Test0969-Rice Test0572-fish oil Test19122-Mixed fruit drink Test0578-olive oil Test0972-wheat flour Test19124-strawberry Test19126-cherry
SE	National Food Administration Chemistry Division 1	SLV/Kem1	02/26/2007	SWEDAC	- EUPT 2011: C5, A06, FV13, SM03

## 29.5. Additional Information

### GLOSSARY / ABBREVIATIONS

SSD	Standard Sample Description
LOQ	Analytical Limit of Quantification
LOD	Analytical Limit of Determination
MRL	Maximum Residue Level
EU	European Union
EURL	European Reference Laboratory
EFSA	European Food Safety Authority
EEA	European Economic Area
RASFF	Rapid Alert System for Food and Feed

### 30. The United Kingdom

#### 30.1. Objective and design of the national control programme

The UK national control programme is made up of surveys of commodities selected every year on the basis of an established prioritisation system.

Proposals for the programme for 2011 were reviewed by the Pesticide Residues Committee (an independent committee of experts that was later replaced by the Expert Committee on Pesticide Residues in Food) before finalisation.

Full details of the programme and supporting justification were previously provided to EFSA and the Commission. Discussion documents

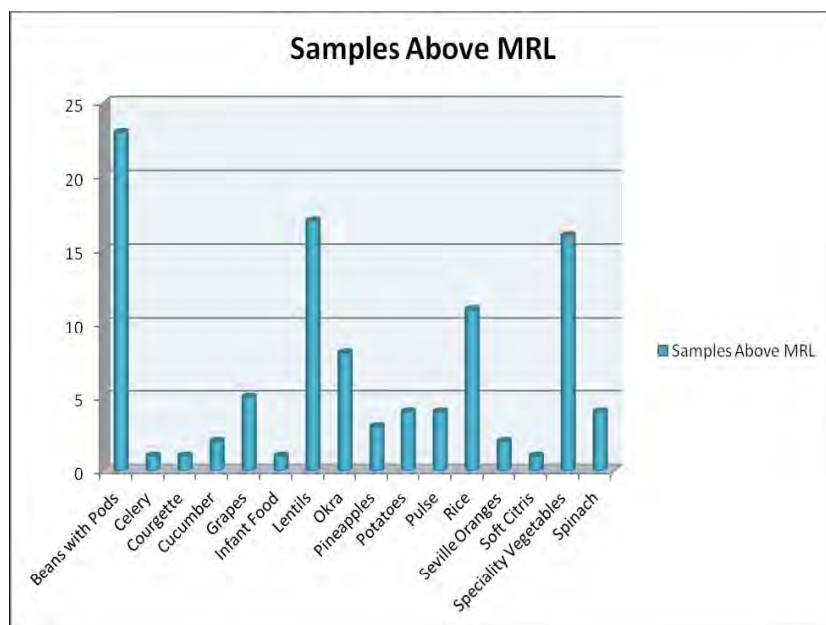
Factors of particular importance in determining surveys for this year's programme were:

- EU monitoring programme – all foods covered by the required EU monitoring for 2012 were classified as high priority for incorporation into the national programme.
- Staple foods – bread and milk are always included in the UK programme.
- Foods of high dietary importance, whether for the whole population or for vulnerable sub-groups in particular infants and children.
- Foods for which RASFF notifications were issued for pesticide residues during 2011 and/or where previous results showed a high rate of noncompliance with MRLs.
- Lower priority foods which had not been surveyed for some years
- In addition, certain foods were selected for 'rolling reporting', that is sampling by government inspectors and faster turn-around of results. An archive of these results is at: [http://www.pesticides.gov.uk/guidance/industries/pesticides/advisorygroups/PRiF/PRiF-archive/2011/Rolling\\_Reports.htm](http://www.pesticides.gov.uk/guidance/industries/pesticides/advisorygroups/PRiF/PRiF-archive/2011/Rolling_Reports.htm)
- <http://pesticides.gov.uk/prc.asp?id=2945> - however it should be noted that these are also covered by the main reports.

Only minor adjustments were made to the programme during the course of the year, which affected the balance of sample numbers between surveys and not its scope.

#### 30.2. Key findings, interpretation of the results and comparability with the previous year results

Of the 3642 samples tested 72 (1.97 %) contained one or more residues that was above the relevant MRL. Since the UK programme is made of surveys of different foods each year, it is not statistically appropriate to compare results to previous years.



The samples containing residues above the MRLs were mostly samples of fruit and vegetables except one that was 3 samples of pulses and 8 samples of rice.

[http://www.pesticides.gov.uk/guidance/industries/pesticides/advisorygroups/PRI/PRI\\_Results\\_and\\_Reports/2011\\_Results\\_and\\_Reports](http://www.pesticides.gov.uk/guidance/industries/pesticides/advisorygroups/PRI/PRI_Results_and_Reports/2011_Results_and_Reports)

Detailed interpretation of results is provided in the Pesticide Residues Committee's quarterly reports at <http://www.pesticides.gov.uk/prc.asp?id=2937>

#### ***Fresh fruit and vegetables (including potatoes)***

A total of 1926 samples were tested. Within this category residues above MRLs (without taking account of measurement uncertainty) was at 4 %, a reduction from 2011 (4.9 %) but still relatively higher than in previous years. This is attributed mostly to high rates of non-compliance in certain vegetables as discussed below.

We continued to find a relatively high percentage of samples with residues over the MRL in beans with pods, speciality vegetables and okra. In two samples of the speciality vegetable daikon, the laboratory reported residues of dithiocarbamates over the MRL using the CS2 method. However we are satisfied; these results are due to naturally occurring sulfur compounds. All three surveys are being done again in 2012.

A relatively high rate of residue above the MRL was seen in beans with pods, speciality vegetables and okra although in line with previous years. This problem is mainly found with imported foods and pesticides where LOD MRLs apply due to absence of substantive MRLs. Due to these results beans with pods, speciality vegetables and okra are being surveyed again in 2012. The speciality vegetable survey will concentrate on starchy root vegetables as these findings lead to more RASFFs.

Two samples of UK potatoes contained residues of chlorpropham over the MRL. HSE CRD as the competent authority and the UK potato industry are continuing to consider these findings.

#### ***Animal products***

Residues of trifluralin were detected in trout farmed in various locations in the UK. Trifluralin is not authorised for use in the UK however persistence in water was a known issue when it was withdrawn. We also detected trifluralin in UK trout in 2010. Then peer reviewing the results (as is standard UK practice) the UK Veterinary Medicines Directorate (competent authority for veterinary medicines) pointed out that trifluralin has been misused as a veterinary medicine outside the EU. However no evidence that the fish farms had misused trifluralin in this way was found. On balance it was concluded that these residues were most likely from environmental contamination from authorised use of trifluralin i.e. before it was withdrawn from use.

Other residues detected in animal products were consistent with either environmental contamination or veterinary use. No residues were above MRLs where applicable.

#### ***Cereals and grains***

Residues of glyphosate above the MRL were found in 7 samples of lentils and 4 samples of pulses. The samples of lentils were taken before the MRL was adjusted to take account of the use of glyphosate on lentils outside the EU.

Similarly 9 samples of rice contained residues of isopropthiolane over the MRL. This was not unexpected it was known at the time of sampling that the EU MRL did not take account of the GAP in the countries of production. It should be noted that the country of origin for pulses and grains may not be where they were grown but where they were packed for sale to consumers or the home country of the brand-owner.

Residues were detected in the majority of bread samples in line with previous findings. Residues of chlormequat are considered to arise from legitimate use of chlormequat as a PGR, whereas residues of pirimiphos-methyl and malathion to rise from legitimate use those pesticides on either stored grain or stored flour. It should be noted that the country of origin for bread is that where the bread was baked and not necessarily the origin of the flour or the grain from which the flour was milled.

#### ***Baby (infant) food***

Residues of ETU were detected in 2 samples, of which one was over the baby food MRL. No residues were detected in baby food.

### **30.3. Non-compliant samples: possible reasons and actions taken**

102 samples were found to contain 115 residues above the MRL, of which 37 samples were found to contain 54 residues in breach of the MRL after measurement uncertainty was taken into account.

Advisory letters were issued to sampling points about of residues above the MRL, in addition for those samples where residues were in breach of the MRL after measurement uncertainty in most cases these were highlighted as

non-compliant when brand name details were published (brand-name details are routinely published for all UK samples taken from the supply chain.)

RASFF notifications were prepared in respect of 14 samples. Brand name details of these samples were also published separately. A list of those samples is below.

For samples of non-UK food the appropriate authorities were also notified. For UK samples results were where possible investigated and/or referred for action under cross-compliance rules.

Reasons for non-compliance were not generally provided. In the case of glyphosate in lentils and pulses, and isoprotiolane in rice, the findings were not unexpected since it was known that the EU MRL in place at the time of sampling did not take account of GAP in the country of production. In other cases for foods from outside the EU it appeared likely, although representations were not made to this effect, that the food had been grown in accordance with local GAP for local markets that is not to a specification that was compliant with EU requirements.

All residues detected in organic samples were referred to the appropriate agriculture department and to organic certification bodies.

### ***RASFF notifications***

Sample ID	Food			Country of Origin	Pesticide Detected	Residue (mg/kg)	Detected	MRL (mg/kg)	Rapid Alert number
Beans with Pods									
3797/2011	Long beans			Dominican Republic	methomyl	0.9		0.02*	2011.0893
4002/2011	Valore beans			Keny	dimethoate	0.4		0.02**	2011.1306
					omethoate	0.5			
4103/2011	Valore beans			Kenya	Dimethoate	0.3		0.02*†	2011/1757
					Omethoate	0.3			
Courgette									
0855/2011	Courgettes			Spain	Oxamyl	0.1		0.03	2012.0200
Cucumber									
5183/2011	Cucumber			Spain	formetanate	0.2		0.05*	2011.0891
Grapes									
4551/2011	Flame Grapes	Red	Seedless	South Africa	ethephon	1.2		0.7	2011.0453
1062/2011	Grapes			Lebanon	Ethephon	1		0.07	2012.0110
1310/2011	Grapes			Namibia	Ethephon	1.4		0.07	2012.0109
Pineapples									
3507/2011	Pineapple			Ghana	chlorpyrifos	1.2		0.05*	2011.0889
3969/2011	Pineapples			Mauritius	ethephon	3.4		2	2012.0057
Potatoes									
5741/2011	Saphire Potatoes			UK	fosthiazate	0.05		0.02*	2012.0052
Speciality Vegetables									
3811/2011	Turia			Ghana	dimethoate	0.1		0.02*†	2011.0890
					omethoate	0.08			
4008/2011	Gourd Karela	(Bitter Melon)	Kenya	dimethoate	0.09		0.02*†	2012.0060	
				omethoate	0.06				
5972/2011	Prickly Pear			Italy	dimethoate	0.02		0.02**‡	2012.0026
					omethoate	0.04			

### 30.4. Quality assurance

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
GB	Food and Environment Research Agency (FERA) United Kingdom National Reference Laboratory	Fera CSL	1996	UKAS	- EUPT: FV13, C5 - FAPAS: 05-73, 09-67, 09-68, 09-70, 09-72, 19-110, 19-112, 19-115, 19-117, 19-120, 05-77
GB	Eurofins	EUAL	Accredited since 06/10/1995, reviewed and assessed annually	UKAS	- EUPT: FV13, SRM5 - FAPAS 19-09, 19-110, 19-111, 19-113, 19-118, 19-120, 19-121, 19-122
GB	LGC Ltd	LGC	1/4/1984	UKAS	- EUPT: FV13, SRM5, AO05 - FAPAS: 05-73, 05-77, 09-68, 09-70, 19-110, 19-113, 19-117, 19-118
GB	Agri-food and Biosciences Institute (AFBI)	AFBI	11/11/2010	UKAS	- EUPT: AO05 - FAPAS: 05-73
GB	Science and Advice for Scottish Agriculture (SASA)	SASA	18 July 1994	UKAS	- EUPT: FV13, SRM5 - FAPAS: 19-113, 05-72, 05-74, 05-77, 19-118

### 30.5. Additional Information

In 2010 the pesticide amitraz was found in a sample of UK pears which had been collected as part of the monitoring programme. Amitraz had not been authorised for use on pears in the UK since December 2007. The case was passed to investigators and further samples were taken. The farmer had continued to store and use amitraz even though it was no longer authorised. In 2011 the farmer was prosecuted for three separate breaches of the Control of Pesticide Regulations 1986 and ordered to pay a fine as well as costs.

During 2011 the Pesticide Residues Committee has been abolished following a UK government review of non-departmental public bodies. UK monitoring plans and results for 2011 onwards will be overseen by the Expert Committee on Pesticide Residues in Food (PRiF). The PRiF is made up of independent experts and will continue the PRC's practice of publishing regular reports about monitoring results including brand name information for all samples.



### APPENDIX III OVERALL EU-COORDINATED PROGRAMME (EUCP) RESULTS REPORTED

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**TABLE A: 2011 EU-COORDINATED PROGRAMME**

Pesticide	Residue definition according to Regulation (EC) No 396/2005 on EU MRLs <sup>(a)</sup>	Type of food <sup>(b)</sup>	Voluntary analysis
2,4-D (RD)	Sum of 2,4-D and its esters expressed as 2,4-D	P	X
Abamectin (RD)	Sum of avermectin B1a, avermectin B1b and delta-8,9 isomer of avermectin B1a	P	
Acephate		P	
Acetamiprid (RD)	For products of animal origin-terrestrial animal: acetamiprid (sum of acetamiprid and N-desmethyl-acetamiprid (IM-2-1), expressed as acetamiprid)	P	
Acrinathrin		P	
Aldicarb (RD)	Sum of aldicarb, its sulfoxide and its sulfone, expressed as aldicarb	P	
Amitraz (RD)	Amitraz including the metabolites containing the 2,4-dimethylaniline moiety expressed as amitraz	P	X
Amitrole		P	X
Azinphos-ethyl		A	X
Azinphos-methyl		P	
Azoxystrobin		P	
Benfuracarb		P	
Bifenthrin		P, A	
Bitertanol		P	
Boscalid (RD)	For products of animal origin-terrestrial animal: sum of boscalid and M 510F01 including its conjugates expressed as boscalid	P	
Bromide ion		P	Mandatory in rice and spinach
Bromopropylate		P	
Bromuconazole (RD)	Sum of diastereoisomers	P	
Bupirimate		P	
Buprofezin		P	
Captan (RD) <sup>(c)</sup>	Captan expressed as captan For products of pome fruit, strawberries, blackberries, raspberries, currants, gooseberries, tomatoes, beans (with and without pods): the sum of captan and folpet	P	
Carbaryl		P	
Carbendazim (RD)	Sum of benomyl and carbendazim expressed as carbendazim For products of animal origin-terrestrial animal: carbendazim and thiophanate-methyl, expressed as carbendazim	P	
Carbofuran (RD)	Sum of carbofuran and 3-hydroxycarbofuran expressed as carbofuran	P	
Carbosulfan		P	
Chlordane (RD)	Chlordane (sum of cis- and trans-chlordane) For products of animal origin-terrestrial animal: sum of cis- and trans-isomers and oxychlordane expressed as chlordane	A	
Chlorfenapyr		P	
Chlorfenvinphos		P	
Chlormequat		P	Mandatory in cereals (excluding rice) and pears
Chlorobenzilate		A	X
Chlorothalonil		P	

Pesticide	Residue definition according to Regulation (EC) No 396/2005 on EU MRLs <sup>(a)</sup>	Type of food <sup>(b)</sup>	Voluntary analysis
Chlorpropham (RD)	Chlorpropham (chlorpropham and 3-chloroaniline, expressed as chlorpropham) For potatoes: chlorpropham For products of animal origin-terrestrial animal: chlorpropham and 4'-hydroxychlorpropham-O-sulphonic acid (4-HSA), expressed as chlorpropham	P	
Chlorpyrifos		P, A	
Chlorpyrifos-methyl		P, A	
Clofentezine (RD)	Clofentezine expressed as clofentezine. For products of animal origin-terrestrial animal: sum of all compounds containing the 2-chlorobenzoyl moiety expressed as clofentezine	P	
Clothianidin		P	
Cyfluthrin (RD)	Cyfluthrin (cyfluthrin including other mixtures of constituent isomers (sum of isomers))	P, A	
Cypermethrin (RD)	Cypermethrin incl. other mixtures of constituent isomers (sum of isomers)	P, A	
Cyproconazole		P	
Cyprodinil (RD)	Cyprodinil expressed as cyprodinil For products of animal origin-terrestrial animal: sum cyprodinil and metabolite CGA 304075	P	
DDT (RD)	DDT (sum of p,p'-DDT, o,p'-DDT, p,p'-DDE and p,p'-TDE (DDD) expressed as DDT)	A	
Deltamethrin	Deltamethrin (cis-deltamethrin)	P, A	
Diazinon		P, A	
Dichlofluanid <sup>(d)</sup>		P	
Dichlorvos		P	
Dicloran		P	
Dicofol (RD)	Dicofol (sum of p, p' and o,p' isomers)	P	
Dicrotophos		P	Mandatory in beans
Dieldrin (RD)	Aldrin and dieldrin (aldrin and dieldrin combined expressed as dieldrin)	A	
Difenoconazole		P	
Dimethoate (RD)	Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	P	
Dimethomorph		P	
Dinocap (RD)	Dinocap (sum of dinocap isomers and their corresponding phenols expressed as dinocap)	P	X
Diphenylamine		P	
Dithiocarbamates	Maneb group (sum expressed as CS <sub>2</sub> : maneb, mancozeb, metiram, propineb, thiram, ziram)	P	
Endosulfan (RD)	Endosulfan (sum of alpha- and beta-isomers and endosulfan-sulphate expresses as endosulfan)	P, A	
Endrin		A	
EPN		P	
Epoxiconazole		P	
Esfenvalerate (RD)	Any of the following residue definitions: Fenvalerate (sum of RR, SS, RS and SR isomers) Fenvalerate and Esfenvalerate (Sum of RR	P, A	

Pesticide	Residue definition according to Regulation (EC) No 396/2005 on EU MRLs <sup>(a)</sup>	Type of food <sup>(b)</sup>	Voluntary analysis
	and SS isomers) Fenvalerate and Esfenvalerate (Sum of RS and SR isomers) Fenvalerate/Esfenvalerate (sum)		
Ethephon		P	X
Ethion		P	
Ethoprophos		P	X
Etofenprox		P	X
Fenamiphos (RD)	Fenamiphos (sum of fenamiphos and its sulfoxide and sulfone expressed as fenamiphos)	P	
Fenarimol		P	
Fenazaquin		P	
Fenbuconazole		P	
Fenbutatin oxide		P	X
Fenhexamid		P	
Fenitrothion		P	
Fenoxycarb		P	
Fenpropathrin		P	
Fenpropimorph (RD)	Fenpropimorph expressed as fenpropimorph For products of animal origin-terrestrial animal: fenpropimorph carboxylic acid (BF 421-2) expressed as fenpropimorph	P	
Fenthion (RD)	Fenthion (sum of fenthion and its oxygen analogue, their sulfoxides and sulfone expressed as fenthion)	P, A	
Fipronil (RD)	Fipronil (sum fipronil + sulfone metabolite (MB46136) expressed as fipronil)	P	
Fluazifop-P-butyl (RD)	Fluazifop-P-butyl (fluazifop acid (free and conjugate))	P	X
Fludioxonil		P	
Flufenoxuron		P	
Fluquinconazole		P	
Flusilazole (RD)	Flusilazole expressed as flusilazole. For products of animal origin-terrestrial animal: sum of flusilazole and its metabolite IN-F7321 ([bis-(4-fluorophenyl)methyl]silanol) expressed as flusilazole	P	
Flutriafol		P	
Folpet (RD) <sup>(c)</sup>	Folpet expressed as folpet. For products of pome fruit, strawberries, blackberries, raspberries, currants, gooseberries, tomatoes, beans (with and without pods): the sum of captan and folpet	P	
Formetanate (RD)	Formetanate (sum of formetanate and its salts expressed as formetanate (hydrochloride))	P	
Fosthiazate		P	
Glyphosate		P	Mandatory in cereals
Haloxypop (RD)	Haloxypop including haloxypop-R (haloxypop-R methyl ester, haloxypop-R and conjugates of haloxypop-R expressed as haloxypop-R) For products of animal origin-terrestrial animal: haloxypop-R and conjugates of haloxypop-R expressed as haloxypop-R	P	X

Pesticide	Residue definition according to Regulation (EC) No 396/2005 on EU MRLs <sup>(a)</sup>	Type of food <sup>(b)</sup>	Voluntary analysis
Heptachlor (RD)	Sum of heptachlor and heptachlor epoxide expressed as heptachlor	A	
Hexachlorobenzene		A	
Hexachlorocyclohexane (alpha)		A	
Hexachlorocyclohexane (beta)		A	
Hexaconazole		P	
Hexythiazox		P	
Imazalil		P	
Imidacloprid		P	
Indoxacarb (RD)	Indoxacarb (sum of S and R enantiomers)	P	
Iprodione		P	
Iprovalicarb		P	
Kresoxim-methyl		P	
Lambda-cyhalothrin (RD)	Lambda-cyhalothrin expressed as lambda-cyhalothrin For products of animal origin-terrestrial animal, except honey: lambda-cyhalothrin, including other mixed isomeric constituents (sum of isomers)	P	
Lindane	Hexachlorocyclohexane (gamma)	A	
Linuron		P	
Lufenuron		P	
Malathion (RD)	Malathion (sum of malathion and malaoxon expressed as malathion)	P	
Mepanipyrim (RD)	Mepanipyrim (Mepanipyrim and its metabolite (2-anilino-4(2-hydroxypropyl)-6-methylpyrimidine) expressed as mepanipyrim)	P	
Mepiquat		P	Mandatory in cereals (without rice) and pears
Metalaxyl (RD)	Metalaxyl and metalaxyl-M (metalaxyl including other mixtures of constituent isomers including metalaxyl-M (sum of isomers))	P	
Metconazole		P	
Methamidophos		P	
Methidathion		P, A	
Methiocarb (RD)	Methiocarb (sum of methiocarb and methiocarb sulfoxide and sulfone, expressed as methiocarb)	P	
Methomyl (RD)	Methomyl (sum of methomyl and thiodicarb expressed as methomyl)	P	
Methoxychlor		A	
Methoxyfenozide		P	
Monocrotophos		P	
Myclobutanil		P	
Nitenpyram		P	Mandatory in beans
Oxadixyl		P	
Oxamyl		P	
Oxydemeton-methyl (RD)	Oxydemeton-methyl (sum of oxydemeton-methyl and demeton-S-methylsulfone expressed as oxydemeton-methyl)	P	
Paclobutrazol		P	
Parathion		P, A	

Pesticide	Residue definition according to Regulation (EC) No 396/2005 on EU MRLs <sup>(a)</sup>	Type of food <sup>(b)</sup>	Voluntary analysis
Parathion-methyl (RD)	Parathion-methyl (sum of parathion-methyl and paraoxon-methyl expressed as parathion-methyl)	P, A	
Penconazole		P	
Pencycuron		P	
Pendimethalin		P	
Permethrin (RD)	Permethrin (sum of cis- and trans-permethrin)	A	
Phenthoate		P	
Phosalone		P	
Phosmet (RD)	Phosmet (phosmet and phosmet oxon expressed as phosmet) For products of animal origin-terrestrial animal, except honey: phosmet	P	
Phoxim		P	
Pirimicarb (RD)	Pirimicarb (sum of pirimicarb and desmethyl pirimicarb expressed as pirimicarb)	P	
Pirimiphos-methyl		P, A	
Prochloraz (RD)	Prochloraz (sum of prochloraz and its metabolites containing the 2,4,6-Trichlorophenol moiety expressed as prochloraz)	P	X
Procymidone		P	
Profenofos		P, A	
Propamocarb (RD)	Propamocarb (sum of propamocarb and its salt expressed as propamocarb)	P	X
Propargite		P	
Propiconazole		P	
Propyzamide (RD)	Propyzamide expressed as propyzamide For products of animal origin-terrestrial animal: sum of propyzamide and all metabolites containing the 3,5-dichlorobenzoic acid fraction expressed as propyzamide	P	
Prothioconazole (RD)	Prothioconazole (prothioconazole-desthio) For products of animal origin-terrestrial animal, except honey: sum of prothioconazole-desthio and its glucuronide conjugate, expressed as prothioconazoledesthio	P	X
Pyraclostrobin		P	
Pyrazophos		A	
Pyrethrins		P	
Pyridaben		P	
Pyrimethanil		P	
Pyriproxyfen		P	
Quinoxifen		P	
Quintozene (RD)	Quintozene (sum of quintozene and pentachloro-aniline expressed as quintozene)	A	
Resmethrin (RD)	Resmethrin (resmethrin including other mixtures of constituent isomers (sum of isomers))	A	X
Spinosad (RD)	Spinosad (sum of spinosyn A and spinosyn D, expressed as spinosad)	P	
Spiroxamine		P	
tau-Fluvalinate		P	
Tebuconazole		P	

Pesticide	Residue definition according to Regulation (EC) No 396/2005 on EU MRLs <sup>(a)</sup>	Type of food <sup>(b)</sup>	Voluntary analysis
Tebufenozide		P	
Tebufenpyrad		P	
Tecnazene		A	
Teflubenzuron		P	
Tefluthrin		P	
Tetraconazole		P	
Tetradifon		P	
Thiabendazole (RD)	Thiabendazole expressed as thiabendazole. For products of animal origin-terrestrial animal: sum of thiabendazole and 5-hydroxythiabendazole	P	
Thiacloprid		P	
Thiamethoxam (RD)	Thiamethoxam (sum of thiamethoxam and clothianidin expressed as thiamethoxam)	P	
Thiophanate-methyl		P	
Tolclofos-methyl		P	
Tolyfluanid (RD)	Tolyfluanid (sum of tolyfluanid and dimethylaminosulfotoluidide expressed as tolyfluanid) For products of animal origin-terrestrial animal: dimethylaminosulfotoluidide expressed as tolyfluanid	P	
Triadimenol (RD)	Sum of triadimefon and triadimenol	P	
Triazole acetic acid		P	X
Triazole alanine		P	X
Triazole lactic acid		P	X
Triazophos		P, A	
Trichlorfon		P	
Trifloxystrobin		P	
Triflumuron		P	
Trifluralin		P	
Triticonazole		P	
Vinclozolin (RD)	Vinclozolin (sum of vinclozolin and all metabolites containing the 3,5-dichloranilinemoiety, expressed as vinclozolin) For products of animal origin-terrestrial animal: sum of vinclozolin, iprodione, procymidone and all metabolites containing the 3,5-dichloroaniline moiety expressed as 3,5 dichloroaniline	P	Metabolites only on voluntary basis
Zoxamide		P	

(a): If not specifically mentioned the residue definition comprises the parent compound only.

(b): Sample matrix / residue definition valid for P = plant products, A = animal products

(c): The sum of Captan and Folpet was summarised as "Captan (RD) + Folpet (RD)" in the report. This is done due to the fact, that in most commodities Captan and Folpet are independent residues but in some cases (pears and beans without pods) are calculated as the sum of Captan plus Folpet. "Captan (RD) + Folpet (RD)" is not included as such in this list because it is a legal requirement to monitor Captan and Folpet separately as they are considered two different substances, despite that for enforcement on these food commodities have to be summed.

(d): For dichlofluanid, EFSA merged two different reporting populations, one for dichlofluanid as such and the other as sum of dichlofluanid and DMSA.



**TABLE B: EUCP - RESULTS BY REPORTING COUNTRY**

Country	Number of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	166	84	50.60	43.1	58.1	76	45.78	38.4	53.4	6	3.61	1.7	7.7
Belgium	159	67	42.14	34.7	49.9	89	55.97	48.2	63.5	3	1.89	0.7	5.4
Bulgaria	247	186	75.30	69.6	80.3	56	22.67	17.9	28.3	5	2.02	0.9	4.6
Cyprus	264	167	63.26	57.3	68.8	70	26.52	21.6	32.2	27	10.23	7.1	14.5
Czech Republic, The	331	157	47.43	42.1	52.8	168	50.76	45.4	56.1	6	1.81	0.9	3.9
Denmark	581	328	56.45	52.4	60.4	249	42.86	38.9	46.9	4	0.69	0.3	1.8
Estonia	162	103	63.58	55.9	70.6	54	33.33	26.5	40.9	5	3.09	1.4	7.0
Finland	216	90	41.67	35.3	48.3	125	57.87	51.2	64.3	1	0.46	0.1	2.5
France	1061	542	51.08	48.1	54.1	483	45.52	42.5	48.5	36	3.39	2.5	4.7
Germany	1898	624	32.88	30.8	35.0	1,245	65.6	63.4	67.7	29	1.53	1.1	2.2
Greece	263	192	73.00	67.3	78.0	58	22.05	17.5	27.5	13	4.94	2.9	8.3
Hungary	310	213	68.71	63.3	73.6	96	30.97	26.1	36.3	1	0.32	0.1	1.8
Iceland	62	39	62.90	50.4	73.9	22	35.48	24.7	48.0	1	1.61	0.4	8.5
Ireland	320	136	42.50	37.2	48.0	175	54.69	49.2	60.1	9	2.81	1.5	5.3
Italy	490	298	60.82	56.4	65.0	191	38.98	34.8	43.4	1	0.2	0.0	1.1
Latvia	196	144	73.47	66.9	79.2	52	26.53	20.8	33.1	0	0	0.0	1.5
Lithuania	117	61	52.14	43.1	61.0	53	45.3	36.6	54.3	3	2.56	0.9	7.3
Luxembourg	131	85	64.89	56.4	72.5	43	32.82	25.4	41.3	3	2.29	0.8	6.5
Malta	148	93	62.84	54.8	70.2	49	33.11	26.0	41.0	6	4.05	1.9	8.6
Netherlands, The	521	225	43.19	39.0	47.5	280	53.74	49.4	58.0	16	3.07	1.9	4.9
Norway	170	103	60.59	53.1	67.6	65	38.24	31.3	45.7	2	1.18	0.4	4.2
Poland	554	360	64.98	60.9	68.8	189	34.12	30.3	38.2	5	0.9	0.4	2.1
Portugal	562	355	63.17	59.1	67.1	200	35.59	31.7	39.6	7	1.25	0.6	2.5
Romania	768	598	77.86	74.8	80.7	168	21.88	19.1	24.9	2	0.26	0.1	0.9
Slovakia	159	72	45.28	37.7	53.1	77	48.43	40.8	56.2	10	6.29	3.5	11.2
Slovenia	362	191	52.76	47.6	57.9	163	45.03	40.0	50.2	8	2.21	1.1	4.3
Spain	1,125	533	47.38	44.5	50.3	575	51.11	48.2	54.0	17	1.51	1.0	2.4
Sweden	297	175	58.92	53.2	64.4	113	38.05	32.7	43.7	9	3.03	1.6	5.7
United Kingdom, The	1,036	550	53.09	50.0	56.1	476	45.95	42.9	49.0	10	0.97	0.5	1.8
<b>Total</b>	<b>12,676</b>	<b>6,771</b>	<b>53.42</b>	<b>52.5</b>	<b>54.3</b>	<b>5,660</b>	<b>44.65</b>	<b>43.8</b>	<b>45.5</b>	<b>245</b>	<b>1.93</b>	<b>1.7</b>	<b>2.2</b>

(a): Lower confidence limit; (b): Upper confidence limit

**TABLE C: EUCP – RESULTS BY PESTICIDES ANALYSED**

Compound	Number of samples <sup>(a)</sup>	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>
2,4-D (RD)	2,102	2,044	97.24	96.4	97.9	58	2.76	2.1	3.6	0	0.00	0.0	0.1
Abamectin (RD)	4,472	4,471	99.98	99.9	100.0	1	0.02	0.0	0.1	0	0.00	0.0	0.1
Acephate	9,778	9,777	99.99	99.9	100.0	0	0.00	0.0	0.0	1	0.01	0.0	0.1
Acetamiprid (RD)	9,548	9,450	98.97	98.8	99.2	88	0.92	0.7	1.1	10	0.10	0.1	0.2
Acrinathrin	9,036	9,024	99.87	99.8	99.9	11	0.12	0.1	0.2	1	0.01	0.0	0.1
Aldicarb (RD)	7,453	7,453	100.00	100.0	100.0	0	0.00	0.0	0.0	0	0.00	0.0	0.0
Amitraz (RD)	3,987	3,987	100.00	99.9	100.0	0	0.00	0.0	0.1	0	0.00	0.0	0.1
Amitrole	804	804	100.00	99.6	100.0	0	0.00	0.0	0.4	0	0.00	0.0	0.4
Azinphos-ethyl	1,034	1,034	100.00	99.7	100.0	0	0.00	0.0	0.3	0	0.00	0.0	0.3
Azinphos-methyl	10,147	10,140	99.93	99.9	100.0	7	0.07	0.0	0.1	0	0.00	0.0	0.0
Azoxystrobin	10,498	10,253	97.67	97.4	97.9	242	2.31	2.0	2.6	3	0.03	0.0	0.1
Benfuracarb	5,876	5,875	99.98	99.9	100.0	1	0.02	0.0	0.1	0	0.00	0.0	0.1
Bifenthrin	11,722	11,681	99.65	99.5	99.7	39	0.33	0.2	0.5	2	0.02	0.0	0.1
Bitertanol	8,972	8,961	99.88	99.8	99.9	11	0.12	0.1	0.2	0	0.00	0.0	0.0
Boscalid (RD)	9,320	8,675	93.08	92.5	93.6	642	6.89	6.4	7.4	3	0.03	0.0	0.1
Bromide ion	1,679	1,068	63.61	61.3	65.9	601	35.80	33.5	38.1	10	0.60	0.3	1.1
Bromopropylate	10,315	10,314	99.99	99.9	100.0	0	0.00	0.0	0.0	1	0.01	0.0	0.1
Bromuconazole (RD)	7,284	7,284	100.00	100.0	100.0	0	0.00	0.0	0.0	0	0.00	0.0	0.0
Bupirimate	10,160	10,154	99.94	99.9	100.0	6	0.06	0.0	0.1	0	0.00	0.0	0.0
Buprofezin	10,242	10,216	99.75	99.6	99.8	26	0.25	0.2	0.4	0	0.00	0.0	0.0
Captan (RD)	5,620	5,615	99.91	99.8	100.0	4	0.07	0.0	0.2	1	0.02	0.0	0.1
Captan (RD)+Folpet (RD) <sup>(d)</sup>	885	794	89.72	87.5	91.5	91	10.28	8.5	12.5	0	0.00	0.0	0.3
Carbaryl	9,840	9,834	99.94	99.9	100.0	1	0.01	0.0	0.1	5	0.05	0.0	0.1
Carbendazim (RD)	8,256	8,081	97.88	97.5	98.2	157	1.90	1.6	2.2	18	0.22	0.1	0.3
Carbofuran (RD)	7,850	7,841	99.89	99.8	99.9	9	0.11	0.1	0.2	0	0.00	0.0	0.0
Carbosulfan	7,176	7,175	99.99	99.9	100.0	1	0.01	0.0	0.1	0	0.00	0.0	0.0
Chlordane (RD)	781	781	100.00	99.6	100.0	0	0.00	0.0	0.4	0	0.00	0.0	0.4
Chlorfenapyr	7,599	7,596	99.96	99.9	100.0	2	0.03	0.0	0.1	1	0.01	0.0	0.1
Chlorfenvinphos	10,076	10,074	99.98	99.9	100.0	2	0.02	0.0	0.1	0	0.00	0.0	0.0
Chlormequat	1,075	842	78.33	75.8	80.7	228	21.21	18.9	23.8	5	0.47	0.2	1.1

Compound	Number of samples <sup>(a)</sup>	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>
Chlorobenzilate	1,073	1,073	100.00	99.7	100.0	0	0.00	0.0	0.3	0	0.00	0.0	0.3
Chlorothalonil	10,015	9,922	99.07	98.9	99.2	92	0.92	0.8	1.1	1	0.01	0.0	0.1
Chlorpropham (RD)	7,269	7,040	96.85	96.4	97.2	226	3.11	2.7	3.5	3	0.04	0.0	0.1
Chlorpyrifos	11,668	10,352	88.72	88.1	89.3	1,294	11.09	10.5	11.7	22	0.19	0.1	0.3
Chlorpyrifos-methyl	11,772	11,586	98.42	98.2	98.6	186	1.58	1.4	1.8	0	0.00	0.0	0.0
Clofentezine (RD)	7,047	7,042	99.93	99.8	100.0	5	0.07	0.0	0.2	0	0.00	0.0	0.0
Clothianidin	2,345	2,329	99.32	98.9	99.6	13	0.55	0.3	1.0	3	0.13	0.0	0.4
Cyfluthrin (RD)	8,945	8,945	100.00	100.0	100.0	0	0.00	0.0	0.0	0	0.00	0.0	0.0
Cypermethrin (RD)	10,531	10,439	99.13	98.9	99.3	85	0.81	0.7	1.0	7	0.07	0.0	0.1
Cyproconazole	9,776	9,768	99.92	99.8	100.0	7	0.07	0.0	0.2	1	0.01	0.0	0.1
Cyprodinil (RD)	9,973	9,657	96.83	96.5	97.2	316	3.17	2.8	3.5	0	0.00	0.0	0.0
DDT (RD)	1,199	1,176	98.08	97.1	98.7	23	1.92	1.3	2.9	0	0.00	0.0	0.3
Deltamethrin	11,488	11,351	98.81	98.6	99.0	136	1.18	1.0	1.4	1	0.01	0.0	0.1
Diazinon	11,863	11,859	99.97	99.9	100.0	1	0.01	0.0	0.1	3	0.03	0.0	0.1
Dichlofluanid	9,877	9,877	100.00	100.0	100.0	0	0.00	0.0	0.0	0	0.00	0.0	0.0
Dichlorvos	9,955	9,953	99.98	99.9	100.0	1	0.01	0.0	0.1	1	0.01	0.0	0.1
Dicloran	9,292	9,291	99.99	99.9	100.0	1	0.01	0.0	0.1	0	0.00	0.0	0.0
Dicofol (RD)	8,739	8,724	99.83	99.7	99.9	15	0.17	0.1	0.3	0	0.00	0.0	0.0
Dicrotophos	543	543	100.00	99.5	100.0	0	0.00	0.0	0.6	0	0.00	0.0	0.6
Dieldrin (RD)	875	868	99.20	98.4	99.6	7	0.80	0.4	1.6	0	0.00	0.0	0.3
Difenoconazole	9,994	9,874	98.80	98.6	99.0	120	1.20	1.0	1.4	0	0.00	0.0	0.0
Dimethoate (RD)	8,424	8,396	99.67	99.5	99.8	17	0.20	0.1	0.3	11	0.13	0.1	0.2
Dimethomorph	8,857	8,775	99.07	98.9	99.3	77	0.87	0.7	1.1	5	0.06	0.0	0.1
Dinocap (RD)	1,871	1,871	100.00	99.8	100.0	0	0.00	0.0	0.2	0	0.00	0.0	0.2
Diphenylamine	9,499	9,392	98.87	98.6	99.1	107	1.13	0.9	1.4	0	0.00	0.0	0.0
Dithiocarbamates (RD)	5,988	5,321	88.86	88.0	89.6	638	10.65	9.9	11.5	29	0.48	0.3	0.7
EPN	6,377	6,377	100.00	100.0	100.0	0	0.00	0.0	0.1	0	0.00	0.0	0.1
Endosulfan (RD)	11,097	11,074	99.79	99.7	99.9	20	0.18	0.1	0.3	3	0.03	0.0	0.1
Endrin	1,283	1,283	100.00	99.8	100.0	0	0.00	0.0	0.2	0	0.00	0.0	0.2
Epoxiconazole	9,349	9,345	99.96	99.9	100.0	3	0.03	0.0	0.1	1	0.01	0.0	0.1
Esfenvalerate (RD)	1,464	1,464	100.00	99.8	100.0	0	0.00	0.0	0.2	0	0.00	0.0	0.2
Ethephon	1,231	1,204	97.81	96.8	98.5	27	2.19	1.5	3.2	0	0.00	0.0	0.2

Compound	Number of samples <sup>(a)</sup>	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>
Ethion	10,184	10,183	99.99	99.9	100.0	0	0.00	0.0	0.0	1	0.01	0.0	0.1
Ethoprophos	8,434	8,433	99.99	99.9	100.0	0	0.00	0.0	0.0	1	0.01	0.0	0.1
Etofenprox	7,362	7,324	99.48	99.3	99.6	38	0.52	0.4	0.7	0	0.00	0.0	0.0
Fenamiphos (RD)	6,070	6,067	99.95	99.9	100.0	2	0.03	0.0	0.1	1	0.02	0.0	0.1
Fenarimol	9,626	9,626	100.00	100.0	100.0	0	0.00	0.0	0.0	0	0.00	0.0	0.0
Fenazaquin	8,431	8,418	99.85	99.7	99.9	12	0.14	0.1	0.3	1	0.01	0.0	0.1
Fenbuconazole	8,529	8,526	99.96	99.9	100.0	3	0.04	0.0	0.1	0	0.00	0.0	0.0
Fenbutatin oxide	3,698	3,674	99.35	99.0	99.6	23	0.62	0.4	0.9	1	0.03	0.0	0.2
Fenhexamid	10,204	10,166	99.63	99.5	99.7	38	0.37	0.3	0.5	0	0.00	0.0	0.0
Fenitrothion	10,240	10,239	99.99	99.9	100.0	0	0.00	0.0	0.0	1	0.01	0.0	0.1
Fenoxycarb	8,992	8,942	99.44	99.3	99.6	50	0.56	0.4	0.7	0	0.00	0.0	0.0
Fenpropathrin	9,428	9,417	99.88	99.8	99.9	11	0.12	0.1	0.2	0	0.00	0.0	0.0
Fenpropimorph (RD)	8,221	8,220	99.99	99.9	100.0	1	0.01	0.0	0.1	0	0.00	0.0	0.0
Fenthion (RD)	8,201	8,198	99.96	99.9	100.0	3	0.04	0.0	0.1	0	0.00	0.0	0.0
Fipronil (RD)	5,971	5,967	99.93	99.8	100.0	0	0.00	0.0	0.1	4	0.07	0.0	0.2
Fluazifop-P-butyl (RD)	3,667	3,655	99.67	99.4	99.8	12	0.33	0.2	0.6	0	0.00	0.0	0.1
Fludioxonil	9,655	9,460	97.98	97.7	98.2	195	2.02	1.8	2.3	0	0.00	0.0	0.0
Flufenoxuron	7,728	7,706	99.72	99.6	99.8	22	0.28	0.2	0.4	0	0.00	0.0	0.0
Fluquinconazole	8,490	8,489	99.99	99.9	100.0	1	0.01	0.0	0.1	0	0.00	0.0	0.0
Flusilazole (RD)	9,052	9,048	99.96	99.9	100.0	4	0.04	0.0	0.1	0	0.00	0.0	0.0
Flutriafol	8,495	8,478	99.80	99.7	99.9	16	0.19	0.1	0.3	1	0.01	0.0	0.1
Folpet (RD)	5,031	5,027	99.92	99.8	100.0	3	0.06	0.0	0.2	1	0.02	0.0	0.1
Formetanate (RD)	4,635	4,628	99.85	99.7	99.9	5	0.11	0.0	0.3	2	0.04	0.0	0.2
Fosthiazate	6,522	6,517	99.92	99.8	100.0	3	0.05	0.0	0.1	2	0.03	0.0	0.1
Glyphosate	475	464	97.68	95.9	98.7	11	2.32	1.3	4.1	0	0.00	0.0	0.6
Haloxifop (RD)	2,621	2,621	100.00	99.9	100.0	0	0.00	0.0	0.1	0	0.00	0.0	0.1
Heptachlor (RD)	904	904	100.00	99.7	100.0	0	0.00	0.0	0.3	0	0.00	0.0	0.3
Hexachlorobenzene	1,246	1,241	99.60	99.1	99.8	5	0.40	0.2	0.9	0	0.00	0.0	0.2
Hexachlorocyclohexane	989	988	99.90	99.4	100.0	1	0.10	0.0	0.6	0	0.00	0.0	0.3
Hexachlorocyclohexane	952	952	100.00	99.7	100.0	0	0.00	0.0	0.3	0	0.00	0.0	0.3
Hexaconazole	9,816	9,807	99.91	99.8	100.0	6	0.06	0.0	0.1	3	0.03	0.0	0.1
Hexythiazox	9,156	9,087	99.25	99.0	99.4	69	0.75	0.6	1.0	0	0.00	0.0	0.0

Compound	Number of samples <sup>(a)</sup>	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>
Imazalil	10,330	8,808	85.27	84.6	85.9	1,506	14.58	13.9	15.3	16	0.15	0.1	0.3
Imidacloprid	9,171	8,885	96.88	96.5	97.2	284	3.10	2.8	3.5	2	0.02	0.0	0.1
Indoxacarb (RD)	8,109	8,059	99.38	99.2	99.5	49	0.60	0.5	0.8	1	0.01	0.0	0.1
Iprodione	9,605	9,340	97.24	96.9	97.5	256	2.67	2.4	3.0	9	0.09	0.0	0.2
Iprovalicarb	9,447	9,445	99.98	99.9	100.0	2	0.02	0.0	0.1	0	0.00	0.0	0.0
Kresoxim-methyl	10,237	10,223	99.86	99.8	99.9	13	0.13	0.1	0.2	1	0.01	0.0	0.1
Lambda-Cyhalothrin (RD)	9,669	9,496	98.21	97.9	98.5	172	1.78	1.5	2.1	1	0.01	0.0	0.1
Lindane	1,228	1,224	99.67	99.2	99.9	4	0.33	0.1	0.8	0	0.00	0.0	0.2
Linuron	8,678	8,525	98.24	97.9	98.5	150	1.73	1.5	2.0	3	0.03	0.0	0.1
Lufenuron	7,628	7,617	99.86	99.7	99.9	11	0.14	0.1	0.3	0	0.00	0.0	0.0
Malathion (RD)	9,282	9,253	99.69	99.6	99.8	22	0.24	0.2	0.4	7	0.08	0.0	0.2
Mepanipyrim (RD)	6,176	6,176	100.00	100.0	100.0	0	0.00	0.0	0.1	0	0.00	0.0	0.1
Mepiquat	979	979	100.00	99.7	100.0	0	0.00	0.0	0.3	0	0.00	0.0	0.3
Metalaxyl (RD)	8,181	8,085	98.83	98.6	99.0	95	1.16	1.0	1.4	1	0.01	0.0	0.1
Metconazole	7,336	7,336	100.00	100.0	100.0	0	0.00	0.0	0.0	0	0.00	0.0	0.0
Methamidophos	9,693	9,692	99.99	99.9	100.0	0	0.00	0.0	0.0	1	0.01	0.0	0.1
Methidathion	11,071	11,046	99.77	99.7	99.8	24	0.22	0.1	0.3	1	0.01	0.0	0.1
Methiocarb (RD)	8,062	8,051	99.86	99.8	99.9	11	0.14	0.1	0.2	0	0.00	0.0	0.0
Methomyl (RD)	7,965	7,953	99.85	99.7	99.9	4	0.05	0.0	0.1	8	0.10	0.1	0.2
Methoxychlor	1,041	1,041	100.00	99.7	100.0	0	0.00	0.0	0.3	0	0.00	0.0	0.3
Methoxyfenozide	7,314	7,234	98.91	98.6	99.1	80	1.09	0.9	1.4	0	0.00	0.0	0.0
Monocrotophos	9,753	9,753	100.00	100.0	100.0	0	0.00	0.0	0.0	0	0.00	0.0	0.0
Myclobutanil	10,232	10,173	99.42	99.3	99.6	59	0.58	0.4	0.7	0	0.00	0.0	0.0
Nitenpyram	467	467	100.00	99.4	100.0	0	0.00	0.0	0.6	0	0.00	0.0	0.6
Oxadixyl	9,020	9,019	99.99	99.9	100.0	0	0.00	0.0	0.0	1	0.01	0.0	0.1
Oxamyl	9,385	9,375	99.89	99.8	99.9	2	0.02	0.0	0.1	8	0.09	0.0	0.2
Oxydemeton-methyl (RD)	7,520	7,520	100.00	100.0	100.0	0	0.00	0.0	0.0	0	0.00	0.0	0.0
Paclobutrazol	7,712	7,705	99.91	99.8	100.0	7	0.09	0.0	0.2	0	0.00	0.0	0.0
Parathion	11,244	11,244	100.00	100.0	100.0	0	0.00	0.0	0.0	0	0.00	0.0	0.0
Parathion-methyl (RD)	9,316	9,316	100.00	100.0	100.0	0	0.00	0.0	0.0	0	0.00	0.0	0.0
Penconazole	10,443	10,419	99.77	99.7	99.8	23	0.22	0.1	0.3	1	0.01	0.0	0.1
Pencycuron	8,344	8,319	99.70	99.6	99.8	22	0.26	0.2	0.4	3	0.04	0.0	0.1

Compound	Number of samples <sup>(a)</sup>	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>
Pendimethalin	9,689	9,645	99.55	99.4	99.7	44	0.45	0.3	0.6	0	0.00	0.0	0.0
Permethrin (RD)	1,237	1,237	100.00	99.8	100.0	0	0.00	0.0	0.2	0	0.00	0.0	0.2
Phenthoate	8,379	8,379	100.00	100.0	100.0	0	0.00	0.0	0.0	0	0.00	0.0	0.0
Phosalone	10,392	10,386	99.94	99.9	100.0	6	0.06	0.0	0.1	0	0.00	0.0	0.0
Phosmet (RD)	9,291	9,242	99.47	99.3	99.6	47	0.51	0.4	0.7	2	0.02	0.0	0.1
Phoxim	6,358	6,357	99.98	99.9	100.0	1	0.02	0.0	0.1	0	0.00	0.0	0.1
Pirimicarb (RD)	7,914	7,871	99.46	99.3	99.6	42	0.53	0.4	0.7	1	0.01	0.0	0.1
Pirimiphos-methyl	11,532	11,282	97.83	97.5	98.1	249	2.16	1.9	2.4	1	0.01	0.0	0.1
Prochloraz (RD)	5,073	5,011	98.78	98.4	99.0	62	1.22	1.0	1.6	0	0.00	0.0	0.1
Procymidone	10,480	10,463	99.84	99.7	99.9	12	0.11	0.1	0.2	5	0.05	0.0	0.1
Profenofos	10,979	10,973	99.95	99.9	100.0	5	0.05	0.0	0.1	1	0.01	0.0	0.1
Propamocarb (RD)	6,221	5,891	94.70	94.1	95.2	328	5.27	4.7	5.9	2	0.03	0.0	0.1
Propargite	9,278	9,232	99.50	99.3	99.6	43	0.46	0.3	0.6	3	0.03	0.0	0.1
Propiconazole	9,628	9,596	99.67	99.5	99.8	31	0.32	0.2	0.5	1	0.01	0.0	0.1
Propyzamide (RD)	9,956	9,953	99.97	99.9	100.0	3	0.03	0.0	0.1	0	0.00	0.0	0.0
Prothioconazole (RD)	2,737	2,737	100.00	99.9	100.0	0	0.00	0.0	0.1	0	0.00	0.0	0.1
Pyraclostrobin	8,493	8,249	97.13	96.7	97.5	239	2.81	2.5	3.2	5	0.06	0.0	0.1
Pyrazophos	1,023	1,023	100.00	99.7	100.0	0	0.00	0.0	0.3	0	0.00	0.0	0.3
Pyrethrins	4,994	4,992	99.96	99.9	100.0	2	0.04	0.0	0.1	0	0.00	0.0	0.1
Pyridaben	9,102	9,074	99.69	99.6	99.8	28	0.31	0.2	0.4	0	0.00	0.0	0.0
Pyrimethanil	9,895	9,603	97.05	96.7	97.4	292	2.95	2.6	3.3	0	0.00	0.0	0.0
Pyriproxyfen	8,806	8,558	97.18	96.8	97.5	248	2.82	2.5	3.2	0	0.00	0.0	0.0
Quinoxifen	9,400	9,400	100.00	100.0	100.0	0	0.00	0.0	0.0	0	0.00	0.0	0.0
Quintozene (RD)	846	846	100.00	99.6	100.0	0	0.00	0.0	0.4	0	0.00	0.0	0.4
Resmethrin (RD)	797	797	100.00	99.6	100.0	0	0.00	0.0	0.4	0	0.00	0.0	0.4
Spinosad (RD)	7,171	7,118	99.26	99.0	99.4	51	0.71	0.5	0.9	2	0.03	0.0	0.1
Spiroxamine	8,895	8,895	100.00	100.0	100.0	0	0.00	0.0	0.0	0	0.00	0.0	0.0
Tau-Fluvalinate	6,777	6,769	99.88	99.8	99.9	6	0.09	0.0	0.2	2	0.03	0.0	0.1
Tebuconazole	10,316	10,102	97.93	97.6	98.2	214	2.07	1.8	2.4	0	0.00	0.0	0.0
Tebufenozide	9,396	9,364	99.66	99.5	99.8	32	0.34	0.2	0.5	0	0.00	0.0	0.0
Tebufenpyrad	9,125	9,068	99.38	99.2	99.5	57	0.62	0.5	0.8	0	0.00	0.0	0.0
Tecnazene	946	946	100.00	99.7	100.0	0	0.00	0.0	0.3	0	0.00	0.0	0.3

Compound	Number of samples <sup>(a)</sup>	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number	%	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>
Teflubenzuron	7,679	7,660	99.75	99.6	99.8	16	0.21	0.1	0.3	3	0.04	0.0	0.1
Tefluthrin	6,992	6,984	99.89	99.8	99.9	7	0.10	0.0	0.2	1	0.01	0.0	0.1
Tetraconazole	9,002	8,995	99.92	99.8	100.0	7	0.08	0.0	0.2	0	0.00	0.0	0.0
Tetradifon	9,645	9,643	99.98	99.9	100.0	2	0.02	0.0	0.1	0	0.00	0.0	0.0
Thiabendazole (RD)	9,846	9,186	93.30	92.8	93.8	657	6.67	6.2	7.2	3	0.03	0.0	0.1
Thiacloprid	8,559	8,361	97.69	97.3	98.0	191	2.23	1.9	2.6	7	0.08	0.0	0.2
Thiamethoxam (RD)	6,391	6,367	99.62	99.4	99.7	21	0.33	0.2	0.5	3	0.05	0.0	0.1
Thiophanate-methyl	8,684	8,651	99.62	99.5	99.7	31	0.36	0.3	0.5	2	0.02	0.0	0.1
Tolclofos-methyl	10,152	10,148	99.96	99.9	100.0	4	0.04	0.0	0.1	0	0.00	0.0	0.0
Tolylfluanid (RD)	6,591	6,591	100.00	100.0	100.0	0	0.00	0.0	0.1	0	0.00	0.0	0.1
Triadimenol (RD)	9,194	9,184	99.89	99.8	99.9	9	0.10	0.1	0.2	1	0.01	0.0	0.1
Triazophos	11,318	11,317	99.99	100.0	100.0	1	0.01	0.0	0.1	0	0.00	0.0	0.0
Trichlorfon	6,984	6,984	100.00	100.0	100.0	0	0.00	0.0	0.0	0	0.00	0.0	0.0
Trifloxystrobin	10,092	10,020	99.29	99.1	99.4	72	0.71	0.6	0.9	0	0.00	0.0	0.0
Triflumuron	7,052	7,039	99.82	99.7	99.9	13	0.18	0.1	0.3	0	0.00	0.0	0.0
Trifluralin	9,278	9,263	99.84	99.7	99.9	15	0.16	0.1	0.3	0	0.00	0.0	0.0
Triticonazole	8,231	8,231	100.00	100.0	100.0	0	0.00	0.0	0.0	0	0.00	0.0	0.0
Vinclozolin (RD)	9,973	9,971	99.98	99.9	100.0	2	0.02	0.0	0.1	0	0.00	0.0	0.0
Zoxamide	8,210	8,210	100.00	100.0	100.0	0	0.00	0.0	0.0	0	0.00	0.0	0.0
<b>Total</b>	<b>1,339,214</b>	<b>1,326,861</b>	<b>99.08</b>	<b>99.1</b>	<b>99.1</b>	<b>12,073</b>	<b>0.90</b>	<b>0.9</b>	<b>0.9</b>	<b>280</b>	<b>0.02</b>	<b>0.0</b>	<b>0.0</b>

(a): Number of times the pesticide was sought in individual samples. For pesticides with complex residue definitions as some of the reporting countries did not analyse for all individual components covered by the residue definition, the numbers for samples fully compliant with the residue definition and those which only cover part of the residue definition were aggregated. Total: Total number of determinations.

(b): Lower confidence limit; (c): Upper confidence limit

(d): The sum of captan and folpet were summed to 'Captan (RD) + Folpet (RD)' for those food products of 2011 EUCP (pears, beans without pods) that the legal residue definition is the sum of both substances.



**TABLE D: EUCP - RESULTS BY COMMODITY AND REPORTING COUNTRY**

**BEANS WITH PODS**

Country	Number of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	14	6	42.86	21.3	67.7	7	50.00	26.6	73.4	1	7.14	1.7	31.9
Belgium	13	3	23.08	8.4	50.8	10	76.92	49.2	91.6	0	0.00	0.0	19.3
Bulgaria	27	23	85.19	67.3	93.9	3	11.11	4.0	28.2	1	3.70	0.9	18.3
Cyprus	27	12	44.44	27.5	62.8	7	25.93	13.2	44.9	8	29.63	15.9	48.7
Czech Republic	22	11	50.00	30.6	69.4	10	45.45	26.8	65.5	1	4.55	1.1	21.9
Denmark	44	20	45.45	31.7	60.0	22	50.00	35.8	64.2	2	4.55	1.4	15.1
Estonia	13	6	46.15	23.0	71.1	6	46.15	23.0	71.1	1	7.69	1.8	33.9
Finland	9	6	66.67	34.8	87.8	3	33.33	12.2	65.2	0	0.00	0.0	25.9
France	61	30	49.18	37.0	61.4	28	45.90	34.0	58.3	3	4.92	1.8	13.5
Germany	183	41	22.40	17.0	29.0	136	74.32	67.5	80.1	6	3.28	1.5	7.0
Greece	17	10	58.82	35.7	78.5	5	29.41	13.3	53.5	2	11.76	3.6	34.7
Hungary	10	10	100.00	76.2	100.0	0	0.00	0.0	23.8	0	0.00	0.0	23.8
Ireland	15	4	26.67	11.0	52.4	8	53.33	29.9	75.3	3	20.00	7.3	45.6
Italy	15	14	93.33	69.8	98.4	1	6.67	1.6	30.2	0	0.00	0.0	17.1
Latvia	2	2	100.00	36.8	100.0	0	0.00	0.0	63.2	0	0.00	0.0	63.2
Lithuania	13	11	84.62	57.2	95.3	2	15.38	4.7	42.8	0	0.00	0.0	19.3
Luxembourg	16	11	68.75	44.0	85.8	4	25.00	10.3	49.9	1	6.25	1.5	28.7
Malta	15	12	80.00	54.4	92.7	3	20.00	7.3	45.6	0	0.00	0.0	17.1
Netherlands	48	20	41.67	28.8	55.8	24	50.00	36.3	63.7	4	8.33	3.4	19.6
Norway	15	11	73.33	47.6	89.0	4	26.67	11.0	52.4	0	0.00	0.0	17.1
Poland	52	32	61.54	47.9	73.5	20	38.46	26.5	52.1	0	0.00	0.0	5.5
Portugal	62	37	59.68	47.2	71.0	24	38.71	27.6	51.2	1	1.61	0.4	8.5
Romania	37	34	91.89	78.6	97.1	3	8.11	2.9	21.4	0	0.00	0.0	7.6
Slovakia	16	7	43.75	23.0	67.1	8	50.00	27.8	72.2	1	6.25	1.5	28.7
Slovenia	30	16	53.33	36.0	69.8	12	40.00	24.5	57.8	2	6.67	2.0	21.4
Spain	90	69	76.67	66.9	84.2	19	21.11	14.0	30.7	2	2.22	0.7	7.7
Sweden	24	12	50.00	31.3	68.7	11	45.83	27.8	65.1	1	4.17	1.0	20.4
United Kingdom	97	62	63.92	54.0	72.8	35	36.08	27.2	46.0	0	0.00	0.0	3.0
<b>Total</b>	<b>987</b>	<b>532</b>	<b>53.90</b>	<b>50.8</b>	<b>57.0</b>	<b>415</b>	<b>42.05</b>	<b>39.0</b>	<b>45.2</b>	<b>40</b>	<b>4.05</b>	<b>3.0</b>	<b>5.5</b>

(a): Lower confidence limit; (b): Upper confidence limit

### CARROTS

Country	No. of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	16	9	56.25	32.9	77.0	5	31.25	14.2	56.0	2	12.50	3.8	36.4
Belgium	15	5	33.33	15.2	58.7	10	66.67	41.3	84.8	0	0.00	0.0	17.1
Bulgaria	21	14	66.67	45.1	82.8	6	28.57	13.9	50.2	1	4.76	1.1	22.8
Cyprus	27	18	66.67	47.6	81.4	8	29.63	15.9	48.7	1	3.70	0.9	18.3
Czech Republic	42	18	42.86	29.1	57.9	24	57.14	42.1	70.9	0	0.00	0.0	6.7
Denmark	59	56	94.92	86.1	98.2	3	5.08	1.8	13.9	0	0.00	0.0	4.9
Estonia	15	12	80.00	54.4	92.7	3	20.00	7.3	45.6	0	0.00	0.0	17.1
Finland	18	7	38.89	20.3	61.6	11	61.11	38.4	79.7	0	0.00	0.0	14.6
France	108	56	51.85	42.5	61.1	49	45.37	36.3	54.8	3	2.78	1.0	7.8
Germany	209	60	28.71	23.0	35.2	148	70.81	64.3	76.6	1	0.48	0.1	2.6
Greece	21	16	76.19	54.6	89.3	4	19.05	7.8	40.3	1	4.76	1.1	22.8
Hungary	23	11	47.83	29.1	67.2	12	52.17	32.8	70.9	0	0.00	0.0	11.7
Iceland	13	13	100.00	80.7	100.0	0	0.00	0.0	19.3	0	0.00	0.0	19.3
Ireland	19	10	52.63	31.5	72.8	9	47.37	27.2	68.5	0	0.00	0.0	13.9
Italy	55	44	80.00	67.6	88.4	11	20.00	11.6	32.4	0	0.00	0.0	5.2
Latvia	20	11	55.00	34.0	74.3	9	45.00	25.7	66.0	0	0.00	0.0	13.3
Lithuania	15	11	73.33	47.6	89.0	4	26.67	11.0	52.4	0	0.00	0.0	17.1
Luxembourg	15	11	73.33	47.6	89.0	4	26.67	11.0	52.4	0	0.00	0.0	17.1
Malta	15	9	60.00	35.4	80.2	6	40.00	19.8	64.6	0	0.00	0.0	17.1
Netherlands	59	23	38.98	27.6	51.8	32	54.24	41.6	66.3	4	6.78	2.8	16.2
Norway	15	8	53.33	29.9	75.3	7	46.67	24.7	70.1	0	0.00	0.0	17.1
Poland	50	32	64.00	50.1	75.9	17	34.00	22.4	47.9	1	2.00	0.5	10.4
Portugal	68	49	72.06	60.4	81.3	17	25.00	16.3	36.5	2	2.94	0.9	10.1
Romania	66	56	84.85	74.3	91.5	9	13.64	7.4	24.0	1	1.52	0.4	8.0
Slovakia	15	4	26.67	11.0	52.4	9	60.00	35.4	80.2	2	13.33	4.0	38.3
Slovenia	40	34	85.00	70.8	92.8	6	15.00	7.2	29.2	0	0.00	0.0	7.0
Spain	65	53	81.54	70.4	89.1	12	18.46	10.9	29.6	0	0.00	0.0	4.4
Sweden	20	7	35.00	18.1	57.0	13	65.00	43.0	81.9	0	0.00	0.0	13.3
United Kingdom	96	42	43.75	34.2	53.7	54	56.25	46.3	65.8	0	0.00	0.0	3.0
<b>Total</b>	<b>1,220</b>	<b>699</b>	<b>57.30</b>	<b>54.5</b>	<b>60.0</b>	<b>502</b>	<b>41.15</b>	<b>38.4</b>	<b>43.9</b>	<b>19</b>	<b>1.56</b>	<b>1.0</b>	<b>2.4</b>

(a): Lower confidence limit; (b): Upper confidence limit

### CUCUMBERS

Country	Number of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	15	4	26.67	11.0	52.4	11	73.33	47.6	89.0	0	0.00	0.0	17.1
Belgium	15	5	33.33	15.2	58.7	10	66.67	41.3	84.8	0	0.00	0.0	17.1
Bulgaria	18	12	66.67	43.4	83.7	6	33.33	16.3	56.6	0	0.00	0.0	14.6
Cyprus	27	21	77.78	59.0	89.3	6	22.22	10.7	41.0	0	0.00	0.0	10.1
Czech Republic	49	14	28.57	17.9	42.5	32	65.31	51.2	77.1	3	6.12	2.2	16.5
Denmark	63	28	44.44	32.8	56.7	35	55.56	43.3	67.2	0	0.00	0.0	4.6
Estonia	15	8	53.33	29.9	75.3	7	46.67	24.7	70.1	0	0.00	0.0	17.1
Finland	22	4	18.18	7.5	38.8	18	81.82	61.2	92.5	0	0.00	0.0	12.2
France	101	61	60.40	50.6	69.4	35	34.65	26.1	44.4	5	4.95	2.2	11.1
Germany	197	73	37.06	30.6	44.0	122	61.93	55.0	68.4	2	1.02	0.3	3.6
Greece	52	40	76.92	63.8	86.2	10	19.23	10.8	32.0	2	3.85	1.2	13.0
Hungary	14	6	42.86	21.3	67.7	8	57.14	32.3	78.7	0	0.00	0.0	18.1
Iceland	11	9	81.82	51.6	94.5	2	18.18	5.5	48.4	0	0.00	0.0	22.1
Ireland	16	11	68.75	44.0	85.8	5	31.25	14.2	56.0	0	0.00	0.0	16.2
Italy	42	31	73.81	58.8	84.7	11	26.19	15.3	41.2	0	0.00	0.0	6.7
Latvia	21	16	76.19	54.6	89.3	5	23.81	10.7	45.4	0	0.00	0.0	12.7
Lithuania	14	6	42.86	21.3	67.7	7	50.00	26.6	73.4	1	7.14	1.7	31.9
Luxembourg	17	11	64.71	41.0	82.7	6	35.29	17.3	59.0	0	0.00	0.0	15.3
Malta	14	4	28.57	11.8	55.1	6	42.86	21.3	67.7	4	28.57	11.8	55.1
Netherlands	65	32	49.23	37.4	61.1	32	49.23	37.4	61.1	1	1.54	0.4	8.2
Norway	15	8	53.33	29.9	75.3	7	46.67	24.7	70.1	0	0.00	0.0	17.1
Poland	60	26	43.33	31.5	55.9	32	53.33	40.8	65.4	2	3.33	1.0	11.3
Portugal	56	41	73.21	60.3	83.0	15	26.79	17.0	39.7	0	0.00	0.0	5.1
Romania	92	69	75.00	65.2	82.7	23	25.00	17.3	34.8	0	0.00	0.0	3.2
Slovakia	14	6	42.86	21.3	67.7	5	35.71	16.3	61.6	3	21.43	7.8	48.1
Slovenia	43	22	51.16	36.7	65.4	21	48.84	34.6	63.3	0	0.00	0.0	6.6
Spain	78	51	65.38	54.3	75.0	24	30.77	21.6	41.8	3	3.85	1.4	10.7
Sweden	18	7	38.89	20.3	61.6	11	61.11	38.4	79.7	0	0.00	0.0	14.6
United Kingdom	96	42	43.75	34.2	53.7	54	56.25	46.3	65.8	0	0.00	0.0	3.0
<b>Total</b>	<b>1,260</b>	<b>668</b>	<b>53.02</b>	<b>50.3</b>	<b>55.8</b>	<b>566</b>	<b>44.92</b>	<b>42.2</b>	<b>47.7</b>	<b>26</b>	<b>2.06</b>	<b>1.4</b>	<b>3.0</b>

(a): Lower confidence limit; (b): Upper confidence limit

### MANDARINS

Country	No. of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	3	0	0.00	0.0	52.7	3	100.00	47.3	100.0	0	0.00	0.0	52.7
Bulgaria	20	10	50.00	29.8	70.2	10	50.00	29.8	70.2	0	0.00	0.0	13.3
Cyprus	9	8	88.89	55.5	97.5	1	11.11	2.5	44.5	0	0.00	0.0	25.9
Czech Republic	18	1	5.56	1.3	26.0	16	88.89	66.9	96.6	1	5.56	1.3	26.0
Denmark	59	6	10.17	4.8	20.5	53	89.83	79.5	95.2	0	0.00	0.0	4.9
Estonia	7	0	0.00	0.0	31.2	7	100.00	68.8	100.0	0	0.00	0.0	31.2
Finland	23	1	4.35	1.0	21.1	22	95.65	78.9	99.0	0	0.00	0.0	11.7
France	67	12	17.91	10.6	28.8	53	79.10	67.9	87.1	2	2.99	0.9	10.2
Greece	3	1	33.33	6.8	80.6	2	66.67	19.4	93.2	0	0.00	0.0	52.7
Hungary	14	4	28.57	11.8	55.1	10	71.43	44.9	88.2	0	0.00	0.0	18.1
Ireland	65	1	1.54	0.4	8.2	60	92.31	83.2	96.6	4	6.15	2.5	14.8
Italy	41	14	34.15	21.6	49.5	26	63.41	48.0	76.4	1	2.44	0.6	12.6
Latvia	4	1	25.00	5.3	71.6	3	75.00	28.4	94.7	0	0.00	0.0	45.1
Lithuania	5	1	20.00	4.3	64.1	4	80.00	35.9	95.7	0	0.00	0.0	39.3
Luxembourg	4	2	50.00	14.7	85.3	1	25.00	5.3	71.6	1	25.00	5.3	71.6
Malta	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Netherlands	61	0	0.00	0.0	4.7	60	98.36	91.3	99.6	1	1.64	0.4	8.7
Norway	11	0	0.00	0.0	22.1	11	100.00	77.9	100.0	0	0.00	0.0	22.1
Poland	16	0	0.00	0.0	16.2	16	100.00	83.8	100.0	0	0.00	0.0	16.2
Portugal	16	7	43.75	23.0	67.1	9	56.25	32.9	77.0	0	0.00	0.0	16.2
Romania	41	20	48.78	34.2	63.6	21	51.22	36.4	65.8	0	0.00	0.0	6.9
Slovakia	7	0	0.00	0.0	31.2	6	85.71	47.3	96.8	1	14.29	3.2	52.7
Slovenia	30	3	10.00	3.6	25.8	27	90.00	74.2	96.4	0	0.00	0.0	9.2
Spain	200	29	14.50	10.3	20.1	171	85.50	79.9	89.7	0	0.00	0.0	1.5
Sweden	24	0	0.00	0.0	11.3	23	95.83	79.6	99.0	1	4.17	1.0	20.4
United Kingdom	107	0	0.00	0.0	2.7	107	100.00	97.3	100.0	0	0.00	0.0	2.7
<b>Total</b>	<b>856</b>	<b>122</b>	<b>14.25</b>	<b>12.1</b>	<b>16.8</b>	<b>722</b>	<b>84.35</b>	<b>81.8</b>	<b>86.6</b>	<b>12</b>	<b>1.40</b>	<b>0.8</b>	<b>2.4</b>

(a): Lower confidence limit; (b): Upper confidence limit

### ORANGES

Country	Number of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	13	1	7.69	1.8	33.9	12	92.31	66.1	98.2	0	0.00	0.0	19.3
Belgium	15	1	6.67	1.6	30.2	14	93.33	69.8	98.4	0	0.00	0.0	17.1
Bulgaria	18	11	61.11	38.4	79.7	6	33.33	16.3	56.6	1	5.56	1.3	26.0
Cyprus	18	14	77.78	54.4	90.9	3	16.67	6.1	39.6	1	5.56	1.3	26.0
Czech Republic	23	4	17.39	7.1	37.4	19	82.61	62.6	92.9	0	0.00	0.0	11.7
Denmark	58	3	5.17	1.9	14.1	54	93.10	83.5	97.2	1	1.72	0.4	9.1
Estonia	8	0	0.00	0.0	28.3	6	75.00	40.0	92.5	2	25.00	7.5	60.0
Finland	29	0	0.00	0.0	9.5	28	96.55	82.8	99.2	1	3.45	0.8	17.2
France	112	18	16.07	10.4	24.0	84	75.00	66.2	82.1	10	8.93	5.0	15.7
Germany	358	41	11.45	8.6	15.2	312	87.15	83.3	90.2	5	1.40	0.6	3.2
Greece	26	20	76.92	57.7	88.9	5	19.23	8.6	38.1	1	3.85	0.9	19.0
Hungary	31	0	0.00	0.0	8.9	31	100.00	91.1	100.0	0	0.00	0.0	8.9
Iceland	15	0	0.00	0.0	17.1	14	93.33	69.8	98.4	1	6.67	1.6	30.2
Ireland	39	3	7.69	2.8	20.4	35	89.74	76.3	95.8	1	2.56	0.6	13.2
Italy	84	25	29.76	21.0	40.3	59	70.24	59.7	79.0	0	0.00	0.0	3.5
Latvia	16	4	25.00	10.3	49.9	12	75.00	50.1	89.7	0	0.00	0.0	16.2
Lithuania	8	0	0.00	0.0	28.3	8	100.00	71.7	100.0	0	0.00	0.0	28.3
Luxembourg	11	1	9.09	2.1	38.5	9	81.82	51.6	94.5	1	9.09	2.1	38.5
Malta	14	8	57.14	32.3	78.7	6	42.86	21.3	67.7	0	0.00	0.0	18.1
Netherlands	73	1	1.37	0.3	7.3	69	94.52	86.7	97.8	3	4.11	1.5	11.4
Norway	4	0	0.00	0.0	45.1	4	100.00	54.9	100.0	0	0.00	0.0	45.1
Poland	30	4	13.33	5.5	29.8	26	86.67	70.2	94.5	0	0.00	0.0	9.2
Portugal	48	29	60.42	46.2	73.0	17	35.42	23.4	49.6	2	4.17	1.3	14.0
Romania	99	50	50.51	40.8	60.2	49	49.49	39.8	59.2	0	0.00	0.0	3.0
Slovakia	10	0	0.00	0.0	23.8	10	100.00	76.2	100.0	0	0.00	0.0	23.8
Slovenia	30	3	10.00	3.6	25.8	26	86.67	70.2	94.5	1	3.33	0.8	16.7
Spain	249	47	18.88	14.5	24.2	200	80.32	74.9	84.8	2	0.80	0.2	2.9
Sweden	20	0	0.00	0.0	13.3	18	90.00	69.6	97.0	2	10.00	3.0	30.4
United Kingdom	2	0	0.00	0.0	63.2	1	50.00	9.4	90.6	1	50.00	9.4	90.6
<b>Total</b>	<b>1,461</b>	<b>288</b>	<b>19.71</b>	<b>17.8</b>	<b>21.8</b>	<b>1,137</b>	<b>77.82</b>	<b>75.6</b>	<b>79.9</b>	<b>36</b>	<b>2.46</b>	<b>1.8</b>	<b>3.4</b>

(a): Lower confidence limit; (b): Upper confidence limit

### PEARS

Country	Number of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	16	1	6.25	1.5	28.7	15	93.75	71.3	98.5	0	0.00	0.0	16.2
Belgium	15	2	13.33	4.0	38.3	13	86.67	61.7	96.0	0	0.00	0.0	17.1
Bulgaria	26	18	69.23	49.8	83.5	7	26.92	13.8	46.3	1	3.85	0.9	19.0
Cyprus	29	12	41.38	25.5	59.4	17	58.62	40.6	74.5	0	0.00	0.0	9.5
Czech Republic	34	15	44.12	28.8	60.6	19	55.88	39.4	71.2	0	0.00	0.0	8.2
Denmark	56	20	35.71	24.4	48.9	36	64.29	51.1	75.6	0	0.00	0.0	5.1
Estonia	15	13	86.67	61.7	96.0	2	13.33	4.0	38.3	0	0.00	0.0	17.1
Finland	23	6	26.09	12.6	46.7	17	73.91	53.3	87.4	0	0.00	0.0	11.7
France	110	27	24.55	17.5	33.4	80	72.73	63.7	80.2	3	2.73	1.0	7.7
Germany	216	18	8.33	5.4	12.8	197	91.20	86.7	94.3	1	0.46	0.1	2.5
Greece	24	13	54.17	34.9	72.2	10	41.67	24.4	61.3	1	4.17	1.0	20.4
Hungary	21	4	19.05	7.8	40.3	17	80.95	59.7	92.2	0	0.00	0.0	12.7
Iceland	9	3	33.33	12.2	65.2	6	66.67	34.8	87.8	0	0.00	0.0	25.9
Ireland	36	11	30.56	18.0	47.0	25	69.44	53.0	82.0	0	0.00	0.0	7.8
Italy	64	27	42.19	30.8	54.4	37	57.81	45.6	69.2	0	0.00	0.0	4.5
Latvia	21	13	61.90	40.7	79.3	8	38.10	20.7	59.3	0	0.00	0.0	12.7
Lithuania	15	5	33.33	15.2	58.7	10	66.67	41.3	84.8	0	0.00	0.0	17.1
Luxembourg	15	4	26.67	11.0	52.4	11	73.33	47.6	89.0	0	0.00	0.0	17.1
Malta	15	1	6.67	1.6	30.2	14	93.33	69.8	98.4	0	0.00	0.0	17.1
Netherlands	35	7	20.00	10.1	36.0	28	80.00	64.0	89.9	0	0.00	0.0	8.0
Norway	15	7	46.67	24.7	70.1	8	53.33	29.9	75.3	0	0.00	0.0	17.1
Poland	90	29	32.22	23.5	42.5	61	67.78	57.5	76.5	0	0.00	0.0	3.2
Portugal	67	19	28.36	19.0	40.1	48	71.64	59.9	81.0	0	0.00	0.0	4.3
Romania	80	53	66.25	55.3	75.7	27	33.75	24.3	44.7	0	0.00	0.0	3.6
Slovakia	15	0	0.00	0.0	17.1	14	93.33	69.8	98.4	1	6.67	1.6	30.2
Slovenia	59	9	15.25	8.3	26.6	48	81.36	69.6	89.2	2	3.39	1.0	11.5
Spain	99	46	46.46	36.9	56.3	48	48.48	38.9	58.2	5	5.05	2.2	11.3
Sweden	26	4	15.38	6.3	33.7	21	80.77	61.9	91.4	1	3.85	0.9	19.0
United Kingdom	118	11	9.32	5.3	15.9	107	90.68	84.1	94.7	0	0.00	0.0	2.5
<b>Total</b>	<b>1,364</b>	<b>398</b>	<b>29.18</b>	<b>26.8</b>	<b>31.6</b>	<b>951</b>	<b>69.72</b>	<b>67.2</b>	<b>72.1</b>	<b>15</b>	<b>1.10</b>	<b>0.7</b>	<b>1.8</b>

(a): Lower confidence limit; (b): Upper confidence limit

## POTATOES

Country	Number of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	15	13	86.67	61.7	96.0	2	13.33	4.0	38.3	0	0.00	0.0	17.1
Belgium	15	3	20.00	7.3	45.6	12	80.00	54.4	92.7	0	0.00	0.0	17.1
Bulgaria	22	14	63.64	42.7	80.3	8	36.36	19.7	57.3	0	0.00	0.0	12.2
Cyprus	27	26	96.30	81.7	99.1	0	0.00	0.0	10.1	1	3.70	0.9	18.3
Czech Republic	55	37	67.27	54.0	78.2	18	32.73	21.8	46.0	0	0.00	0.0	5.2
Denmark	59	58	98.31	91.1	99.6	1	1.69	0.4	8.9	0	0.00	0.0	4.9
Estonia	15	10	66.67	41.3	84.8	5	33.33	15.2	58.7	0	0.00	0.0	17.1
Finland	21	16	76.19	54.6	89.3	5	23.81	10.7	45.4	0	0.00	0.0	12.7
France	127	87	68.50	60.0	75.9	39	30.71	23.4	39.2	1	0.79	0.2	4.3
Germany	200	103	51.50	44.6	58.3	97	48.50	41.7	55.4	0	0.00	0.0	1.5
Greece	31	27	87.10	71.0	94.7	3	9.68	3.5	25.0	1	3.23	0.8	16.2
Hungary	19	15	78.95	56.3	91.3	4	21.05	8.7	43.7	0	0.00	0.0	13.9
Iceland	14	14	100.00	81.9	100.0	0	0.00	0.0	18.1	0	0.00	0.0	18.1
Ireland	50	40	80.00	66.9	88.7	10	20.00	11.3	33.1	0	0.00	0.0	5.7
Italy	62	39	62.90	50.4	73.9	23	37.10	26.1	49.6	0	0.00	0.0	4.6
Latvia	20	18	90.00	69.6	97.0	2	10.00	3.0	30.4	0	0.00	0.0	13.3
Lithuania	17	11	64.71	41.0	82.7	6	35.29	17.3	59.0	0	0.00	0.0	15.3
Luxembourg	16	15	93.75	71.3	98.5	1	6.25	1.5	28.7	0	0.00	0.0	16.2
Malta	15	15	100.00	82.9	100.0	0	0.00	0.0	17.1	0	0.00	0.0	17.1
Netherlands	34	30	88.24	73.3	95.2	4	11.76	4.8	26.7	0	0.00	0.0	8.2
Norway	15	12	80.00	54.4	92.7	3	20.00	7.3	45.6	0	0.00	0.0	17.1
Poland	59	57	96.61	88.5	99.0	2	3.39	1.0	11.5	0	0.00	0.0	4.9
Portugal	66	37	56.06	44.0	67.4	29	43.94	32.6	56.0	0	0.00	0.0	4.4
Romania	167	148	88.62	82.9	92.6	19	11.38	7.4	17.1	0	0.00	0.0	1.8
Slovakia	15	13	86.67	61.7	96.0	2	13.33	4.0	38.3	0	0.00	0.0	17.1
Slovenia	66	59	89.39	79.7	94.7	6	9.09	4.3	18.5	1	1.52	0.4	8.0
Spain	93	63	67.74	57.7	76.4	29	31.18	22.7	41.2	1	1.08	0.3	5.8
Sweden	19	16	84.21	62.1	94.3	3	15.79	5.7	37.9	0	0.00	0.0	13.9
United Kingdom	106	102	96.23	90.7	98.5	0	0.00	0.0	2.8	4	3.77	1.5	9.3
<b>Total</b>	<b>1,440</b>	<b>1,098</b>	<b>76.25</b>	<b>74.0</b>	<b>78.4</b>	<b>333</b>	<b>23.13</b>	<b>21.0</b>	<b>25.4</b>	<b>9</b>	<b>0.63</b>	<b>0.3</b>	<b>1.2</b>

(a): Lower confidence limit; (b): Upper confidence limit



### RICE

Country	Number of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	15	9	60.00	35.4	80.2	5	33.33	15.2	58.7	1	6.67	1.6	30.2
Belgium	15	9	60.00	35.4	80.2	5	33.33	15.2	58.7	1	6.67	1.6	30.2
Bulgaria	15	10	66.67	41.3	84.8	5	33.33	15.2	58.7	0	0.00	0.0	17.1
Cyprus	28	23	82.14	64.2	92.0	5	17.86	8.0	35.8	0	0.00	0.0	9.8
Czech Republic	36	25	69.44	53.0	82.0	11	30.56	18.0	47.0	0	0.00	0.0	7.8
Denmark	37	33	89.19	75.2	95.6	4	10.81	4.4	24.8	0	0.00	0.0	7.6
Estonia	16	15	93.75	71.3	98.5	1	6.25	1.5	28.7	0	0.00	0.0	16.2
Finland	17	7	41.18	21.5	64.3	10	58.82	35.7	78.5	0	0.00	0.0	15.3
France	125	76	60.80	52.0	68.9	43	34.40	26.6	43.1	6	4.80	2.3	10.1
Germany	125	73	58.40	49.6	66.7	50	40.00	31.8	48.8	2	1.60	0.5	5.6
Greece	23	18	78.26	57.8	90.2	3	13.04	4.7	32.4	2	8.70	2.7	27.0
Hungary	33	22	66.67	49.5	80.3	11	33.33	19.7	50.5	0	0.00	0.0	8.4
Ireland	15	12	80.00	54.4	92.7	3	20.00	7.3	45.6	0	0.00	0.0	17.1
Italy	70	59	84.29	74.0	91.0	11	15.71	9.0	26.0	0	0.00	0.0	4.1
Latvia	21	18	85.71	65.1	94.8	3	14.29	5.2	34.9	0	0.00	0.0	12.7
Lithuania	16	14	87.50	63.6	96.2	1	6.25	1.5	28.7	1	6.25	1.5	28.7
Luxembourg	10	9	90.00	58.7	97.7	1	10.00	2.3	41.3	0	0.00	0.0	23.8
Netherlands	46	28	60.87	46.4	73.6	17	36.96	24.5	51.5	1	2.17	0.5	11.3
Norway	15	5	33.33	15.2	58.7	8	53.33	29.9	75.3	2	13.33	4.0	38.3
Poland	41	37	90.24	77.4	96.0	4	9.76	4.0	22.6	0	0.00	0.0	6.9
Portugal	64	59	92.19	83.0	96.5	5	7.81	3.5	17.0	0	0.00	0.0	4.5
Romania	50	46	92.00	81.1	96.7	4	8.00	3.3	18.9	0	0.00	0.0	5.7
Slovakia	15	6	40.00	19.8	64.6	8	53.33	29.9	75.3	1	6.67	1.6	30.2
Slovenia	3	3	100.00	47.3	100.0	0	0.00	0.0	52.7	0	0.00	0.0	52.7
Spain	75	30	40.00	29.6	51.4	45	60.00	48.6	70.4	0	0.00	0.0	3.9
Sweden	62	53	85.48	74.6	92.1	6	9.68	4.6	19.6	3	4.84	1.8	13.3
United Kingdom	72	49	68.06	56.6	77.7	22	30.56	21.1	42.0	1	1.39	0.3	7.4
<b>Total</b>	<b>1,060</b>	<b>748</b>	<b>70.57</b>	<b>67.8</b>	<b>73.2</b>	<b>291</b>	<b>27.45</b>	<b>24.9</b>	<b>30.2</b>	<b>21</b>	<b>1.98</b>	<b>1.3</b>	<b>3.0</b>

(a): Lower confidence limit; (b): Upper confidence limit

### SPINACH

Country	Number of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	17	7	41.18	21.5	64.3	8	47.06	26.0	69.2	2	11.76	3.6	34.7
Belgium	15	8	53.33	29.9	75.3	6	40.00	19.8	64.6	1	6.67	1.6	30.2
Bulgaria	16	11	68.75	44.0	85.8	4	25.00	10.3	49.9	1	6.25	1.5	28.7
Cyprus	27	2	7.41	2.3	23.5	9	33.33	18.6	52.4	16	59.26	40.6	75.5
Czech Republic	25	7	28.00	14.3	47.8	17	68.00	48.2	82.8	1	4.00	0.9	19.6
Denmark	45	28	62.22	47.5	74.9	16	35.56	23.2	50.2	1	2.22	0.5	11.5
Estonia	13	6	46.15	23.0	71.1	5	38.46	17.7	64.9	2	15.38	4.7	42.8
Finland	9	2	22.22	6.7	55.6	7	77.78	44.4	93.3	0	0.00	0.0	25.9
France	78	60	76.92	66.4	84.9	15	19.23	12.0	29.4	3	3.85	1.4	10.7
Germany	206	25	12.14	8.4	17.3	169	82.04	76.2	86.7	12	5.83	3.4	9.9
Greece	22	10	45.45	26.8	65.5	9	40.91	23.2	61.5	3	13.64	5.0	33.6
Hungary	14	10	71.43	44.9	88.2	3	21.43	7.8	48.1	1	7.14	1.7	31.9
Ireland	13	9	69.23	41.9	87.2	4	30.77	12.8	58.1	0	0.00	0.0	19.3
Italy	25	16	64.00	44.3	79.8	9	36.00	20.2	55.7	0	0.00	0.0	10.9
Latvia	20	17	85.00	63.7	94.6	3	15.00	5.4	36.3	0	0.00	0.0	13.3
Lithuania	14	2	14.29	4.3	40.5	11	78.57	51.9	92.2	1	7.14	1.7	31.9
Luxembourg	8	6	75.00	40.0	92.5	2	25.00	7.5	60.0	0	0.00	0.0	28.3
Malta	15	11	73.33	47.6	89.0	2	13.33	4.0	38.3	2	13.33	4.0	38.3
Netherlands	44	37	84.09	70.5	92.0	5	11.36	5.1	24.1	2	4.55	1.4	15.1
Norway	20	13	65.00	43.0	81.9	7	35.00	18.1	57.0	0	0.00	0.0	13.3
Poland	49	38	77.55	64.0	86.9	9	18.37	10.0	31.4	2	4.08	1.3	13.7
Portugal	53	46	86.79	75.1	93.4	5	9.43	4.2	20.3	2	3.77	1.2	12.7
Romania	59	45	76.27	64.0	85.3	13	22.03	13.4	34.2	1	1.69	0.4	8.9
Slovakia	15	6	40.00	19.8	64.6	8	53.33	29.9	75.3	1	6.67	1.6	30.2
Slovenia	15	6	40.00	19.8	64.6	7	46.67	24.7	70.1	2	13.33	4.0	38.3
Spain	83	61	73.49	63.1	81.8	18	21.69	14.2	31.7	4	4.82	2.0	11.7
Sweden	20	13	65.00	43.0	81.9	6	30.00	14.6	52.2	1	5.00	1.2	23.8
United Kingdom	54	28	51.85	38.8	64.6	22	40.74	28.7	54.1	4	7.41	3.0	17.6
<b>Total</b>	<b>994</b>	<b>530</b>	<b>53.32</b>	<b>50.2</b>	<b>56.4</b>	<b>399</b>	<b>40.14</b>	<b>37.1</b>	<b>43.2</b>	<b>65</b>	<b>6.54</b>	<b>5.2</b>	<b>8.3</b>

(a): Lower confidence limit; (b): Upper confidence limit

### WHEAT FLOUR

Country	No. of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	15	7	46.67	24.7	70.1	8	53.33	29.9	75.3	0	0.00	0.0	17.1
Belgium	11	1	9.09	2.1	38.5	9	81.82	51.6	94.5	1	9.09	2.1	38.5
Bulgaria	22	21	95.45	78.1	98.9	1	4.55	1.1	21.9	0	0.00	0.0	12.2
Cyprus	15	1	6.67	1.6	30.2	14	93.33	69.8	98.4	0	0.00	0.0	17.1
Czech Republic	4	4	100.00	54.9	100.0	0	0.00	0.0	45.1	0	0.00	0.0	45.1
Denmark	61	36	59.02	46.4	70.5	25	40.98	29.5	53.6	0	0.00	0.0	4.7
Estonia	15	5	33.33	15.2	58.7	10	66.67	41.3	84.8	0	0.00	0.0	17.1
Finland	5	1	20.00	4.3	64.1	4	80.00	35.9	95.7	0	0.00	0.0	39.3
France	113	59	52.21	43.1	61.2	54	47.79	38.8	56.9	0	0.00	0.0	2.6
Greece	15	8	53.33	29.9	75.3	7	46.67	24.7	70.1	0	0.00	0.0	17.1
Ireland	22	5	22.73	10.2	43.7	16	72.73	51.6	86.8	1	4.55	1.1	21.9
Italy	15	12	80.00	54.4	92.7	3	20.00	7.3	45.6	0	0.00	0.0	17.1
Latvia	23	16	69.57	48.9	84.4	7	30.43	15.6	51.1	0	0.00	0.0	11.7
Luxembourg	4	0	0.00	0.0	45.1	4	100.00	54.9	100.0	0	0.00	0.0	45.1
Malta	15	3	20.00	7.3	45.6	12	80.00	54.4	92.7	0	0.00	0.0	17.1
Netherlands	13	4	30.77	12.8	58.1	9	69.23	41.9	87.2	0	0.00	0.0	19.3
Norway	15	9	60.00	35.4	80.2	6	40.00	19.8	64.6	0	0.00	0.0	17.1
Poland	10	8	80.00	48.2	94.0	2	20.00	6.0	51.8	0	0.00	0.0	23.8
Portugal	62	31	50.00	37.9	62.1	31	50.00	37.9	62.1	0	0.00	0.0	4.6
Romania	12	12	100.00	79.4	100.0	0	0.00	0.0	20.6	0	0.00	0.0	20.6
Slovakia	14	7	50.00	26.6	73.4	7	50.00	26.6	73.4	0	0.00	0.0	18.1
Slovenia	16	6	37.50	18.4	61.7	10	62.50	38.3	81.6	0	0.00	0.0	16.2
Spain	22	13	59.09	38.5	76.8	9	40.91	23.2	61.5	0	0.00	0.0	12.2
Sweden	14	13	92.86	68.1	98.3	1	7.14	1.7	31.9	0	0.00	0.0	18.1
United Kingdom	72	8	11.11	5.8	20.5	64	88.89	79.5	94.2	0	0.00	0.0	4.0
<b>Total</b>	<b>605</b>	<b>290</b>	<b>47.93</b>	<b>44.0</b>	<b>51.9</b>	<b>313</b>	<b>51.74</b>	<b>47.8</b>	<b>55.7</b>	<b>2</b>	<b>0.33</b>	<b>0.1</b>	<b>1.2</b>

(a): Lower confidence limit; (b): Upper confidence limit

### LIVER

Country	No. of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	15	15	100.00	82.9	100.0	0	0.00	0.0	17.1	0	0.00	0.0	17.1
Belgium	15	15	100.00	82.9	100.0	0	0.00	0.0	17.1	0	0.00	0.0	17.1
Bulgaria	25	25	100.00	89.1	100.0	0	0.00	0.0	10.9	0	0.00	0.0	10.9
Cyprus	15	15	100.00	82.9	100.0	0	0.00	0.0	17.1	0	0.00	0.0	17.1
Czech Republic	15	13	86.67	61.7	96.0	2	13.33	4.0	38.3	0	0.00	0.0	17.1
Denmark	15	15	100.00	82.9	100.0	0	0.00	0.0	17.1	0	0.00	0.0	17.1
Estonia	15	15	100.00	82.9	100.0	0	0.00	0.0	17.1	0	0.00	0.0	17.1
Finland	20	20	100.00	86.7	100.0	0	0.00	0.0	13.3	0	0.00	0.0	13.3
France	59	56	94.92	86.1	98.2	3	5.08	1.8	13.9	0	0.00	0.0	4.9
Germany	100	89	89.00	81.3	93.7	11	11.00	6.3	18.7	0	0.00	0.0	2.9
Greece	15	15	100.00	82.9	100.0	0	0.00	0.0	17.1	0	0.00	0.0	17.1
Hungary	50	50	100.00	94.3	100.0	0	0.00	0.0	5.7	0	0.00	0.0	5.7
Ireland	15	15	100.00	82.9	100.0	0	0.00	0.0	17.1	0	0.00	0.0	17.1
Italy	8	8	100.00	71.7	100.0	0	0.00	0.0	28.3	0	0.00	0.0	28.3
Latvia	13	13	100.00	80.7	100.0	0	0.00	0.0	19.3	0	0.00	0.0	19.3
Luxembourg	15	15	100.00	82.9	100.0	0	0.00	0.0	17.1	0	0.00	0.0	17.1
Malta	14	14	100.00	81.9	100.0	0	0.00	0.0	18.1	0	0.00	0.0	18.1
Netherlands	31	31	100.00	91.1	100.0	0	0.00	0.0	8.9	0	0.00	0.0	8.9
Norway	15	15	100.00	82.9	100.0	0	0.00	0.0	17.1	0	0.00	0.0	17.1
Poland	50	50	100.00	94.3	100.0	0	0.00	0.0	5.7	0	0.00	0.0	5.7
Romania	5	5	100.00	60.7	100.0	0	0.00	0.0	39.3	0	0.00	0.0	39.3
Slovakia	15	15	100.00	82.9	100.0	0	0.00	0.0	17.1	0	0.00	0.0	17.1
Slovenia	16	16	100.00	83.8	100.0	0	0.00	0.0	16.2	0	0.00	0.0	16.2
Spain	34	34	100.00	91.8	100.0	0	0.00	0.0	8.2	0	0.00	0.0	8.2
Sweden	20	20	100.00	86.7	100.0	0	0.00	0.0	13.3	0	0.00	0.0	13.3
United Kingdom	108	98	90.74	83.8	94.9	10	9.26	5.1	16.2	0	0.00	0.0	2.7
<b>Total</b>	<b>718</b>	<b>692</b>	<b>96.38</b>	<b>94.7</b>	<b>97.5</b>	<b>26</b>	<b>3.62</b>	<b>2.5</b>	<b>5.3</b>	<b>0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.4</b>

(a): Lower confidence limit; (b): Upper confidence limit

### POULTRY MEAT

Country	No. of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	12	12	100.00	79.4	100.0	0	0.00	0.00	20.6	0.0	0.00	0.0	20.6
Belgium	15	15	100.00	82.9	100.0	0	0.00	0.00	17.1	0.0	0.00	0.0	17.1
Bulgaria	17	17	100.00	84.7	100.0	0	0.00	0.00	15.3	0.0	0.00	0.0	15.3
Cyprus	15	15	100.00	82.9	100.0	0	0.00	0.00	17.1	0.0	0.00	0.0	17.1
Czech Republic	8	8	100.00	71.7	100.0	0	0.00	0.00	28.3	0.0	0.00	0.0	28.3
Denmark	25	25	100.00	89.1	100.0	0	0.00	0.00	10.9	0.0	0.00	0.0	10.9
Estonia	15	13	86.67	61.7	96.0	2	13.33	4.00	38.3	0.0	0.00	0.0	17.1
Finland	20	20	100.00	86.7	100.0	0	0.00	0.00	13.3	0.0	0.00	0.0	13.3
Germany	104	101	97.12	91.9	99.0	3	2.88	1.00	8.1	0.0	0.00	0.0	2.8
Greece	14	14	100.00	81.9	100.0	0	0.00	0.00	18.1	0.0	0.00	0.0	18.1
Hungary	81	81	100.00	96.4	100.0	0	0.00	0.00	3.6	0.0	0.00	0.0	3.6
Ireland	15	15	100.00	82.9	100.0	0	0.00	0.00	17.1	0.0	0.00	0.0	17.1
Italy	9	9	100.00	74.1	100.0	0	0.00	0.00	25.9	0.0	0.00	0.0	25.9
Latvia	15	15	100.00	82.9	100.0	0	0.00	0.00	17.1	0.0	0.00	0.0	17.1
Malta	15	15	100.00	82.9	100.0	0	0.00	0.00	17.1	0.0	0.00	0.0	17.1
Netherlands	12	12	100.00	79.4	100.0	0	0.00	0.00	20.6	0.0	0.00	0.0	20.6
Norway	15	15	100.00	82.9	100.0	0	0.00	0.00	17.1	0.0	0.00	0.0	17.1
Poland	47	47	100.00	93.9	100.0	0	0.00	0.00	6.1	0.0	0.00	0.0	6.1
Romania	60	60	100.00	95.2	100.0	0	0.00	0.00	4.8	0.0	0.00	0.0	4.8
Slovakia	8	8	100.00	71.7	100.0	0	0.00	0.00	28.3	0.0	0.00	0.0	28.3
Slovenia	14	14	100.00	81.9	100.0	0	0.00	0.00	18.1	0.0	0.00	0.0	18.1
Spain	37	37	100.00	92.4	100.0	0	0.00	0.00	7.6	0.0	0.00	0.0	7.6
Sweden	30	30	100.00	90.8	100.0	0	0.00	0.00	9.2	0.0	0.00	0.0	9.2
United Kingdom	108	108	100.00	97.3	100.0	0	0.00	0.00	2.7	0.0	0.00	0.0	2.7
<b>Total</b>	<b>711</b>	<b>706</b>	<b>99.30</b>	<b>98.4</b>	<b>99.7</b>	<b>5</b>	<b>0.70</b>	<b>0.30</b>	<b>1.6</b>	<b>0.0</b>	<b>0.00</b>	<b>0.0</b>	<b>0.4</b>

(a): Lower confidence limit; (b): Upper confidence limit

**TABLE E: EUCP – SINGLE MRL EXCEEDANCES BY COMMODITY, PESTICIDE AND COUNTRY OF ORIGIN**

Food item	Pesticide	Country of origin <sup>(a)</sup>	Reported Concentration (mg/kg)	Non-compliant <sup>(b)</sup>	MRL
Beans with pods	Acetamiprid (RD)	Cyprus	0.02	Y	0.01
Beans with pods	Acetamiprid (RD)	Cyprus	0.03	Y	0.01
Beans with pods	Acetamiprid (RD)	Cyprus	0.03	Y	0.01
Beans with pods	Acetamiprid (RD)	Cyprus	0.09	Y	0.01
Beans with pods	Acetamiprid (RD)	Cyprus	0.16	Y	0.01
Beans with pods	Acetamiprid (RD)	Cyprus	0.20	Y	0.01
Beans with pods	Acetamiprid (RD)	Egypt	0.03	Y	0.01
Beans with pods	Acetamiprid (RD)	Greece	0.07	Y	0.01
Beans with pods	Acetamiprid (RD)	Kenya	0.01	N	0.01
Beans with pods	Bromopropylate	Ethiopia	0.013	N	0.01
Beans with pods	Carbendazim (RD)	Kenya	0.26	N	0.2
Beans with pods	Carbendazim (RD)	Morocco	0.30	N	0.2
Beans with pods	Chlorpyrifos	Peru	0.07	Y	0.05
Beans with pods	Chlorpyrifos	Serbia	0.12	Y	0.05
Beans with pods	Cypermethrin (RD)	Cyprus	0.92	Y	0.7
Beans with pods	Dimethoate (RD)	Egypt	0.02	N	0.02
Beans with pods	Dimethoate (RD)	Ireland	0.05	Y	0.02
Beans with pods	Dimethoate (RD)	Kenya	0.10	Y	0.02
Beans with pods	Dimethomorph	Greece	0.27	Y	0.05
Beans with pods	Dithiocarbamates (RD)	Morocco	1.30	N	1
Beans with pods	Dithiocarbamates (RD)	Portugal	1.38	N	1
Beans with pods	Endosulfan (RD)	Morocco	0.09	N	0.05
Beans with pods	Endosulfan (RD)	Morocco	0.09	N	0.05
Beans with pods	Fenazaquin	Slovenia	0.27	Y	0.1
Beans with pods	Fipronil (RD)	Ethiopia	0.01	N	0.005
Beans with pods	Flutriafol	Morocco	0.10	N	0.05
Beans with pods	Hexaconazole	Turkey	0.06	Y	0.02
Beans with pods	Indoxacarb (RD)	Cyprus	0.15	Y	0.02
Beans with pods	Methomyl (RD)	Cyprus	0.48	Y	0.02
Beans with pods	Methomyl (RD)	Cyprus	0.96	Y	0.02
Beans with pods	Methomyl (RD)	Kenya	0.05	Y	0.02
Beans with pods	Methomyl (RD)	Morocco	0.02	N	0.02
Beans with pods	Methomyl (RD)	Morocco	0.03	N	0.02
Beans with pods	Methomyl (RD)	Morocco	0.09	Y	0.02
Beans with pods	Oxamyl	Morocco	0.11	Y	0.01
Beans with pods	Oxamyl	Morocco	0.11	Y	0.01
Beans with pods	Oxamyl	Spain	0.03	Y	0.01
Beans with pods	Propamocarb (RD)	Italy	0.67	Y	0.1
Beans with pods	Propamocarb (RD)	Morocco	0.13	N	0.1
Beans with pods	Propargite	Estonia	0.34	Y	0.01
Beans with pods	Propargite	Jordan	0.03	Y	0.01
Beans with pods	Pyraclostrobin	Greece	0.22	Y	0.02

Beans with pods	Pyraclostrobin	Italy	0.09	Y	0.02
Beans with pods	Spinosad (RD)	Cyprus	0.66	Y	0.5
Beans with pods	Tau-Fluvalinate	Spain	0.11	N	0.1
Beans with pods	Tau-Fluvalinate	Spain	0.13	N	0.1
Beans with pods	Thiophanate-methyl	Egypt	0.14	N	0.1
Beans with pods	Thiophanate-methyl	Kenya	0.18	N	0.1
Carrots	Acephate	Costa Rica	0.83	Y	0.02
Carrots	Bifenthrin	Hungary	0.099	N	0.05
Carrots	Chlorpyrifos	Austria	0.21	Y	0.1
Carrots	Chlorpyrifos	Bulgaria	0.22	Y	0.1
Carrots	Chlorpyrifos	Greece	0.73	Y	0.1
Carrots	Chlorpyrifos	Portugal	0.48	Y	0.1
Carrots	Chlorpyrifos	Slovakia	0.12	N	0.1
Carrots	Chlorpyrifos	Spain	0.28	Y	0.1
Carrots	Diazinon	Poland	0.018	N	0.01
Carrots	Diazinon	Poland	0.020	Y	0.01
Carrots	Fipronil (RD)	Austria	0.006	N	0.005
Carrots	Fipronil (RD)	Spain	0.009	N	0.005
Carrots	Fipronil (RD)	Spain	0.009	N	0.005
Carrots	Folpet (RD)	Portugal	0.11	Y	0.02
Carrots	Iprodione	Israel	2.6	Y	0.5
Carrots	Linuron	France	0.40	Y	0.2
Carrots	Linuron	France	0.41	Y	0.2
Carrots	Methamidophos	Costa Rica	0.064	Y	0.01
Carrots	Oxamyl	Netherlands	0.017	N	0.01
Carrots	Procymidone	Unknown	0.026	N	0.02
Cucumbers	Captan (RD)	Malta	0.082	Y	0.02
Cucumbers	Carbendazim (RD)	Bulgaria	0.29	Y	0.1
Cucumbers	Carbendazim (RD)	France	0.11	N	0.1
Cucumbers	Carbendazim (RD)	Lebanon	0.47	Y	0.1
Cucumbers	Carbendazim (RD)	Poland	0.31	Y	0.1
Cucumbers	Chlorpyrifos	Bulgaria	0.10	N	0.05
Cucumbers	Chlorpyrifos	Spain	0.095	N	0.05
Cucumbers	Chlorpyrifos	Spain	0.12	Y	0.05
Cucumbers	Chlorpyrifos	Spain	0.48	Y	0.05
Cucumbers	Cyproconazole	Spain	0.080	N	0.05
Cucumbers	Dichlorvos	Spain	0.050	Y	0.01
Cucumbers	Endosulfan (RD)	Lebanon	0.66	Y	0.05
Cucumbers	Ethoprophos	Greece	0.022	N	0.02
Cucumbers	Formetanate (RD)	Spain	0.13	Y	0.05
Cucumbers	Formetanate (RD)	Spain	0.23	Y	0.05
Cucumbers	Methomyl (RD)	Lebanon	0.28	Y	0.1
Cucumbers	Oxadixyl	France	0.027	Y	0.01
Cucumbers	Oxamyl	Bulgaria	0.20	Y	0.02
Cucumbers	Oxamyl	Greece	0.11	Y	0.02
Cucumbers	Oxamyl	Lebanon	0.083	Y	0.02
Cucumbers	Oxamyl	Spain	0.16	Y	0.02
Cucumbers	Procymidone	Malta	0.062	Y	0.02
Cucumbers	Procymidone	Malta	0.073	Y	0.02



Cucumbers	Procymidone	Malta	0.37	Y	0.02
Cucumbers	Propargite	Poland	0.012	N	0.01
Cucumbers	Thiacloprid	Germany	0.39	N	0.3
Cucumbers	Thiacloprid	Unknown	0.37	N	0.3
Cucumbers	Triadimenol (RD)	Lebanon	0.31	N	0.2
Mandarins	Boscalid (RD)	Italy	0.10	N	0.05
Mandarins	Chlorfenapyr	Peru	0.057	N	0.05
Mandarins	Diazinon	Morocco	0.013	N	0.01
Mandarins	Imazalil	Israel	5.4	N	5
Mandarins	Imazalil	South Africa	5.7	N	5
Mandarins	Imazalil	Spain	6.4	N	5
Mandarins	Imazalil	Spain	6.8	N	5
Mandarins	Malathion (RD)	Morocco	0.19	Y	0.02
Mandarins	Malathion (RD)	South Africa	0.031	N	0.02
Mandarins	Malathion (RD)	Spain	0.088	Y	0.02
Mandarins	Phosmet (RD)	Greece	0.27	N	0.2
Mandarins	Thiabendazole (RD)	Argentina	5.2	N	5
Mandarins	Thiabendazole (RD)	South Africa	5.2	N	5
Oranges	Boscalid (RD)	Spain	0.076	N	0.05
Oranges	Carbaryl	Dominican	0.093	N	0.05
Oranges	Carbaryl	Dominican	0.27	Y	0.05
Oranges	Carbaryl	Dominican	0.84	Y	0.05
Oranges	Carbaryl	Egypt	0.084	N	0.05
Oranges	Carbaryl	Zimbabwe	0.069	N	0.05
Oranges	Carbendazim (RD)	Spain	0.84	Y	0.5
Oranges	Chlorpyrifos	Brazil	0.31	N	0.3
Oranges	Chlorpyrifos	Cyprus	0.40	N	0.3
Oranges	Chlorpyrifos	Morocco	0.36	N	0.3
Oranges	Chlorpyrifos	Morocco	0.37	N	0.3
Oranges	Dimethoate (RD)	Cyprus	0.031	Y	0.02
Oranges	Dimethoate (RD)	Portugal	0.12	Y	0.02
Oranges	Dimethoate (RD)	Portugal	0.12	Y	0.02
Oranges	Dimethoate (RD)	Portugal	0.16	Y	0.02
Oranges	Ethion	Spain	0.017	N	0.01
Oranges	Fenamiphos (RD)	Spain	0.36	Y	0.02
Oranges	Fenitrothion	Spain	0.050	Y	0.01
Oranges	Imazalil	Argentina	5.8	N	5
Oranges	Imazalil	Argentina	7.7	N	5
Oranges	Imazalil	Morocco	5.5	N	5
Oranges	Imazalil	South Africa	5.7	N	5
Oranges	Imazalil	Spain	5.3	N	5
Oranges	Imazalil	Spain	5.4	N	5
Oranges	Imazalil	Spain	6.4	Y	5
Oranges	Imazalil	Tunisia	7.5	N	5
Oranges	Imazalil	Turkey	11.6	Y	5
Oranges	Iprodione	Spain	0.14	Y	0.02
Oranges	Malathion (RD)	Egypt	0.021	N	0.02
Oranges	Malathion (RD)	Morocco	0.032	N	0.02
Oranges	Malathion (RD)	Spain	0.030	Y	0.02

Oranges	Malathion (RD)	Turkey	0.064	Y	0.02
Oranges	Methidathion	Chile	0.049	Y	5
Oranges	Penconazole	Spain	0.56	Y	0.05
Oranges	Profenofos	South Africa	0.073	N	0.05
Oranges	Tefluthrin	Spain	0.013	N	0.01
Oranges	Thiabendazole (RD)	Honduras	7.7	N	5
Pears	Carbendazim (RD)	South Africa	0.28	Y	0.2
Pears	Chlormequat	Netherlands	1.5	Y	0.1
Pears	Chlormequat	Spain	0.16	N	0.1
Pears	Chlormequat	Spain	0.18	N	0.1
Pears	Chlormequat	Spain	0.75	Y	0.1
Pears	Chlormequat	Spain	10.4	Y	0.1
Pears	Dimethomorph	Slovenia	0.11	Y	0.05
Pears	Imazalil	Spain	2.1	N	2
Pears	Imazalil	Spain	2.4	N	2
Pears	Imazalil	Spain	5.0	Y	2
Pears	Procymidone	Spain	0.036	Y	0.02
Pears	Pyraclostrobin	Netherlands	0.50	N	0.3
Pears	Thiacloprid	Portugal	0.71	Y	0.3
Potatoes	Chlorpropham (RD)	United Kingdom	17.0	N	10
Potatoes	Chlorpropham (RD)	United Kingdom	18.0	N	10
Potatoes	Chlorpyrifos	France	0.52	Y	0.05
Potatoes	Fosthiazate	France	0.024	N	0.02
Potatoes	Fosthiazate	United Kingdom	0.050	Y	0.02
Potatoes	Kresoxim-methyl	Greece	0.054	N	0.05
Potatoes	Pencycuron	United Kingdom	0.20	N	0.1
Potatoes	Pirimiphos-methyl	Slovenia	0.058	N	0.05
Potatoes	Spinosad (RD)	Cyprus	0.40	Y	0.02
Rice	Acetamiprid (RD)	Vietnam	0.021	N	0.01
Rice	Bromide ion	Greece	61.0	N	50
Rice	Bromide ion	Greece	124	Y	50
Rice	Bromide ion	India	57.0	N	50
Rice	Bromide ion	India	61.5	N	50
Rice	Bromide ion	India	78.0	N	50
Rice	Bromide ion	Pakistan	50.9	N	50
Rice	Bromide ion	Thailand	55.0	N	50
Rice	Bromide ion	Thailand	75.0	N	50
Rice	Bromide ion	Vietnam	57.5	N	50
Rice	Carbendazim (RD)	India	0.013	N	0.01
Rice	Carbendazim (RD)	India	0.015	N	0.01
Rice	Carbendazim (RD)	Pakistan	0.014	N	0.01
Rice	Carbendazim (RD)	Pakistan	0.015	N	0.01
Rice	Carbendazim (RD)	Pakistan	0.018	N	0.01
Rice	Carbendazim (RD)	Pakistan	0.020	N	0.01
Rice	Carbendazim (RD)	United Kingdom	0.013	N	0.01
Rice	Carbendazim (RD)	Vietnam	0.013	N	0.01
Rice	Deltamethrin	Non domestic,	2.5	N	2
Rice	Epoxiconazole	India	0.19	N	0.1
Rice	Hexaconazole	Vietnam	0.022	N	0.02

Rice	Hexaconazole	Vietnam	0.050	Y	0.02
Rice	Propiconazole	Vietnam	0.080	N	0.05
Spinach	Acrinathrin	Greece	1.1	Y	0.05
Spinach	Azoxystrobin	Italy	0.10	N	0.05
Spinach	Azoxystrobin	Poland	0.40	Y	0.05
Spinach	Azoxystrobin	Spain	0.26	Y	0.05
Spinach	Bifenthrin	Cyprus	0.17	Y	0.05
Spinach	Boscalid (RD)	Germany	11.0	N	10
Spinach	Bromide ion	United Kingdom	51.0	N	50
Spinach	Carbendazim (RD)	France	0.16	N	0.1
Spinach	Carbendazim (RD)	Turkey	0.20	N	0.1
Spinach	Chlorothalonil	Cyprus	0.17	Y	0.01
Spinach	Chlorpyrifos	Malta	0.17	Y	0.05
Spinach	Chlorpyrifos	Malta	0.83	Y	0.05
Spinach	Chlorpyrifos	Poland	0.12	Y	0.05
Spinach	Chlorpyrifos	Unknown	0.050	N	0.05
Spinach	Clothianidin	Estonia	0.043	N	0.02
Spinach	Clothianidin	Greece	0.054	Y	0.02
Spinach	Clothianidin	Greece	0.10	Y	0.02
Spinach	Cypermethrin (RD)	Cyprus	0.80	Y	0.7
Spinach	Cypermethrin (RD)	Cyprus	1.0	Y	0.7
Spinach	Cypermethrin (RD)	Cyprus	1.2	Y	0.7
Spinach	Cypermethrin (RD)	Cyprus	2.7	Y	0.7
Spinach	Cypermethrin (RD)	Cyprus	2.8	Y	0.7
Spinach	Cypermethrin (RD)	United Kingdom	0.80	N	0.7
Spinach	Dimethoate (RD)	Germany	0.092	Y	0.02
Spinach	Dimethoate (RD)	Germany	0.10	Y	0.02
Spinach	Dimethoate (RD)	Germany	10.3	Y	0.02
Spinach	Dimethoate (RD)	Slovenia	0.17	Y	0.02
Spinach	Dimethomorph	Germany	0.11	N	0.1
Spinach	Dimethomorph	Germany	0.13	N	0.1
Spinach	Dimethomorph	Germany	0.16	N	0.1
Spinach	Dithiocarbamates (RD)	Austria	0.21	Y	0.05
Spinach	Dithiocarbamates (RD)	Belgium	0.092	N	0.05
Spinach	Dithiocarbamates (RD)	Belgium	0.24	Y	0.05
Spinach	Dithiocarbamates (RD)	Bulgaria	0.63	Y	0.05
Spinach	Dithiocarbamates (RD)	Cyprus	0.054	Y	0.05
Spinach	Dithiocarbamates (RD)	Cyprus	0.071	Y	0.05
Spinach	Dithiocarbamates (RD)	Cyprus	0.10	Y	0.05
Spinach	Dithiocarbamates (RD)	Cyprus	0.24	Y	0.05
Spinach	Dithiocarbamates (RD)	Cyprus	0.26	Y	0.05
Spinach	Dithiocarbamates (RD)	Cyprus	0.32	Y	0.05
Spinach	Dithiocarbamates (RD)	Cyprus	0.44	Y	0.05
Spinach	Dithiocarbamates (RD)	Cyprus	1.3	Y	0.05
Spinach	Dithiocarbamates (RD)	Germany	0.10	N	0.05
Spinach	Dithiocarbamates (RD)	Germany	0.36	Y	0.05
Spinach	Dithiocarbamates (RD)	Germany	0.37	Y	0.05
Spinach	Dithiocarbamates (RD)	Germany	1.7	Y	0.05
Spinach	Dithiocarbamates (RD)	Germany	1.7	Y	0.05

Spinach	Dithiocarbamates (RD)	Germany	2.2	Y	0.05
Spinach	Dithiocarbamates (RD)	Germany	3.8	Y	0.05
Spinach	Dithiocarbamates (RD)	Hungary	0.34	Y	0.05
Spinach	Dithiocarbamates (RD)	Italy	0.10	N	0.05
Spinach	Dithiocarbamates (RD)	Portugal	0.50	Y	0.05
Spinach	Dithiocarbamates (RD)	Portugal	0.50	Y	0.05
Spinach	Dithiocarbamates (RD)	Slovenia	0.27	Y	0.05
Spinach	Dithiocarbamates (RD)	Spain	0.080	N	0.05
Spinach	Dithiocarbamates (RD)	Unknown	0.13	Y	0.05
Spinach	Dithiocarbamates (RD)	Unknown	0.51	Y	0.05
Spinach	Fenbutatin oxide	Cyprus	0.53	Y	0.05
Spinach	Imidacloprid	Cyprus	0.28	Y	0.05
Spinach	Imidacloprid	Poland	0.080	N	0.05
Spinach	Iprodione	Austria	0.12	Y	0.02
Spinach	Iprodione	Estonia	0.030	N	0.02
Spinach	Iprodione	Estonia	0.061	Y	0.02
Spinach	Iprodione	Germany	0.033	N	0.02
Spinach	Iprodione	Germany	0.038	N	0.02
Spinach	Iprodione	Netherlands	0.88	Y	0.02
Spinach	Iprodione	Spain	2.0	Y	0.02
Spinach	Lambda-Cyhalothrin (RD)	Spain	0.67	N	0.5
Spinach	Linuron	France	0.90	Y	0.05
Spinach	Metalaxyl (RD)	Netherlands	0.82	Y	0.05
Spinach	Methomyl (RD)	Cyprus	11.6	Y	0.05
Spinach	Pencycuron	Cyprus	0.053	Y	0.05
Spinach	Pencycuron	France	1.0	Y	0.05
Spinach	Pirimicarb (RD)	Netherlands	3.1	N	2
Spinach	Pyraclostrobin	Germany	1.3	Y	0.5
Spinach	Pyraclostrobin	United Kingdom	2.0	Y	0.5
Spinach	Teflubenzuron	Cyprus	0.056	Y	0.05
Spinach	Teflubenzuron	Cyprus	1.0	Y	0.05
Spinach	Teflubenzuron	Cyprus	1.2	Y	0.05
Spinach	Thiacloprid	Germany	0.053	Y	0.02
Spinach	Thiacloprid	Germany	0.067	Y	0.02
Spinach	Thiacloprid	Germany	0.21	Y	0.02
Spinach	Thiacloprid	Romania	0.15	Y	0.02
Spinach	Thiamethoxam (RD)	Estonia	0.069	N	0.05
Spinach	Thiamethoxam (RD)	Italy	0.15	Y	0.05
Spinach	Thiamethoxam (RD)	Slovenia	0.19	Y	0.05
Wheat flour <sup>(c)</sup>	Chlorpropham (RD)	Unknown	0.33	N	0.02
Wheat flour <sup>(c)</sup>	Chlorpyrifos	Rwanda	0.098	N	0.05

(a): In the case that the country of origin was not reported, in the table the origin country is referred to as 'Unknown'.

(b): Regarding the non-compliant column: 'Y' describes the results non-compliant with the EU MRL Regulations and 'N' describes the results compliant, as assessed by the reporting countries.

(c): The MRL is set for wheat grains. The choice of the appropriate conversion factor to check the compliance of wheat flour samples against the wheat grains MRLs is made at national level.

## APPENDIX IV OVERALL NATIONAL PROGRAMMES (NP) RESULTS REPORTED

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**TABLE A: NP – SURVEILLANCE SAMPLING: PESTICIDES FOUND**

**TABLE A1: ANIMAL PRODUCTS**

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries analysing	Included in the EU programme <sup>(d)</sup>
2,4-Dimethylphenylformamide	68	4	5.88	2.4	14.2	1	
Acetamiprid (RD)	536	7	1.31	0.7	2.7	2	
Amitraz (RD)	154	1	0.65	0.2	3.5	7	X
Azoxystrobin	846	2	0.24	0.1	0.9	12	
Bifenthrin	3,410	1	0.03	0.0	0.2	26	
Boscalid (RD)	592	6	1.01	0.5	2.2	2	
Camphechlor (RD)	353	1	0.28	0.1	1.6	2	
Carbendazim (RD)	98	2	2.04	0.6	7.1	6	
Chlordane (RD)	2,440	13	0.53	0.3	0.9	20	
Coumaphos	1,189	4	0.34	0.1	0.9	12	
DDT (RD)	4,345	337	7.76	7.0	8.6	25	
Diazinon	3,618	3	0.08	0.0	0.2	26	
Dieldrin (RD)	3,388	22	0.65	0.4	1.0	22	
Dimoxystrobin	519	9	1.73	0.9	3.3	3	
Endosulfan (RD)	3,589	13	0.36	0.2	0.6	25	
Endrin	4,821	3	0.06	0.0	0.2	25	
Ethoxyquin	39	2	5.13	1.6	16.9	4	
Heptachlor (RD)	3,973	10	0.25	0.1	0.5	26	
Hexachlorobenzene	4,648	300	6.45	5.8	7.2	25	
Hexachlorocyclohexane (alpha)	3,691	17	0.46	0.3	0.7	16	
Hexachlorocyclohexane (beta)	3,411	120	3.52	3.0	4.2	16	
Iprovalicarb	581	1	0.17	0.0	1.0	8	
Lindane	4,684	18	0.38	0.2	0.6	26	
Nonachlor-Trans	777	1	0.13	0.0	0.7	3	
Permethrin (RD)	3,926	3	0.08	0.0	0.2	26	
Phoxim	946	1	0.11	0.0	0.6	9	
Pirimicarb (RD)	823	1	0.12	0.0	0.7	9	
Pirimiphos-methyl	3,811	2	0.05	0.0	0.2	26	
Quintozene (RD)	2,572	1	0.04	0.0	0.2	17	
Thiacloprid	719	42	5.84	4.4	7.8	10	
<b>Total<sup>(a)</sup></b>	<b>64,567</b>	<b>947</b>					

(a): Number of times the pesticide was sought in individual samples. Total: Total number of determinations

(b): Lower confidence limit

(c): Upper confidence limit

(d): X = not mandatory, X\* = not mandatory for some commodities

**TABLE A2: CEREALS**

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries analysing	Included in the EU programme <sup>(d)</sup>
2-Hydroxyethylphosphonic acid	26	2	7.69	2.4	24.3	1	
AMPA	212	3	1.42	0.5	4.1	7	
Acetamiprid (RD)	3,399	7	0.21	0.1	0.4	26	
Acetochlor	437	1	0.23	0.1	1.3	7	
Anthraquinone	554	1	0.18	0.0	1.0	4	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries analysing	Included in the EU programme <sup>(d)</sup>
Azinphos-methyl	4,157	1	0.02	0.0	0.1	28	
Azoxystrobin	4,502	27	0.60	0.4	0.9	28	
Benfuracarb	2,154	1	0.05	0.0	0.3	21	
Bifenthrin	4,431	8	0.18	0.1	0.4	27	
Boscalid (RD)	3,659	46	1.26	1.0	1.7	26	
Bromide ion	671	151	22.50	19.5	25.8	19	X*
Buprofezin	4,041	16	0.40	0.3	0.6	27	
Captan (RD)	2,747	2	0.07	0.0	0.3	26	
Carbendazim (RD)	3,375	21	0.62	0.4	1.0	28	
Carbosulfan	2,640	1	0.04	0.0	0.2	24	
Chlormequat	1,863	587	31.51	29.4	33.7	23	X*
Chlorothalonil	4,194	2	0.05	0.0	0.2	27	
Chlorpropham (RD)	3,987	29	0.73	0.5	1.0	22	
Chlorpyrifos	4,597	45	0.98	0.7	1.3	27	
Chlorpyrifos-methyl	4,627	192	4.15	3.6	4.8	27	
Cyfluthrin (RD)	3,298	2	0.06	0.0	0.2	24	
Cypermethrin (RD)	4,397	25	0.57	0.4	0.8	27	
Cyproconazole	3,840	4	0.10	0.0	0.3	26	
Cyprodinil (RD)	3,995	1	0.03	0.0	0.1	26	
DDT (RD)	3,354	1	0.03	0.0	0.2	23	
Deltamethrin	4,604	135	2.93	2.5	3.5	27	
Dicamba	804	1	0.12	0.0	0.7	8	
Dichlorvos	4,419	3	0.07	0.0	0.2	27	
Difenoconazole	3,850	6	0.16	0.1	0.3	26	
Dimethoate (RD)	3,377	4	0.12	0.1	0.3	27	
Dimethomorph	3,104	3	0.10	0.0	0.3	26	
Dithiocarbamates	898	12	1.34	0.8	2.3	22	
Endosulfan (RD)	4,230	5	0.12	0.1	0.3	27	
Epoxiconazole	3,814	6	0.16	0.1	0.3	27	
Ethephon	198	9	4.55	2.4	8.4	7	X
Fenhexamid	4,029	4	0.10	0.0	0.3	27	
Fenpropiidin (RD)	1,898	1	0.05	0.0	0.3	14	
Fenpropimorph (RD)	3,262	2	0.06	0.0	0.2	23	
Fipronil (RD)	1,849	1	0.05	0.0	0.3	18	
Fluroxypyr (RD)	1,433	1	0.07	0.0	0.4	8	
Flusilazole (RD)	3,738	5	0.13	0.1	0.3	25	
Flutolanil	1,350	1	0.07	0.0	0.4	12	
Flutriafol	3,491	3	0.09	0.0	0.3	25	
Fonofos	1,687	1	0.06	0.0	0.3	15	
Glyphosate	1,072	63	5.88	4.6	7.5	20	X*
Hexachlorobenzene	3,023	3	0.10	0.0	0.3	22	
Hexaconazole	3,935	5	0.13	0.1	0.3	27	
Hexythiazox	3,285	1	0.03	0.0	0.2	26	
Hydrogen phosphide (RD)	90	25	27.78	19.6	37.8	2	
Imazalil	4,201	1	0.02	0.0	0.1	28	
Imidacloprid	3,375	21	0.62	0.4	1.0	26	
Iprodione	3,999	5	0.13	0.1	0.3	27	
Isoprothiolane	1,161	32	2.76	2.0	3.9	12	
Kresoxim-methyl	4,392	1	0.02	0.0	0.1	28	
Lambda-Cyhalothrin (RD)	3,827	4	0.10	0.0	0.3	25	
Malathion (RD)	3,848	22	0.57	0.4	0.9	27	
Mecoprop (RD)	1,125	1	0.09	0.0	0.5	9	
Mepiquat	1,787	55	3.08	2.4	4.0	22	X*



Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries analysing	Included in the EU programme <sup>(d)</sup>
Methomyl (RD)	2,859	1	0.03	0.0	0.2	26	
Myclobutanil	4,124	1	0.02	0.0	0.1	27	
Orthophenylphenol	2,313	2	0.09	0.0	0.3	20	
Pencycuron	2,947	1	0.03	0.0	0.2	25	
Permethrin (RD)	4,062	11	0.27	0.2	0.5	24	
Phosphines and phosphides (RD)	24	1	4.17	1.0	20.4	1	
Picoxystrobin	2,377	1	0.04	0.0	0.2	18	
Pirimicarb (RD)	3,218	1	0.03	0.0	0.2	27	
Pirimiphos-methyl	4,685	722	15.41	14.4	16.5	27	
Profenofos	3,822	1	0.03	0.0	0.2	27	
Propamocarb (RD)	1,964	2	0.10	0.0	0.4	29	X
Propiconazole	4,289	30	0.70	0.5	1.0	27	
Propoxur	2,659	1	0.04	0.0	0.2	20	
Prothioconazole (RD)	1,527	1	0.07	0.0	0.4	11	X
Pyraclostrobin	3,684	8	0.22	0.1	0.4	26	
Pyrethrins	1,522	2	0.13	0.0	0.5	17	
Quinclorac	182	1	0.55	0.1	3.0	4	
Quinmerac	510	1	0.20	0.1	1.1	5	
Quinoxifen	3,614	2	0.06	0.0	0.2	25	
Spinosad (RD)	2,586	1	0.04	0.0	0.2	24	
Spiroxamine	3,507	5	0.14	0.1	0.3	28	
Sulphur	155	1	0.65	0.2	3.5	2	
Tebuconazole	4,520	90	1.99	1.6	2.4	28	
Tebufozide	3,510	14	0.40	0.2	0.7	26	
Tetraconazole	3,145	3	0.10	0.0	0.3	24	
Tetradifon	3,593	1	0.03	0.0	0.2	26	
Thiabendazole (RD)	4,193	3	0.07	0.0	0.2	27	
Thiamethoxam (RD)	2,321	4	0.17	0.1	0.4	23	
Tolylfluanid (RD)	2,357	1	0.04	0.0	0.2	21	
Triadimenol (RD)	3,777	2	0.05	0.0	0.2	28	
Triazophos	4,298	1	0.02	0.0	0.1	28	
Tricyclazole	1,011	73	7.22	5.8	9.0	14	
Trifloxystrobin	4,402	2	0.05	0.0	0.2	28	
Trinexapac	305	3	0.98	0.4	2.8	2	
Zoxamide	2,947	1	0.03	0.0	0.2	24	
<b>Total<sup>(a)</sup></b>	<b>263,321</b>	<b>2,613</b>					

(a): Number of times the pesticide was sought in individual samples. Total: Total number of determinations

(b): Lower confidence limit

(c): Upper confidence limit

(d): X = not mandatory, X\* = not mandatory for some commodities

TABLE A3: FRUITS AND NUTS

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries analysing	Included in the EU programme <sup>(d)</sup>
1-naphthylacetamide	2,577	1	0.04	0.0	0.2	1	
2,4 DB	5,125	2	0.04	0.0	0.1	9	
2,4,5-T	4,045	1	0.02	0.0	0.1	9	
2,4-D (RD)	4,029	121	3.00	2.5	3.6	15	X
2-Hydroxyethylphosphonic acid	466	15	3.22	2.0	5.2	1	
4-CPA	5,457	2	0.04	0.0	0.1	7	
4-hydroxychlorothalonil	1,011	1	0.10	0.0	0.6	1	
6-Benzyladenin	1,011	2	0.20	0.1	0.7	1	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries analysing	Included in the EU programme <sup>(d)</sup>
AMPA	619	4	0.65	0.3	1.6	2	
Abamectin (RD)	11,227	17	0.15	0.1	0.2	20	
Acephate	21,780	8	0.04	0.0	0.1	29	
Acetamiprid (RD)	21,495	418	1.94	1.8	2.1	28	
Aclonifen	13,126	1	0.01	0.0	0.0	17	
Acrinathrin	21,444	54	0.25	0.2	0.3	27	
Aldicarb (RD)	16,871	1	0.01	0.0	0.0	26	
Ametryn	7,056	2	0.03	0.0	0.1	10	
Amitraz (RD)	8,456	2	0.02	0.0	0.1	21	X
Anthraquinone	3,034	1	0.03	0.0	0.2	6	
Atrazine	15,779	1	0.01	0.0	0.0	22	
Azinphos-ethyl	20,200	4	0.02	0.0	0.1	25	X
Azinphos-methyl	23,944	21	0.09	0.1	0.1	29	
Azoxystrobin	24,654	1,005	4.08	3.8	4.3	28	
Benalaxyl (RD)	15,500	4	0.03	0.0	0.1	16	
Bendiocarb	8,631	1	0.01	0.0	0.1	12	
Bifenazate	8,708	19	0.22	0.1	0.3	11	
Bifenthrin	24,008	209	0.87	0.8	1.0	28	
Binapacryl	8,784	2	0.02	0.0	0.1	13	
Biphenyl	12,587	2	0.02	0.0	0.1	20	
Bitertanol	21,500	107	0.50	0.4	0.6	29	
Boscalid (RD)	22,597	3,003	13.29	12.9	13.7	28	
Bromacil	7,704	1	0.01	0.0	0.1	10	
Bromide ion	572	150	26.22	22.8	30.0	9	X*
Bromophos	16,954	2	0.01	0.0	0.0	19	
Bromopropylate	24,138	20	0.08	0.1	0.1	29	
Bromuconazole (RD)	17,515	3	0.02	0.0	0.1	25	
Bupirimate	23,518	176	0.75	0.7	0.9	29	
Buprofezin	24,032	59	0.25	0.2	0.3	29	
Cadusafos	18,046	1	0.01	0.0	0.0	24	
Captan (RD)	14,568	539	3.70	3.4	4.0	27	
Captan (RD)+Folpet (RD)	6,150	530	8.62	7.9	9.4	15	
Carbaryl	23,317	42	0.18	0.1	0.2	29	
Carbendazim (RD)	19,111	802	4.20	3.9	4.5	27	
Carbofuran (RD)	18,871	17	0.09	0.1	0.1	26	
Carbosulfan	14,287	2	0.01	0.0	0.1	25	
Chlorantranilipole	7,157	184	2.57	2.2	3.0	9	
Chlorfenapyr	17,164	12	0.07	0.0	0.1	26	
Chlorfenvinphos	22,980	2	0.01	0.0	0.0	29	
Chlormequat	2,985	134	4.49	3.8	5.3	24	X*
Chlorobenzilate	12,360	1	0.01	0.0	0.1	23	X
Chlorothalonil	23,329	83	0.36	0.3	0.4	29	
Chlorpropham (RD)	21,911	13	0.06	0.0	0.1	24	
Chlorpyrifos	24,785	3,710	14.97	14.5	15.4	29	
Chlorpyrifos-methyl	24,626	374	1.52	1.4	1.7	29	
Chlorthiophos	5,286	1	0.02	0.0	0.1	9	
Clofentezine (RD)	18,536	101	0.54	0.5	0.7	26	
Clothianidin	5,275	6	0.11	0.1	0.3	15	
Crotoxyphos	978	36	3.68	2.7	5.1	1	
Cyazofamid	13,122	41	0.31	0.2	0.4	17	
Cyflufenamid (RD)	4,151	4	0.10	0.0	0.3	4	
Cyfluthrin (RD)	20,553	44	0.21	0.2	0.3	25	
Cyhalothrin	607	36	5.93	4.3	8.1	2	
Cymoxanil	14,335	6	0.04	0.0	0.1	16	
Cypermethrin (RD)	23,821	444	1.86	1.7	2.0	28	
Cyproconazole	23,103	51	0.22	0.2	0.3	28	
Cyprodinil (RD)	23,356	2,196	9.40	9.0	9.8	29	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries analysing	Included in the EU programme <sup>(d)</sup>
Cyromazine	10,401	6	0.06	0.0	0.1	13	
DDT (RD)	18,390	1	0.01	0.0	0.0	25	
Deltamethrin	23,866	119	0.50	0.4	0.6	28	
Desmedipham	5,260	1	0.02	0.0	0.1	7	
Diazinon	24,581	20	0.08	0.1	0.1	29	
Dicamba	4,309	7	0.16	0.1	0.3	10	
Dichlofluanid	22,432	1	0.00	0.0	0.0	28	
Dichlorobenzamide, 2,6-	1,992	12	0.60	0.4	1.1	5	
Dichlorobenzophenone, 4,4'-	4,919	6	0.12	0.1	0.3	7	
Dichlorvos	22,179	10	0.05	0.0	0.1	27	
Dicloran	22,083	2	0.01	0.0	0.0	28	
Dicofol (RD)	21,244	42	0.20	0.2	0.3	26	
Diethofencarb	17,537	3	0.02	0.0	0.1	21	
Difenoconazole	23,789	276	1.16	1.0	1.3	28	
Diflubenzuron (RD)	14,643	59	0.40	0.3	0.5	18	
Dimethoate (RD)	20,275	204	1.01	0.9	1.2	27	
Dimethomorph	21,671	429	1.98	1.8	2.2	28	
Dimoxystrobin	10,998	2	0.02	0.0	0.1	15	
Diniconazole	16,914	9	0.05	0.0	0.1	20	
Dinotefuran	3,135	1	0.03	0.0	0.2	4	
Dioxathion	10,118	1	0.01	0.0	0.1	10	
Diphenamid	3,853	2	0.05	0.0	0.2	5	
Diphenylamine	22,009	376	1.71	1.6	1.9	29	
Dithianon	4,115	154	3.74	3.2	4.4	7	
Dithiocarbamates (RD)	6,988	1,128	16.14	15.3	17.0	25	
Dodine	7,569	155	2.05	1.8	2.4	10	
EPN	16,270	2	0.01	0.0	0.0	24	
Endosulfan (RD)	22,868	18	0.08	0.1	0.1	28	
Epoxiconazole	21,017	6	0.03	0.0	0.1	28	
Esfenvalerate (RD)	28,060	15	0.05	0.0	0.1	17	
Ethephon	2,084	208	9.98	8.8	11.3	10	X
Ethion	23,228	4	0.02	0.0	0.0	29	
Ethirimol	9,346	26	0.28	0.2	0.4	13	
Ethoxyquin	8,557	37	0.43	0.3	0.6	14	
Ethylenethiourea	854	2	0.23	0.1	0.8	3	
Etofenprox	18,143	379	2.09	1.9	2.3	25	X
Etoxazole	9,463	45	0.48	0.4	0.6	13	
Famoxadone	18,253	147	0.81	0.7	1.0	20	
Famphur	2,421	1	0.04	0.0	0.2	3	
Fenamidone	16,210	16	0.10	0.1	0.2	22	
Fenamiphos (RD)	14,315	3	0.02	0.0	0.1	23	
Fenarimol	23,406	23	0.10	0.1	0.2	29	
Fenazaquin	20,465	64	0.31	0.3	0.4	27	
Fenbuconazole	19,777	245	1.24	1.1	1.4	26	
Fenbutatin oxide	6,885	173	2.51	2.2	2.9	14	X
Fenhexamid	24,216	1,948	8.04	7.7	8.4	28	
Fenitrothion	24,088	6	0.02	0.0	0.1	28	
Fenoxaprop	6,762	3	0.04	0.0	0.1	3	
Fenoxycarb	21,530	139	0.65	0.6	0.8	27	
Fenpropathrin	21,350	26	0.12	0.1	0.2	28	
Fenpropidrin (RD)	11,807	1	0.01	0.0	0.1	16	
Fenpropimorph (RD)	19,202	14	0.07	0.0	0.1	26	
Fenpyroximate	16,781	107	0.64	0.5	0.8	17	
Fenthion (RD)	17,609	17	0.10	0.1	0.2	25	
Fipronil (RD)	14,783	1	0.01	0.0	0.0	22	
Flonicamid (RD)	5,094	22	0.43	0.3	0.7	6	
Florchlorfenuron	2,176	7	0.32	0.2	0.7	5	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries analysing	Included in the EU programme <sup>(d)</sup>
Fluazifop-P-butyl (RD)	7,690	6	0.08	0.0	0.2	18	X
Fluazinam	10,339	1	0.01	0.0	0.1	16	
Flubendiamide	1,829	1	0.05	0.0	0.3	4	
Fludioxonil	23,357	1,949	8.34	8.0	8.7	28	
Flufenoxuron	18,570	129	0.69	0.6	0.8	26	
Flufenzin	475	1	0.21	0.1	1.2	1	
Fluopicolide	6,400	33	0.52	0.4	0.7	10	
Fluoxastrobin	8,329	2	0.02	0.0	0.1	8	
Fluquinconazole	18,832	9	0.05	0.0	0.1	26	
Flurprimidole	1,570	1	0.06	0.0	0.4	1	
Flusilazole (RD)	21,273	16	0.08	0.1	0.1	26	
Flutriafol	19,078	25	0.13	0.1	0.2	27	
Folpet (RD)	13,450	74	0.55	0.4	0.7	27	
Fonofos	12,926	1	0.01	0.0	0.0	18	
Formetanate (RD)	11,191	6	0.05	0.0	0.1	21	
Fosetyl-Al (RD)	559	3	0.54	0.2	1.6	2	
Furathiocarb	13,854	10	0.07	0.0	0.1	20	
Gibberellic acid	1,011	24	2.37	1.6	3.5	1	
Glyphosate	676	1	0.15	0.0	0.8	3	X*
Hexachlorocyclohexane (RD)	12,273	1	0.01	0.0	0.1	21	
Hexaconazole	22,836	11	0.05	0.0	0.1	28	
Hexazinone	7,230	1	0.01	0.0	0.1	9	
Hexythiazox	20,911	199	0.95	0.8	1.1	28	
Hydrogen phosphide (RD)	68	10	14.71	8.2	25.0	2	
Imazalil	24,240	3,856	15.91	15.5	16.4	29	
Imazosulfuron	2,857	1	0.04	0.0	0.2	3	
Imidacloprid	21,253	894	4.21	3.9	4.5	27	
Indoxacarb (RD)	19,455	333	1.71	1.5	1.9	26	
Iprobenfos	4,742	1	0.02	0.0	0.1	6	
Iprodione	22,914	1,271	5.55	5.3	5.9	29	
Iprovalicarb	22,680	111	0.49	0.4	0.6	28	
Isocarbophos	8,776	3	0.03	0.0	0.1	11	
Isofenphos-methyl	16,599	2	0.01	0.0	0.0	21	
Isoxaben	5,465	6	0.11	0.1	0.2	8	
Kresoxim-methyl	24,040	317	1.32	1.2	1.5	28	
Lambda-Cyhalothrin (RD)	23,096	558	2.42	2.2	2.6	27	
Lenacil	9,844	4	0.04	0.0	0.1	12	
Linuron	20,586	1	0.00	0.0	0.0	27	
Lufenuron	18,169	21	0.12	0.1	0.2	25	
MCPA (RD)	7,659	2	0.03	0.0	0.1	9	
Malathion (RD)	20,936	46	0.22	0.2	0.3	28	
Mandipropamid	7,275	14	0.19	0.1	0.3	11	
Mepanipyrim (RD)	16,103	90	0.56	0.5	0.7	18	
Mepiquat	2,698	1	0.04	0.0	0.2	23	X*
Meptyldinocap (RD)	589	2	0.34	0.1	1.2	1	
Metalaxyl (RD)	19,567	280	1.43	1.3	1.6	26	
Metamitron	13,148	4	0.03	0.0	0.1	16	
Metconazole	15,513	2	0.01	0.0	0.1	26	
Methacrifos	14,398	1	0.01	0.0	0.0	24	
Methamidophos	22,648	5	0.02	0.0	0.1	29	
Methidathion	24,120	121	0.50	0.4	0.6	29	
Methiocarb (RD)	18,224	35	0.19	0.1	0.3	28	
Methomyl (RD)	19,241	26	0.14	0.1	0.2	27	
Methoxyfenozide	18,136	447	2.46	2.3	2.7	26	
Metrafenone	9,697	45	0.46	0.4	0.6	13	
Metribuzin	19,980	3	0.02	0.0	0.0	23	
Molinate	4,825	3	0.06	0.0	0.2	10	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries analysing	Included in the EU programme <sup>(d)</sup>
Monocrotophos	21,614	3	0.01	0.0	0.0	28	
Myclobutanil	24,299	892	3.67	3.4	3.9	29	
N-2,4-Dimethylphenyl-N-Nitrofen	3,410	5	0.15	0.1	0.3	3	
Novaluron	13,130	1	0.01	0.0	0.0	19	
Orthophenylphenol	5,158	7	0.14	0.1	0.3	6	
Oxadixyl	18,904	786	4.16	3.9	4.5	26	
Oxamyl	20,859	2	0.01	0.0	0.0	29	
Oxamyl-Oxime	21,735	1	0.00	0.0	0.0	28	
Oxycarboxin	2,362	5	0.21	0.1	0.5	6	
Oxydemeton-methyl (RD)	3,921	1	0.03	0.0	0.1	6	
Paclobutrazol	17,533	1	0.01	0.0	0.0	26	
Parathion	17,375	13	0.07	0.0	0.1	25	
Parathion-methyl (RD)	23,067	2	0.01	0.0	0.0	28	
Penconazole	19,480	1	0.01	0.0	0.0	26	
Pencycuron	24,349	439	1.80	1.6	2.0	29	
Pendimethalin	18,771	1	0.01	0.0	0.0	27	
Permethrin (RD)	22,732	23	0.10	0.1	0.2	27	
Phenmedipham	21,457	8	0.04	0.0	0.1	26	
Phenthoate	12,488	12	0.10	0.1	0.2	16	
Phorate (RD)	18,803	5	0.03	0.0	0.1	27	
Phosalone	16,103	1	0.01	0.0	0.0	20	
Phosmet (RD)	24,642	38	0.15	0.1	0.2	29	
Phoxim	21,290	170	0.80	0.7	0.9	25	
Picoxystrobin	14,095	1	0.01	0.0	0.0	25	
Pirimicarb (RD)	16,022	1	0.01	0.0	0.0	18	
Pirimicarb, Desmethylformamido-Pirimiphos-methyl	19,988	492	2.46	2.3	2.7	27	
Prochloraz (RD)	2,298	2	0.09	0.0	0.3	3	
Procymidone	24,073	5	0.02	0.0	0.1	29	
Profenofos	12,224	377	3.08	2.8	3.4	23	X
Propamocarb (RD)	24,123	51	0.21	0.2	0.3	29	
Propanil	22,301	12	0.05	0.0	0.1	28	
Propargite	16,502	17	0.10	0.1	0.2	24	X
Propiconazole	8,231	1	0.01	0.0	0.1	11	
Propyzamide (RD)	21,009	294	1.40	1.3	1.6	29	
Proquinazid	23,652	36	0.15	0.1	0.2	28	
Prosulfocarb	22,895	9	0.04	0.0	0.1	28	
Prothiofos	6,889	23	0.33	0.2	0.5	10	
Pymetrozine	12,433	1	0.01	0.0	0.0	12	
Pyraclostrobin	18,410	6	0.03	0.0	0.1	25	
Pyrethrins	16,173	8	0.05	0.0	0.1	20	
Pyridaben	20,362	1,536	7.54	7.2	7.9	28	
Pyridalyl	10,493	14	0.13	0.1	0.2	22	
Pyrifenoxy	21,142	92	0.44	0.4	0.5	29	
Pirimethanil	3,593	1	0.03	0.0	0.2	3	
Pyrimidifen	14,359	1	0.01	0.0	0.0	18	
Pyriproxyfen	23,935	1,395	5.83	5.5	6.1	29	
Quinalphos	2,224	1	0.04	0.0	0.3	2	
Quinoxifen	20,804	708	3.40	3.2	3.7	27	
Simazine	20,852	2	0.01	0.0	0.0	24	
Spinosad (RD)	21,965	268	1.22	1.1	1.4	27	
Spirodiclofen	14,087	1	0.01	0.0	0.0	20	
Spiromesifen	16,301	353	2.17	2.0	2.4	24	
Spirotetramat (RD)	12,873	89	0.69	0.6	0.9	15	
Spiroxamine	9,889	16	0.16	0.1	0.3	12	
Sulphur	1,471	5	0.34	0.2	0.8	4	
	20,687	129	0.62	0.5	0.7	28	
	1,470	71	4.83	3.9	6.1	3	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries analysing	Included in the EU programme <sup>(d)</sup>
Tau-Fluvalinate	19,797	32	0.16	0.1	0.2	24	
Tebuconazole	23,356	942	4.03	3.8	4.3	29	
Tebufenozide	21,709	86	0.40	0.3	0.5	28	
Tebufenpyrad	21,866	181	0.83	0.7	1.0	28	
Teflubenzuron	17,933	41	0.23	0.2	0.3	26	
Tefluthrin	17,762	4	0.02	0.0	0.1	25	
Terbutylazine	14,114	27	0.19	0.1	0.3	17	
Terbutylazine, Desethyl-	2,085	10	0.48	0.3	0.9	3	
Terbutryn	11,987	1	0.01	0.0	0.1	14	
Tetraconazole	21,748	111	0.51	0.4	0.6	27	
Tetradifon	21,510	9	0.04	0.0	0.1	29	
Tetrahydrophthalimide	311	12	3.86	2.2	6.6	2	
Tetramethrin	10,664	2	0.02	0.0	0.1	14	
Thiabendazole (RD)	22,958	2,243	9.77	9.4	10.2	28	
Thiacloprid	19,952	1,153	5.78	5.5	6.1	27	
Thiamethoxam (RD)	16,295	69	0.42	0.3	0.5	24	
Thiophanate-Ethyl	1,153	2	0.17	0.1	0.6	3	
Thiophanate-methyl	19,871	193	0.97	0.8	1.1	28	
Tolclofos-methyl	24,112	2	0.01	0.0	0.0	29	
Tolylfluanid (RD)	16,813	6	0.04	0.0	0.1	24	
Tri-allate	8,488	2	0.02	0.0	0.1	11	
Triadimenol (RD)	20,890	373	1.79	1.6	2.0	28	
Triazophos	22,937	3	0.01	0.0	0.0	28	
Tribromoanisole, 2,4,6-	1,910	1	0.05	0.0	0.3	3	
Tribromophenol, 2,4,6-	2,267	1	0.04	0.0	0.3	4	
Trichlorfon	16,871	4	0.02	0.0	0.1	26	
Triclopyr (RD)	5,759	11	0.19	0.1	0.3	6	
Tridemorph	2,277	2	0.09	0.0	0.3	4	
Trifloxystrobin	23,906	1,040	4.35	4.1	4.6	28	
Trifloxysulfuron	1,867	2	0.11	0.0	0.4	1	
Triflumizole (RD)	11,225	1	0.01	0.0	0.1	9	
Triflumuron	16,479	49	0.30	0.2	0.4	25	
Trifluralin	21,740	2	0.01	0.0	0.0	28	
Triforine	8,342	1	0.01	0.0	0.1	13	
Vinclozolin (RD)	21,447	9	0.04	0.0	0.1	22	X*
Zoxamide	17,906	34	0.19	0.1	0.3	26	
<b>Total<sup>(a)</sup></b>	<b>3923,02</b>	<b>47,701</b>					

(a): Number of times the pesticide was sought in individual samples. Total: Total number of determinations

(b): Lower confidence limit

(c): Upper confidence limit

(d): X = not mandatory, X\* = not mandatory for some commodities

TABLE A4: VEGETABLES

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries analysing	Included in the EU programme <sup>(d)</sup>
1-naphthylacetamide	2,763	8	0.29	0.2	0.6	1	
1-naphthylacetic acid	1,300	1	0.08	0.0	0.4	2	
2,4-D (RD)	3,793	1	0.03	0.0	0.2	13	X
2-Hydroxyethylphosphonic acid	401	15	3.74	2.3	6.1	1	
4-CPA	5,313	4	0.08	0.0	0.2	6	
4-hydroxychlorothalonil	981	48	4.89	3.7	6.4	1	
Abamectin (RD)	11,941	7	0.06	0.0	0.1	19	
Acephate	23,369	38	0.16	0.1	0.2	29	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues			Number of countries analysing	Included in the EU programme <sup>(d)</sup>
			LCL <sup>(b)</sup>	UCL <sup>(c)</sup>			
Acetamiprid (RD)	22,971	456	1.99	1.8	2.2	28	
Aclonifen	14,294	20	0.14	0.1	0.2	17	
Acrinathrin	21,943	33	0.15	0.1	0.2	27	
Ametryn	7,700	4	0.05	0.0	0.1	10	
Amitraz (RD)	9,401	11	0.12	0.1	0.2	16	X
Atrazine	17,574	2	0.01	0.0	0.0	22	
Azadirachtin	3,706	3	0.08	0.0	0.2	6	
Azinphos-methyl	25,061	2	0.01	0.0	0.0	29	
Azoxystrobin	25,645	1,256	4.90	4.6	5.2	28	
Benalaxyl (RD)	15,180	17	0.11	0.1	0.2	16	
Benfluralin	9,956	4	0.04	0.0	0.1	9	
Bifenazate	9,683	26	0.27	0.2	0.4	11	
Bifenthrin	25,106	114	0.45	0.4	0.6	28	
Biphenyl	14,521	7	0.05	0.0	0.1	18	
Bitertanol	22,743	18	0.08	0.1	0.1	29	
Boscalid (RD)	23,674	1,907	8.06	7.7	8.4	28	
Bromacil	8,267	2	0.02	0.0	0.1	10	
Bromide ion	1,760	864	49.09	46.8	51.4	18	X*
Bromophos	16,959	5	0.03	0.0	0.1	19	
Bromopropylate	25,339	2	0.01	0.0	0.0	29	
Bromuconazole (RD)	18,510	4	0.02	0.0	0.1	25	
Bupirimate	24,735	57	0.23	0.2	0.3	29	
Buprofezin	25,045	65	0.26	0.2	0.3	29	
Cadusafos	19,620	1	0.01	0.0	0.0	24	
Captan (RD)	17,056	16	0.09	0.1	0.2	26	
Captan (RD)+Folpet (RD)	4,288	10	0.23	0.1	0.4	14	
Carbaryl	24,247	15	0.06	0.0	0.1	29	
Carbendazim (RD)	20,071	424	2.11	1.9	2.3	27	
Carbofuran (RD)	20,050	22	0.11	0.1	0.2	26	
Carbosulfan	16,129	2	0.01	0.0	0.0	26	
Chinomethionat	12,559	6	0.05	0.0	0.1	15	
Chlorantranilipole	7,139	24	0.34	0.2	0.5	9	
Chlordane (RD)	8,330	1	0.01	0.0	0.1	14	
Chlordecone	2,135	5	0.23	0.1	0.6	2	
Chlorfenapyr	17,830	21	0.12	0.1	0.2	26	
Chlorfenvinphos	24,477	4	0.02	0.0	0.0	29	
Chlorfluazuron	6,184	3	0.05	0.0	0.1	9	
Chloridazon	7,574	4	0.05	0.0	0.1	9	
Chlormequat	1,965	30	1.53	1.1	2.2	11	X*
Chlorothalonil	24,603	369	1.50	1.4	1.7	29	
Chlorotoluron	7,839	2	0.03	0.0	0.1	10	
Chlorpropham (RD)	23,285	525	2.25	2.1	2.5	44	
Chlorpyrifos	26,065	491	1.88	1.7	2.1	29	
Chlorpyrifos-methyl	25,816	50	0.19	0.2	0.3	29	
Chlorthal-dimethyl	14,491	28	0.19	0.1	0.3	16	
Clofentezine (RD)	19,309	24	0.12	0.1	0.2	26	
Clomazone	12,038	10	0.08	0.1	0.2	13	
Clothianidin	6,365	38	0.60	0.4	0.8	15	
Crotoxyphos	1,078	12	1.11	0.6	1.9	1	
Cyazofamid	14,077	23	0.16	0.1	0.3	17	
Cyflufenamid (RD)	3,931	2	0.05	0.0	0.2	4	



Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries analysing	Included in the EU programme <sup>(d)</sup>
Cyfluthrin (RD)	22,185	29	0.13	0.1	0.2	25	
Cyhalothrin	501	10	2.00	1.1	3.6	2	
Cyhexatin (RD)	1,221	1	0.08	0.0	0.5	2	
Cymoxanil	14,490	8	0.06	0.0	0.1	16	
Cypermethrin (RD)	25,298	508	2.01	1.8	2.2	28	
Cyproconazole	24,023	40	0.17	0.1	0.2	28	
Cyprodinil (RD)	23,826	858	3.60	3.4	3.9	28	
Cyromazine	10,411	75	0.72	0.6	0.9	13	
DDT (RD)	20,515	31	0.15	0.1	0.2	25	
Deltamethrin	25,523	247	0.97	0.9	1.1	28	
Desethyl-Atrazine	3,913	2	0.05	0.0	0.2	5	
Diazinon	26,065	17	0.07	0.0	0.1	29	
Dicamba	4,446	1	0.02	0.0	0.1	6	
Dichlofluanid	23,882	3	0.01	0.0	0.0	28	
Dichlorobenzamide, 2,6-	2,086	12	0.58	0.3	1.0	4	
Dichlorobenzophenone, 4,4'-	5,057	8	0.16	0.1	0.3	7	
Dichlorvos	23,954	11	0.05	0.0	0.1	27	
Dicloran	23,158	17	0.07	0.1	0.1	28	
Dicofol (RD)	22,039	12	0.05	0.0	0.1	26	
Dicrotophos	13,842	1	0.01	0.0	0.0	19	X*
Dieldrin (RD)	16,305	38	0.23	0.2	0.3	20	
Diethofencarb	18,131	20	0.11	0.1	0.2	21	
Difenoconazole	24,918	753	3.02	2.8	3.2	28	
Diiflubenzuron (RD)	14,982	21	0.14	0.1	0.2	19	
Dimethenamid-p (RD)	5,731	2	0.03	0.0	0.1	7	
Dimethoate (RD)	21,322	183	0.86	0.7	1.0	27	
Dimethomorph	22,482	561	2.50	2.3	2.7	28	
Diniconazole	17,519	18	0.10	0.1	0.2	20	
Dinotefuran	3,324	4	0.12	0.1	0.3	4	
Diphenylamine	23,175	6	0.03	0.0	0.1	29	
Diquat	151	12	7.95	4.6	13.4	7	
Dithianon	3,987	2	0.05	0.0	0.2	5	
Dithiocarbamates (RD)	8,160	750	9.19	8.6	9.8	25	
Dodine	7,978	4	0.05	0.0	0.1	10	
EPN	17,381	2	0.01	0.0	0.0	24	
Endosulfan (RD)	24,126	57	0.24	0.2	0.3	28	
Epoxiconazole	22,414	10	0.04	0.0	0.1	28	
Esfenvalerate (RD)	25,132	25	0.10	0.1	0.2	17	
Ethephon	1,790	56	3.13	2.4	4.0	9	X
Ethion	24,686	11	0.04	0.0	0.1	29	
Ethirimol	9,723	6	0.06	0.0	0.1	13	
Ethofumesate (RD)	10,096	14	0.14	0.1	0.2	11	
Ethoprophos	21,340	12	0.06	0.0	0.1	25	X
Ethylene oxide (RD)	1	1	100.00	22.4	100.0	1	
Ethylenethiourea	574	3	0.52	0.2	1.5	2	
Etofenprox	18,478	69	0.37	0.3	0.5	25	X
Etoxazole	10,058	6	0.06	0.0	0.1	13	
Etridiazole	10,809	4	0.04	0.0	0.1	13	
Famoxadone	18,200	50	0.27	0.2	0.4	20	
Fenamidone	17,265	27	0.16	0.1	0.2	22	
Fenamiphos (RD)	15,476	9	0.06	0.0	0.1	23	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries analysing	Included in the EU programme <sup>(d)</sup>
Fenarimol	25,153	15	0.06	0.0	0.1	29	
Fenazaquin	20,646	19	0.09	0.1	0.1	27	
Fenbuconazole	20,669	3	0.01	0.0	0.0	26	
Fenbutatin oxide	6,744	8	0.12	0.1	0.2	13	X
Fenhexamid	25,139	274	1.09	1.0	1.2	28	
Fenitrothion	25,508	3	0.01	0.0	0.0	28	
Fenobucarb	4,686	1	0.02	0.0	0.1	6	
Fenoxaprop	6,855	1	0.01	0.0	0.1	3	
Fenpropathrin	22,824	17	0.07	0.1	0.1	28	
Fenpropidrin (RD)	11,843	4	0.03	0.0	0.1	15	
Fenpropimorph (RD)	20,225	8	0.04	0.0	0.1	26	
Fenpyroximate	17,226	13	0.08	0.0	0.1	17	
Fenuron	4,353	1	0.02	0.0	0.1	6	
Fipronil (RD)	15,657	29	0.19	0.1	0.3	22	
Flonicamid (RD)	5,103	41	0.80	0.6	1.1	6	
Fluazifop-Butyl	2,725	6	0.22	0.1	0.5	6	
Fluazifop-P-butyl (RD)	8,401	25	0.30	0.2	0.4	18	X
Fluazinam	11,343	3	0.03	0.0	0.1	16	
Flubendiamide	1,418	2	0.14	0.0	0.5	4	
Flucythrinate (RD)	12,605	4	0.03	0.0	0.1	16	
Fludioxonil	24,307	561	2.31	2.1	2.5	28	
Flufenacet (RD)	5,412	5	0.09	0.0	0.2	4	
Flufenoxuron	19,335	18	0.09	0.1	0.2	26	
Fluopicolide	7,159	23	0.32	0.2	0.5	10	
Fluoxastrobin	8,878	1	0.01	0.0	0.1	8	
Fluquinconazole	19,735	3	0.02	0.0	0.0	26	
Flurochloridone	6,440	1	0.02	0.0	0.1	9	
Flusilazole (RD)	22,563	18	0.08	0.1	0.1	26	
Flutolanil	13,260	32	0.24	0.2	0.3	15	
Flutriafol	21,012	229	1.09	1.0	1.2	27	
Folpet (RD)	16,248	32	0.20	0.1	0.3	27	
Formetanate (RD)	11,202	23	0.21	0.1	0.3	20	
Fosetyl-Al (RD)	469	6	1.28	0.6	2.8	2	
Fosthiazate	14,711	12	0.08	0.1	0.1	23	
Fuberidazole	7,563	1	0.01	0.0	0.1	8	
Gibberellic acid	980	2	0.20	0.1	0.7	1	
Glufosinate-ammonium (RD)	379	1	0.26	0.1	1.5	1	
Glyphosate	617	3	0.49	0.2	1.4	4	X*
Haloxifop (RD)	6,894	1	0.01	0.0	0.1	15	X
Heptachlor (RD)	13,914	12	0.09	0.1	0.2	24	
Hexachlorobenzene	17,021	1	0.01	0.0	0.0	25	
Hexachlorocyclohexane (RD)	13,362	3	0.02	0.0	0.1	21	
Hexaconazole	24,240	73	0.30	0.2	0.4	28	
Hexazinone	7,782	2	0.03	0.0	0.1	9	
Hexythiazox	22,237	30	0.13	0.1	0.2	28	
Hydrogen phosphide (RD)	2	1	50.00	9.4	90.6	1	
Imazalil	25,237	141	0.56	0.5	0.7	29	
Imidacloprid	22,391	951	4.25	4.0	4.5	27	
Indoxacarb (RD)	20,426	256	1.25	1.1	1.4	26	
Ioxinyl (RD)	3,790	1	0.03	0.0	0.2	9	
Iprodione	24,043	1,100	4.58	4.3	4.9	29	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries analysing	Included in the EU programme <sup>(d)</sup>
Iprovalicarb	23,525	10	0.04	0.0	0.1	28	
Isoprothiolane	6,968	1	0.01	0.0	0.1	12	
Isoproturon	16,389	4	0.02	0.0	0.1	21	
Kresoxim-methyl	25,108	59	0.23	0.2	0.3	28	
Lambda-Cyhalothrin (RD)	24,568	500	2.04	1.9	2.2	27	
Lenacil	10,674	11	0.10	0.1	0.2	12	
Lindane	21,460	1	0.00	0.0	0.0	25	
Linuron	21,435	493	2.30	2.1	2.5	27	
Lufenuron	19,026	24	0.13	0.1	0.2	25	
MCPA (RD)	7,755	7	0.09	0.0	0.2	10	
Malathion (RD)	22,495	7	0.03	0.0	0.1	28	
Maleic hydrazide	799	37	4.63	3.4	6.3	6	
Mandipropamid	7,986	95	1.19	1.0	1.5	11	
Mecarbam	20,313	1	0.00	0.0	0.0	24	
Mepanipyrim (RD)	16,608	27	0.16	0.1	0.2	18	
Mepiquat	1,820	24	1.32	0.9	2.0	11	X*
Metaflumizole (RD)	8,979	7	0.08	0.0	0.2	17	
Metalaxyl (RD)	20,679	615	2.97	2.8	3.2	26	
Metaldehyde	1,331	2	0.15	0.1	0.5	2	
Metamitron	13,595	18	0.13	0.1	0.2	16	
Metazachlor	13,312	4	0.03	0.0	0.1	16	
Methabenzthiazuron	7,119	1	0.01	0.0	0.1	8	
Methamidophos	23,987	33	0.14	0.1	0.2	29	
Methidathion	25,723	10	0.04	0.0	0.1	29	
Methiocarb (RD)	19,388	33	0.17	0.1	0.2	28	
Metholachlor (RD)	7,055	7	0.10	0.1	0.2	10	
Methomyl (RD)	20,292	59	0.29	0.2	0.4	27	
Methoxyfenozide	18,732	89	0.48	0.4	0.6	26	
Metobromuron	12,545	7	0.06	0.0	0.1	16	
Metrafenone	11,059	2	0.02	0.0	0.1	13	
Metribuzin	20,295	11	0.05	0.0	0.1	23	
Monocrotophos	23,186	8	0.03	0.0	0.1	28	
Myclobutanil	25,449	145	0.57	0.5	0.7	29	
N-2,4-Dimethylphenyl-N-methylformamidine	3,476	2	0.06	0.0	0.2	2	
Naphthoxyacetic acid, 2-	3,746	1	0.03	0.0	0.2	3	
Napropamide	12,572	3	0.02	0.0	0.1	15	
Nereistoxin	980	4	0.41	0.2	1.0	1	
Nicotine	168	10	5.95	3.3	10.6	5	
Novaluron	5,341	1	0.02	0.0	0.1	6	
Orthophenylphenol	19,318	51	0.26	0.2	0.4	24	
Oxadiazon	7,440	4	0.05	0.0	0.1	9	
Oxadixyl	22,541	20	0.09	0.1	0.1	29	
Oxamyl	22,904	33	0.14	0.1	0.2	28	
Oxamyl-Oxime	2,489	17	0.68	0.4	1.1	6	
Paclobutrazol	17,667	4	0.02	0.0	0.1	25	
Parathion	24,392	2	0.01	0.0	0.0	28	
Penconazole	25,648	73	0.28	0.2	0.4	29	
Pencycuron	20,172	83	0.41	0.3	0.5	27	
Pendimethalin	23,848	205	0.86	0.8	1.0	27	
Permethrin (RD)	23,495	26	0.11	0.1	0.2	26	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries analysing	Included in the EU programme <sup>(d)</sup>
Phenmedipham	12,645	39	0.31	0.2	0.4	17	
Phenthoate	19,858	6	0.03	0.0	0.1	27	
Phorate (RD)	16,301	1	0.01	0.0	0.0	20	
Phosalone	25,652	4	0.02	0.0	0.0	29	
Phosmet (RD)	18,079	1	0.01	0.0	0.0	25	
Phoxim	15,258	1	0.01	0.0	0.0	25	
Pirimicarb (RD)	20,484	173	0.84	0.7	1.0	27	
Pirimiphos-methyl	25,542	13	0.05	0.0	0.1	29	
Prochloraz (RD)	12,249	51	0.42	0.3	0.6	23	X
Procymidone	25,550	95	0.37	0.3	0.5	29	
Profenofos	23,594	57	0.24	0.2	0.3	28	
Promecarb	12,027	62	0.52	0.4	0.7	11	
Prometryn	15,148	5	0.03	0.0	0.1	20	
Propachlor (RD)	5,251	1	0.02	0.0	0.1	11	
Propamocarb (RD)	18,441	1,124	6.10	5.8	6.5	24	X
Propanil	7,677	3	0.04	0.0	0.1	11	
Propaquizafop	6,281	2	0.03	0.0	0.1	9	
Propargite	22,405	59	0.26	0.2	0.3	29	
Propetamphos	8,574	1	0.01	0.0	0.1	8	
Propiconazole	24,884	54	0.22	0.2	0.3	28	
Propoxur	18,503	5	0.03	0.0	0.1	22	
Propyzamide (RD)	23,991	116	0.48	0.4	0.6	28	
Proquinazid	7,054	1	0.01	0.0	0.1	10	
Prosulfocarb	13,046	37	0.28	0.2	0.4	12	
Prothioconazole (RD)	7,539	8	0.11	0.1	0.2	11	X
Prothiofos	19,229	3	0.02	0.0	0.1	25	
Pymetrozine	17,123	122	0.71	0.6	0.9	20	
Pyraclostrobin	20,985	515	2.45	2.3	2.7	28	
Pyrazophos	22,098	1	0.00	0.0	0.0	26	
Pyrethrins	11,160	3	0.03	0.0	0.1	21	
Pyridaben	21,865	85	0.39	0.3	0.5	29	
Pyridalyl	3,516	5	0.14	0.1	0.3	3	
Pyridate (RD)	4,782	1	0.02	0.0	0.1	4	
Pyrimethanil	25,144	279	1.11	1.0	1.3	29	
Pyrimidifen	2,626	1	0.04	0.0	0.2	2	
Pyriproxyfen	21,789	62	0.28	0.2	0.4	27	
Quinalphos	21,433	8	0.04	0.0	0.1	23	
Quinclorac	2,588	1	0.04	0.0	0.2	4	
Quinmerac	5,396	1	0.02	0.0	0.1	7	
Quinoxifen	23,271	4	0.02	0.0	0.0	27	
Quintozene (RD)	17,028	12	0.07	0.0	0.1	20	
Quizalfop (RD)	4,323	9	0.21	0.1	0.4	8	
Rotenone	8,290	1	0.01	0.0	0.1	11	
Simazine	14,918	3	0.02	0.0	0.1	20	
Spinetoram	1,056	4	0.38	0.2	1.0	2	
Spinosad (RD)	17,332	248	1.43	1.3	1.6	24	
Spirodiclofen	13,551	1	0.01	0.0	0.0	15	
Spiromesifen	11,411	83	0.73	0.6	0.9	12	
Spirotetramat (RD)	1,736	9	0.52	0.3	1.0	5	
Spiroxamine	21,207	18	0.08	0.1	0.1	28	
Sulphur	1,590	15	0.94	0.6	1.6	3	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries analysing	Included in the EU programme <sup>(d)</sup>
Tau-Fluvalinate	20,920	10	0.05	0.0	0.1	24	
Tebuconazole	24,863	425	1.71	1.6	1.9	29	
Tebufozide	22,693	19	0.08	0.1	0.1	28	
Tebufofenpyrad	22,015	22	0.10	0.1	0.2	28	
Teflubenzuron	18,466	21	0.11	0.1	0.2	25	
Tefluthrin	18,751	23	0.12	0.1	0.2	25	
Tepraloxymid	6,688	4	0.06	0.0	0.2	7	
Terbutylazine	14,566	24	0.16	0.1	0.3	17	
Terbutylazine, Desethyl-	2,090	22	1.05	0.7	1.6	2	
Terbutryn	12,400	3	0.02	0.0	0.1	14	
Tetraconazole	22,746	32	0.14	0.1	0.2	27	
Tetradifon	22,996	7	0.03	0.0	0.1	29	
Thiabendazole (RD)	23,469	65	0.28	0.2	0.4	28	
Thiacloprid	20,936	219	1.05	0.9	1.2	27	
Thiamethoxam (RD)	17,126	204	1.19	1.0	1.4	24	
Thiocyclam	1,140	4	0.35	0.1	0.9	2	
Thiophanate-Ethyl	857	1	0.12	0.0	0.7	3	
Thiophanate-methyl	20,857	101	0.48	0.4	0.6	28	
Tolclofos-methyl	25,423	106	0.42	0.4	0.5	29	
Tolylfluand (RD)	17,693	2	0.01	0.0	0.0	24	
Tri-allate	8,426	1	0.01	0.0	0.1	11	
Triadimenol (RD)	22,669	174	0.77	0.7	0.9	28	
Triazophos	24,563	13	0.05	0.0	0.1	28	
Trichlorfon	18,204	1	0.01	0.0	0.0	26	
Trichloronat	7,171	1	0.01	0.0	0.1	10	
Tricyclazole	7,106	3	0.04	0.0	0.1	12	
Trifloxystrobin	24,673	96	0.39	0.3	0.5	28	
Triflumizole (RD)	11,526	21	0.18	0.1	0.3	9	
Triflumuron	17,332	4	0.02	0.0	0.1	25	
Trifluralin	22,934	30	0.13	0.1	0.2	28	
Triforine	9,515	2	0.02	0.0	0.1	14	
Trimethyl-sulfonium cation	79	3	3.80	1.4	10.6	1	
Vinclozolin (RD)	22,754	6	0.03	0.0	0.1	36	X*
Zoxamide	19,436	6	0.03	0.0	0.1	26	
<b>Total<sup>(a)</sup></b>	<b>4,304,021</b>	<b>23,795</b>					

(a): Number of times the pesticide was sought in individual samples. Total: Total number of determinations

(b): Lower confidence limit

(c): Upper confidence limit

(d): X = not mandatory, X\* = not mandatory for some commodities

**TABLE B: NP – SURVEILLANCE SAMPLING RESULTS BY REPORTING COUNTRY**

**TABLE B1: CEREALS**

Country	No of samples	No of processed samples	No of Compounds			Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
			Sought	Found	% found from sought	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	113	88	441	9	2.04	94	83.19	75.2	88.9	18	15.93	10.3	23.8	1	0.8	0.2	4.8
Belgium	43	13	344	17	4.94	10	23.26	13.2	37.8	30	69.77	54.8	81.4	3	6.9	2.5	18.7
Bulgaria	53	37	159	8	5.03	46	86.79	75.1	93.4	7	13.21	6.6	24.9	0	0.0	0.0	5.4
Cyprus	47	15	257	8	3.11	25	53.19	39.2	66.7	21	44.68	31.4	58.8	1	2.1	0.5	11.1
Czech Republic, The	215	49	283	30	10.6	132	61.40	54.7	67.7	79	36.74	30.6	43.4	4	1.9	0.8	4.7
Denmark	324	175	166	10	6.02	248	76.54	71.6	80.8	76	23.46	19.2	28.4	0	0.0	0.0	0.9
Estonia	31	15	329	3	0.91	20	64.52	46.8	78.9	11	35.48	21.1	53.2	0	0.0	0.0	8.9
Finland	171	35	269	20	7.43	89	52.05	44.6	59.4	77	45.03	37.8	52.5	5	2.9	1.3	6.7
France	615	212	363	19	5.23	374	60.81	56.9	64.6	232	37.72	34.0	41.6	9	1.4	0.8	2.8
Germany	543	67	762	38	4.99	339	62.43	58.3	66.4	199	36.65	32.7	40.8	5	0.9	0.4	2.1
Greece	55	26	282	3	1.06	40	72.73	59.7	82.7	13	23.64	14.4	36.4	2	3.6	1.1	12.3
Hungary	117	11	310	15	4.84	83	70.94	62.1	78.4	34	29.06	21.6	37.9	0	0.0	0.0	2.5
Ireland	145	25	310	18	5.81	70	48.28	40.3	56.4	73	50.34	42.3	58.4	2	1.3	0.4	4.9
Italy	823	315	385	24	6.23	604	73.39	70.3	76.3	215	26.12	23.2	29.2	4	0.4	0.2	1.2
Latvia	45	24	150	8	5.33	35	77.78	63.6	87.4	10	22.22	12.6	36.4	0	0.0	0.0	6.3
Lithuania	50	32	241	11	4.56	36	72.00	58.3	82.5	12	24.00	14.3	37.5	2	4.0	1.2	13.5
Luxembourg	30	20	239	5	2.09	16	53.33	36.0	69.8	12	40.00	24.5	57.8	2	6.6	2.0	21.4
Malta	15	15	195	5	2.56	3	20.00	7.3	45.6	12	80.00	54.4	92.7	0	0.0	0.0	17.1
Netherlands, The	145	42	210	25	11.9	58	40.00	32.4	48.1	83	57.24	49.1	65.0	4	2.7	1.1	6.9
Norway	79	18	274	12	4.38	60	75.95	65.4	84.0	16	20.25	12.9	30.4	3	3.8	1.4	10.6
Poland	145	59	87	6	6.90	126	86.90	80.4	91.4	19	13.10	8.6	19.6	0	0.0	0.0	2.0
Portugal	126	62	282	6	2.13	90	71.43	63.0	78.6	36	28.57	21.4	37.0	0	0.0	0.0	2.3
Romania	225	12	181	4	2.21	207	92.00	87.7	94.9	18	8.00	5.1	12.3	0	0.0	0.0	1.3
Slovakia	47	15	227	11	4.85	25	53.19	39.2	66.7	21	44.68	31.4	58.8	1	2.1	0.5	11.1
Slovenia	69	46	259	7	2.70	46	66.67	54.9	76.7	23	33.33	23.3	45.1	0	0.0	0.0	4.2
Spain	132	52	518	8	1.54	58	43.94	35.8	52.5	74	56.06	47.5	64.2	0	0.0	0.0	2.2
Sweden	255	160	362	19	5.25	205	80.39	75.1	84.8	47	18.43	14.2	23.7	3	1.1	0.4	3.4

Country	No of samples	No of processed samples	No of Compounds			Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
			Sought	Found	% found from sought	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
United Kingdom, The	360	288	89	18	20.22	105	29.17	24.7	34.1	244	67.78	62.8	72.4	11	3.0	1.7	5.4
<b>Total</b>	<b>5,018</b>	<b>1,928</b>	<b>7,974</b>	<b>367</b>	<b>4.60</b>	<b>3,244</b>	<b>64.65</b>	<b>63.3</b>	<b>66.0</b>	<b>1,712</b>	<b>34.12</b>	<b>32.8</b>	<b>35.4</b>	<b>62</b>	<b>1.2</b>	<b>1.0</b>	<b>1.6</b>

(a): Lower confidence limit; (b): Upper confidence limit

**TABLE B2: FRUIT AND NUTS**

Country	No of samples	No of processed samples	No of Compounds			Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
			Sought	Found	% found from sought	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	664	108	451	91	20.18	230	34.64	31.1	38.3	419	63.10	59.4	66.7	15	2.26	1.4	3.7
Belgium	720	16	492	108	21.95	116	16.11	13.6	19.0	575	79.86	76.8	82.6	29	4.03	2.8	5.7
Bulgaria	152	0	163	38	23.31	85	55.92	48.0	63.6	63	41.45	33.9	49.4	4	2.63	1.1	6.6
Cyprus	140	6	256	51	19.92	53	37.86	30.2	46.1	75	53.57	45.3	61.6	12	8.57	5.0	14.4
Czech Republic, The	317	13	284	94	33.10	91	28.71	24.0	33.9	219	69.09	63.8	73.9	7	2.21	1.1	4.5
Denmark	954	62	228	65	28.51	354	37.11	34.1	40.2	575	60.27	57.1	63.3	25	2.62	1.8	3.8
Estonia	49	0	265	19	7.17	29	59.18	45.2	71.8	18	36.73	24.7	50.8	2	4.08	1.3	13.7
Finland	699	122	285	106	37.19	246	35.19	31.7	38.8	437	62.52	58.9	66.0	16	2.29	1.4	3.7
France	1,796	493	361	90	24.93	819	45.60	43.3	47.9	935	52.06	49.7	54.4	42	2.34	1.7	3.1
Germany	7,005	105	778	246	31.62	1558	22.24	21.3	23.2	5,311	75.82	74.8	76.8	136	1.94	1.6	2.3
Greece	840	36	326	66	20.25	468	55.71	52.3	59.0	363	43.21	39.9	46.6	9	1.07	0.6	2.0
Hungary	1,171	72	303	98	32.34	387	33.05	30.4	35.8	775	66.18	63.4	68.8	9	0.77	0.4	1.5
Iceland	114	0	61	17	27.87	41	35.96	27.7	45.1	68	59.65	50.4	68.2	5	4.39	1.9	9.9
Ireland	531	57	312	94	30.13	130	24.48	21.0	28.3	384	72.32	68.4	76.0	17	3.20	2.0	5.1
Italy	3,098	463	433	107	24.71	1495	48.26	46.5	50.0	1,581	51.03	49.3	52.8	22	0.71	0.5	1.1
Latvia	46	0	149	19	12.75	21	45.65	32.1	59.9	25	54.35	40.1	67.9	0	0.00	0.0	6.2
Lithuania	252	13	240	69	28.75	41	16.27	12.2	21.3	199	78.97	73.5	83.5	12	4.76	2.8	8.1
Luxembourg	69	1	410	48	11.71	28	40.58	29.8	52.4	38	55.07	43.3	66.3	3	4.35	1.6	12.0
Malta	33	0	200	21	10.50	11	33.33	19.7	50.5	22	66.67	49.5	80.3	0	0.00	0.0	8.4
Netherlands, The	1,173	58	370	107	28.92	288	24.55	22.2	27.1	827	70.50	67.8	73.0	58	4.94	3.8	6.3
Norway	615	18	286	73	25.52	158	25.69	22.4	29.3	450	73.17	69.5	76.5	7	1.14	0.6	2.3
Poland	688	134	214	50	23.36	499	72.53	69.1	75.7	185	26.89	23.7	30.3	4	0.58	0.2	1.5
Portugal	303	0	282	39	13.83	141	46.53	41.0	52.2	148	48.84	43.3	54.5	14	4.62	2.8	7.6
Romania	1,435	18	188	58	30.85	760	52.96	50.4	55.5	656	45.71	43.2	48.3	19	1.32	0.9	2.1
Slovakia	283	9	237	78	32.91	71	25.09	20.4	30.5	202	71.38	65.8	76.3	10	3.53	1.9	6.4



Country	No of samples	No of processed samples	No of Compounds			Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
			Sought	Found	% found from sought	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Slovenia	431	47	259	72	27.80	124	28.77	24.7	33.2	297	68.91	64.4	73.1	10	2.32	1.3	4.2
Spain	931	44	536	99	18.47	268	28.79	26.0	31.8	641	68.85	65.8	71.7	22	2.36	1.6	3.6
Sweden	732	75	340	93	27.35	151	20.63	17.9	23.7	554	75.68	72.4	78.6	27	3.69	2.6	5.3
United Kingdom, The	807	0	365	100	27.40	110	13.63	11.4	16.2	687	85.13	82.5	87.4	10	1.24	0.7	2.3
<b>Total</b>	<b>26,048</b>	<b>1,970</b>	<b>9,074</b>	<b>2,216</b>	<b>24.42</b>	<b>8,773</b>	<b>33.68</b>	<b>33.1</b>	<b>34.3</b>	<b>16,729</b>	<b>64.22</b>	<b>63.6</b>	<b>64.8</b>	<b>546</b>	<b>2.10</b>	<b>1.9</b>	<b>2.3</b>

(a): Lower confidence limit ; (b): Upper confidence limit

**TABLE B3: VEGETABLES**

Country	No of samples	No of processed samples	No of Compounds			Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
			Sought	Found	% found from sought	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	824	37	448	92	20.54	446	54.13	50.7	57.5	348	42.23	38.9	45.6	30	3.64	2.6	5.2
Belgium	1,096	0	501	109	21.76	429	39.14	36.3	42.1	606	55.29	52.3	58.2	61	5.57	4.4	7.1
Bulgaria	193	0	163	27	16.56	126	65.28	58.3	71.6	62	32.12	25.9	39.0	5	2.59	1.1	5.9
Cyprus	254	7	255	52	20.39	133	52.36	46.2	58.4	82	32.28	26.8	38.3	39	15.3	11.4	20.3
Czech Republic, The	599	18	280	102	36.43	250	41.74	37.9	45.7	327	54.59	50.6	58.5	22	3.67	2.4	5.5
Denmark	841	1	230	66	28.70	600	71.34	68.2	74.3	212	25.21	22.4	28.3	29	3.45	2.4	4.9
Estonia	131	0	263	34	12.93	71	54.20	45.7	62.5	55	41.98	33.9	50.6	5	3.82	1.7	8.6
Finland	604	68	281	108	38.43	281	46.52	42.6	50.5	299	49.50	45.5	53.5	24	3.97	2.7	5.8
France	2,329	60	364	107	29.40	1,551	66.60	64.7	68.5	698	29.97	28.1	31.9	80	3.43	2.8	4.3
Germany	6,963	32	791	276	34.89	3,307	47.49	46.3	48.7	3,407	48.93	47.8	50.1	249	3.58	3.2	4.0
Greece	1,287	17	324	76	23.46	1,076	83.61	81.5	85.5	167	12.98	11.3	14.9	44	3.42	2.6	4.6
Hungary	1,201	13	305	90	29.51	700	58.28	55.5	61.0	491	40.88	38.1	43.7	10	0.83	0.5	1.5
Iceland	154	0	61	11	18.03	137	88.96	83.0	93.0	14	9.09	5.5	14.7	3	1.95	0.7	5.6
Ireland	347	5	312	63	20.19	177	51.01	45.8	56.2	158	45.53	40.4	50.8	12	3.46	2.0	5.9
Italy	2,277	182	400	94	23.50	1,728	75.89	74.1	77.6	526	23.10	21.4	24.9	23	1.01	0.7	1.5
Latvia	116	2	151	15	9.93	96	82.76	74.8	88.5	20	17.24	11.5	25.2	0	0.00	0.0	2.5
Lithuania	136	1	238	38	15.97	81	59.56	51.1	67.4	52	38.24	30.5	46.6	3	2.21	0.8	6.3
Luxembourg	119	0	382	31	8.12	84	70.59	61.8	78.0	31	26.05	19.0	34.6	4	3.36	1.4	8.3
Malta	75	0	198	29	14.65	51	68.00	56.7	77.5	18	24.00	15.8	34.8	6	8.00	3.8	16.4
Netherlands, The	1,710	19	364	114	31.32	888	51.93	49.6	54.3	657	38.42	36.1	40.8	165	9.65	8.3	11.1
Norway	678	3	274	73	26.64	471	69.47	65.9	72.8	191	28.17	24.9	31.7	16	2.36	1.5	3.8
Poland	826	3	214	52	24.30	656	79.42	76.5	82.0	158	19.13	16.6	22.0	12	1.45	0.8	2.5

Country	No of samples	No of processed samples	No of Compounds			Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
			Sought	Found	% found from sought	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Portugal	417	0	283	25	8.83	283	67.87	63.2	72.2	127	30.46	26.2	35.0	7	1.68	0.8	3.4
Romania	1,611	2	188	61	32.45	1,400	86.90	85.2	88.5	199	12.35	10.8	14.1	12	0.74	0.4	1.3
Slovakia	196	7	231	55	23.81	114	58.16	51.2	64.9	72	36.73	30.3	43.7	10	5.10	2.8	9.1
Slovenia	427	37	258	53	20.54	262	61.36	56.7	65.9	143	33.49	29.2	38.1	22	5.15	3.4	7.7
Spain	808	17	543	84	15.47	507	62.75	59.4	66.0	274	33.91	30.7	37.2	27	3.34	2.3	4.8
Sweden	544	21	339	91	26.84	309	56.80	52.6	60.9	207	38.05	34.1	42.2	28	5.15	3.6	7.3
United Kingdom, The	1,067	47	363	78	21.49	646	60.54	57.6	63.4	392	36.74	33.9	39.7	29	2.72	1.9	3.9
<b>Total</b>	<b>27,830</b>	<b>599</b>	<b>9,004</b>	<b>2,106</b>	<b>23.39</b>	<b>16,860</b>	<b>60.58</b>	<b>60.0</b>	<b>61.2</b>	<b>9,993</b>	<b>35.91</b>	<b>35.3</b>	<b>36.5</b>	<b>977</b>	<b>3.51</b>	<b>3.3</b>	<b>3.7</b>

(a): Lower confidence limit ; (b): Upper confidence limit

**TABLE B4: OTHER PLANT PRODUCTS**

Country	No of samples	No of processed samples	No of Compounds			Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
			Sought	Found	% found from sought	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	290	264	434	20	4.61	176	60.69	55.0	66.1	105	36.21	30.9	41.9	9	3.10	1.7	5.8
Belgium	105	14	474	51	10.76	46	43.81	34.7	53.4	42	40.00	31.1	49.6	17	16.1	10.4	24.4
Cyprus	19	0	250	2	0.80	17	89.47	68.3	96.8	1	5.26	1.2	24.9	1	5.26	1.2	24.9
Czech Republic, The	49	34	280	32	11.43	29	59.18	45.2	71.8	17	34.69	22.9	48.8	3	6.12	2.2	16.5
Denmark	67	8	226	12	5.31	49	73.13	61.4	82.3	8	11.94	6.2	21.9	10	14.9	8.4	25.4
Estonia	12	0	262	0	0.00	12	100.0	79.4	100.0	0	0.00	0.0	20.6	0	0.00	0.0	20.6
Finland	154	39	255	25	9.80	114	74.03	66.6	80.3	31	20.13	14.6	27.2	9	5.84	3.1	10.7
France	207	33	363	31	8.54	159	76.81	70.6	82.0	30	14.49	10.4	19.9	18	8.70	5.6	13.3
Germany	852	125	793	103	12.99	529	62.09	58.8	65.3	258	30.28	27.3	33.5	65	7.63	6.0	9.6
Greece	259	202	295	12	4.07	231	89.19	84.8	92.4	24	9.27	6.3	13.4	4	1.54	0.6	3.9
Hungary	70	20	293	6	2.05	60	85.71	75.6	92.0	9	12.86	7.0	22.7	1	1.43	0.3	7.6
Ireland	2	0	308	0	0.00	2	100.0	36.8	100.0	0	0.00	0.0	63.2	0	0.00	0.0	63.2
Italy	408	238	362	15	4.14	347	85.05	81.3	88.2	59	14.46	11.4	18.2	2	0.49	0.2	1.8
Lithuania	28	14	238	16	6.72	19	67.86	49.2	82.1	4	14.29	5.8	31.7	5	17.8	8.0	35.8
Netherlands, The	112	33	367	27	7.36	73	65.18	56.0	73.4	37	33.04	25.0	42.2	2	1.79	0.6	6.2
Norway	20	1	229	8	3.49	9	45.00	25.7	66.0	9	45.00	25.7	66.0	2	10.0	3.0	30.4
Poland	5	1	207	0	0.00	5	100.0	60.7	100.0	0	0.00	0.0	39.3	0	0.00	0.0	39.3
Romania	52	0	181	0	0.00	52	100.0	94.5	100.0	0	0.00	0.0	5.5	0	0.00	0.0	5.5

Slovakia	10	0	207	6	2.90	9	90.00	58.7	97.7	1	10.00	2.3	41.3	0	0.00	0.0	23.8
Slovenia	57	33	253	7	2.77	49	85.96	74.6	92.7	7	12.28	6.1	23.3	1	1.75	0.4	9.2
Spain	73	65	346	5	1.45	54	73.97	62.8	82.6	19	26.03	17.4	37.2	0	0.00	0.0	4.0
United Kingdom, The	232	225	361	8	2.22	201	86.64	81.6	90.4	13	5.60	3.3	9.4	18	7.76	5.0	11.9
<b>Total</b>	<b>3,083</b>	<b>1,349</b>	<b>6,984</b>	<b>386</b>	<b>5.53</b>	<b>2,242</b>	<b>72.72</b>	<b>71.1</b>	<b>74.3</b>	<b>674</b>	<b>21.86</b>	<b>20.4</b>	<b>23.4</b>	<b>167</b>	<b>5.42</b>	<b>4.7</b>	<b>6.3</b>

(a): Lower confidence limit; (b): Upper confidence limit

**TABLE B5: ANIMAL PRODUCTS**

Country	No of samples	No of processed samples	No of Compounds			Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
			Sought	Found	% found from sought	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	464	1	142	3	2.11	448	96.55	94.5	97.9	15	3.23	2.0	5.3	1	0.22	0.1	1.2
Belgium	591	72	68	8	11.76	461	78.00	74.5	81.2	130	22.00	18.8	25.5	0	0.00	0.0	0.5
Bulgaria	42	0	5	0	0.00	42	100.00	93.3	100.0	0	0.00	0.0	6.7	0	0.00	0.0	6.7
Cyprus	160	0	117	1	0.85	155	96.88	92.9	98.6	5	3.13	1.4	7.1	0	0.00	0.0	1.8
Czech Republic, The	65	15	35	2	5.71	48	73.85	62.0	83.0	17	26.15	17.0	38.0	0	0.00	0.0	4.4
Denmark	263	1	123	0	0.00	263	100.00	98.9	100.0	0	0.00	0.0	1.1	0	0.00	0.0	1.1
Estonia	30	0	35	1	2.86	28	93.33	78.6	98.0	2	6.67	2.0	21.4	0	0.00	0.0	9.2
Finland	41	1	258	0	0.00	41	100.00	93.1	100.0	0	0.00	0.0	6.9	0	0.00	0.0	6.9
France	60	1	274	2	0.73	57	95.00	86.3	98.2	3	5.00	1.8	13.7	0	0.00	0.0	4.8
Germany	1,047	170	545	23	4.22	674	64.37	61.4	67.2	371	35.43	32.6	38.4	2	0.19	0.1	0.7
Greece	72	20	181	2	1.10	68	94.44	86.6	97.7	4	5.56	2.3	13.4	0	0.00	0.0	4.0
Hungary	1,337	982	29	2	6.90	1,328	99.33	98.7	99.6	8	0.60	0.3	1.2	1	0.07	0.0	0.4
Ireland	424	0	336	9	2.68	413	97.41	95.4	98.5	11	2.59	1.5	4.6	0	0.00	0.0	0.7
Italy	151	68	274	1	0.36	150	99.34	96.4	99.8	1	0.66	0.2	3.6	0	0.00	0.0	2.0
Latvia	28	0	33	0	0.00	28	100.00	90.2	100.0	0	0.00	0.0	9.8	0	0.00	0.0	9.8
Lithuania	30	30	34	0	0.00	30	100.00	90.8	100.0	0	0.00	0.0	9.2	0	0.00	0.0	9.2
Luxembourg	15	0	41	0	0.00	15	100.00	82.9	100.0	0	0.00	0.0	17.1	0	0.00	0.0	17.1
Malta	30	0	50	0	0.00	30	100.00	90.8	100.0	0	0.00	0.0	9.2	0	0.00	0.0	9.2
Netherlands, The	47	0	53	0	0.00	47	100.00	93.9	100.0	0	0.00	0.0	6.1	0	0.00	0.0	6.1
Norway	30	0	35	0	0.00	30	100.00	90.8	100.0	0	0.00	0.0	9.2	0	0.00	0.0	9.2
Poland	310	105	32	0	0.00	310	100.00	99.0	100.0	0	0.00	0.0	1.0	0	0.00	0.0	1.0
Romania	362	16	63	10	15.87	333	91.99	88.7	94.4	29	8.01	5.6	11.3	0	0.00	0.0	0.8
Slovakia	30	0	35	0	0.00	30	100.00	90.8	100.0	0	0.00	0.0	9.2	0	0.00	0.0	9.2
Slovenia	76	16	34	1	2.94	75	98.68	93.0	99.7	1	1.32	0.3	7.0	0	0.00	0.0	3.8
Spain	522	23	373	8	2.14	504	96.55	94.6	97.8	16	3.07	1.9	4.9	2	0.38	0.1	1.4
Sweden	85	0	318	0	0.00	85	100.00	96.6	100.0	0	0.00	0.0	3.4	0	0.00	0.0	3.4
United Kingdom, The	648	132	66	3	4.55	633	97.69	96.2	98.6	15	2.31	1.4	3.8	0	0.00	0.0	0.5

Country	No of samples	No of processed samples	No of Compounds			Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
			Sought	Found	% found from sought	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
<b>Total</b>	<b>6,960</b>	<b>1,653</b>	<b>3,589</b>	<b>76</b>	<b>2.12</b>	<b>6,326</b>	<b>90.89</b>	<b>90.2</b>	<b>91.5</b>	<b>628</b>	<b>9.02</b>	<b>8.4</b>	<b>9.7</b>	<b>6</b>	<b>0.09</b>	<b>0.0</b>	<b>0.2</b>

(a): Lower confidence limit; (b): Upper confidence limit

**TABLE B6: BABY FOOD**

Country	No of samples	No of Compounds			Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Sought	Found	% found from sought	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	200	422	0	0.00	200	100.00	98.5	100.0	0	0.00	0.0	1.5	0	0.00	0.0	1.5
Belgium	74	377	3	0.80	70	94.59	86.9	97.8	3	4.05	1.5	11.2	1	1.35	0.3	7.2
Bulgaria	21	154	1	0.65	19	90.48	70.8	97.1	0	0.00	0.0	12.7	2	9.52	2.9	29.2
Cyprus	22	251	1	0.40	20	90.91	72.0	97.2	2	9.09	2.8	28.0	0	0.00	0.0	12.2
Czech Republic, The	39	279	3	1.08	35	89.74	76.3	95.8	4	10.26	4.2	23.7	0	0.00	0.0	7.2
Denmark	17	239	0	0.00	17	100.00	84.7	100.0	0	0.00	0.0	15.3	0	0.00	0.0	15.3
Estonia	15	256	0	0.00	15	100.00	82.9	100.0	0	0.00	0.0	17.1	0	0.00	0.0	17.1
Finland	33	257	0	0.00	33	100.00	91.6	100.0	0	0.00	0.0	8.4	0	0.00	0.0	8.4
France	27	360	0	0.00	27	100.00	89.9	100.0	0	0.00	0.0	10.1	0	0.00	0.0	10.1
Germany	251	705	9	1.28	241	96.02	92.8	97.8	10	3.98	2.2	7.2	0	0.00	0.0	1.2
Greece	31	257	0	0.00	31	100.00	91.1	100.0	0	0.00	0.0	8.9	0	0.00	0.0	8.9
Hungary	43	31	0	0.00	43	100.00	93.4	100.0	0	0.00	0.0	6.6	0	0.00	0.0	6.6
Ireland	40	300	0	0.00	40	100.00	93.0	100.0	0	0.00	0.0	7.0	0	0.00	0.0	7.0
Italy	163	372	0	0.00	163	100.00	98.2	100.0	0	0.00	0.0	1.8	0	0.00	0.0	1.8
Latvia	10	146	0	0.00	10	100.00	76.2	100.0	0	0.00	0.0	23.8	0	0.00	0.0	23.8
Lithuania	11	238	3	1.26	8	72.73	42.8	90.1	3	27.27	9.9	57.2	0	0.00	0.0	22.1
Luxembourg	10	366	0	0.00	10	100.00	76.2	100.0	0	0.00	0.0	23.8	0	0.00	0.0	23.8
Malta	10	133	0	0.00	10	100.00	76.2	100.0	0	0.00	0.0	23.8	0	0.00	0.0	23.8
Netherlands, The	36	207	3	1.45	33	91.67	78.1	97.0	3	8.33	3.0	21.9	0	0.00	0.0	7.8
Norway	44	257	0	0.00	44	100.00	93.6	100.0	0	0.00	0.0	6.4	0	0.00	0.0	6.4
Poland	190	175	0	0.00	190	100.00	98.4	100.0	0	0.00	0.0	1.6	0	0.00	0.0	1.6
Portugal	15	280	0	0.00	15	100.00	82.9	100.0	0	0.00	0.0	17.1	0	0.00	0.0	17.1
Romania	84	51	2	3.92	81	96.43	90.0	98.7	3	3.57	1.3	10.0	0	0.00	0.0	3.5
Slovakia	40	176	3	1.70	35	87.50	73.8	94.4	5	12.50	5.6	26.2	0	0.00	0.0	7.0
Slovenia	60	267	1	0.37	59	98.33	91.2	99.6	1	1.67	0.4	8.8	0	0.00	0.0	4.8
Spain	205	561	0	0.00	205	100.00	98.6	100.0	0	0.00	0.0	1.4	0	0.00	0.0	1.4
Sweden	45	359	0	0.00	45	100.00	93.7	100.0	0	0.00	0.0	6.3	0	0.00	0.0	6.3

Country	No of samples	No of Compounds			Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Sought	Found	% found from sought	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
United Kingdom, The	60	167	1	0.60	58	96.67	88.7	99.0	1	1.67	0.4	8.8	1	1.67	0.4	8.8
<b>Total</b>	<b>1,796</b>	<b>7,643</b>	<b>30</b>	<b>0.39</b>	<b>1,757</b>	<b>97.83</b>	<b>97.0</b>	<b>98.4</b>	<b>35</b>	<b>1.95</b>	<b>1.4</b>	<b>2.7</b>	<b>4</b>	<b>0.22</b>	<b>0.1</b>	<b>0.6</b>

(a): Lower confidence limit; (b): Upper confidence limit

**TABLE C: NP – SURVEILLANCE SAMPLING: NUMBER OF PESTICIDES FOUND IN THE SAME SAMPLE BY REPORTING COUNTRY**

Country	Number of samples analysed	Number of pesticides found in the sample																											Samples with multiple residues	
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	22	23	27	Number	%			
Austria	2,570	1,594	428	248	134	90	37	20	5	11			1	2													548	21.32		
Belgium	2,629	1,132	495	310	229	160	96	79	57	28	19	8	6	3	3	2		2									1,002	38.11		
Bulgaria	461	318	87	41	9	6																					56	12.15		
Cyprus	658	411	105	72	33	16	9	4	6	1		1															142	21.58		
Czech Republic, The	1,289	587	253	145	101	65	63	31	17	11	7	3	2	2		1	1										449	34.83		
Denmark	2,466	1,531	452	259	142	57	12	8	4	1																	483	19.59		
Estonia	268	175	51	21	11	4	4	1	1																		42	15.67		
Finland	1,702	804	318	187	129	112	63	30	20	10	10	2	4		4		1	1	4		2				1	580	34.08			
France	5,034	2,987	929	523	288	152	80	37	18	8	7	2	1	1		1											1,118	22.21		
Germany	16,661	6,648	3,217	2,270	1,647	1,046	710	445	266	159	98	49	43	23	16	8	5	1	4	2	1		2	1			6,796	40.79		
Greece	2,544	1,914	371	143	56	27	13	7	3	3	3	1											1	2			259	10.18		
Hungary	3,942	2,603	724	330	159	69	34	13	2	3	2	2	1														615	15.6		
Iceland	268	178	53	20	13	4																					37	13.81		
Ireland	1,489	832	237	151	98	70	42	26	20	6	2	1	1	1		1						1					420	28.21		
Italy	6,933	4,500	1,219	611	287	159	79	44	17	9	5	1	2														1,214	17.51		
Latvia	245	190	35	10	7	2		1																			20	8.16		
Lithuania	507	215	68	61	71	40	25	12	9	5		1															224	44.18		
Luxembourg	243	153	37	13	14	9	4	9	1	1		1								1							53	21.81		
Malta	163	105	21	23	8	2	1	1		1		1															37	22.7		
Netherlands, The	3,223	1,387	653	468	282	194	110	58	40	15	5	1	4	1	3		2										1,183	36.7		
Norway	1,466	772	264	211	95	64	34	9	8	6	1	1	1														430	29.33		
Poland	2,194	1,816	199	91	55	19	6	3	3	1		1															179	8.16		
Portugal	861	529	224	86	17	1	3	1																			108	12.54		
Romania	3,771	2,835	572	232	96	25	7	2	2																		364	9.65		
Slovakia	606	284	119	72	44	37	22	15	6	1	2	2	1				1										203	33.5		
Slovenia	1,120	615	216	131	64	39	32	14	6	3																	289	25.8		
Spain	2,703	1,622	520	252	162	76	31	16	12	3	4	2	3														561	20.75		
Sweden	1,661	795	266	226	161	108	50	31	12	8	1		1		1							1					600	36.12		
United Kingdom, The	3487	2,031	587	326	211	150	83	45	26	6	6	3	5		2	4	1		1								869	24.92		
Total	71,164	39,563	12,720	7,533	4,623	2,803	1,650	962	561	300	172	83	76	33	29	17	11	4	9	3	3	2	3	3	1		18,881	26.53		

**TABLE D: NP – ENFORCEMENT SAMPLING RESULTS BY REPORTING COUNTRY**

**TABLE D1: ANIMAL PRODUCTS**

Country	No of samples	No of processed samples	Samples with no measurable residues		Samples with residues below or at the MRL		Samples with residues above the MRL	
			Number	%	Number	%	Number	%
Austria	4	0	3	75.00	1	25.00	0	0.00
Germany	15	0	13	86.67	2	13.33	0	0.00
Hungary	1	1	1	100.00	0	0.00	0	0.00
Latvia	2	0	0	0.00	0	0.00	2	100.00
Poland	2	2	2	100.00	0	0.00	0	0.00
<b>Total</b>	<b>24</b>	<b>3</b>	<b>19</b>	<b>79.17</b>	<b>3</b>	<b>12.50</b>	<b>2</b>	<b>8.33</b>

**TABLE D2: BABY FOOD**

Country	No of samples	No of processed samples	Samples with no measurable residues		Samples with residues below or at the MRL		Samples with residues above the MRL	
			Number	%	Number	%	Number	%
Spain	2	0	0	0.00	0	0.00	2	100.00
<b>Total</b>	<b>2</b>	<b>0</b>	<b>0</b>	<b>0.00</b>	<b>0</b>	<b>0.00</b>	<b>2</b>	<b>100.00</b>

**TABLE D3: CEREALS**

Country	No of samples	No of processed samples	Samples with no measurable residues		Samples with residues below or at the MRL		Samples with residues above the MRL	
			Number	%	Number	%	Number	%
Austria	4	2	3	75.00	1	25.00	0	0.00
Czech Republic, The	1	1	1	100.00	0	0.00	0	0.00
Finland	2	0	1	50.00	1	50.00	0	0.00
France	1	0	1	100.00	0	0.00	0	0.00
Germany	5	0	4	80.00	1	20.00	0	0.00
Greece	1	0	1	100.00	0	0.00	0	0.00
Ireland	9	0	5	55.56	2	22.22	2	22.22
Italy	10	5	10	100.00	0	0.00	0	0.00
Netherlands, The	1	0	1	100.00	0	0.00	0	0.00
Poland	1	0	1	100.00	0	0.00	0	0.00
<b>Total</b>	<b>35</b>	<b>8</b>	<b>28</b>	<b>80.00</b>	<b>5</b>	<b>14.29</b>	<b>2</b>	<b>5.71</b>

**TABLE D4: FRUIT AND NUTS**

Country	No of samples	No of processed samples	Samples with no measurable residues		Samples with residues below or at the MRL		Samples with residues above the MRL	
			Number	%	Number	%	Number	%
Austria	36	8	16	44.44	20	55.56	0	0.00
Belgium	80	0	30	37.50	43	53.75	7	8.75
Cyprus	1	0	1	100.00	0	0.00	0	0.00
Czech Republic, The	1	0	0	0.00	1	100.00	0	0.00
Denmark	4	0	0	0.00	3	75.00	1	25.00
Finland	115	0	20	17.39	71	61.74	24	20.87
France	28	0	4	14.29	23	82.14	1	3.57
Germany	133	0	46	34.59	81	60.90	6	4.51
Greece	34	0	12	35.29	20	58.82	2	5.88
Iceland	1	0	0	0.00	1	100.00	0	0.00
Ireland	7	0	0	0.00	7	100.00	0	0.00
Italy	7	0	6	85.71	1	14.29	0	0.00
Luxembourg	2	0	0	0.00	2	100.00	0	0.00
Netherlands, The	451	0	28	6.21	319	70.73	104	23.06
Norway	5	0	0	0.00	5	100.00	0	0.00
Poland	9	6	3	33.33	5	55.56	1	11.11
Portugal	4	0	2	50.00	0	0.00	2	50.00
Slovakia	2	0	1	50.00	1	50.00	0	0.00



Country	No of samples	No of processed samples	Samples with no measurable residues		Samples with residues below or at the MRL		Samples with residues above the MRL	
			Number	%	Number	%	Number	%
Slovenia	2	0	0	0.00	2	100.00	0	0.00
Spain	5	0	1	20.00	4	80.00	0	0.00
Sweden	23	2	4	17.39	10	43.48	9	39.13
<b>Total</b>	<b>950</b>	<b>16</b>	<b>174</b>	<b>18.32</b>	<b>619</b>	<b>65.16</b>	<b>157</b>	<b>16.53</b>

**TABLE D5: VEGETABLES**

Country	No of samples	No of processed samples	Samples with no measurable residues		Samples with residues below or at the MRL		Samples with residues above the MRL	
			Number	%	Number	%	Number	%
Austria	31	0	21	67.74	9	29.03	1	3.23
Belgium	510	0	197	38.63	251	49.22	62	12.16
Bulgaria	4,055	0	3,845	94.82	113	2.79	97	2.39
Cyprus	12	0	9	75	2	16.67	1	8.33
Czech Republic, The	5	0	3	60	2	40	0	0
Denmark	57	0	33	57.89	16	28.07	8	14.04
Finland	273	1	168	61.54	60	21.98	45	16.48
France	250	0	112	44.8	98	39.2	40	16
Germany	268	2	155	57.84	98	36.57	15	5.6
Greece	110	3	39	35.45	60	54.55	11	10
Hungary	1	0	0	0	1	100	0	0
Iceland	7	0	5	71.43	0	0	2	28.57
Ireland	13	0	7	53.85	6	46.15	0	0
Italy	12	0	11	91.67	0	0	1	8.33
Malta	7	0	0	0	4	57.14	3	42.86
Netherlands, The	816	0	445	54.53	278	34.07	93	11.4
Norway	151	0	110	72.85	23	15.23	18	11.92
Poland	5	0	4	80	1	20	0	0
Romania	4	0	0	0	4	100	0	0
Slovakia	4	0	2	50	0	0	2	50
Slovenia	3	1	2	66.67	0	0	1	33.33
Spain	28	0	19	67.86	7	25	2	7.14
Sweden	69	0	39	56.52	22	31.88	8	11.59
<b>Total</b>	<b>6,691</b>	<b>7</b>	<b>5226</b>	<b>78.1</b>	<b>1,055</b>	<b>15.77</b>	<b>410</b>	<b>6.13</b>

**TABLE D6: OTHER PLANT PRODUCTS**

Country	No of samples	No of processed samples	Samples with no measurable residues		Samples with residues below or at the MRL		Samples with residues above the MRL	
			Number	%	Number	%	Number	%
Austria	23	15	10	43.48	11	47.83	2	8.7
Belgium	4	0	0	0	3	75	1	25
Czech Republic, The	2	2	2	100	0	0	0	0
Denmark	4	1	1	25	3	75	0	0
Finland	12	0	8	66.67	4	33.33	0	0
France	11	0	4	36.36	6	54.55	1	9.09
Germany	75	5	33	44	28	37.33	14	18.67
Greece	5	1	5	100	0	0	0	0
Norway	1	0	1	100	0	0	0	0
Poland	11	11	1	9.09	10	90.91	0	0
Spain	5	3	4	80	0	0	1	20
<b>Total</b>	<b>153</b>	<b>38</b>	<b>69</b>	<b>45.1</b>	<b>65</b>	<b>42.48</b>	<b>19</b>	<b>12.42</b>

**TABLE E: NP – SURVEILLANCE SAMPLING: COMPARISON OF ORGANIC AND OTHER PRODUCTION RESULTS IN COUNTRIES REPORTING ORGANIC SAMPLES**

**TABLE E1: ANIMAL PRODUCTS**

Country	Type of production	No of samples	Samples with no measurable residues	Samples with residues below or at the MRL	Samples with residues above the MRL			
					Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	Organic	34	33	1	0	0.00	0	8.43
	Other production	430	415	14	1	0.23	0.06	1.28
Belgium	Organic	7	6	1	0	0.00	0	34.81
	Other production	584	455	129	0	0.00	0	0.51
Denmark	Organic	1	1	0	0	0.00	0	95
	Other production	262	262	0	0	0.00	0	1.13
Estonia	Organic	1	1	0	0	0.00	0	95
	Other production	29	27	2	0	0.00	0	9.81
Germany	Organic	63	42	21	0	0.00	0	4.64
	Other production	984	632	350	2	0.20	0.02	0.73
Greece	Organic	2	2	0	0	0.00	0	77.64
	Other production	70	66	4	0	0.00	0	4.18
Poland	Organic	2	2	0	0	0.00	0	77.63
	Other production	308	308	0	0	0.00	0	0.96
Sweden	Organic	2	2	0	0	0.00	0	77.63
	Other production	83	83	0	0	0.00	0	3.5
United Kingdom, The	Organic	88	88	0	0	0.00	0	3.35
	Other production	560	545	15	0	0.00	0	0.53

(a): lower confident level; (b) upper confident level

**TABLE E2: BABY FOOD**

Country	Type of production	No of samples	Samples with no measurable residues	Samples with residues below or at the MRL	Samples with residues above the MRL			
					Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	Organic	146	146	0	0	0.00	0.0	2.0
	Other production	54	54	0	0	0.00	0.0	5.3
Cyprus	Organic	3	3	0	0	0.00	0.0	63.2
	Other production	19	17	2	0	0.00	0.0	14.6
Czech Republic, The	Organic	15	14	1	0	0.00	0.0	18.1
	Other production	24	21	3	0	0.00	0.0	11.7
Denmark	Organic	16	16	0	0	0.00	0.0	17.1
	Other production	1	1	0	0	0.00	0.0	95.0
Estonia	Organic	1	1	0	0	0.00	0.0	95.0
	Other production	14	14	0	0	0.00	0.0	19.3
Finland	Organic	8	8	0	0	0.00	0.0	31.2
	Other production	25	25	0	0	0.00	0.0	11.3
France	Organic	7	7	0	0	0.00	0.0	34.8
	Other production	20	20	0	0	0.00	0.0	13.9
Germany	Organic	100	94	6	0	0.00	0.0	2.9
	Other production	151	147	4	0	0.00	0.0	2.0
Greece	Organic	1	1	0	0	0.00	0.0	95.0
	Other production	30	30	0	0	0.00	0.0	9.5
Italy	Organic	55	55	0	0	0.00	0.0	5.3
	Other production	108	108	0	0	0.00	0.0	2.7
Luxembourg	Organic	5	5	0	0	0.00	0.0	45.1
	Other production	5	5	0	0	0.00	0.0	45.1
Norway	Organic	7	7	0	0	0.00	0.0	34.8
	Other production	37	37	0	0	0.00	0.0	7.8
Poland	Organic	2	2	0	0	0.00	0.0	77.6
	Other production	188	188	0	0	0.00	0.0	1.6

Country	Type of production	No of samples	Samples with no measurable residues	Samples with residues below or at the MRL	Samples with residues above the MRL			
					Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Slovakia	Organic	2	2	0	0	0.00	0.0	77.6
	Other production	38	33	5	0	0.00	0.0	7.6
Slovenia	Organic	19	19	0	0	0.00	0.0	14.6
	Other production	41	40	1	0	0.00	0.0	7.1
Spain	Organic	3	3	0	0	0.00	0.0	63.2
	Other production	202	202	0	0	0.00	0.0	1.5
Sweden	Organic	8	8	0	0	0.00	0.0	31.2
	Other production	37	37	0	0	0.00	0.0	7.8
United Kingdom, The	Organic	29	29	0	0	0.00	0.0	9.8
	Other production	31	29	1	1	3.23	0.8	16.7

(a): lower confident level; (b) upper confident level

TABLE E3: CEREALS

Country	Type of production	No of samples	Samples with no measurable residues	Samples with residues below or at the MRL	Samples with residues above the MRL			
					Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	Organic	43	42	1	0	0.00	0.0	6.2
	Other production	70	52	17	1	1.43	0.03	7.7
Belgium	Organic	5	3	1	1	20.00	0.5	71.6
	Other production	38	7	29	2	5.26	0.6	17.8
Cyprus	Organic	1	1	0	0	0.00	0.0	77.6
	Other production	46	24	21	1	2.17	0.06	11.5
Czech Republic, The	Organic	49	42	7	0	0.0	0.0	5.8
	Other production	166	90	72	4	2.4	0.7	6.1
Denmark	Organic	71	69	2	0	0.00	0.0	4.1
	Other production	253	179	74	0	0.00	0.0	1.2
Estonia	Organic	2	2	0	0	0.00	0.0	77.6
	Other production	29	18	11	0	0.00	0.0	9.8
Finland	Organic	29	26	3	0	0.00	0.0	9.8
	Other production	142	63	74	5	3.5	1.15	8.0
France	Organic	121	115	6	0	0.00	0.0	2.4
	Other production	494	259	226	9	1.82	0.8	3.4
Germany	Organic	103	85	18	0	0.00	0.0	2.8
	Other production	440	254	181	5	1.13	0.4	2.6
Greece	Organic	3	3	0	0	0.00	0.0	63.2
	Other production	52	37	13	2	3.85	0.5	13.2
Ireland	Organic	1	1	0	0	0.00	0.0	77.6
	Other production	144	69	73	2	1.39	0.2	4.9
Italy	Organic	72	70	2	0	0.00	0.0	4.0
	Other production	751	534	213	4	0.53	0.2	1.3
Latvia	Organic	3	3	0	0	0.00	0.0	63.2
	Other production	42	32	10	0	0.00	0.0	6.7
Lithuania	Organic	3	2	1	0	0.00	0.0	63.2
	Other production	47	34	11	2	4.26	0.5	14.5
Luxembourg	Organic	8	7	1	0	0.00	0.0	31.2
	Other production	22	9	11	2	9.09	1.1	29.0
Netherlands, The	Organic	11	5	6	0	0.00	0.0	22.1
	Other production	134	53	77	4	2.99	0.8	7.5
Poland	Organic	3	3	0	0	0.00	0.0	63.2
	Other production	142	123	19	0	0.00	0.0	2.1
Slovakia	Organic	4	2	1	1	25.00	0.6	80.6
	Other production	43	23	20	0	0.00	0.0	6.7

Country	Type of production	No of samples	Samples with no measurable residues	Samples with residues below or at the MRL	Samples with residues above the MRL			
					Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Slovenia	Organic	9	9	0	0	0.00	0.0	28.3
	Other production	60	37	23	0	0.00	0.0	4.9
Spain	Organic	3	3	0	0	0.00	0.0	63.2
	Other production	129	55	74	0	0.00	0.0	2.3
Sweden	Organic	22	20	2	0	0.00	0.0	12.7
	Other production	233	185	45	3	1.29	0.3	3.7
United Kingdom, The	Organic	15	12	3	0	0.00	0.0	18.1
	Other production	345	93	241	11	3.19	1.6	5.6

(a): lower confident level; (b) upper confident level

**TABLE E4: FRUITS AND NUTS**

Country	Type of production	No of samples	Samples with no measurable residues	Samples with residues below or at the MRL	Samples with residues above the MRL			
					Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	Organic	68	64	4	0	0.00	0.0	4.3
	Other production	596	166	415	15	2.51	1.4	4.1
Belgium	Organic	2	1	1	0	0.00	0.0	77.6
	Other production	718	115	574	29	4.04	2.7	5.8
Cyprus	Organic	4	3	1	0	0.00	0.0	52.7
	Other production	136	50	74	12	8.82	4.6	14.9
Czech Republic, The	Organic	38	34	3	1	2.63	0.07	13.8
	Other production	279	57	216	6	2.15	0.8	4.6
Denmark	Organic	41	41	0	0	0.0	0.0	7.1
	Other production	913	313	575	25	2.73	1.9	4.0
Finland	Organic	61	57	4	0	0.0	0.0	4.8
	Other production	638	189	433	16	2.5	1.4	4.0
France	Organic	128	123	4	1	0.78	0.02	4.2
	Other production	1,668	696	931	41	2.46	1.8	3.3
Germany	Organic	357	294	60	3	0.8	0.17	2.4
	Other production	6,648	1,264	5,251	133	2.0	1.7	2.4
Greece	Organic	30	26	4	0	0.00	0.0	9.5
	Other production	810	442	359	9	1.11	0.5	2.1
Ireland	Organic	29	26	3	0	0.00	0.0	9.8
	Other production	502	104	381	17	3.39	1.9	5.3
Italy	Organic	113	108	5	0	0.00	0.0	2.6
	Other production	2,985	1,387	1,576	22	0.74	0.5	1.1
Latvia	Organic	1	1	0	0	0.00	0.0	95.0
	Other production	45	20	25	0	0.00	0.0	6.4
Lithuania	Organic	4	4	0	0	0.00	0.0	52.7
	Other production	248	37	199	12	4.84	2.5	8.3
Luxembourg	Organic	4	4	0	0	0.00	0.0	45.1
	Other production	65	24	38	3	4.62	0.96	12.9
Netherlands, The	Organic	37	36	1	0	0.0	0.0	7.7
	Other production	1,136	252	826	58	5.1	3.9	6.6
Norway	Organic	36	35	1	0	0.0	0.0	7.9
	Other production	579	123	449	7	1.2	0.5	2.5
Poland	Organic	1	1	0	0	0.00	0.0	95.0

Country	Type of production	No of samples	Samples with no measurable residues	Samples with residues below or at the MRL	Samples with residues above the MRL			
					Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Portugal	Other production	687	498	185	4	0.57	0.16	1.5
	Organic	3	1	2	0	0.00	0.0	63.2
	Other production	300	140	146	14	5.26	3.3	7.7
Slovakia	Organic	6	6	0	0	0.00	0.0	39.3
	Other production	277	65	202	10	3.6	1.7	6.5
Slovenia	Organic	11	10	1	0	0.00	0.0	23.8
	Other production	420	114	296	10	2.38	1.2	4.3
Spain	Organic	6	6	0	0	0.0	0.0	39.3
	Other production	925	262	641	22	2.37	1.5	3.5
Sweden	Organic	14	13	1	0	0.00	0.0	19.3
	Other production	718	138	553	27	3.76	2.5	5.4
United Kingdom, The	Organic	12	11	1	0	0.00	0.0	22.1
	Other production	795	99	686	10	1.26	0.6	2.3

(a): lower confidence level; (b) upper confidence level

**TABLE E5: VEGETABLES**

Country	Type of production	No of samples	Samples with no measurable residues	Samples with residues below or at the MRL	Samples with residues above the MRL			
					Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	Organic	26	25	1	0	0.0	0.0	10.9
	Other production	798	421	347	30	3.76	2.6	5.3
Belgium	Organic	11	5	4	2	18.2	2.3	51.8
	Other production	1,085	424	602	59	5.4	4.2	6.9
Cyprus	Organic	6	6	0	0	0.00	0.0	34.8
	Other production	248	127	82	39	15.7	11.4	20.9
Czech Republic, The	Organic	62	53	9	0	0.00	0.0	4.7
	Other production	537	197	318	22	4.1	2.6	6.1
Denmark	Organic	62	60	2	0	0.00	0.0	4.7
	Other production	779	540	210	29	4.43	3.2	5.3
Finland	Organic	30	27	3	0	0.0	0.0	9.5
	Other production	574	254	296	24	4.1	2.7	6.2
France	Organic	109	103	5	1	0.92	0.02	5.0
	Other production	2,220	1,448	693	79	3.6	2.8	4.4
Germany	Organic	652	545	104	3	0.46	0.09	1.3
	Other production	6,311	2,762	3,303	246	3.9	3.4	4.4
Greece	Organic	48	47	1	0	0.00	0.0	6.1
	Other production	1,239	1,029	166	44	3.55	2.6	4.7
Ireland	Organic	20	19	1	0	0.00	0.0	13.9
	Other production	327	158	157	12	3.7	1.9	6.3
Italy	Organic	136	133	2	1	0.74	0.02	4.0
	Other production	2,141	1,595	524	22	1.02	0.7	1.6
Latvia	Organic	1	1	0	0	0.00	0.0	95.0
	Other production	115	95	20	0	0.00	0.0	2.6
Lithuania	Organic	6	6	0	0	0.00	0.0	39.3
	Other production	130	75	52	3	2.31	0.5	6.6
Luxembourg	Organic	20	20	0	0	0.00	0.0	13.9
	Other production	99	64	31	4	4.04	1.1	10.0
Malta	Organic	3	3	0	0	0.00	0.0	63.2
	Other production	72	48	18	6	8.3	3.1	17.3
Netherlands, The	Organic	94	91	3	0	0.00	0.0	3.1
	Other production	1,616	797	654	165	10.2	8.8	11.8

Country	Type of production	No of samples	Samples with no measurable residues	Samples with residues below or at the MRL	Samples with residues above the MRL			
					Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Norway	Organic	69	67	2	0	0.00	0.0	4.2
	Other production	609	404	189	16	2.6	1.5	4.2
Poland	Organic	8	7	1	0	0.00	0.0	31.2
	Other production	818	649	157	12	1.46	0.8	2.5
Portugal	Organic	5	3	2	0	0.00	0.0	45.1
	Other production	412	280	125	7	1.70	0.7	3.5
Slovakia	Organic	3	3	0	0	0.00	0.0	63.2
	Other production	193	111	72	10	5.18	2.5	9.3
Slovenia	Organic	10	10	0	0	0.00	0.0	23.8
	Other production	417	252	143	22	5.28	3.3	7.9
Spain	Organic	12	11	1	0	0.00	0.0	22.1
	Other production	796	496	273	27	3.39	2.3	4.9
Sweden	Organic	13	13	0	0	0.00	0.0	20.6
	Other production	531	296	207	28	5.27	3.5	7.5
United Kingdom, The	Organic	73	72	1	0	0.00	0.0	4.0
	Other production	994	574	391	29	2.92	2.0	4.2

(a): lower confidence level; (b) upper confidence level

**TABLE E6: OTHER PLANT PRODUCTS**

Country	Type of production	No of samples	Samples with no measurable residues	Samples with residues below or at the MRL	Samples with residues above the MRL			
					Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	Organic	33	24	9	0	0.0	0.0	8.6
	Other production	257	152	96	9	3.50	1.61	6.54
Czech Republic, The	Organic	14	10	4	0	0.00	0	19.3
	Other production	35	19	13	3	8.57	1.8	23.06
Denmark	Organic	31	27	1	3	9.68	2.04	25.75
	Other production	36	22	7	7	19.4	8.19	36.02
Estonia	Organic	1	1	0	0	0.00	0	95.00
	Other production	11	11	0	0	0.00	0	23.84
Finland	Organic	39	38	1	0	0.00	0	7.39
	Other production	115	76	30	9	7.83	3.64	14.33
France	Organic	35	34	0	1	2.86	0.07	14.92
	Other production	172	125	30	17	9.88	5.86	15.35
Germany	Organic	106	77	26	3	2.83	0.59	8.05
	Other production	746	452	232	62	8.31	6.43	10.52
Greece	Organic	12	12	0	0	0.00	0	22.09
	Other production	247	219	24	4	1.62	0.44	4.09
Italy	Organic	17	16	1	0	0.00	0	16.16
	Other production	391	331	58	2	0.51	0.06	1.84
Netherlands, The	Organic	10	10	0	0	0.00	0	25.89
	Other production	102	63	37	2	1.96	0.24	6.90
Norway	Organic	1	1	0	0	0.00	0	95.0
	Other production	19	8	9	2	10.52	1.3	33.14
Slovakia	Organic	1	1	0	0	0.00	0	95.0
	Other production	9	8	1	0	0.00	0	28.31
Slovenia	Organic	6	5	1	0	0.00	0	39.30
	Other production	51	44	6	1	1.96	0.05	10.45
Spain	Organic	1	1	0	0	0.00	0.0	95.0
	Other production	72	53	19	0	0.00	0.0	4.08
United Kingdom, The	Organic	33	31	1	1	3.03	0.08	15.76
	Other production	199	170	12	17	8.54	5.06	13.33

**TABLE F: NP – SURVEILLANCE SAMPLING: RESULTS BY PRODUCTION TYPE**

**TABLE F1: ANIMAL PRODUCTS**

Production type	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Battery production	83	81	97.59	91.7	99.3	2	2.41	0.7	8.3	0	0.00	0.0	3.5
Domestic or cultivated	47	42	89.36	77.3	95.3	5	10.64	4.7	22.7	0	0.00	0.0	6.1
Free range production	8	8	100.00	71.7	100.0	0	0.00	0.0	28.3	0	0.00	0.0	28.3
Industrial production	304	283	93.09	89.7	95.4	21	6.91	4.6	10.3	0	0.00	0.0	1.0
Non-organic production	1,324	1,275	96.30	95.1	97.2	48	3.63	2.7	4.8	1	0.08	0.0	0.4
Organic production	200	177	88.50	83.3	92.2	23	11.50	7.8	16.7	0	0.00	0.0	1.5
Other production method	50	50	100.00	94.3	100.0	0	0.00	0.0	5.7	0	0.00	0.0	5.7
Production method unknown	4,861	4,327	89.01	88.1	89.9	529	10.88	10.0	11.8	5	0.10	0.0	0.2
Traditional production	83	83	100.00	96.5	100.0	0	0.00	0.0	3.5	0	0.00	0.0	3.5
<b>Total</b>	<b>6,960</b>	<b>6,326</b>	<b>90.89</b>	<b>90.2</b>	<b>91.5</b>	<b>628</b>	<b>9.02</b>	<b>8.4</b>	<b>9.7</b>	<b>6</b>	<b>0.09</b>	<b>0.0</b>	<b>0.2</b>

(a): lower confidence level; (b) upper confidence level

**TABLE F2: BABY FOOD**

Production type	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Industrial production	30	30	100.00	90.8	100.0	0	0.00	0.0	9.2	0	0.00	0.0	9.2
Non-organic production	393	377	95.93	93.5	97.5	16	4.07	2.5	6.5	0	0.00	0.0	0.8
Organic production	511	501	98.04	96.4	98.9	10	1.96	1.1	3.6	0	0.00	0.0	0.6
Other production method	5	3	60.00	22.3	88.2	0	0.00	0.0	39.3	2	40.00	11.8	77.7
Production method unknown	820	809	98.66	97.6	99.2	9	1.10	0.6	2.1	2	0.24	0.1	0.9
Traditional production	37	37	100.00	92.4	100.0	0	0.00	0.0	7.6	0	0.00	0.0	7.6
<b>Total</b>	<b>1,796</b>	<b>1,757</b>	<b>97.83</b>	<b>97.0</b>	<b>98.4</b>	<b>35</b>	<b>1.95</b>	<b>1.4</b>	<b>2.7</b>	<b>4</b>	<b>0.22</b>	<b>0.1</b>	<b>0.6</b>

(a): lower confidence level; (b) upper confidence level



**TABLE F3: CEREALS**

Production type	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Genetically modified	4	0	0.00	0.0	45.1	4	100.00	54.9	100.0	0	0.00	0.0	45.1
Industrial production	31	15	48.39	31.9	65.3	16	51.61	34.7	68.1	0	0.00	0.0	8.9
Integrated Pest Management	6	5	83.33	42.1	96.3	1	16.67	3.7	57.9	0	0.00	0.0	34.8
Non-organic production	2,001	1,251	62.52	60.4	64.6	714	35.68	33.6	37.8	36	1.80	1.3	2.5
Organic production	581	525	90.36	87.7	92.5	54	9.29	7.2	11.9	2	0.34	0.1	1.2
Outdoor / Open-air growing condition	24	9	37.50	21.1	57.5	15	62.50	42.5	78.9	0	0.00	0.0	11.3
Production method unknown	2,131	1,252	58.75	56.6	60.8	858	40.26	38.2	42.4	21	0.99	0.6	1.5
Traditional production	239	187	78.24	72.6	83.0	49	20.50	15.9	26.1	3	1.26	0.5	3.6
Under glass / protected growing condition	1	0	0.00	0.0	77.6	1	100.00	22.4	100.0	0	0.00	0.0	77.6
<b>Total</b>	<b>5,018</b>	<b>3,244</b>	<b>64.65</b>	<b>63.3</b>	<b>66.0</b>	<b>1,712</b>	<b>34.12</b>	<b>32.8</b>	<b>35.4</b>	<b>62</b>	<b>1.24</b>	<b>1.0</b>	<b>1.6</b>

(a): lower confidence level; (b) upper confidence level

**TABLE F4: FRUIT, VEGETABLES AND OTHER PLANT PRODUCTS**

Production type	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Battery production	4	2	50.00	14.7	85.3	2	50.00	14.7	85.3	0	0.00	0.0	
Domestic or cultivated	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Industrial production	94	75	79.79	70.5	86.6	19	20.21	13.4	29.5	0	0.00	0.0	3.1
Integrated Pest Management	386	158	40.93	36.1	45.9	216	55.96	51.0	60.8	12	3.11	1.8	5.4
Non-organic production	23,349	12,395	53.09	52.4	53.7	10,127	43.37	42.7	44.0	827	3.54	3.3	3.8
Organic production	2,825	2,523	89.31	88.1	90.4	282	9.98	8.9	11.1	20	0.71	0.5	1.1
Other production method	3	3	100.00	47.3	100.0	0	0.00	0.0	52.7	0	0.00	0.0	52.7
Outdoor / Open-air growing condition	827	298	36.03	32.8	39.4	519	62.76	59.4	66.0	10	1.21	0.7	2.2
Production method unknown	27,955	11,919	42.64	42.1	43.2	15,290	54.70	54.1	55.3	746	2.67	2.5	2.9
Traditional production	1,195	400	33.47	30.9	36.2	737	61.67	58.9	64.4	58	4.85	3.8	6.2
Under glass / protected growing condition	322	101	31.37	26.5	36.6	204	63.35	58.0	68.4	17	5.28	3.3	8.3
<b>Total</b>	<b>56,961</b>	<b>27,875</b>	<b>48.94</b>	<b>48.5</b>	<b>49.3</b>	<b>27,396</b>	<b>48.10</b>	<b>47.7</b>	<b>48.5</b>	<b>1,690</b>	<b>2.97</b>	<b>2.8</b>	<b>3.1</b>

(a): lower confidence level; (b) upper confidence level

**TABLE G: NP – SURVEILLANCE SAMPLING: RESULTS BY TREATMENT**

**TABLE G1: ANIMAL PRODUCTS**

Treatment	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Churning	372	293	78.76	74.3	82.6	79	21.24	17.4	25.7	0	0	0.0	0.8
Cooked	15	14	93.33	69.8	98.5	1	6.67	1.6	30.2	0	0	0.0	17.1
Dehydration	21	19	90.48	70.8	97.1	2	9.52	2.9	29.2	0	0	0.0	12.7
Freezing	170	161	94.71	90.2	97.2	9	5.29	2.8	9.8	0	0	0.0	1.7
Milk pasteurisation	12	12	100	79.4	100.0	0	0	0.0	20.6	0	0	0.0	20.6
Preserving	1	1	100	22.4	100.0	0	0	0.0	77.6	0	0	0.0	77.6
Processed	1,218	1,206	99.01	98.3	99.4	11	0.9	0.5	1.6	1	0.08	0.0	0.5
Smoking	14	14	100	81.9	100.0	0	0	0.0	18.1	0	0	0.0	18.1
Unprocessed	5,137	4,606	89.66	88.8	90.5	526	10.24	9.4	11.1	5	0.1	0.0	0.2

(a): lower confidence level; (b) upper confidence level

**TABLE G2: BABY FOOD**

Treatment	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Canning	10	10	100.00	76.2	100.0	0	0.00	0.0	23.8	0	0.00	0.0	23.8
Cooked	7	7	100.00	68.8	100.0	0	0.00	0.0	31.2	0	0.00	0.0	31.2
Cooking in air	3	3	100.00	47.3	100.0	0	0.00	0.0	52.7	0	0.00	0.0	52.7
Dehydration	2	2	100.00	36.8	100.0	0	0.00	0.0	63.2	0	0.00	0.0	63.2
Flaking	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Juicing	11	11	100.00	77.9	100.0	0	0.00	0.0	22.1	0	0.00	0.0	22.1
Milling	14	12	85.71	59.5	95.7	0	0.00	0.0	18.1	2	14.29	4.3	40.5
Oil production	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Preserving	59	53	89.83	79.5	95.2	6	10.17	4.8	20.5	0	0.00	0.0	4.9
Processed	1,599	1,568	98.06	97.3	98.6	29	1.81	1.3	2.6	2	0.13	0.0	0.5
Unprocessed	89	89	100.00	96.7	100.0	0	0.00	0.0	3.3	0	0.00	0.0	3.3

(a): lower confidence level; (b) upper confidence level

TABLE G3:CEREALS

Treatment	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Canning	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Cooked	4	3	75.00	28.4	94.7	1	25.00	5.3	71.6	0	0.00	0.0	45.1
Cooking in air (Baking)	58	46	79.31	67.2	87.7	11	18.97	11.0	30.9	1	1.72	0.4	9.1
Crushing	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Decortication	24	18	75.00	54.9	87.9	6	25.00	12.1	45.1	0	0.00	0.0	11.3
Dehydration	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Extrusion	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Flaking	7	7	100.00	68.8	100.0	0	0.00	0.0	31.2	0	0.00	0.0	31.2
Freezing	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Heating	6	4	66.67	29.0	90.1	2	33.33	9.9	71.0	0	0.00	0.0	34.8
Milling	1,089	649	59.60	56.7	62.5	436	40.04	37.2	43.0	4	0.37	0.2	0.9
Milling - bran production	24	11	45.83	27.8	65.1	13	54.17	34.9	72.2	0	0.00	0.0	11.3
Milling - refined flour	167	92	55.09	47.5	62.4	75	44.91	37.6	52.5	0	0.00	0.0	1.8
Milling - unprocessed flour	14	10	71.43	44.9	88.2	4	28.57	11.8	55.1	0	0.00	0.0	18.1
Oil production	3	3	100.00	47.3	100.0	0	0.00	0.0	52.7	0	0.00	0.0	52.7
Oil production - Virgin oil after cold press	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Peeling (inedible peel)	28	24	85.71	68.3	94.2	4	14.29	5.9	31.7	0	0.00	0.0	9.8
Pickling	5	5	100.00	60.7	100.0	0	0.00	0.0	39.3	0	0.00	0.0	39.3
Polishing	55	44	80.00	67.6	88.4	8	14.55	7.6	26.2	3	5.45	2.0	14.9
Processed	433	213	49.19	44.5	53.9	218	50.35	45.7	55.0	2	0.46	0.1	1.7
Production of alcoholic beverages	6	6	100.00	65.2	100.0	0	0.00	0.0	34.8	0	0.00	0.0	34.8
Unprocessed	3,089	2,103	68.08	66.4	69.7	934	30.24	28.6	31.9	52	1.68	1.3	2.2

(a): lower confidence level; (b) upper confidence level

**TABLE G4: FRUIT AND NUTS**

Treatment	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Canning	44	33	75.00	60.5	85.4	11	25.00	14.6	39.5	0	0.00	0.0	6.4
Cooking with a grill or barbecue	6	6	100.00	65.2	100.0	0	0.00	0.0	34.8	0	0.00	0.0	34.8
Decortication	13	13	100.00	80.7	100.0	0	0.00	0.0	19.3	0	0.00	0.0	19.3
Dehydration	92	49	53.26	43.1	63.1	37	40.22	30.8	50.5	6	6.52	3.1	13.5
Fermentation	2	2	100.00	36.8	100.0	0	0.00	0.0	63.2	0	0.00	0.0	63.2
Freezing	288	115	39.93	34.4	45.7	158	54.86	49.1	60.5	15	5.21	3.2	8.4
Heating	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Juicing	534	417	78.09	74.4	81.4	116	21.72	18.4	25.4	1	0.19	0.1	1.0
Milling	10	10	100.00	76.2	100.0	0	0.00	0.0	23.8	0	0.00	0.0	23.8
Oil production	8	8	100.00	71.7	100.0	0	0.00	0.0	28.3	0	0.00	0.0	28.3
Oil production - refined oils	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Peeling (edible peel)	2	0	0.00	0.0	63.2	2	100.00	36.8	100.0	0	0.00	0.0	63.2
Peeling (inedible peel)	116	82	70.69	61.8	78.2	34	29.31	21.8	38.2	0	0.00	0.0	2.5
Pickling	6	6	100.00	65.2	100.0	0	0.00	0.0	34.8	0	0.00	0.0	34.8
Preserving	68	53	77.94	66.7	86.1	14	20.59	12.7	31.7	1	1.47	0.4	7.8
Pressing	4	3	75.00	28.4	94.7	1	25.00	5.3	71.6	0	0.00	0.0	45.1
Processed	222	154	69.37	63.0	75.1	68	30.63	24.9	37.0	0	0.00	0.0	1.3
Production of alcoholic beverages	16	15	93.75	71.3	98.5	1	6.25	1.5	28.7	0	0.00	0.0	16.2
Unprocessed	23,790	7,306	30.71	30.1	31.3	15,967	67.12	66.5	67.7	517	2.17	2.0	2.4
Wine production	370	195	52.70	47.6	57.7	169	45.68	40.7	50.8	6	1.62	0.8	3.5
Wine production - red wine cold process	320	220	68.75	63.5	73.6	100	31.25	26.4	36.5	0	0.00	0.0	0.9
Wine production - red wine warm process	2	2	100.00	36.8	100.0	0	0.00	0.0	63.2	0	0.00	0.0	63.2
Wine production - white wine	133	82	61.65	53.2	69.5	51	38.35	30.5	46.8	0	0.00	0.0	2.2

(a): lower confidence level; (b) upper confidence level

**TABLE G5: VEGETABLES**

Treatment	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Canning	116	98	84.48	76.8	89.9	17	14.66	9.4	22.2	1	0.86	0.2	4.7
Cooked	2	2	100.00	36.8	100.0	0	0.00	0.0	63.2	0	0.00	0.0	63.2

Treatment	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Cooking in water	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Cooking with a grill or barbecue	5	4	80.00	35.9	95.7	1	20.00	4.3	64.1	0	0.00	0.0	39.3
Crushing	6	6	100.00	65.2	100.0	0	0.00	0.0	34.8	0	0.00	0.0	34.8
Dehydration	144	59	40.97	33.3	49.2	71	49.31	41.3	57.4	14	9.72	5.9	15.7
Fermentation	5	0	0.00	0.0	39.3	0	0.00	0.0	39.3	5	100.00	60.7	100.0
Flaking	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Freezing	623	347	55.70	51.8	59.6	267	42.86	39.0	46.8	9	1.44	0.8	2.7
Juicing	21	19	90.48	70.8	97.1	2	9.52	2.9	29.2	0	0.00	0.0	12.7
Milling	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Oil production	2	1	50.00	9.4	90.6	1	50.00	9.4	90.6	0	0.00	0.0	63.2
Peeling (inedible peel)	66	61	92.42	83.4	96.6	5	7.58	3.4	16.6	0	0.00	0.0	4.4
Pickling	44	24	54.55	40.0	68.3	18	40.91	27.7	55.7	2	4.55	1.4	15.2
Preserving	48	38	79.17	65.7	88.2	4	8.33	3.4	19.6	6	12.50	5.9	24.8
Processed	137	112	81.75	74.4	87.3	25	18.25	12.7	25.6	0	0.00	0.0	2.2
Unprocessed	26,608	16,086	60.46	59.9	61.0	9,582	36.01	35.4	36.6	940	3.53	3.3	3.8

(a): lower confidence level; (b) upper confidence level

TABLE G6: OTHER PLANT PRODUCTS

Treatment	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Canning	3	3	100.00	47.3	100.0	0	0.00	0.0	52.7	0	0.00	0.0	52.7
Crushing	1	0	0.00	0.0	77.6	1	100.00	22.4	100.0	0	0.00	0.0	77.6
Decortication	22	18	81.82	61.2	92.5	3	13.64	5.0	33.6	1	4.55	1.1	22.0
Dehydration	38	17	44.74	30.1	60.4	14	36.84	23.4	52.8	7	18.42	9.3	33.5
Fermentation	3	1	33.33	6.8	80.6	2	66.67	19.4	93.2	0	0.00	0.0	52.7
Freezing	4	3	75.00	28.4	94.7	1	25.00	5.3	71.6	0	0.00	0.0	45.1
Heating	11	9	81.82	51.6	94.5	1	9.09	2.1	38.5	1	9.09	2.1	38.5
Infusion / extractions	13	12	92.31	66.1	98.2	1	7.69	1.8	33.9	0	0.00	0.0	19.3
Juicing	5	3	60.00	22.3	88.2	2	40.00	11.8	77.7	0	0.00	0.0	39.3

Treatment	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
Milling	29	25	86.21	69.3	94.4	4	13.79	5.6	30.7	0	0.00	0.0	9.5
Milling - bran production	2	2	100.00	36.8	100.0	0	0.00	0.0	63.2	0	0.00	0.0	63.2
Milling - unprocessed flour	1	0	0.00	0.0	77.6	1	100.00	22.4	100.0	0	0.00	0.0	77.6
Oil production	687	481	70.01	66.5	73.3	204	29.69	26.4	33.2	2	0.29	0.1	1.1
Oil production - Cold press	21	17	80.95	59.7	92.2	3	14.29	5.2	34.9	1	4.76	1.1	22.8
Oil production - Solvent Extraction	14	14	100.00	81.9	100.0	0	0.00	0.0	18.1	0	0.00	0.0	18.1
Oil production - Virgin oil after cold press	67	59	88.06	78.1	93.8	7	10.45	5.2	20.1	1	1.49	0.4	7.9
Oil production - Warm press	29	28	96.55	82.8	99.2	1	3.45	0.8	17.2	0	0.00	0.0	9.5
Oil production - refined oils	10	9	90.00	58.7	97.7	1	10.00	2.3	41.3	0	0.00	0.0	23.8
Peeling (inedible peel)	23	21	91.30	73.0	97.3	2	8.70	2.7	27.0	0	0.00	0.0	11.7
Pickling	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Preserving	13	13	100.00	80.7	100.0	0	0.00	0.0	19.3	0	0.00	0.0	19.3
Pressing	4	3	75.00	28.4	94.7	1	25.00	5.3	71.6	0	0.00	0.0	45.1
Processed	351	293	83.48	79.2	87.0	39	11.11	8.2	14.8	19	5.41	3.5	8.3
Refining	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Unprocessed	1,730	1,209	69.88	67.7	72.0	386	22.31	20.4	24.3	135	7.80	6.6	9.2

(a): lower confidence level; (b) upper confidence level

**TABLE H: NP – SURVEILLANCE SAMPLING: RESULTS BY COUNTRY OF ORIGIN**

Country of origin	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Afghanistan	2	1	50.00	9.4	90.6	0	0.00	0.0	63.2	1	50.00	9.4	90.6
Albania	25	13	52.00	33.4	70.1	11	44.00	26.6	63.1	1	4.00	1.0	19.6
Argentina	624	207	33.17	29.6	37.0	407	65.22	61.4	68.9	10	1.60	0.9	2.9
Aruba	1	0	0.00	0.0	77.6	1	100.00	22.4	100.0	0	0.00	0.0	77.6
Australia	40	30	75.00	59.7	85.8	9	22.50	12.4	37.6	1	2.50	0.6	12.9
Austria	1,463	1,047	71.57	69.2	73.8	393	26.86	24.7	29.2	23	1.57	1.1	2.4
Azerbaijan	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Bangladesh	6	4	66.67	29.0	90.1	1	16.67	3.7	57.9	1	16.67	3.7	57.9
Belarus	14	10	71.43	44.9	88.2	4	28.57	11.8	55.1	0	0.00	0.0	18.1
Belgium	1,993	829	41.60	39.5	43.8	1,105	55.44	53.3	57.6	59	2.96	2.3	3.8
Belize	11	4	36.36	15.2	65.1	7	63.64	34.9	84.8	0	0.00	0.0	22.1
Benin	6	6	100.00	65.2	100.0	0	0.00	0.0	34.8	0	0.00	0.0	34.8
Bolivia	13	9	69.23	41.9	87.2	3	23.08	8.4	50.8	1	7.69	1.8	33.9
Bosnia and Herzegovina	10	5	50.00	23.4	76.6	5	50.00	23.4	76.6	0	0.00	0.0	23.8
Brazil	527	131	24.86	21.4	28.7	372	70.59	66.6	74.3	24	4.55	3.1	6.7
British Indian Ocean Territory	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Bulgaria	347	253	72.91	68.0	77.3	81	23.34	19.2	28.1	13	3.75	2.2	6.3
Burkina Faso	12	12	100.00	79.4	100.0	0	0.00	0.0	20.6	0	0.00	0.0	20.6
Burundi	9	7	77.78	44.4	93.3	1	11.11	2.5	44.5	1	11.11	2.5	44.5
Cambodia	28	25	89.29	72.7	96.1	3	10.71	3.9	27.4	0	0.00	0.0	9.8
Cameroon	39	13	33.33	20.6	49.1	26	66.67	50.9	79.4	0	0.00	0.0	7.2
Canada	106	67	63.21	53.7	71.8	33	31.13	23.1	40.5	6	5.66	2.7	11.8
Central African Republic	3	0	0.00	0.0	52.7	3	100.00	47.3	100.0	0	0.00	0.0	52.7
Chile	832	227	27.28	24.4	30.4	594	71.39	68.2	74.4	11	1.32	0.8	2.4
China	892	509	57.06	53.8	60.3	330	37.00	33.9	40.2	53	5.94	4.6	7.7
Colombia	268	74	27.61	22.6	33.3	182	67.91	62.1	73.2	12	4.48	2.6	7.7
Congo, The Democratic Republic of the	1	0	0.00	0.0	77.6	1	100.00	22.4	100.0	0	0.00	0.0	77.6
Costa Rica	517	167	32.30	28.4	36.5	337	65.18	61.0	69.2	13	2.51	1.5	4.3
Cote D'Ivoire	52	23	44.23	31.6	57.7	27	51.92	38.6	64.9	2	3.85	1.2	13.0
Croatia	49	29	59.18	45.2	71.8	19	38.78	26.4	52.8	1	2.04	0.5	10.7
Cuba	10	5	50.00	23.4	76.6	5	50.00	23.4	76.6	0	0.00	0.0	23.8
Cyprus	533	328	61.54	57.3	65.6	155	29.08	25.4	33.1	50	9.38	7.2	12.2



Country of origin	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Czech Republic, The	479	259	54.07	49.6	58.5	209	43.63	39.3	48.1	11	2.30	1.3	4.1
Denmark	812	720	88.67	86.3	90.7	90	11.08	9.1	13.4	2	0.25	0.1	0.9
Dominica	39	39	100.00	92.8	100.0	0	0.00	0.0	7.2	0	0.00	0.0	7.2
Dominican Republic	181	117	64.64	57.4	71.2	46	25.41	19.6	32.2	18	9.94	6.4	15.2
EEA	20	13	65.00	43.0	81.9	7	35.00	18.1	57.0	0	0.00	0.0	13.3
Ecuador	320	140	43.75	38.4	49.2	176	55.00	49.5	60.4	4	1.25	0.5	3.2
Egypt	672	354	52.68	48.9	56.4	287	42.71	39.0	46.5	31	4.61	3.3	6.5
Estonia	184	125	67.93	60.9	74.3	54	29.35	23.3	36.3	5	2.72	1.2	6.2
Ethiopia	43	26	60.47	45.5	73.7	16	37.21	24.4	52.2	1	2.33	0.6	12.0
European Union	195	165	84.62	78.9	89.0	29	14.87	10.6	20.6	1	0.51	0.1	2.8
Finland	279	197	70.61	65.0	75.6	81	29.03	24.0	34.6	1	0.36	0.1	2.0
France	4,336	2,483	57.26	55.8	58.7	1,756	40.50	39.1	42.0	97	2.24	1.8	2.7
French Guiana	2	2	100.00	36.8	100.0	0	0.00	0.0	63.2	0	0.00	0.0	63.2
Gambia	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Georgia	9	9	100.00	74.1	100.0	0	0.00	0.0	25.9	0	0.00	0.0	25.9
Germany	7,461	3,731	50.01	48.9	51.1	3,627	48.61	47.5	49.8	103	1.38	1.1	1.7
Ghana	97	39	40.21	31.0	50.2	51	52.58	42.7	62.2	7	7.22	3.6	14.2
Greece	2,880	1,938	67.29	65.6	69.0	891	30.94	29.3	32.7	51	1.77	1.4	2.3
Greenland	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Grenada	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Guadeloupe	4	2	50.00	14.7	85.3	2	50.00	14.7	85.3	0	0.00	0.0	45.1
Guatemala	33	9	27.27	15.1	44.4	18	54.55	37.9	70.2	6	18.18	8.7	34.5
Guyana	4	4	100.00	54.9	100.0	0	0.00	0.0	45.1	0	0.00	0.0	45.1
Haiti	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Honduras	50	15	30.00	19.1	43.8	34	68.00	54.1	79.2	1	2.00	0.5	10.5
Hongkong	2	1	50.00	9.4	90.6	1	50.00	9.4	90.6	0	0.00	0.0	63.2
Hungary	2,837	2,137	75.33	73.7	76.9	680	23.97	22.4	25.6	20	0.70	0.5	1.1
Iceland	71	68	95.77	88.3	98.5	1	1.41	0.3	7.5	2	2.82	0.9	9.7
India	443	195	44.02	39.5	48.7	201	45.37	40.8	50.0	47	10.61	8.1	13.8
Indonesia	21	17	80.95	59.7	92.2	4	19.05	7.8	40.3	0	0.00	0.0	12.7
Iran	14	7	50.00	26.6	73.4	5	35.71	16.3	61.6	2	14.29	4.3	40.5
Ireland	765	617	80.65	77.7	83.3	139	18.17	15.6	21.1	9	1.18	0.6	2.2
Israel	613	285	46.49	42.6	50.5	292	47.63	43.7	51.6	36	5.87	4.3	8.0
Italy	9,330	5,175	55.47	54.5	56.5	4,051	43.42	42.4	44.4	104	1.11	0.9	1.4

Country of origin	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Jamaica	3	2	66.67	19.4	93.2	1	33.33	6.8	80.6	0	0.00	0.0	52.7
Japan	9	7	77.78	44.4	93.3	1	11.11	2.5	44.5	1	11.11	2.5	44.5
Jordan	104	47	45.19	36.0	54.8	46	44.23	35.1	53.8	11	10.58	6.1	18.0
Kazakhstan	19	10	52.63	31.5	72.8	9	47.37	27.2	68.5	0	0.00	0.0	13.9
Kenya	355	135	38.03	33.1	43.2	147	41.41	36.4	46.6	73	20.56	16.7	25.1
Korea (South)	6	4	66.67	29.0	90.1	2	33.33	9.9	71.0	0	0.00	0.0	34.8
Kyrgyzstan	4	4	100.00	54.9	100.0	0	0.00	0.0	45.1	0	0.00	0.0	45.1
Laos	3	1	33.33	6.8	80.6	1	33.33	6.8	80.6	1	33.33	6.8	80.6
Latvia	134	111	82.84	75.5	88.3	23	17.16	11.7	24.5	0	0.00	0.0	2.2
Lebanon	12	6	50.00	25.1	74.9	2	16.67	5.0	45.5	4	33.33	13.9	61.4
Lithuania	134	94	70.15	61.9	77.2	39	29.10	22.1	37.3	1	0.75	0.2	4.1
Luxembourg	76	46	60.53	49.3	70.8	29	38.16	28.1	49.4	1	1.32	0.3	7.0
Macedonia, The Former Yugoslav Republic of	98	61	62.24	52.3	71.2	33	33.67	25.1	43.5	4	4.08	1.7	10.0
Madagascar	13	13	100.00	80.7	100.0	0	0.00	0.0	19.3	0	0.00	0.0	19.3
Malaysia	108	33	30.56	22.7	39.8	49	45.37	36.3	54.8	26	24.07	17.0	33.0
Mali	2	1	50.00	9.4	90.6	1	50.00	9.4	90.6	0	0.00	0.0	63.2
Malta	93	65	69.89	59.9	78.3	22	23.66	16.2	33.3	6	6.45	3.1	13.4
Martinique	15	5	33.33	15.2	58.7	10	66.67	41.3	84.8	0	0.00	0.0	17.1
Mauritania	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Mauritius	4	2	50.00	14.7	85.3	1	25.00	5.3	71.6	1	25.00	5.3	71.6
Mexico	151	73	48.34	40.5	56.3	75	49.67	41.8	57.6	3	1.99	0.7	5.7
Moldova	23	22	95.65	78.9	99.0	1	4.35	1.0	21.1	0	0.00	0.0	11.7
Mongolia	2	1	50.00	9.4	90.6	1	50.00	9.4	90.6	0	0.00	0.0	63.2
Morocco	740	223	30.14	26.9	33.5	479	64.73	61.2	68.1	38	5.14	3.8	7.0
Mozambique	1	0	0.00	0.0	77.6	1	100.00	22.4	100.0	0	0.00	0.0	77.6
Myanmar	3	3	100.00	47.3	100.0	0	0.00	0.0	52.7	0	0.00	0.0	52.7
Namibia	24	3	12.50	4.5	31.2	20	83.33	63.9	93.2	1	4.17	1.0	20.4
Nepal	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Netherlands, The	2,787	1,477	53.00	51.1	54.8	1,291	46.32	44.5	48.2	19	0.68	0.4	1.1
New Zealand	262	183	69.85	64.0	75.1	78	29.77	24.6	35.6	1	0.38	0.1	2.1
Nicaragua	2	1	50.00	9.4	90.6	1	50.00	9.4	90.6	0	0.00	0.0	63.2
Niger	10	6	60.00	30.8	83.3	4	40.00	16.8	69.2	0	0.00	0.0	23.8
Nigeria	10	2	20.00	6.0	51.8	7	70.00	39.0	89.1	1	10.00	2.3	41.3

Country of origin	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Non EEA	13	12	92.31	66.1	98.2	1	7.69	1.8	33.9	0	0.00	0.0	19.3
Non domestic, import	587	308	52.47	48.4	56.5	261	44.46	40.5	48.5	18	3.07	2.0	4.8
Norway	548	376	68.61	64.6	72.4	172	31.39	27.6	35.4	0	0.00	0.0	0.5
Oman	1	0	0.00	0.0	77.6	1	100.00	22.4	100.0	0	0.00	0.0	77.6
Pakistan	97	75	77.32	68.0	84.5	15	15.46	9.6	24.0	7	7.22	3.6	14.2
Palestinian territory, occupied	7	1	14.29	3.2	52.7	6	85.71	47.4	96.8	0	0.00	0.0	31.2
Panama	44	13	29.55	18.2	44.3	31	70.45	55.7	81.8	0	0.00	0.0	6.4
Paraguay	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Peru	326	130	39.88	34.7	45.3	189	57.98	52.6	63.2	7	2.15	1.1	4.4
Philippines	4	4	100.00	54.9	100.0	0	0.00	0.0	45.1	0	0.00	0.0	45.1
Pitcairn	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Poland	2,119	1,706	80.51	78.8	82.1	391	18.45	16.9	20.2	22	1.04	0.7	1.6
Portugal	777	429	55.21	51.7	58.7	322	41.44	38.0	44.9	26	3.35	2.3	4.9
Puerto Rico	4	0	0.00	0.0	45.1	4	100.00	54.9	100.0	0	0.00	0.0	45.1
Romania	2,465	2,071	84.02	82.5	85.4	380	15.42	14.1	16.9	14	0.57	0.3	1.0
Russia	75	55	73.33	62.3	82.0	20	26.67	18.0	37.7	0	0.00	0.0	3.9
Rwanda	1	0	0.00	0.0	77.6	0	0.00	0.0	77.6	1	100.00	22.4	100.0
Saint Lucia	2	2	100.00	36.8	100.0	0	0.00	0.0	63.2	0	0.00	0.0	63.2
Saudi Arabia	4	4	100.00	54.9	100.0	0	0.00	0.0	45.1	0	0.00	0.0	45.1
Senegal	34	14	41.18	26.3	57.9	20	58.82	42.1	73.7	0	0.00	0.0	8.2
Serbia	85	44	51.76	41.3	62.1	38	44.71	34.6	55.3	3	3.53	1.3	9.9
Sierra Leone	1	0	0.00	0.0	77.6	1	100.00	22.4	100.0	0	0.00	0.0	77.6
Slovakia	202	154	76.24	69.9	81.6	47	23.27	18.0	29.6	1	0.50	0.1	2.7
Slovenia	487	287	58.93	54.5	63.2	178	36.55	32.4	40.9	22	4.52	3.0	6.8
South Africa	1,330	306	23.01	20.8	25.4	997	74.96	72.6	77.2	27	2.03	1.4	2.9
Spain	8,179	3,325	40.65	39.6	41.7	4,718	57.68	56.6	58.8	136	1.66	1.4	2.0
Sri Lanka	55	51	92.73	82.7	97.0	4	7.27	3.0	17.3	0	0.00	0.0	5.2
St. Pierre And Miquelon	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Sudan	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
Suriname	76	28	36.84	26.9	48.1	35	46.05	35.3	57.2	13	17.11	10.3	27.1
Swaziland	13	5	38.46	17.7	64.9	8	61.54	35.1	82.3	0	0.00	0.0	19.3
Sweden	648	515	79.48	76.2	82.4	130	20.06	17.2	23.3	3	0.46	0.2	1.3
Switzerland	28	22	78.57	60.3	89.7	6	21.43	10.3	39.7	0	0.00	0.0	9.8
Syria	12	9	75.00	46.2	90.9	3	25.00	9.1	53.8	0	0.00	0.0	20.6

Country of origin	No of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Taiwan	22	13	59.09	38.5	76.8	9	40.91	23.2	61.5	0	0.00	0.0	12.2
Tanzania	11	7	63.64	34.9	84.8	4	36.36	15.2	65.1	0	0.00	0.0	22.1
Thailand	458	279	60.92	56.4	65.3	107	23.36	19.7	27.5	72	15.72	12.7	19.3
Togo	4	4	100.00	54.9	100.0	0	0.00	0.0	45.1	0	0.00	0.0	45.1
Tokelau	1	0	0.00	0.0	77.6	1	100.00	22.4	100.0	0	0.00	0.0	77.6
Tunisia	32	16	50.00	33.5	66.5	15	46.88	30.8	63.7	1	3.13	0.7	15.8
Turkey	1,358	500	36.82	34.3	39.4	772	56.85	54.2	59.5	86	6.33	5.2	7.8
Uganda	47	30	63.83	49.5	76.1	13	27.66	17.0	41.9	4	8.51	3.5	20.0
Ukraine	53	45	84.91	72.9	92.1	6	11.32	5.4	22.6	2	3.77	1.2	12.8
United Arab Emirates	1	1	100.00	22.4	100.0	0	0.00	0.0	77.6	0	0.00	0.0	77.6
United Kingdom, The	1,956	1,346	68.81	66.7	70.8	577	29.50	27.5	31.6	33	1.69	1.2	2.4
United States, The	398	227	57.04	52.1	61.8	156	39.20	34.5	44.1	15	3.77	2.3	6.1
Unknown	2,193	1,411	64.34	62.3	66.3	740	33.74	31.8	35.8	42	1.92	1.4	2.6
Uruguay	94	21	22.34	15.1	31.8	69	73.40	63.7	81.3	4	4.26	1.7	10.4
Uzbekistan	3	3	100.00	47.3	100.0	0	0.00	0.0	52.7	0	0.00	0.0	52.7
Venezuela	3	2	66.67	19.4	93.2	1	33.33	6.8	80.6	0	0.00	0.0	52.7
Vietnam	421	114	27.08	23.1	31.5	138	32.78	28.5	37.4	169	40.14	35.6	44.9
Zambia	4	3	75.00	28.4	94.7	1	25.00	5.3	71.6	0	0.00	0.0	45.1
Zimbabwe	33	18	54.55	37.9	70.2	13	39.39	24.7	56.4	2	6.06	1.9	19.7

(a): lower confidence level; (b) upper confidence level

**APPENDIX V – RESULTS OF THE DIETARY EXPOSURE ASSESSMENT**

TABLE A: ARfD AND ADI VALUES FOR RISK ASSESSMENT	324
TABLE B: ACUTE AND CHRONIC EXPOSURE ASSESSMENT PRIMo RESULTS	329

**TABLE A: ARfD AND ADI VALUES FOR RISK ASSESSMENT**

Pesticide	ARfD (mg/kg bw)	Year	Source	ADI (mg/kg bw/d)	Year	Source
2,4-D (RD)	ARfD not necessary	2011	COM	0.05	2001	COM
Abamectin (RD)	0.005	2008	COM	0.0025	2008	EFSA
Acephate	0.1	2005	JMPR	0.03	2005	JMPR
Acetamiprid (RD)	0.1	1999	COM	0.07	1999	COM
Acrinathrin	0.01	2010	EFSA	0.01	2010	EFSA
Aldicarb (RD)	0.003	2001	JMPR	0.003	2001	JMPR
Amitraz (RD)	0.01	2003	COM	0.003	2003	COM
Amitrole	ARfD not necessary	2001	COM	0.001	2001	COM
Azinphos-ethyl	No ARfD allocated			No ADI allocated		
Azinphos-methyl	0.01	2006	COM	0.005	2006	COM
Azoxystrobin	ARfD not necessary	2011	COM	0.2	2011	COM
Benfuracarb	0.02	2009	EFSA	0.01	2009	EFSA
Bifenthrin	0.03	2011	EFSA	0.015	2011	EFSA
Bitertanol	0.01	2011	COM	0.003	2011	COM
Boscalid	ARfD not necessary	2008	COM	0.04	2008	COM
Bromide ion <sup>(a)</sup>	ARfD not necessary	2010	EFSA	1	1988	JMPR
Bromopropylate	No ARfD allocated			0.03	1993	JMPR
Bromuconazole (RD)	0.1	2010	COM	0.01	2010	COM
Bupirimate	ARfD not necessary	2011	COM	0.05	2011	COM
Buprofezin	0.5	2010	COM	0.01	2010	COM
Captan (RD)	0.3	2008	COM	0.1	2007	COM
Carbaryl	0.01	2006	EFSA	0.0075	2006	EFSA
Carbendazim (RD)	0.02	2010	COM	0.02	2010	COM
Carbofuran (RD)	0.00015	2009	EFSA	0.00015	2009	EFSA
Carbosulfan	0.005	2009	EFSA	0.005	2009	EFSA
Chlordane (RD)	ARfD not allocated			0.0005	1994	JMPR
Chlorfenapyr	0.015	2006	EFSA	0.015	1999	ECCO
Chlorfenvinphos	No ARfD allocated			0.0005	1994	JMPR
Chlormequat <sup>(b)</sup>	0.07	2009	COM	0.031	2009	COM
Chlorobenzilate	No ARfD allocated			0.02	1980	JMPR
Chlorothalonil	0.6	2006	COM	0.015	2006	COM
Chlorpropham (RD)	0.5	2004	COM	0.05	2004	COM
Chlorpyrifos	0.1	2005	COM	0.01	2005	COM
Chlorpyrifos-methyl	0.1	2005	COM	0.01	2005	COM
Clofentezine (RD)	ARfD not necessary	2010	COM	0.02	2010	COM
Clothianidin	0.1	2006	COM	0.097	2006	COM
Cyfluthrin (RD) <sup>(c)</sup>	0.02	2003	COM	0.003	2003	COM
Cypermethrin (RD) <sup>(d)</sup>	0.2	2005	COM	0.05	2005	COM
Cyproconazole	0.02	2011	COM	0.02	2011	COM
Cyprodinil (RD)	ARfD not necessary	2006	COM	0.03	2006	COM
DDT (RD)	ARfD not necessary	2000	JMPR	0.01	2000	JMPR
Deltamethrin	0.01	2003	COM	0.01	2003	COM
Diazinon	0.025	2006	EFSA	0.0002	2006	EFSA
Dichlofluanid	No ARfD allocated			0.3	1983	JMPR
Dichlorvos	0.002	2006	EFSA	0.00008	2006	EFSA
Dicloran	0.025	2010	EFSA	0.005	2010	EFSA
Dicofol (RD)	0.2	2011	JMPR	0.002	1992	JMPR
Dicrotophos	No ARfD allocated			No ADI allocated		

Dieldrin (RD)	0.003	2007	EFSA	0.0001	1994	JMPR
Difenoconazole	0.16	2008	COM	0.01	2008	COM
Dimethoate (RD) <sup>(e)</sup>	0.01	2007	COM	0.001	2007	COM
Omethoate <sup>(e)</sup>	0.002	2007	COM	0.0003	2007	COM
Dimethomorph	0.6	2007	COM	0.05	2007	COM
Dinocap (RD)	0.004	2007	COM	0.004	2007	COM
Diphenylamine	ARfD not necessary	2008	EFSA	0.075	2008	EFSA
Dithiocarbamates (RD) <sup>(f)</sup> - ziram	0.04	2004	COM	0.003	2004	COM
Dithiocarbamates (RD) <sup>(f)</sup> - propineb	0.053	2003	COM	0.004	2003	COM
Dithiocarbamates (RD) <sup>(f)</sup> - mancozeb	0.337	2005	COM	0.028	2005	COM
Endosulfan (RD)	0.015	2001	ECCO	0.006	2006	JMPR
Endrin	No ARfD allocated			0.0002	1994	JMPR
EPN	No ARfD allocated			No ADI allocated		
Epoxiconazole	0.023	2008	COM	0.008	2008	COM
Esfenvalerate (RD) <sup>(g)</sup>	0.05	2000	COM	0.02	2000	COM
Ethephon	0.05	2008	COM	0.03	2006	COM
Ethion	No ARfD allocated			0.002	1990	JMPR
Ethoprophos	0.01	2006	EFSA	0.0004	2006	EFSA
Etofenprox	1	2009	COM	0.03	2009	COM
Fenamiphos (RD)	0.0025	2006	COM	0.0008	2006	COM
Fenarimol	0.02	2006	COM	0.01	2006	COM
Fenazaquin	0.1	2011	COM	0.005	2011	COM
Fenbuconazole	0.3	2010	COM	0.006	2010	COM
Fenbutatin oxide	0.1	2011	COM	0.05	2011	COM
Fenhexamid	ARfD not necessary	2001	COM	0.2	2001	COM
Fenitrothion	0.013	2006	EFSA	0.005	2006	EFSA
Fenoxycarb	2	2011	COM	0.053	2011	COM
Fenpropathrin	0.03	2012	JMPR	0.03	1993	JMPR
Fenpropimorph (RD)	0.03	2008	COM	0.003	2008	COM
Fenthion (RD)	0.01	2000	JMPR	0.007	2000	JMPR
Fipronil (RD)	0.009	2007	COM	0.0002	2007	COM
Fluazifop-P-butyl (RD) <sup>(h)</sup>	0.017	2011	COM	0.01	2011	COM
Fludioxonil	ARfD not necessary	2007	COM	0.37	2007	COM
Flufenoxuron	ARfD not necessary	2011	EFSA	0.01	2011	EFSA
Fluquinconazole	0.02	2011	COM	0.002	2011	COM
Flusilazole (RD)	0.005	2007	COM	0.002	2007	COM
Flutriafol	0.05	2011	COM	0.01	2011	COM
Folpet (RD)	0.2	2013	EFSA	0.1	2013	EFSA
Formetanate (RD)	0.005	2007	COM	0.004	2007	COM
Fosthiazate	0.005	2003	COM	0.004	2003	COM
Glyphosate	ARfD not necessary	2001	COM	0.3	2001	COM
Haloxifop (RD)	0.075	2006	EFSA	0.00065	2006	EFSA
Heptachlor (RD)	No ARfD allocated			0.0001	1994	JMPR
Hexachlorobenzene	No ARfD allocated			No ADI allocated		
Hexachlorocyclohexane (alpha)	No ARfD allocated			No ADI allocated		
Hexachlorocyclohexane (beta)	No ARfD allocated			No ADI allocated		
Hexaconazole	No ARfD allocated			0.005	1990	JMPR
Hexythiazox	ARfD not necessary	2011	COM	0.03	2011	COM
Imazalil	0.05	2011	COM	0.025	2011	COM
Imidacloprid	0.08	2008	COM	0.06	2008	COM



Indoxacarb (RD)	0.125	2005	COM	0.006	2005	COM
Iprodione	ARfD not necessary	2002	COM	0.06	2002	COM
Iprovalicarb	ARfD not necessary	2002	COM	0.015	2002	COM
Kresoxim-methyl	ARfD not necessary	2011	COM	0.4	2011	COM
Lambda-cyhalothrin (RD)	0.0075	2001	COM	0.005	2001	COM
Lindane	0.06	2000	COM	0.005	2000	COM
Linuron	0.03	2002	COM	0.003	2002	COM
Lufenuron	ARfD not necessary	2009	COM	0.015	2009	COM
Malathion (RD)	0.3	2010	COM	0.03	2010	COM
Mepanipyrim (RD)	ARfD not necessary	2004	COM	0.02	2004	COM
Mepiquat <sup>(i)</sup>	0.23	2008	COM	0.154	2008	COM
Metalaxyl (RD)	0.5	2002	COM	0.08	2002	COM
Metconazole	0.01	2006	COM	0.01	2006	COM
Methamidophos	0.003	2007	COM	0.001	2007	COM
Methidathion	0.01	1997	JMPR	0.001	1997	JMPR
Methiocarb (RD)	0.013	2007	COM	0.013	2007	COM
Methomyl (RD) <sup>(j)</sup>	0.0025	2009	COM	0.0025	2009	COM
Methoxychlor	No ARfD allocated			0.1	1977	JMPR
Methoxyfenozide	0.2	2005	COM	0.1	2005	COM
Monocrotophos	0.002	1995	JMPR	0.0006	1995	JMPR
Myclobutanil	0.31	2010	COM	0.025	2010	COM
Nitenpyram	No ARfD allocated			No ADI allocated		
Oxadixyl	No ARfD allocated			0.01	2012	EFSA
Oxamyl	0.001	2006	COM	0.001	2006	COM
Oxydemeton-methyl (RD)	0.0015	2006	COM	0.0003	2006	COM
Paclobutrazol	0.1	2011	COM	0.022	2011	COM
Parathion	0.005	2001	ECCO 100	0.0006	2001	ECCO 100
Parathion-methyl (RD)	0.03	2001	COM	0.003	2002	COM
Penconazole	0.5	2009	COM	0.03	2009	COM
Pencycuron	ARfD not necessary	2011	COM	0.2	2011	COM
Pendimethalin	ARfD not necessary	2003	COM	0.125	2003	COM
Permethrin (RD)	1.5	2000	COM	0.05	2000	COM
Phenthoate	No ARfD allocated			0.003	1984	JMPR
Phosalone	0.1	2006	EFSA	0.01	2006	EFSA
Phosmet (RD)	0.045	2007	COM	0.01	2007	COM
Phoxim	No ARfD allocated			0.00375	2000	EMEA
Pirimicarb (RD)	0.1	2006	COM	0.035	2006	COM
Pirimiphos-methyl	0.15	2007	COM	0.004	2007	COM
Prochloraz (RD)	0.025	2011	COM	0.01	2011	COM
Procymidone	0.012	2007	DAR FR	0.0028	2007	DAR FR
Profenofos	1	2007	JMPR	0.03	2007	JMPR
Propamocarb (RD) <sup>(k)</sup>	0.84	2007	COM	0.244	2007	COM
Propargite	No ARfD allocated			No ADI allocated		
Propiconazole	0.3	2003	COM	0.04	2003	COM
Propyzamide (RD)	ARfD not necessary	2003	COM	0.02	2003	COM
Prothioconazole (RD)	0.01	2008	COM	0.01	2008	COM
Pyraclostrobin	0.03	2004	COM	0.03	2004	COM
Pyrazophos	No ARfD allocated			0.004	1992	JMPR
Pyrethrins <sup>(l)</sup>	0.2	2013	EFSA	0.04	2013	EFSA
Pyridaben	0.05	2010	COM	0.01	2010	COM
Pyrimethanil	ARfD not necessary	2006	EFSA	0.17	2006	COM
Pyriproxyfen	10	2008	COM	0.1	2008	COM

Quinoxifen	ARfD not necessary	2003	COM	0.2	2004	COM
Quintozene (RD)	ARfD not necessary	2000	COM	0.01	2000	COM
Resmethrin (RD)	No ARfD allocated			0.03	1991	JMPR
Spinosad (RD)	ARfD not necessary	2006	COM	0.024	2007	COM
Spiroxamine (RD)	0.1	2011	COM	0.025	1999	COM
tau-Fluvalinate	0.05	2010	COM	0.005	2010	COM
Tebuconazole	0.03	2008	COM	0.03	2008	COM
Tebufenozide	ARfD not necessary	2011	COM	0.02	2011	COM
Tebufenpyrad	0.02	2009	COM	0.01	2009	COM
Tecnazene	No ARfD allocated			0.02	1994	JMPR
Teflubenzuron	ARfD not necessary	2008	COM	0.01	2008	COM
Tefluthrin	0.005	2010	COM	0.005	2010	COM
Tetraconazole	0.05	2008	COM	0.004	2008	COM
Tetradifon	ARfD not necessary	2002	DE	0.015	2001	DE
Thiabendazole (RD)	ARfD not necessary	2001	COM	0.1	2001	COM
Thiacloprid	0.03	2004	COM	0.01	2004	COM
Thiamethoxam (RD)	0.5	2007	COM	0.026	2007	COM
Thiophanate-methyl	0.2	2005	COM	0.08	2005	COM
Tolclofos-methyl	ARfD not necessary	2006	COM	0.064	2006	COM
Tolylfluanid (RD)	0.25	2006	COM	0.1	2006	COM
Triadimenol (RD) <sup>(m)</sup>	0.05	2008	COM	0.03	2004	JMPR
Triazole acetic acid	0.06	2006	EFSA	0.02	2006	EFSA
Triazole alanine	0.1	2006	EFSA	0.1	2006	EFSA
Triazole lactic acid	0.06	2006	EFSA	0.02	2006	EFSA
Triazophos	0.001	2002	JMPR	0.001	2002	JMPR
Trichlorfon	0.1	2006	EFSA	0.002	2003	JMPR
Trifloxystrobin	ARfD not necessary	2003	COM	0.1	2003	COM
Triflumuron	ARfD not necessary	2011	COM	0.014	2011	COM
Trifluralin	ARfD not necessary	2005	EFSA	0.015	2005	EFSA
Triticonazole	0.05	2006	COM	0.025	2006	COM
Vinclozolin (RD)	0.06	2006	COM	0.005	2006	COM
Zoxamide	ARfD not necessary	2003	COM	0.5	2003	COM

(a): Bromide ion: no risk assessment is conducted as the toxicological values are for methyl bromide and are not suitable as the residue definition is not matched.

(b): Chlormequat: the toxicological values for chlormequat chloride (ADI: 0.04 mg/kg bw/d and ARfD: 0.09 mg/kg bw) were recalculated to chlormequat ion to match the residue definition by applying a molecular weight conversion factor calculated as:  $(\text{tox value}) \times (122.6/158.1)$ .

(c): Cyfluthrin: the risk assessment is performed with the toxicological reference values for cyfluthrin which are the same for beta-cyfluthrin isomer.

(d): Cypermethrin: the risk assessment is performed with the toxicological reference values for cypermethrin. Other toxicological reference values for cypermethrin isomers are: alpha-cypermethrin (ADI: 0.015 mg/kg bw/d; ARfD: 0.04 mg/kg bw) and zeta-cypermethrin (ADI: 0.04 mg/kg bw/d; ARfD: 0.125 mg/kg bw).

(e): Dimethoate (RD): the risk assessment was calculated for two scenarios. In dimethoate scenario: only the residue results that were compliant with the residue definition were taken into account; the toxicological values taken were those of dimethoate. In omethoate scenario: all residue results reported for the sum of dimethoate and omethoate were considered as being omethoate; the toxicological values taken were those of omethoate.

(f): Dithiocarbamates (RD): the risk assessment was calculated transforming the CS<sub>2</sub> results into the ditiocarbamates: ziram, propineb and mancozeb, depending on the authorised use on each of the crops. In ziram: the toxicological reference values for ziram (ADI: 0.006 mg/kg bw/d and ARfD: 0.08 mg/kg bw) were recalculated to CS<sub>2</sub> to match the residue definition by applying a conversion factor calculated as:  $(\text{tox.value}) \times ((12+32 \times 2) \times 2) / 306$ . In propineb scenario: the toxicological reference values for propineb (ADI: 0.007 mg/kg bw/d and ARfD: 0.1 mg/kg bw) were recalculated to CS<sub>2</sub> to match the residue definition by applying a conversion factor calculated as:  $(\text{tox.value}) \times ((12+32 \times 2) \times 2) / 289.9$ . In mancozeb scenario: the toxicological reference values for mancozeb (ADI: 0.05 mg/kg bw/d and ARfD: 0.6 mg/kg bw) were recalculated to CS<sub>2</sub> to match the residue definition by applying a conversion factor calculated as:  $(\text{tox.value}) \times ((12+32 \times 2) \times 2) / 271.3$ .

(g): Esfenvalerate (RD): the risk assessment is performed with the toxicological values of esfenvalerate and not the ones of fenvalerate. This is because the residues are more likely to come from an approved use than a not approved one.

(h): Fluazifop-P-butyl (RD): the toxicological values are expressed as fluazifop acid to match with the residue definition.

- (i): Mepiquat: the toxicological values for mepiquat chloride (ADI: 0.2 mg/kg bw/d and ARfD: 0.3 mg/kg bw) were recalculated to mepiquat to match the residue definition by applying a molecular weight conversion factor calculated as:  $(\text{tox value}) \times (114.2/149.9)$ .
- (j): Methomyl (RD): the risk assessment is performed with the toxicological reference values of methomyl as they are lower than those of thiodicarb (ADI: 0.01 mg/kg bw/d and ARfD: 0.01 mg/kg bw). The residues are more likely to come from the use of an approved substance such as methomyl than a not approved one such as thiodicarb.
- (k): Propamocarb (RD): the toxicological values for propamocarb hydrochloride (ADI: 0.29 mg/kg bw/d and ARfD: 1 mg/kg bw) were recalculated to probamocarb to match the residue definition by applying a molecular weight conversion factor calculated as:  $(\text{tox value}) \times (189/224.5)$ .
- (l): Pyrethrins: the toxicological values referred to the mixture of the six pyrethrins.
- (m): Triadimenol (RD): the risk assessment is performed with the toxicological reference values of triadimenol and not the ones of triadimefon. The residues are more likely to come from the use of an approved substance such as triadimenol than a not approved one such as triadimefon.

**TABLE B: ACUTE AND CHRONIC EXPOSURE ASSESSMENT PRIMo RESULTS**

2,4-D (RD)					
Status of the active substance:		Approved	Monitoring year:	2011	
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	Y	
Toxicological end points					
ADI (mg/kg bw/day):		0.05	ARfD (mg/kg bw):		n.n.
Source of ADI:		COM	Source of ARfD:		COM
Year of evaluation:		2001	Year of evaluation:		2011

Pesticide to be analysed on a voluntary basis only.

Full residue definition: 2,4-D (sum of 2,4-D and its esters expressed as 2,4-D)

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.30	NL child	0.13	Oranges	0.12	Mandarins	0.02	Table grapes
	0.26	DE child	0.15	Oranges	0.07	Mandarins	0.03	Table grapes
	0.16	IE adult	0.10	Mandarins	0.04	Oranges	0.01	Aubergines (egg plants)
	0.16	UK toddler	0.08	Oranges	0.05	Mandarins	0.02	Rice
	0.15	FR toddler	0.08	Oranges	0.04	Mandarins	0.01	Rice
	0.14	SE (GP)	0.07	Mandarins	0.03	Oranges	0.02	Head cabbage
	0.13	ES child	0.09	Oranges	0.03	Mandarins	0.01	Rice
	0.13	WHO cluster diet B	0.05	Mandarins	0.03	Oranges	0.02	Rice
	0.12	NL (GP)	0.06	Oranges	0.04	Mandarins	0.01	Head cabbage
	0.09	ES adult	0.05	Oranges	0.02	Mandarins	0.01	Rice
	0.08	WHO Cluster diet F	0.04	Oranges	0.03	Mandarins	0.01	Head cabbage
	0.08	UK infant	0.05	Oranges	0.02	Rice	0.00	Cauliflower

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	1	260	13.46		0.33		not assessed		
2011	Mandarins	1	271	16.24		0.77		not assessed		
2011	Pears	0.05	330					not assessed		
2011	Potatoes	0.05	296					not assessed		
2011	Carrots	0.05	256					not assessed		
2011	Cucumbers	0.05	238					not assessed		
2011	Spinach	0.05	197					not assessed		
2011	Beans (with pods)	0.05	243					not assessed		
2011	Rice	0.05	273					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

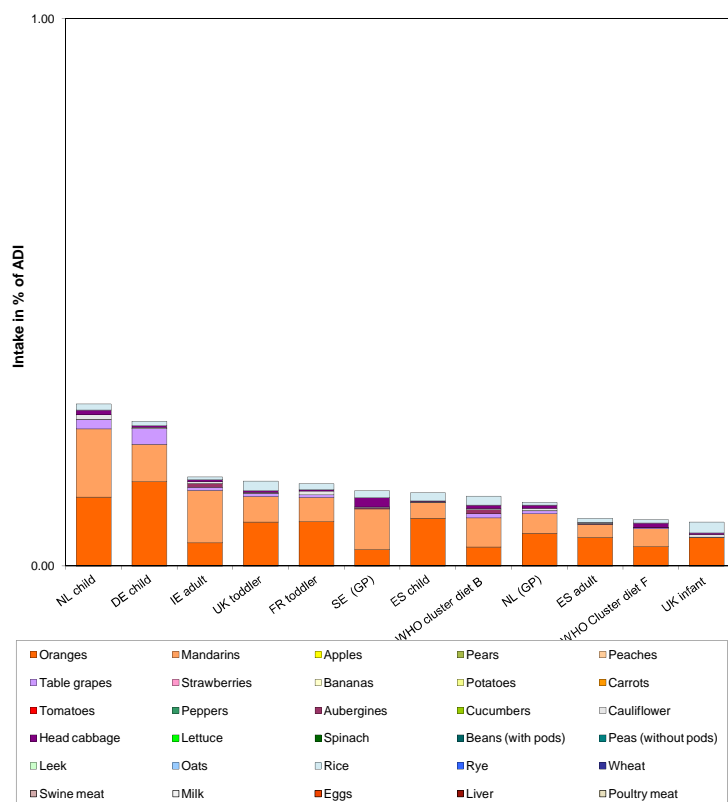
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

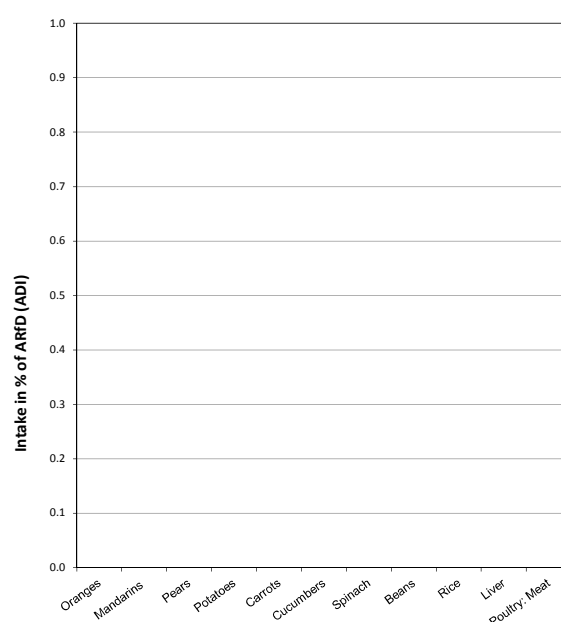
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: 2,4-D (RD)



Acute risk assessment: 2,4-D (RD)



Abamectin (RD)			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.0025	ARfD (mg/kg bw):	0.005
Source of ADI:	EFSA	Source of ARfD:	COM
Year of evaluation:	2008	Year of evaluation:	2008

Full residue definition: Abamectin (sum of avermectin B1a, avermectinB1b and delta-8,9 isomer of avermectin B1a)			
Chronic risk assessment			
	Highest calculated exposure in % of ADI	Top 12 diets	
	0.67	DK child	
	0.44	DE child	
	0.28	FR toddler	
	0.22	FR infant	
	0.20	NL child	
	0.19	SE (GP)	
	0.17	LT adult	
	0.15	IE adult	
	0.14	FI adult	
	0.13	UK toddler	
	0.12	DK adult	
	0.12	WHO cluster diet B	

	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.62	Cucumbers		0.05	Strawberries			FRUIT (FRESH OR FROZEN)
	0.22	Cucumbers		0.22	Strawberries			FRUIT (FRESH OR FROZEN)
	0.28	Strawberries			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)
	0.22	Strawberries			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)
	0.10	Strawberries		0.10	Cucumbers			FRUIT (FRESH OR FROZEN)
	0.12	Cucumbers		0.07	Strawberries			FRUIT (FRESH OR FROZEN)
	0.15	Cucumbers		0.02	Strawberries			FRUIT (FRESH OR FROZEN)
	0.11	Strawberries		0.04	Cucumbers			FRUIT (FRESH OR FROZEN)
	0.10	Cucumbers		0.03	Strawberries			FRUIT (FRESH OR FROZEN)
	0.09	Strawberries		0.04	Cucumbers			FRUIT (FRESH OR FROZEN)
	0.10	Cucumbers		0.02	Strawberries			FRUIT (FRESH OR FROZEN)
	0.08	Cucumbers		0.04	Strawberries			FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.01	879							
2011	Mandarins	0.01	731							
2011	Pears	0.01	923							
2011	Potatoes	0.01	947							
2011	Carrots	0.01	818							
2011	Cucumbers	0.02	813	0.12		0.02		21.05	NL child	
2011	Spinach	0.01	538							
2011	Beans (with pods)	0.01	674	0.15		0.01		2.27	NL child	
2011	Rice	0.01	464							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

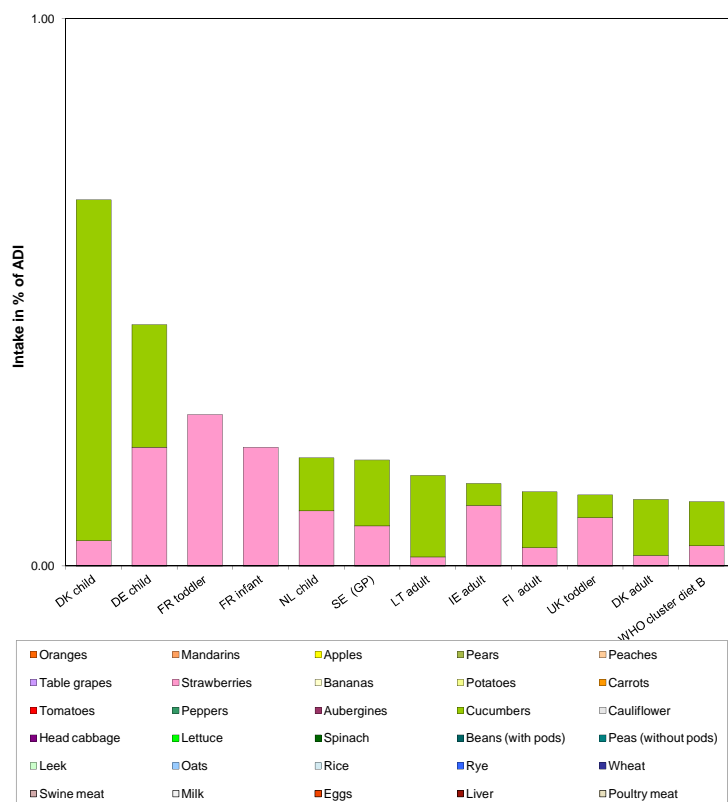
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

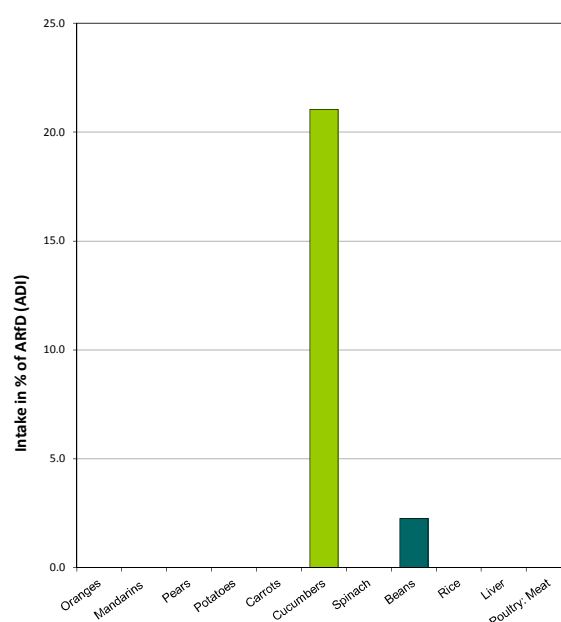
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Abamectin (RD)



Acute risk assessment: Abamectin (RD)



Acephate									
Status of the active substance:				Not approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N		
Toxicological end points									
ADI (mg/kg bw/day):				0.03	ARfD (mg/kg bw):		0.1		
Source of ADI:				JMPR	Source of ARfD:		JMPR		
Year of evaluation:				2005	Year of evaluation:		2005		

Chronic risk assessment														
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
Top 12 diets														
0.55	DE child		0.46	Apples	0.04	Carrots	0.04	Carrots	0.04	Tomatoes	0.04	Tomatoes		
0.29	NL child		0.24	Apples	0.03	Tomatoes	0.03	Tomatoes	0.02	Carrots	0.02	Carrots		
0.23	FR toddler		0.10	Apples	0.10	Carrots	0.10	Carrots	0.03	Tomatoes	0.03	Tomatoes		
0.21	FR infant		0.11	Carrots	0.10	Apples	0.10	Apples	0.01	Tomatoes	0.01	Tomatoes		
0.20	WHO cluster diet B		0.12	Tomatoes	0.04	Apples	0.04	Apples	0.02	Peppers	0.02	Peppers		
0.17	DK child		0.09	Apples	0.06	Carrots	0.06	Carrots	0.02	Tomatoes	0.02	Tomatoes		
0.13	PL (GP)		0.08	Apples	0.04	Tomatoes	0.04	Tomatoes	0.01	Carrots	0.01	Carrots		
0.13	UK infant		0.06	Apples	0.05	Carrots	0.05	Carrots	0.01	Tomatoes	0.01	Tomatoes		
0.12	SE (GP)		0.04	Apples	0.03	Carrots	0.03	Carrots	0.03	Tomatoes	0.03	Tomatoes		
0.11	UK toddler		0.06	Apples	0.02	Tomatoes	0.02	Tomatoes	0.02	Carrots	0.02	Carrots		
0.11	PT (GP)		0.04	Apples	0.04	Tomatoes	0.04	Tomatoes	0.03	Carrots	0.03	Carrots		
0.10	LT adult		0.07	Apples	0.02	Tomatoes	0.02	Tomatoes	0.01	Carrots	0.01	Carrots		

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1786							
2011	Mandarins	0.02	1473							
2011	Pears	0.02	1862							
2011	Potatoes	0.02	2062							
2011	Carrots	0.02	1527		0.07	0.83		52.62	UK infant	
2011	Cucumbers	0.02	1607							
2011	Spinach	0.02	1043							
2011	Beans (with pods)	0.02	1247	0.16	0.24	0.09		1.02	NL child	
2011	Rice	0.02	947							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

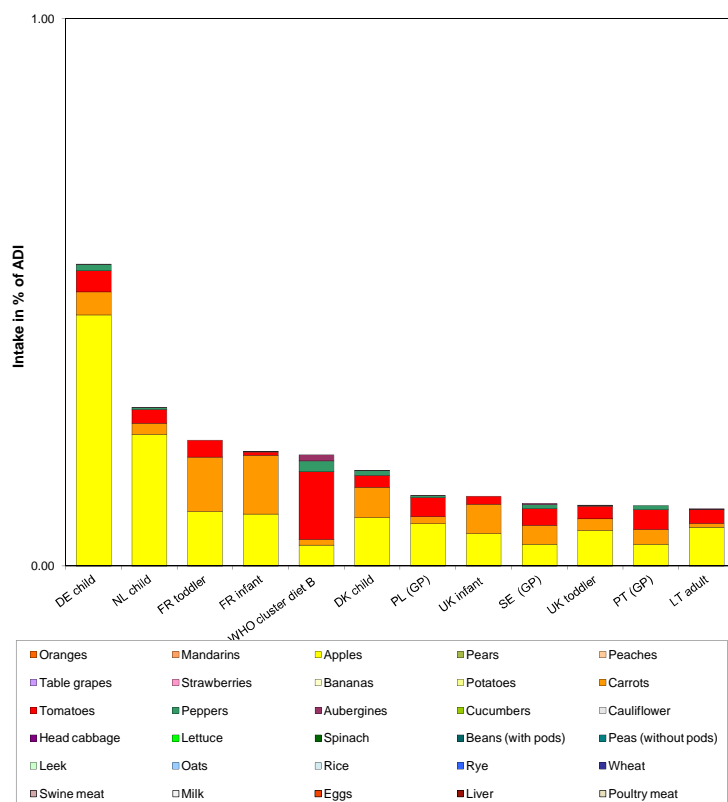
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

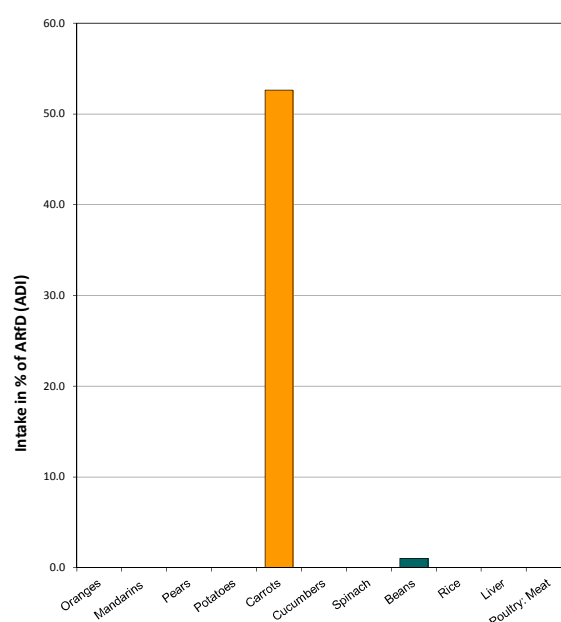
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Acephate



Acute risk assessment: Acephate





Acetamidrid (RD)									
Status of the active substance:				Approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N		
Toxicological end points									
ADI (mg/kg bw/day):				0.07	ARfD (mg/kg bw):		0.1		
Source of ADI:				COM	Source of ARfD:		COM		
Year of evaluation:				1999	Year of evaluation:		1999		

Full residue definition: Acetamidrid expressed as acetamidrid. For products of animal origin - terrestrial animal: acetamidrid (sum of acetamidrid and N-desmethyl-acetamidrid (IM-2-1), expressed as acetamidrid)

Chronic risk assessment									
Highest calculated exposure in % of ADI				Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets				Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
0.30	DE child			0.18	Apples	0.05	Oranges	0.02	Tomatoes
0.20	NL child			0.09	Apples	0.04	Oranges	0.01	Mandarins
0.14	WHO cluster diet B			0.05	Tomatoes	0.01	Apples	0.01	Oranges
0.13	FR toddler			0.04	Apples	0.03	Oranges	0.02	Beans (with pods)
0.10	ES child			0.03	Oranges	0.02	Apples	0.02	Tomatoes
0.10	DK child			0.03	Apples	0.03	Cucumbers	0.01	Pears
0.09	FR infant			0.04	Apples	0.01	Beans (with pods)	0.01	Oranges
0.08	UK toddler			0.03	Oranges	0.02	Apples	0.01	Tomatoes
0.08	IE adult			0.01	Oranges	0.01	Apples	0.01	Pears
0.08	ES adult			0.02	Oranges	0.01	Tomatoes	0.01	Lettuce
0.07	IT child/toddler			0.02	Tomatoes	0.01	Apples	0.01	Oranges
0.07	SE (GP)			0.02	Apples	0.01	Tomatoes	0.01	Oranges

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	1	1783	0.34		0.03		3.85	UK infant	
2011	Mandarins	1	1432	0.42		0.16		8.90	UK toddler	
2011	Pears		1689	3.43		0.16		14.57	DE child	
2011	Potatoes	0.01	1967							
2011	Carrots	0.01	1478							
2011	Cucumbers	0.3	1528	2.95		0.28		16.37	NL child	
2011	Spinach		1037	1.35		1.68		37.88	BE child	
2011	Beans (with pods)		1218	0.16	1.23	0.20		2.27	NL child	
2011	Rice	0.01	884	0.57	0.23	0.06		0.78	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

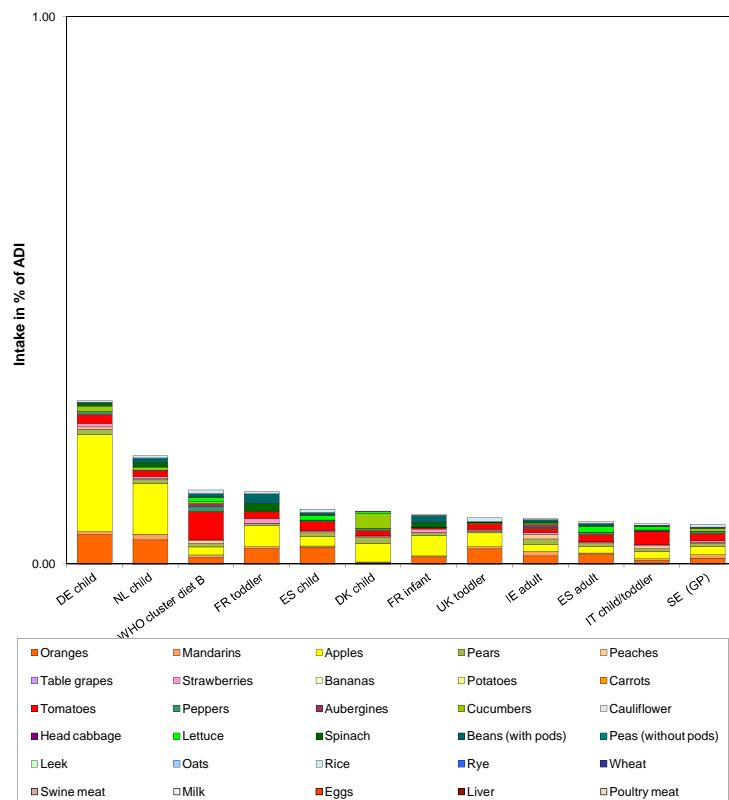
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

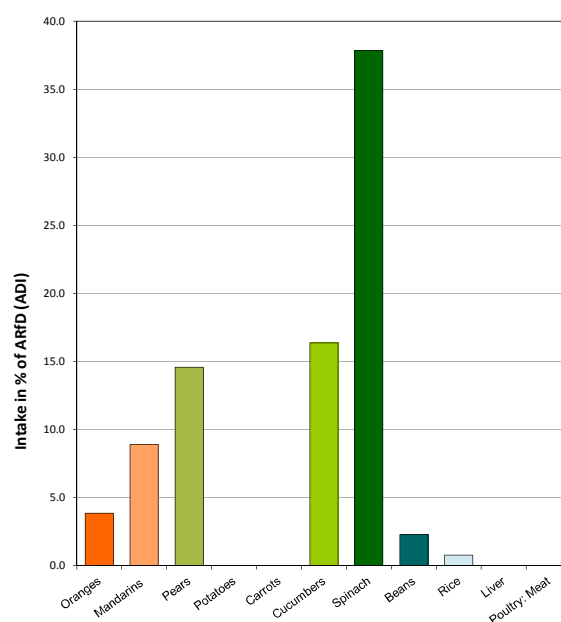
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Acetamiprid (RD)



Acute risk assessment: Acetamiprid (RD)



Acrinathrin									
Status of the active substance:				Approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N		
Toxicological end points									
ADI (mg/kg bw/day):				0.01	ARfD (mg/kg bw):		0.01		
Source of ADI:				EFSA	Source of ARfD:		EFSA		
Year of evaluation:				2010	Year of evaluation:		2010		

Chronic risk assessment															
Highest calculated exposure in % of ADI				Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
Top 12 diets				2.28		Apples		0.45		Bananas		0.23		Table grapes	
3.51 DE child				1.20		Apples		0.49		Bananas		0.14		Table grapes	
2.28 NL child				0.49		Apples		0.37		Bananas		0.23		Beans (with pods)	
1.63 FR toddler				0.44		Apples		0.34		Cucumbers		0.33		Bananas	
1.33 DK child				0.58		Tomatoes		0.19		Apples		0.09		Bananas	
1.31 WHO cluster diet B				0.47		Apples		0.21		Bananas		0.17		Beans (with pods)	
1.14 FR infant				0.52		Bananas		0.20		Apples		0.14		Tomatoes	
1.07 SE (GP)				0.32		Apples		0.31		Bananas		0.11		Tomatoes	
0.88 UK toddler				0.22		Bananas		0.16		Apples		0.12		Peaches	
0.87 IE adult				0.29		Bananas		0.22		Apples		0.18		Tomatoes	
0.85 ES child				0.42		Bananas		0.29		Apples		0.07		Tomatoes	
0.85 UK infant				0.27		Tomatoes		0.17		Apples		0.15		Bananas	
0.77 IT child/toddler															

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.2	1778							
2011	Mandarins	0.2	1471							
2011	Pears	0.1	1738							
2011	Potatoes	0.05	1931							
2011	Carrots	0.05	1467							
2011	Cucumbers	0.1	1468	0.75		0.09		49.71	NL child	
2011	Spinach	0.05	1009	0.10	0.10	1.05	1	237.31	BE child	
2011	Beans (with pods)	0.3	1176	0.43		0.10		11.00	NL child	
2011	Rice	0.05	906							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

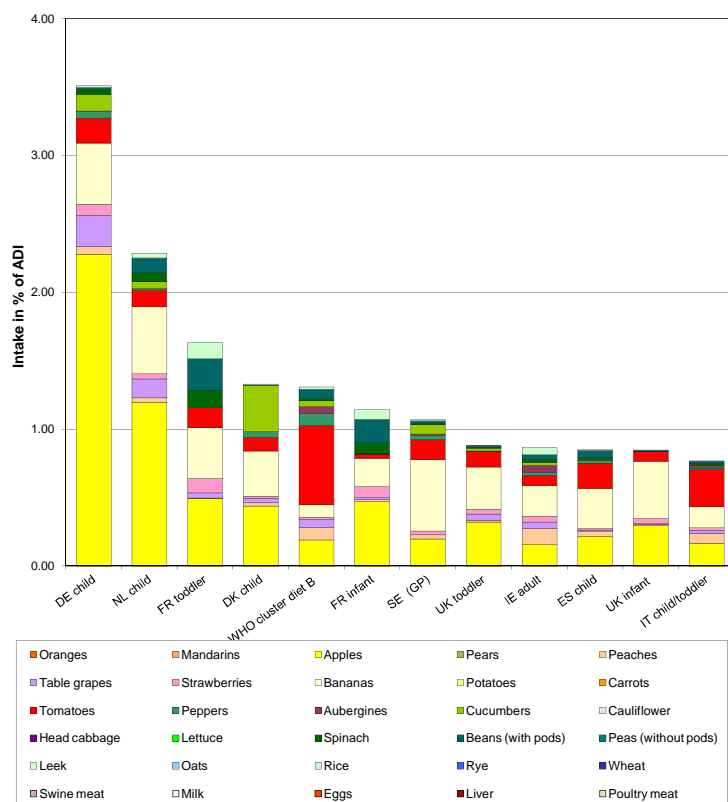
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

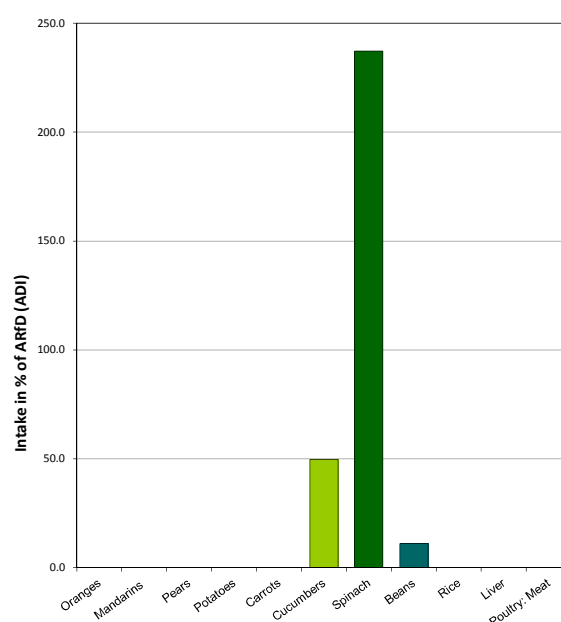
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported      <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Acrinathrin



Acute risk assessment: Acrinathrin



Aldicarb (RD)			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.003	ARfD (mg/kg bw):	0.003
Source of ADI:	JMPR	Source of ARfD:	JMPR
Year of evaluation:	2001	Year of evaluation:	2001

Full residue definition: Aldicarb (sum of aldicarb, its sulfoxide and its sulfone, expressed as aldicarb)

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1478							
2011	Mandarins	0.02	1240							
2011	Pears	0.02	1474							
2011	Potatoes	0.02	1642							
2011	Carrots	0.02	1291							
2011	Cucumbers	0.02	1279							
2011	Spinach	0.02	849							
2011	Beans (with pods)	0.02	997							
2011	Rice		687							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

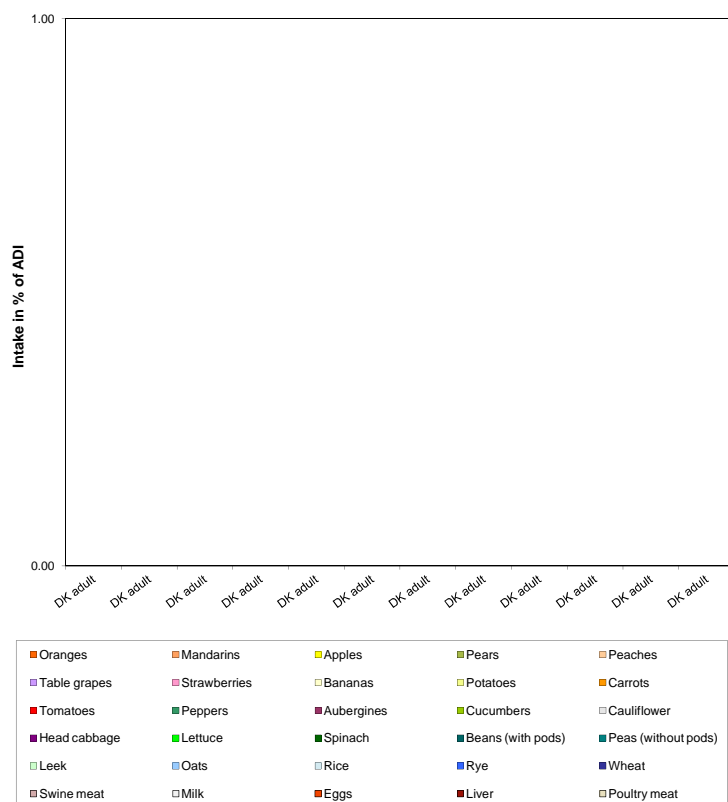
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

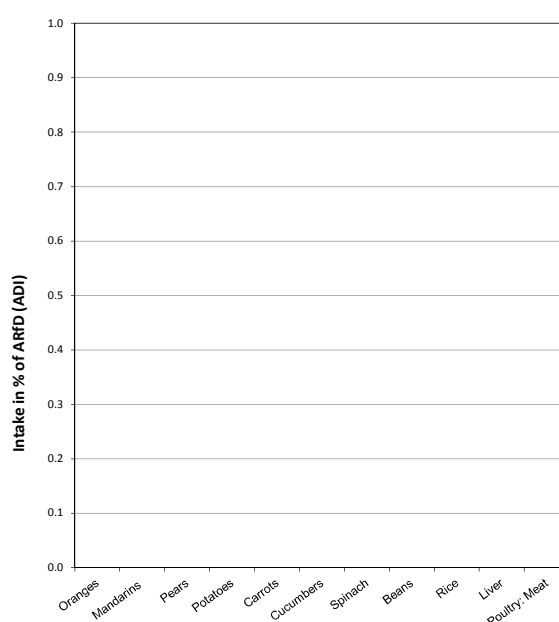
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Aldicarb (RD)



Acute risk assessment: Aldicarb (RD)



Amitraz (RD)									
Status of the active substance:				Not approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		Y		
Toxicological end points									
ADI (mg/kg bw/day):				0.003	ARfD (mg/kg bw):		0.01		
Source of ADI:				COM	Source of ARfD:		COM		
Year of evaluation:				2003	Year of evaluation:		2003		

Pesticide to be analysed on a voluntary basis only.

Full residue definition: Amitraz (amitraz including the metabolites containing the 2,4 -dimethylaniline moiety expressed as amitraz)

Chronic risk assessment									
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	
	2.30	WHO cluster diet B	2.02	Tomatoes	0.28	Peppers		FRUIT (FRESH OR FROZEN)	
	0.97	IT child/toddler	0.93	Tomatoes	0.03	Peppers		FRUIT (FRESH OR FROZEN)	
	0.82	WHO regional diet	0.72	Tomatoes	0.10	Peppers		FRUIT (FRESH OR FROZEN)	
	0.80	IT adult	0.76	Tomatoes	0.04	Peppers		FRUIT (FRESH OR FROZEN)	
	0.80	DE child	0.63	Tomatoes	0.17	Peppers		FRUIT (FRESH OR FROZEN)	
	0.72	WHO cluster diet D	0.66	Tomatoes	0.06	Peppers		FRUIT (FRESH OR FROZEN)	
	0.71	ES child	0.64	Tomatoes	0.07	Peppers		FRUIT (FRESH OR FROZEN)	
	0.70	PT (GP)	0.59	Tomatoes	0.11	Peppers		FRUIT (FRESH OR FROZEN)	
	0.62	PL (GP)	0.58	Tomatoes	0.04	Peppers		FRUIT (FRESH OR FROZEN)	
	0.61	SE (GP)	0.50	Tomatoes	0.11	Peppers		FRUIT (FRESH OR FROZEN)	
	0.60	ES adult	0.51	Tomatoes	0.09	Peppers		FRUIT (FRESH OR FROZEN)	
	0.51	FR toddler	0.51	Tomatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05	646							
2011	Mandarins	0.05	498							
2011	Pears	0.05	876							
2011	Potatoes	0.05	712							
2011	Carrots	0.05	620							
2011	Cucumbers	0.05	692							
2011	Spinach	0.05	367							
2011	Beans (with pods)	0.05	477	0.21		0.01		1.13	NL child	
2011	Rice	0.05	396							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

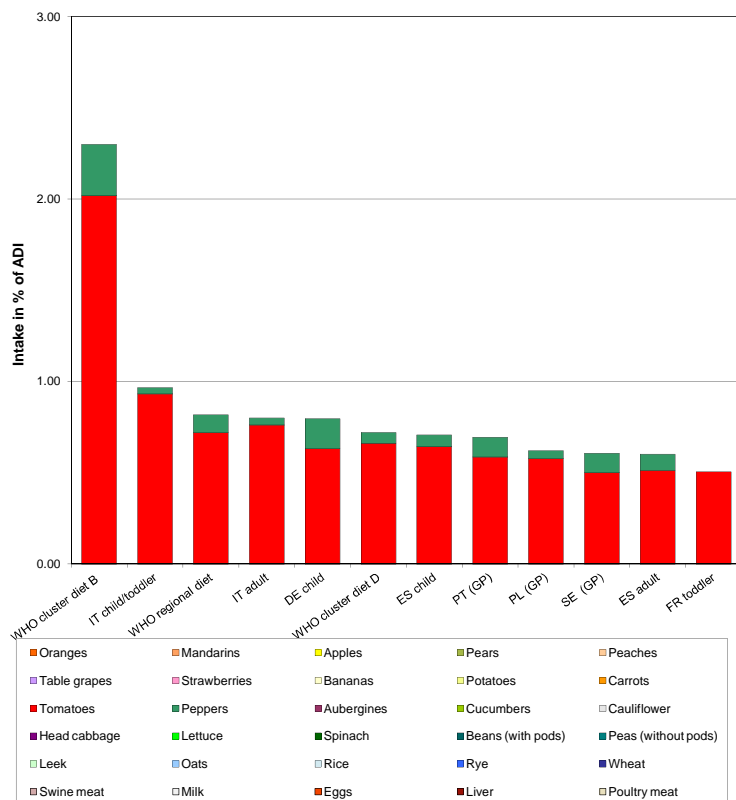
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

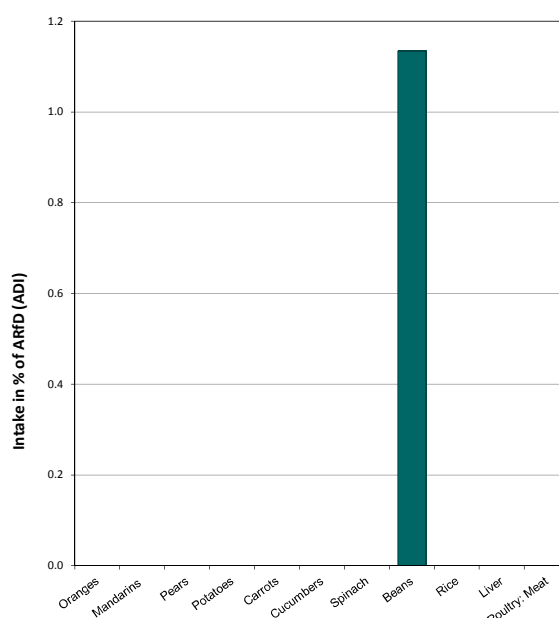
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Amitraz (RD)



Acute risk assessment: Amitraz (RD)



		Amitrole			
Status of the active substance:		Approved	Monitoring year:	2011	
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	Y	
Toxicological end points					
ADI (mg/kg bw/day):		0.001	ARfD (mg/kg bw):	n.n.	
Source of ADI:		COM	Source of ARfD:	COM	
Year of evaluation:		2001	Year of evaluation:	2001	

Pesticide to be analysed on a voluntary basis only.

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.01	135					not assessed		
2011	Mandarins	0.01	48					not assessed		
2011	Pears	0.01	198					not assessed		
2011	Potatoes	0.01	132					not assessed		
2011	Carrots	0.01	121					not assessed		
2011	Cucumbers	0.01	105					not assessed		
2011	Spinach	0.01	72					not assessed		
2011	Beans (with pods)	0.01	78					not assessed		
2011	Rice	0.01	92					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

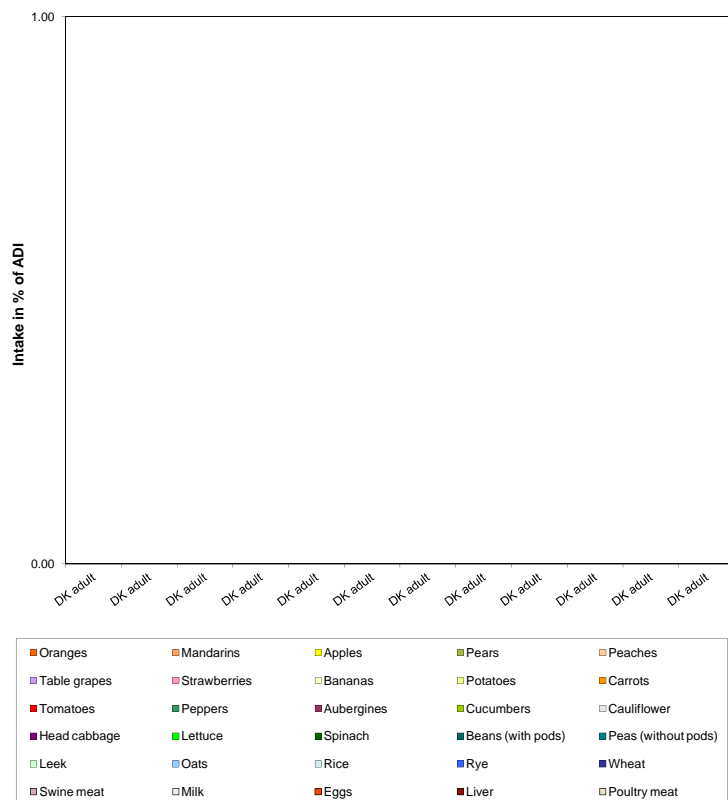
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

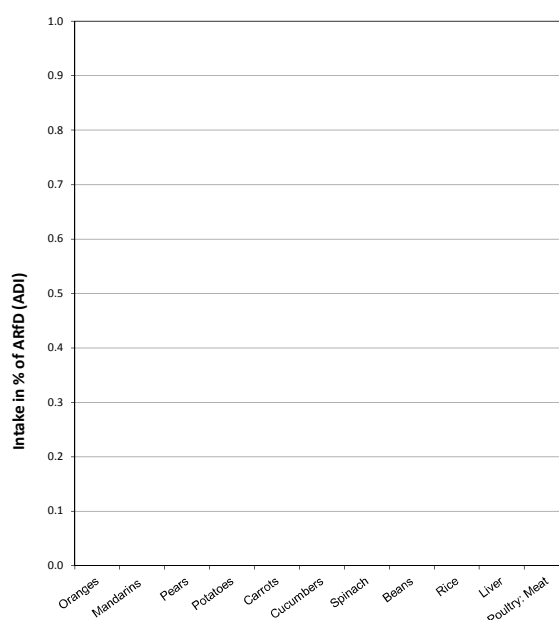
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Amitrole



Acute risk assessment: Amitrole

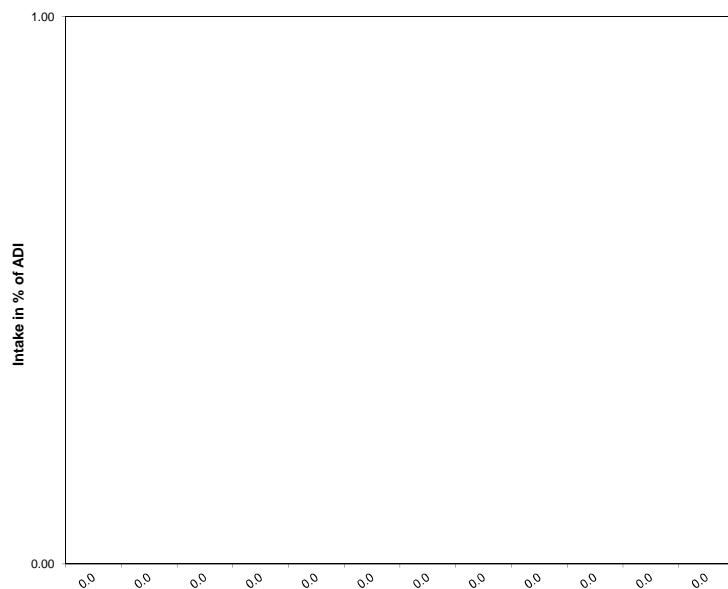


Azinphos-ethyl			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	A	Analysis on voluntary basis?	Y
Toxicological end points			
ADI (mg/kg bw/day):		ARfD (mg/kg bw):	
Source of ADI:		Source of ARfD:	
Year of evaluation:		Year of evaluation:	

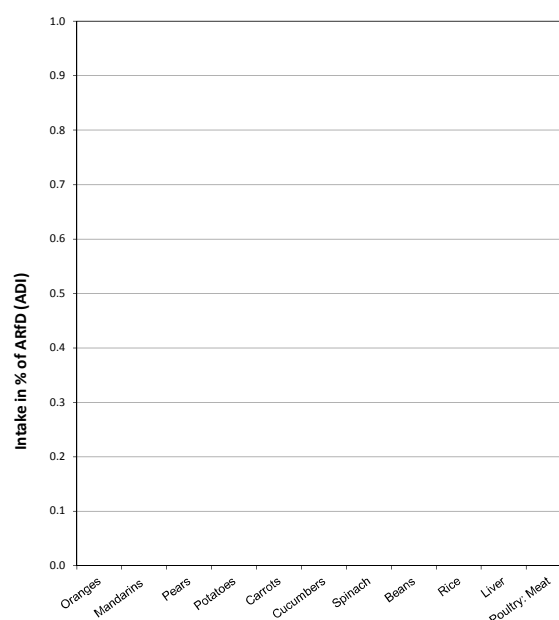
No ADI and no ARfD allocated. Pesticide to be analysed on a voluntary basis only.

Chronic risk assessment			
</			

Chronic risk assessment: Azinphos-ethyl



Acute risk assessment: Azinphos-ethyl



Oranges	Mandarins	Apples	Pears	Peaches
Table grapes	Strawberries	Bananas	Potatoes	Carrots
Tomatoes	Peppers	Aubergines	Cucumbers	Cauliflower
Head cabbage	Lettuce	Spinach	Beans (with pods)	Peas (without pods)
Leek	Oats	Rice	Rye	Wheat
Swine meat	Milk	Eggs	Liver	Poultry meat

Azinphos-methyl			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.005	ARID (mg/kg bw):	0.01
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2006	Year of evaluation:	2006

Chronic risk assessment								
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)		
Top 12 diets		Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities		
5.89	DE child	5.00	Apples	0.46	Table grapes	0.24	Pears	
3.24	NL child	2.62	Apples	0.27	Table grapes	0.16	Pears	
1.38	FR toddler	1.09	Apples	0.12	Rice	0.10	Pears	
1.37	DK child	0.96	Apples	0.26	Pears	0.07	Table grapes	
1.24	FR infant	1.04	Apples	0.12	Pears	0.03	Rice	
1.09	PL (GP)	0.85	Apples	0.11	Table grapes	0.11	Pears	
1.08	UK toddler	0.71	Apples	0.19	Rice	0.09	Table grapes	
1.06	PT (GP)	0.44	Apples	0.26	Rice	0.13	Peaches	
1.02	WHO cluster diet B	0.42	Apples	0.17	Rice	0.16	Peaches	
0.98	UK infant	0.65	Apples	0.21	Rice	0.10	Pears	
0.96	IE adult	0.34	Apples	0.26	Pears	0.22	Peaches	
0.91	LT adult	0.77	Apples	0.07	Rice	0.06	Pears	

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARID) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.05	1915							
2011	Mandarins	0.05	1572							
2011	Pears	0.05	1956	0.46	0.05	0.10		91.07	DE child	
2011	Potatoes	0.05	2190							
2011	Carrots	0.05	1592							
2011	Cucumbers	0.2	1624							
2011	Spinach	0.05	1086							
2011	Beans (with pods)	0.05	1273							
2011	Rice	0.05	1080	0.09		0.01		1.39	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

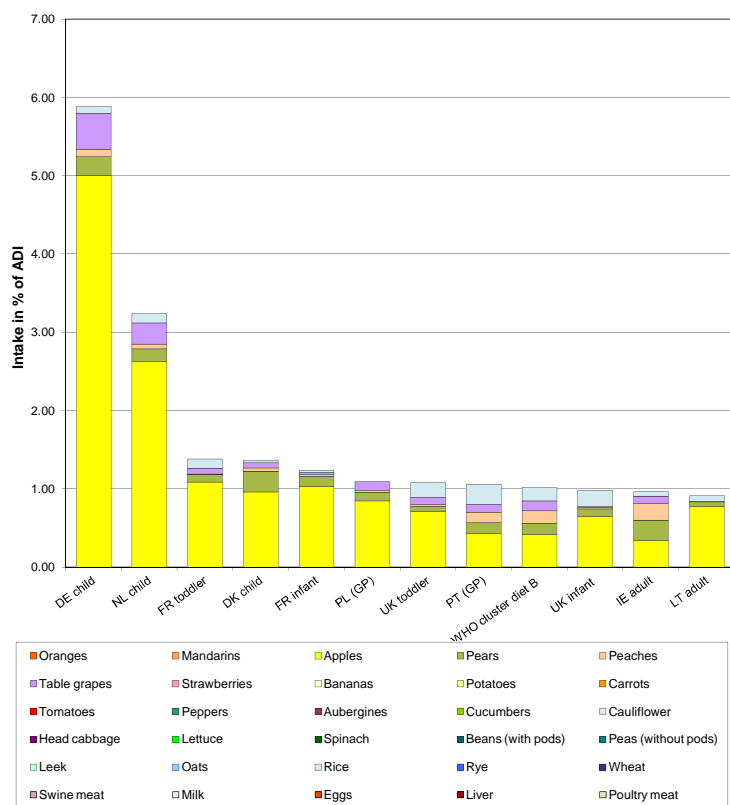
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

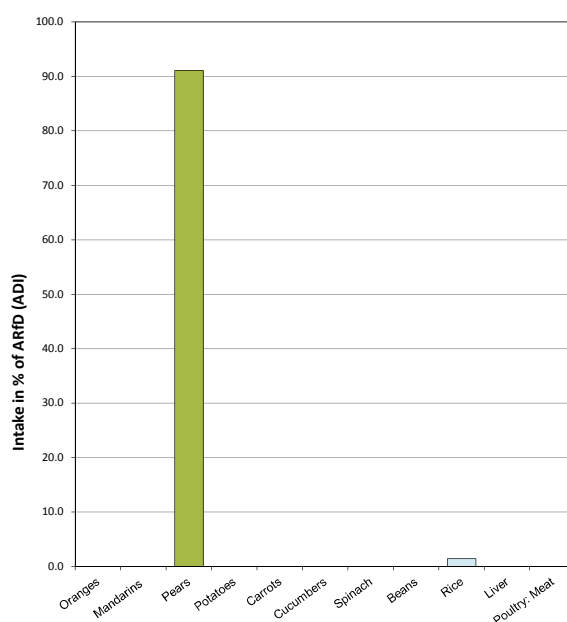
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Azinphos-methyl



Acute risk assessment: Azinphos-methyl





Azoxystrobin			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.2	ARfD (mg/kg bw):	n.n.
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2011	Year of evaluation:	2011

Chronic risk assessment									
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)			
Top 12 diets	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities		
0.23	DE child	0.09	Apples	0.03	Bananas	0.03	Oranges		
0.20	NL child	0.05	Apples	0.04	Potatoes	0.04	Bananas		
0.17	FR toddler	0.03	Potatoes	0.03	Bananas	0.02	Apples		
0.13	DK child	0.04	Rye	0.02	Bananas	0.02	Apples		
0.12	FR infant	0.03	Potatoes	0.02	Carrots	0.02	Apples		
0.12	SE (GP)	0.04	Bananas	0.03	Potatoes	0.01	Apples		
0.11	UK infant	0.03	Bananas	0.02	Potatoes	0.01	Apples		
0.10	WHO cluster diet B	0.03	Tomatoes	0.02	Potatoes	0.01	Apples		
0.10	UK toddler	0.02	Potatoes	0.02	Bananas	0.01	Oranges		
0.09	ES child	0.02	Bananas	0.02	Oranges	0.01	Potatoes		
0.09	PT (GP)	0.04	Potatoes	0.01	Tomatoes	0.01	Apples		
0.08	IE adult	0.02	Bananas	0.02	Potatoes	0.01	Oranges		

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	15	1952	1.08		0.13		not assessed		
2011	Mandarins	15	1576	1.33		0.38		not assessed		
2011	Pears	0.05	2001	0.15		0.02		not assessed		
2011	Potatoes	1	2189	0.41		0.05		not assessed		
2011	Carrots	1	1634	7.28		0.20		not assessed		
2011	Cucumbers	1	1711	5.79		0.21		not assessed		
2011	Spinach	0.05	1135	0.79	0.26	0.40		not assessed		
2011	Beans (with pods)	3	1328	5.35		0.50		not assessed		
2011	Rice	5	1121	1.87		0.15		not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

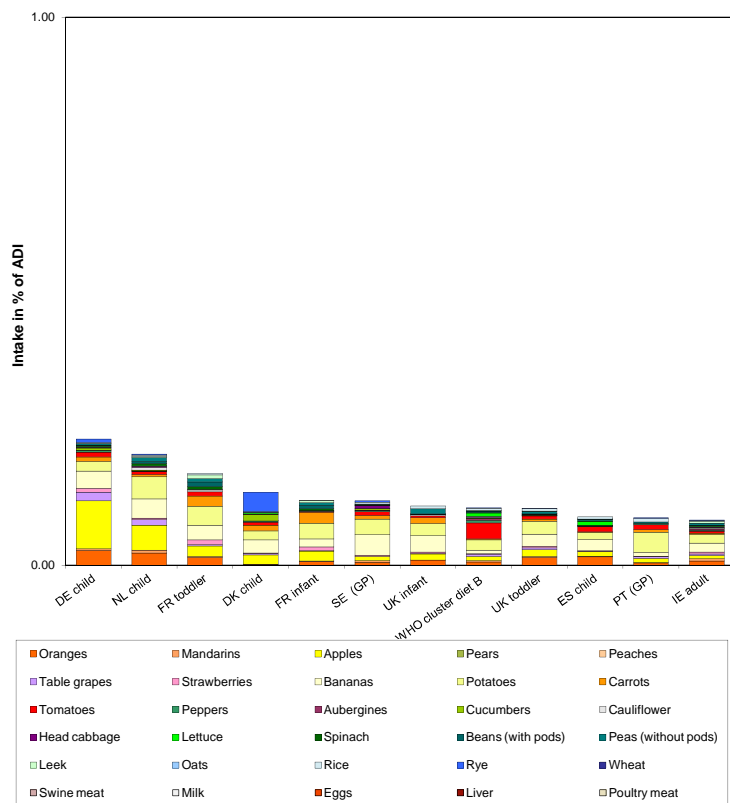
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

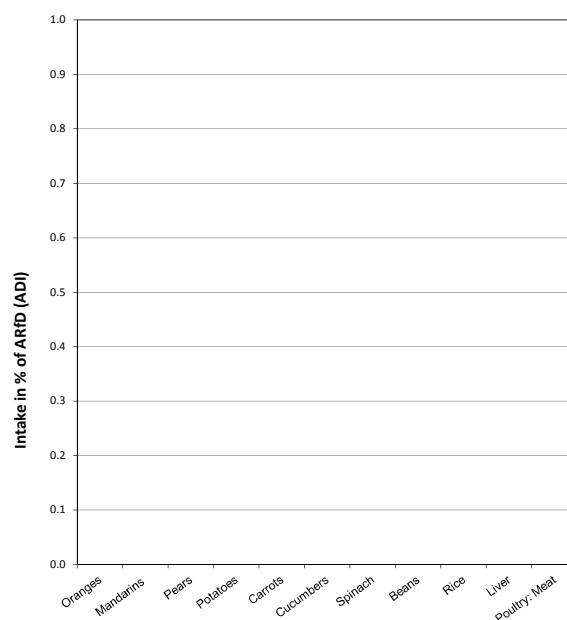
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Azoxystrobin



Acute risk assessment: Azoxystrobin



Benfuracarb			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARID (mg/kg bw):	0.02
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2009	Year of evaluation:	2009

Chronic risk assessment							
Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.11	PT (GP)	0.11	Rice		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.09	UK infant	0.09	Rice		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.08	UK toddler	0.08	Rice		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.08	WHO cluster diet D	0.08	Rice		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.07	WHO cluster diet B	0.07	Rice		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.07	ES child	0.07	Rice		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.05	SE (GP)	0.05	Rice		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.05	UK vegetarian	0.05	Rice		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.05	UK adult	0.05	Rice		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.05	FR toddler	0.05	Rice		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.05	NL child	0.05	Rice		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.04	DE child	0.04	Rice		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARID) e)	Most critical diet	Comment
2011	Oranges	0.05	1062							
2011	Mandarins	0.05	815							
2011	Pears	0.05	1038							
2011	Potatoes	0.05	1212							
2011	Carrots	0.05	913							
2011	Cucumbers	0.05	952							
2011	Spinach	0.05	632							
2011	Beans (with pods)	0.05	751							
2011	Rice	0.05	576	0.17		0.01		0.38	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

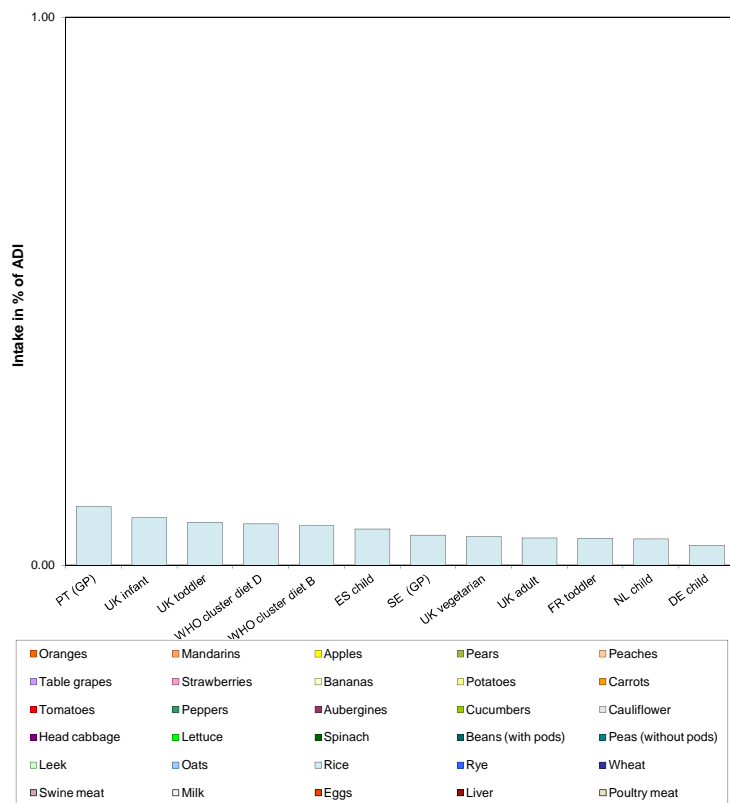
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

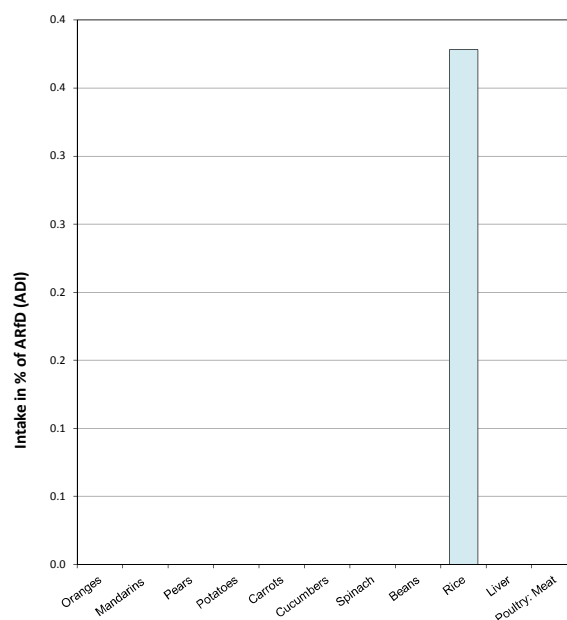
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Benfuracarb



Acute risk assessment: Benfuracarb



Bifenthrin			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P, A	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.015	ARID (mg/kg bw):	0.03
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2011	Year of evaluation:	2011

Chronic risk assessment								
	Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
	Top 12 diets		Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
	3.48	NL child	0.89	Milk	0.55	Potatoes	0.55	Apples
	3.24	DE child	1.05	Apples	0.43	Milk	0.43	Wheat
	3.16	FR toddler	1.20	Milk	0.48	Potatoes	0.27	Wheat
	2.52	UK infant	1.17	Milk	0.31	Potatoes	0.27	Wheat
	2.15	FR infant	0.78	Milk	0.39	Potatoes	0.26	Carrots
	2.11	UK toddler	0.62	Milk	0.41	Wheat	0.33	Potatoes
	2.06	WHO cluster diet B	0.89	Wheat	0.26	Tomatoes	0.25	Potatoes
	1.98	DK child	0.57	Wheat	0.38	Milk	0.23	Potatoes
	1.84	SE (GP)	0.39	Potatoes	0.37	Milk	0.33	Wheat
	1.74	ES child	0.46	Wheat	0.38	Milk	0.20	Oranges
	1.55	WHO cluster diet D	0.68	Wheat	0.38	Potatoes	0.14	Milk
	1.46	PT (GP)	0.50	Potatoes	0.41	Wheat	0.09	Rice

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARID) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.1	1935	0.36		0.04		17.68	UK infant	
2011	Mandarins	0.1	1561	0.32		0.08		14.84	UK toddler	
2011	Pears	0.3	1984	0.55		0.04		11.84	DE child	
2011	Potatoes	0.05	2193	0.05		0.02		10.25	UK infant	
2011	Carrots	0.05	1577	0.32	0.06	0.10		20.92	UK infant	
2011	Cucumbers	0.1	1717	0.23		0.04		7.80	NL child	
2011	Spinach	0.05	1115	0.54	0.09	0.17		12.51	BE child	
2011	Beans (with pods)	0.5	1298	1.08		0.08		3.10	NL child	
2011	Rice	0.05	1127	0.09		0.02		0.84	UK toddler	
2011	Liver	0.05	592							Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.05	635							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

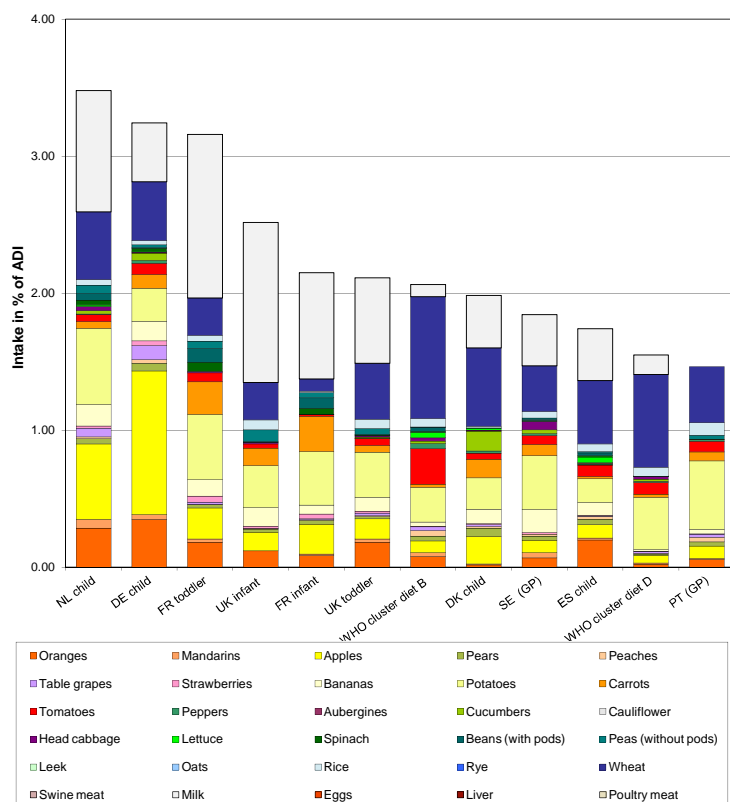
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

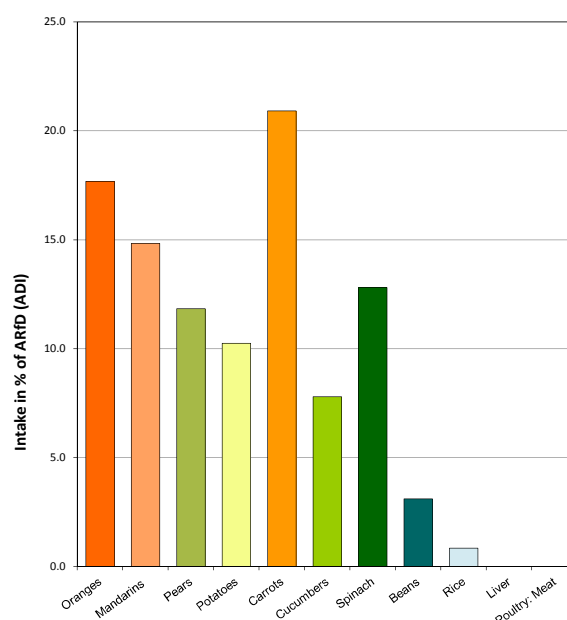
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Bifenthrin



Acute risk assessment: Bifenthrin



Bitertanol			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.003	ARID (mg/kg bw):	0.01
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2011	Year of evaluation:	2011

Chronic risk assessment									
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)			
Top 12 diets	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities		
11.86	DE child	6.56	Apples	1.65	Oranges	1.46	Bananas		
7.66	NL child	3.44	Apples	1.61	Bananas	1.35	Oranges		
4.35	DK child	1.26	Apples	1.08	Bananas	1.00	Cucumbers		
4.17	FR toddler	1.43	Apples	1.22	Bananas	0.87	Oranges		
3.73	WHO cluster diet B	1.51	Tomatoes	0.55	Apples	0.37	Oranges		
3.55	SE (GP)	1.71	Bananas	0.57	Apples	0.37	Tomatoes		
3.47	ES child	0.96	Bananas	0.94	Oranges	0.62	Apples		
3.45	UK toddler	1.02	Bananas	0.93	Apples	0.86	Oranges		
3.17	UK infant	1.38	Bananas	0.85	Apples	0.56	Oranges		
2.81	IE adult	0.74	Bananas	0.45	Oranges	0.45	Apples		
2.78	FR infant	1.36	Apples	0.68	Bananas	0.39	Oranges		
2.39	IT child/toddler	0.70	Tomatoes	0.51	Bananas	0.48	Apples		

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARID) e)	Most critical diet	Comment
2011	Oranges	0.05	1706	0.12		0.01		13.26	UK infant	
2011	Mandarins	0.05	1427							
2011	Pears	2	1688	0.47		0.14	1	127.50	DE child	
2011	Potatoes	0.05	1949							
2011	Carrots	0.05	1446							
2011	Cucumbers	0.5	1404	0.43		0.08		45.03	NL child	
2011	Spinach	0.05	991							
2011	Beans (with pods)	0.05	1177	0.08		0.02		2.27	NL child	
2011	Rice	0.05	898							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

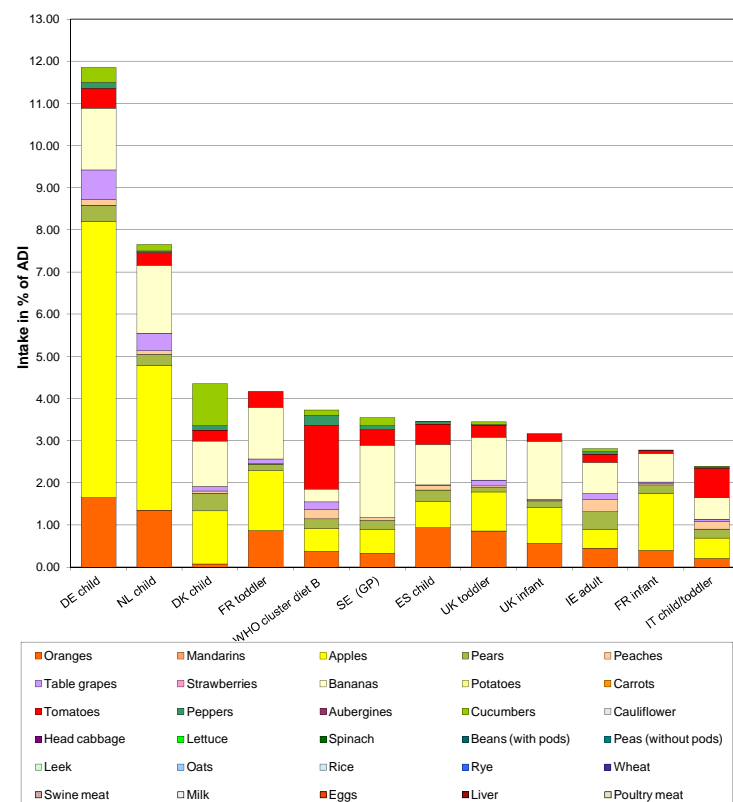
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

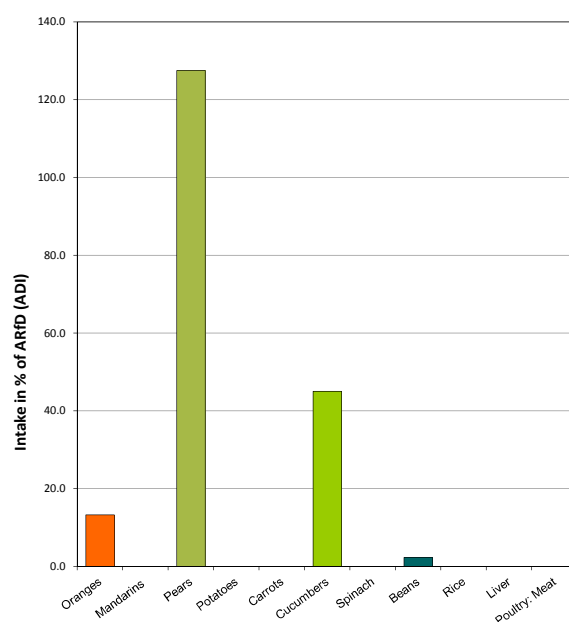
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Bitertanol



Acute risk assessment: Bitertanol



Boscalid			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.04	ARfD (mg/kg bw):	n.n.
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2008	Year of evaluation:	2008

Chronic risk assessment															
Highest calculated exposure in % of ADI		Top 12 diets		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
	1.79	DE child		0.87	Apples			0.21	Table grapes			0.15	Wheat		
	1.36	NL child		0.46	Apples			0.18	Wheat			0.13	Table grapes		
	1.05	FR toddler		0.19	Apples			0.12	Leek			0.11	Strawberries		
	0.93	WHO cluster diet B		0.32	Wheat			0.13	Tomatoes			0.09	Lettuce		
	0.90	DK child		0.20	Wheat			0.18	Rye			0.17	Apples		
	0.74	FR infant		0.18	Apples			0.12	Carrots			0.09	Strawberries		
	0.65	IE adult		0.08	Wheat			0.07	Pears			0.06	Apples		
	0.62	IT child/toddler		0.25	Wheat			0.07	Lettuce			0.06	Apples		
	0.60	ES child		0.16	Wheat			0.10	Lettuce			0.08	Apples		
	0.60	UK toddler		0.15	Wheat			0.12	Apples			0.08	Peas (without pods)		
	0.59	UK infant		0.15	Peas (without pods)			0.11	Apples			0.10	Wheat		
	0.55	WHO regional diet		0.11	Wheat			0.09	Lettuce			0.05	Apples		

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARfD) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.05	1826	0.11	0.05	0.08		not assessed		
2011	Mandarins	0.05	1467	0.07	0.07	0.10		not assessed		
2011	Pears	2	1815	25.34		1.01		not assessed		
2011	Potatoes		2083					not assessed		
2011	Carrots		1500	19.20		0.39		not assessed		
2011	Cucumbers		1560	3.78	0.10	0.26		not assessed		
2011	Spinach		1031	5.82		11.00		not assessed		
2011	Beans (with pods)		1213	10.06		0.36		not assessed		
2011	Rice	0.5	954					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

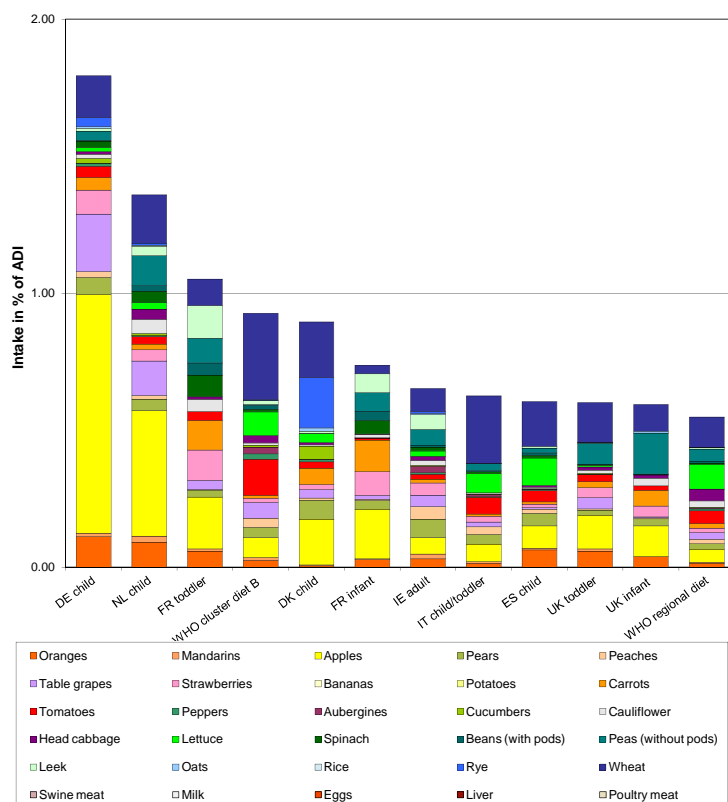
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

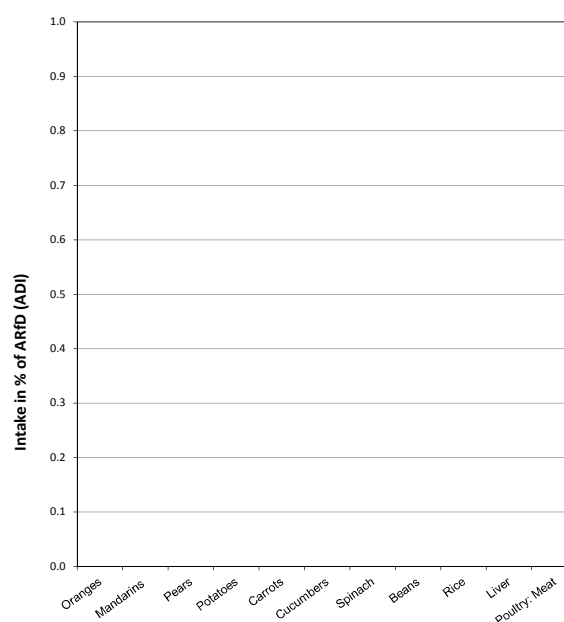
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Boscalid



Acute risk assessment: Boscalid



Bromide ion			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	Y
Toxicological end points			
ADI (mg/kg bw/day):	1	ARID (mg/kg bw):	n.n.
Source of ADI:	JMPR	Source of ARID:	EFSA
Year of evaluation:	1988	Year of evaluation:	2010

The tox. values for methyl bromide are not suitable for RA because it does not match with the residue definition. Mandatory only in rice and spinach.

#### Chronic risk assessment

Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
5.37	DK child	2.25	Rye	1.64	Wheat	0.32	Potatoes
4.91	WHO cluster diet B	2.54	Wheat	0.59	Tomatoes	0.48	Rice
3.63	NL child	1.41	Wheat	0.77	Potatoes	0.32	Rice
3.55	WHO cluster diet D	1.94	Wheat	0.53	Potatoes	0.51	Rice
3.43	DE child	1.23	Wheat	0.40	Rye	0.34	Potatoes
3.13	FR toddler	0.78	Wheat	0.67	Potatoes	0.46	Carrots
3.12	ES child	1.32	Wheat	0.55	Lettuce	0.44	Rice
3.11	PT (GP)	1.17	Wheat	0.72	Rice	0.70	Potatoes
3.10	IT child/toddler	1.98	Wheat	0.38	Lettuce	0.27	Tomatoes
2.90	WHO Cluster diet F	1.07	Wheat	0.45	Potatoes	0.39	Lettuce
2.64	UK toddler	1.17	Wheat	0.53	Rice	0.46	Potatoes
2.60	WHO cluster diet E	1.18	Wheat	0.50	Potatoes	0.22	Rye

#### Acute risk assessment

Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARID) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	30	165	46.67		2.57		not assessed		
2011	Mandarins	30	45	80.00		3.88		not assessed		
2011	Pears	20	136	1.47		2.48		not assessed		
2011	Potatoes	50	98	31.63		8.52		not assessed		
2011	Carrots	50	172	55.81		8.00		not assessed		
2011	Cucumbers	50	139	39.57		8.30		not assessed		
2011	Spinach	50	428	53.97	0.23	51.00		not assessed		
2011	Beans (with pods)	30	142	46.48		7.10		not assessed		
2011	Rice	50	425	15.29	2.35	124.00		not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

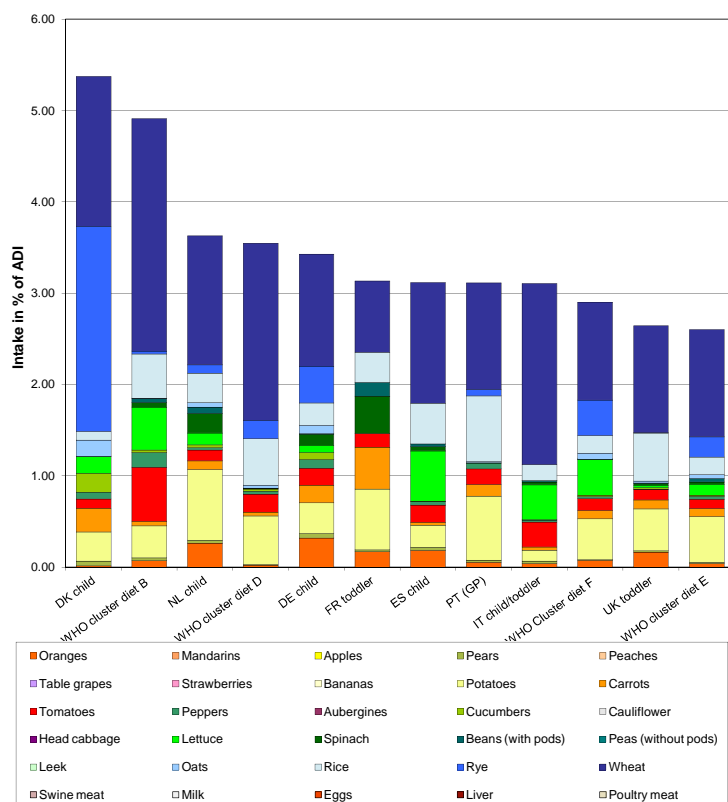
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

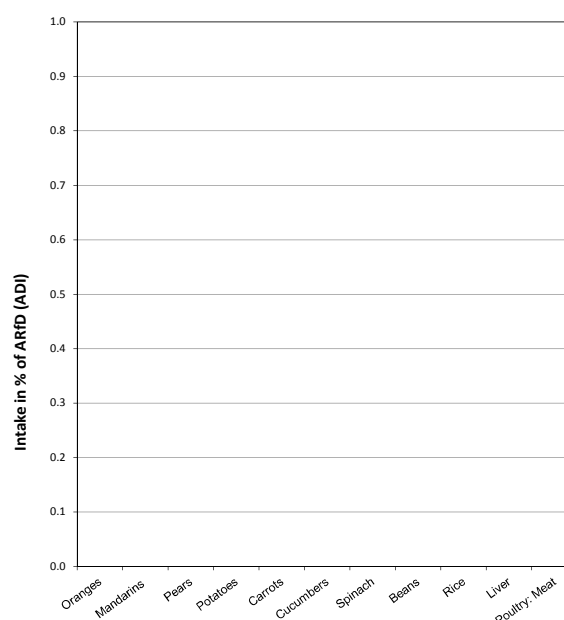
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Bromide ion



Acute risk assessment: Bromide ion



Bromopropylate										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):				0.03		ARfD (mg/kg bw):				
Source of ADI:				JMPR		Source of ARfD:				
Year of evaluation:				1993		Year of evaluation:				

Active substance not assessed regarding the setting of an ARfD. Acute RA is performed with ADI value.

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.44	DE child			0.38	Apples	0.04	Table grapes	0.02	Strawberries
	0.25	NL child			0.20	Apples	0.02	Table grapes	0.02	Beans (with pods)
	0.15	FR toddler			0.08	Apples	0.03	Beans (with pods)	0.02	Strawberries
	0.13	FR infant			0.08	Apples	0.03	Beans (with pods)	0.02	Strawberries
	0.09	DK child			0.07	Apples	0.01	Lettuce	0.01	Table grapes
	0.08	PL (GP)			0.06	Apples	0.01	Table grapes	0.00	Strawberries
	0.07	UK toddler			0.05	Apples	0.01	Table grapes	0.01	Strawberries
	0.07	WHO cluster diet B			0.03	Apples	0.01	Lettuce	0.01	Table grapes
	0.06	ES child			0.04	Apples	0.02	Lettuce	0.01	Beans (with pods)
	0.06	LT adult			0.06	Apples	0.00	Lettuce	0.00	Strawberries
	0.06	NL (GP)			0.04	Apples	0.01	Beans (with pods)	0.01	Table grapes
	0.06	UK infant			0.05	Apples	0.01	Strawberries	0.00	Beans (with pods)

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.01	1945		0.05	0.03		13.70	UK infant	
2011	Mandarins	0.01	1583	0.06	0.06	0.19		35.24	UK toddler	
2011	Pears	0.01	1990	0.05		0.010		3.04	DE child	
2011	Potatoes		2189							
2011	Carrots		1630							
2011	Cucumbers		1721							
2011	Spinach		1108							
2011	Beans (with pods)	0.01	1291		0.08	0.01		0.49	NL child	
2011	Rice		1035							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

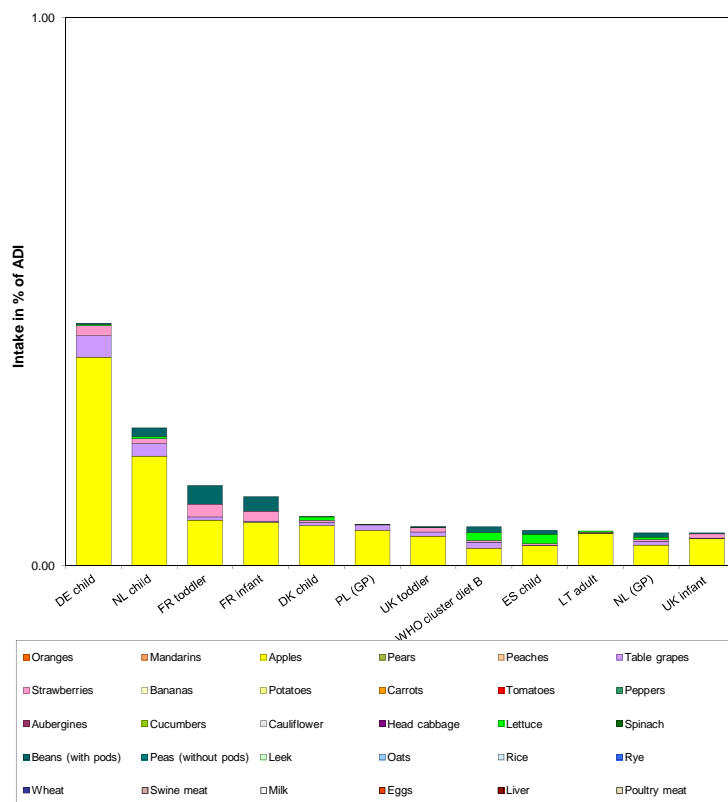
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

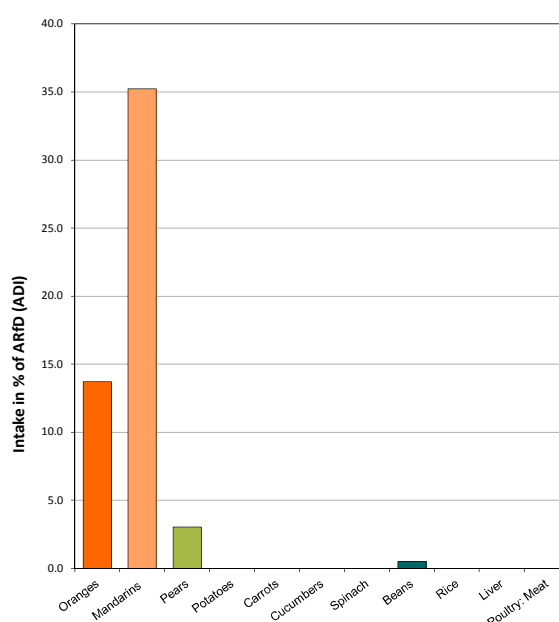
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Bromopropylate



Acute risk assessment: Bromopropylate





Bromuconazole (RD)									
Status of the active substance:				Approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N		
Toxicological end points									
ADI (mg/kg bw/day):				0.01	ARID (mg/kg bw):		0.1		
Source of ADI:				COM	Source of ARID:		COM		
Year of evaluation:				2010	Year of evaluation:		2010		

Full residue definition: Sum of diastereoisomers																
Chronic risk assessment																
Highest calculated exposure in % of ADI			Top 12 diets		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
0.17			DE child		0.17		Table grapes				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.10			NL child		0.10		Table grapes				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.05			WHO cluster diet B		0.05		Table grapes				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.04			PL (GP)		0.04		Table grapes				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.04			PT (GP)		0.04		Table grapes				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.04			IE adult		0.04		Table grapes				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.03			UK toddler		0.03		Table grapes				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.03			NL (GP)		0.03		Table grapes				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.03			FR toddler		0.03		Table grapes				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.03			WHO cluster diet D		0.03		Table grapes				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.03			DK child		0.03		Table grapes				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.02			WHO cluster diet E		0.02		Table grapes				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05	1300							
2011	Mandarins	0.05	1087							
2011	Pears	0.05	1444							
2011	Potatoes	0.05	1631							
2011	Carrots	0.05	1270							
2011	Cucumbers	0.05	1292							
2011	Spinach	0.05	806							
2011	Beans (with pods)	0.05	954							
2011	Rice	0.2	700							
2011	Liver									
2011	Poultry: Meat									

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

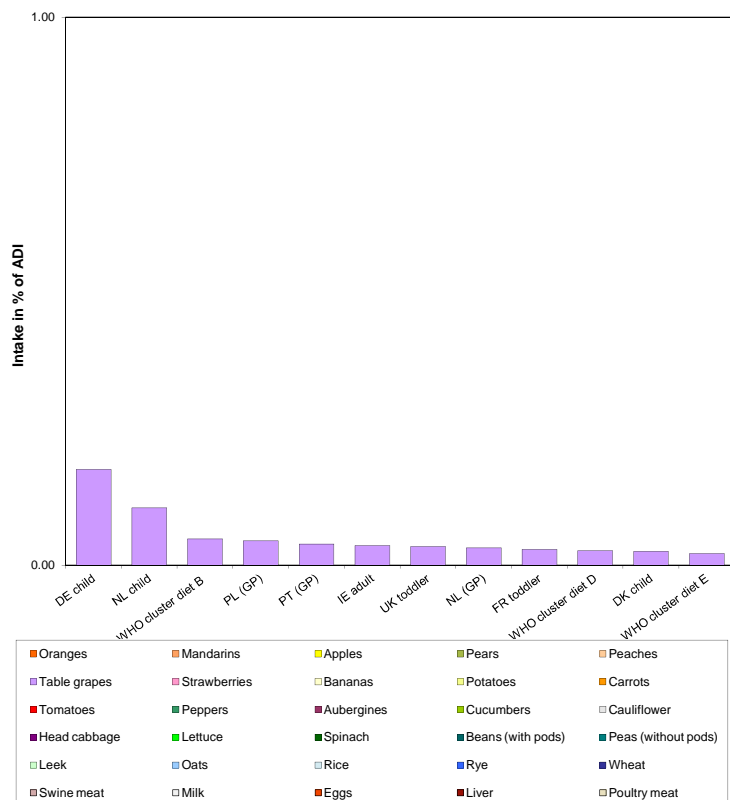
c) MRL in place on 01/01/2011.

d) TRL: toxicological threshold level

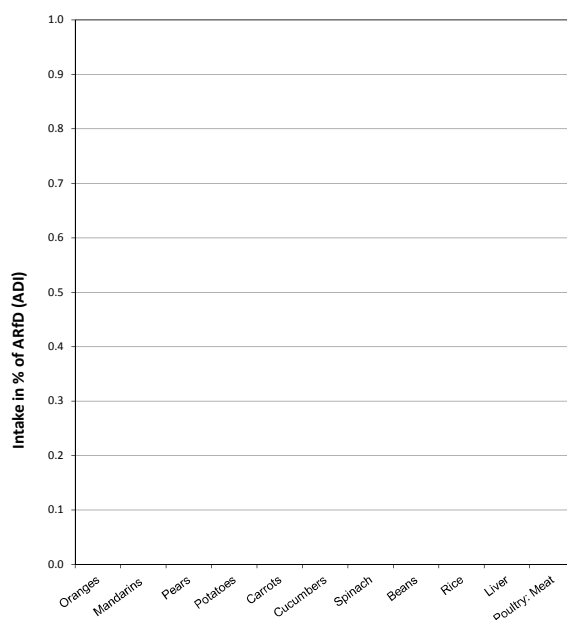
e) For liver, only the MRL for bovine liver is reported

f) The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Bromuconazole (RD)



Acute risk assessment: Bromuconazole (RD)



Bupirimate			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.05	ARID (mg/kg bw):	n.n.
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2011	Year of evaluation:	2011

Chronic risk assessment								
	Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
	Top 12 diets		Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
	0.52	DE child	0.32	Apples	0.09	Oranges	0.03	Table grapes
	0.30	NL child	0.17	Apples	0.07	Oranges	0.02	Table grapes
	0.19	WHO cluster diet B	0.09	Tomatoes	0.03	Apples	0.02	Oranges
	0.17	FR toddler	0.07	Apples	0.05	Oranges	0.02	Strawberries
	0.13	DK child	0.06	Apples	0.04	Cucumbers	0.02	Tomatoes
	0.13	UK toddler	0.05	Oranges	0.05	Apples	0.02	Tomatoes
	0.12	ES child	0.05	Oranges	0.03	Apples	0.03	Tomatoes
	0.11	FR infant	0.07	Apples	0.02	Oranges	0.02	Strawberries
	0.10	IE adult	0.02	Oranges	0.02	Apples	0.02	Peaches
	0.10	IT child/toddler	0.04	Tomatoes	0.02	Apples	0.01	Oranges
	0.09	PL (GP)	0.05	Apples	0.03	Tomatoes	0.01	Table grapes
	0.09	NL (GP)	0.04	Oranges	0.03	Apples	0.01	Tomatoes

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARID) e)	Most critical diet	Comment
2011	Oranges	0.05	1878	0.05		0.01				
2011	Mandarins	0.05	1537							
2011	Pears	0.2	1924	0.05		0.01				
2011	Potatoes	0.05	2184							
2011	Carrots	0.05	1583							
2011	Cucumbers	1	1633	0.61		0.10				
2011	Spinach	0.05	1109							
2011	Beans (with pods)	0.05	1301							
2011	Rice	0.05	989							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

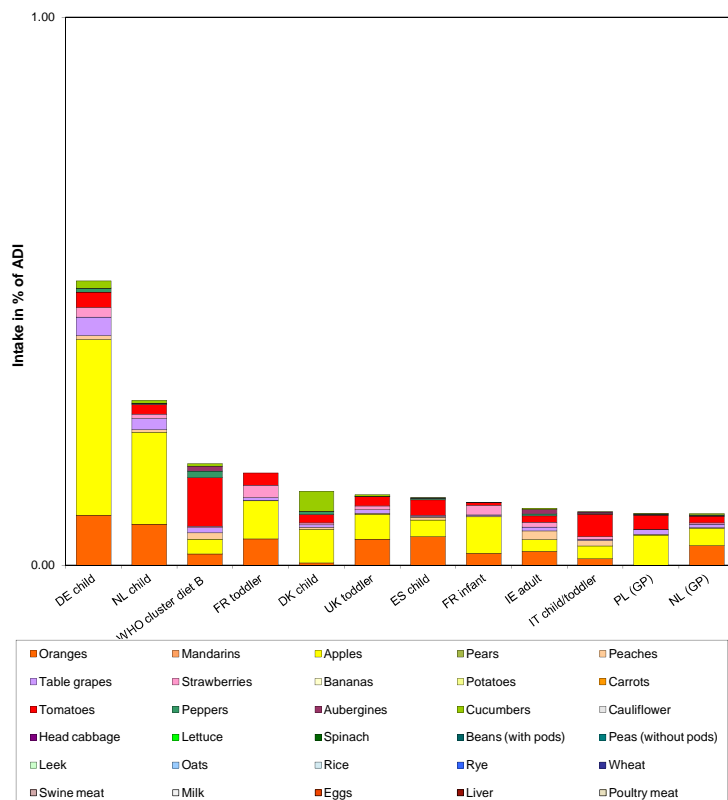
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

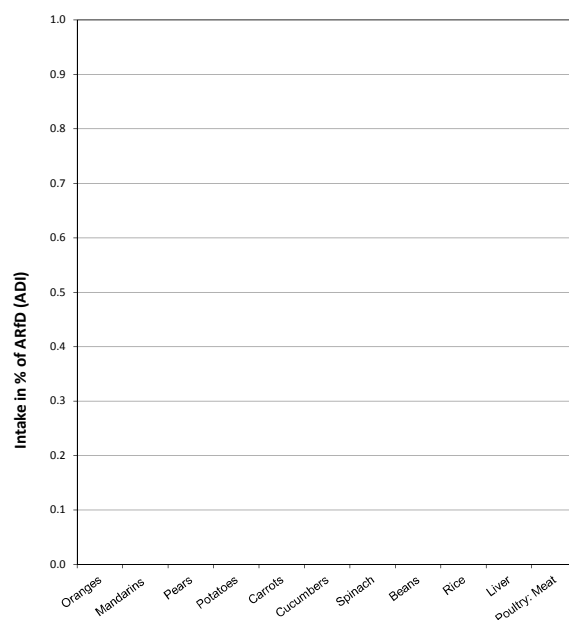
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Bupirimate



Acute risk assessment: Bupirimate



Buprofezin			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARID (mg/kg bw):	0.5
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2010	Year of evaluation:	2010

Chronic risk assessment									
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)			
Top 12 diets	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities		
3.73	DE child	2.11	Apples	0.58	Oranges	0.26	Bananas		
2.49	NL child	1.11	Apples	0.47	Oranges	0.28	Bananas		
1.82	FR toddler	0.46	Apples	0.37	Carrots	0.30	Oranges		
1.44	WHO cluster diet B	0.57	Tomatoes	0.18	Apples	0.13	Oranges		
1.34	FR infant	0.44	Apples	0.40	Carrots	0.14	Oranges		
1.20	ES child	0.33	Oranges	0.20	Apples	0.18	Tomatoes		
1.18	UK toddler	0.30	Oranges	0.30	Apples	0.18	Bananas		
1.14	DK child	0.41	Apples	0.21	Carrots	0.19	Bananas		
1.14	UK infant	0.27	Apples	0.24	Bananas	0.20	Carrots		
1.10	SE (GP)	0.30	Bananas	0.18	Apples	0.14	Tomatoes		
0.91	IE adult	0.16	Oranges	0.14	Apples	0.13	Bananas		
0.87	PT (GP)	0.18	Apples	0.16	Tomatoes	0.14	Rice		

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARID) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	1	1922	0.42		0.03		0.82	UK infant	
2011	Mandarins	1	1571	0.38		0.03		0.35	UK toddler	
2011	Pears	0.5	1950	0.26		0.14		2.60	DE child	
2011	Potatoes	0.05	2171							
2011	Carrots	0.05	1587	0.13		0.04		0.53	UK infant	
2011	Cucumbers	1	1650	0.12		0.03		0.36	NL child	
2011	Spinach	0.05	1098							
2011	Beans (with pods)	1	1293	0.08		0.04		0.09	NL child	
2011	Rice	0.5	1028	1.46		0.12		0.30	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

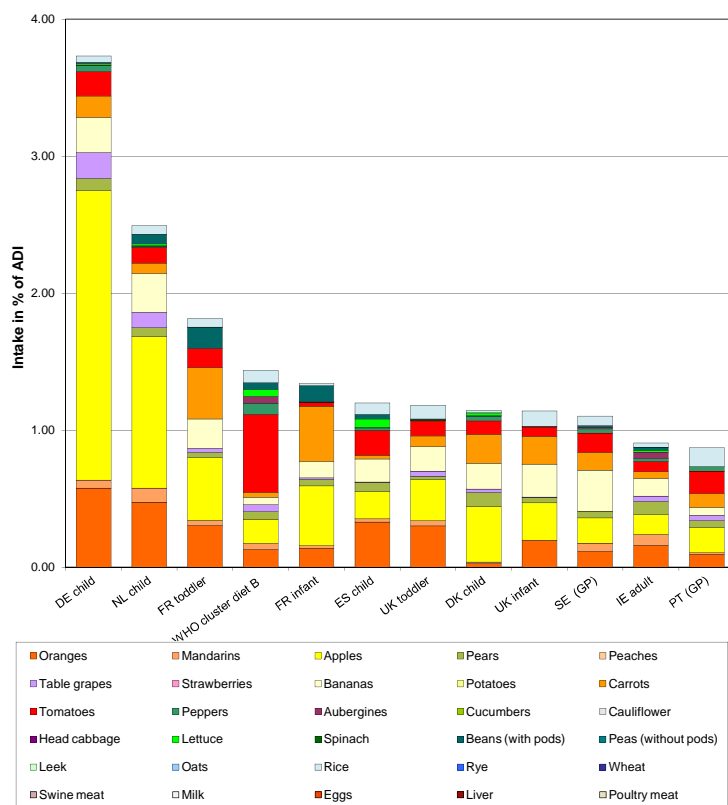
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

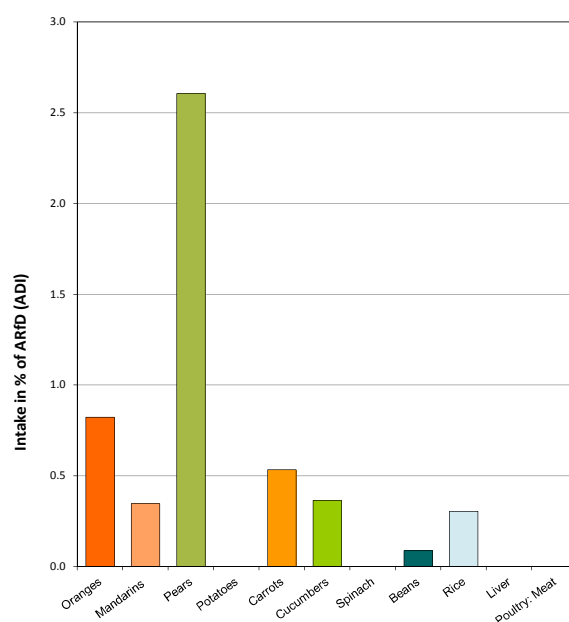
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Buprofezin



Acute risk assessment: Buprofezin



Captan (RD)			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.1	ARfD (mg/kg bw):	0.3
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2007	Year of evaluation:	2008

Full residue definition: Captan expressed as captan. For products pome fruit, strawberries, blackberries, raspberries, currants, gooseberries, tomatoes, beans (with and without pods): the sum of captan and folpet

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	1.00	DE child	0.86	Apples	0.03	Tomatoes	0.03	Pears
	0.55	NL child	0.45	Apples	0.02	Tomatoes	0.02	Pears
	0.34	FR toddler	0.19	Apples	0.06	Carrots	0.03	Beans (with pods)
	0.31	FR infant	0.18	Apples	0.06	Carrots	0.02	Beans (with pods)
	0.29	DK child	0.16	Apples	0.03	Carrots	0.03	Pears
	0.25	WHO cluster diet B	0.10	Tomatoes	0.07	Apples	0.02	Pears
	0.20	PL (GP)	0.15	Apples	0.03	Tomatoes	0.01	Pears
	0.18	UK infant	0.11	Apples	0.03	Carrots	0.01	Tomatoes
	0.18	UK toddler	0.12	Apples	0.02	Tomatoes	0.01	Carrots
	0.17	LT adult	0.13	Apples	0.02	Tomatoes	0.01	Pears
	0.16	ES child	0.08	Apples	0.03	Tomatoes	0.02	Pears
	0.16	SE (GP)	0.07	Apples	0.03	Tomatoes	0.02	Carrots

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1423							
2011	Mandarins	0.02	1156							
2011	Pears	3	962	16.84	0.10	3.86	1	117.18	DE child	
2011	Potatoes	0.05	1865							
2011	Carrots	0.1	1305	0.38		0.10		2.11	UK infant	
2011	Cucumbers	0.02	1432		0.07	0.08		1.60	NL child	
2011	Spinach		934							
2011	Beans (with pods)	2	472							
2011	Rice	0.02	887							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

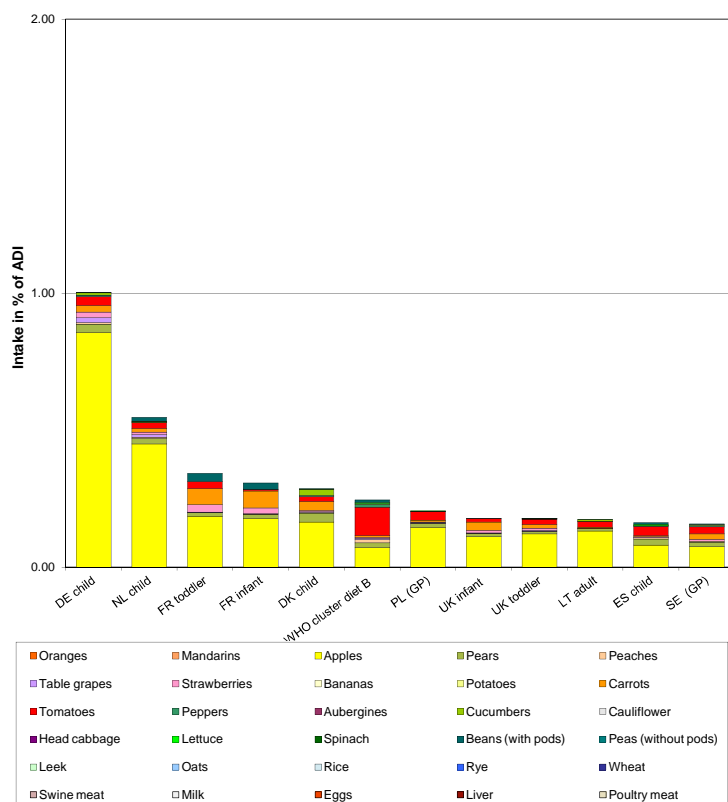
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

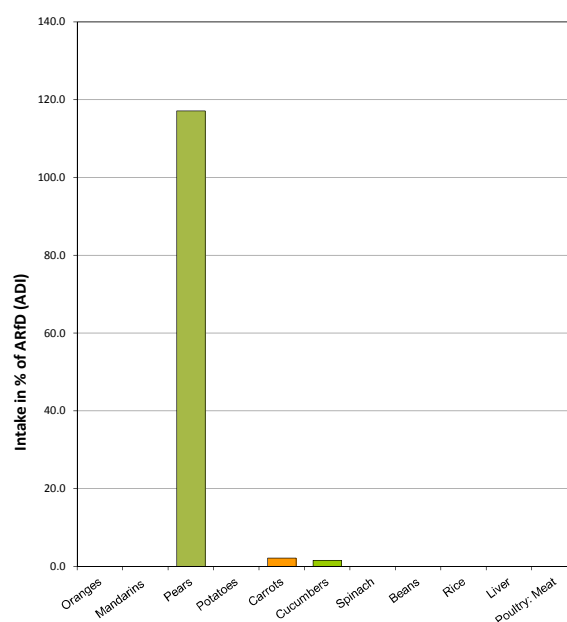
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Captan (RD)



Acute risk assessment: Captan (RD)



Carbaryl			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.0075	ARID (mg/kg bw):	0.01
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

Chronic risk assessment								
	Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
	Top 12 diets		Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
	3.91	DE child	2.73	Apples	0.79	Oranges	0.24	Tomatoes
	2.29	NL child	1.43	Apples	0.64	Oranges	0.15	Tomatoes
	1.31	FR toddler	0.59	Apples	0.41	Oranges	0.19	Tomatoes
	1.28	WHO cluster diet B	0.76	Tomatoes	0.23	Apples	0.18	Oranges
	0.98	ES child	0.45	Oranges	0.26	Apples	0.24	Tomatoes
	0.98	UK toddler	0.41	Oranges	0.39	Apples	0.15	Tomatoes
	0.88	FR infant	0.57	Apples	0.19	Oranges	0.09	Strawberries
	0.76	DK child	0.53	Apples	0.13	Tomatoes	0.05	Peppers
	0.75	UK infant	0.35	Apples	0.27	Oranges	0.09	Tomatoes
	0.71	NL (GP)	0.31	Oranges	0.27	Apples	0.11	Tomatoes
	0.70	PL (GP)	0.46	Apples	0.22	Tomatoes	0.02	Peppers
	0.69	IT child/toddler	0.35	Tomatoes	0.20	Apples	0.10	Oranges

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARID) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.05	1825	0.11	0.27	0.84	2	868.93	UK infant	PF 0.78
2011	Mandarins	0.05	1470							
2011	Pears	0.05	1869							
2011	Potatoes	0.05	2101							
2011	Carrots	0.05	1543							
2011	Cucumbers	0.05	1533							
2011	Spinach	0.05	1041							
2011	Beans (with pods)	0.05	1230							
2011	Rice	1	1043							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

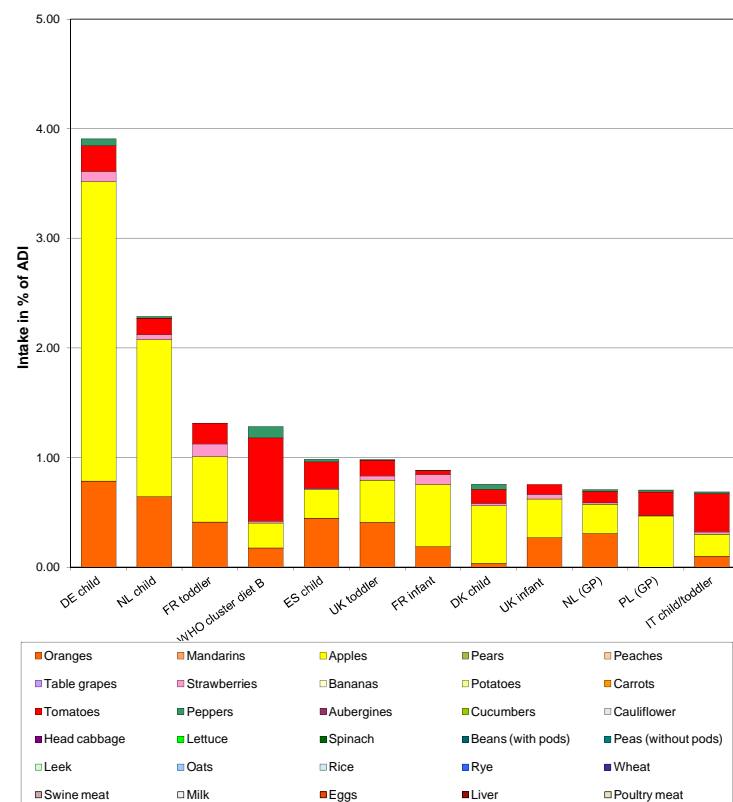
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

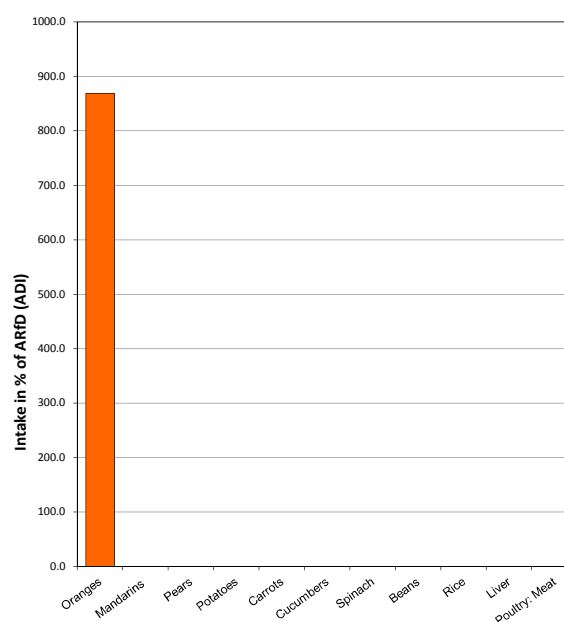
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Carbaryl



Acute risk assessment: Carbaryl



Carbendazim (RD)				
Status of the active substance:		Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	N
Toxicological end points				
ADI (mg/kg bw/day):		0.02	ARfD (mg/kg bw):	0.02
Source of ADI:		COM	Source of ARfD:	COM
Year of evaluation:		2010	Year of evaluation:	2010

Full residue definition: Carbendazim and benomyl (sum of benomyl and carbendazim expressed as carbendazim). For products of animal origin-terrestrial animal: carbendazim and thiophanate-methyl, expressed as carbendazim

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	2.62	DE child	0.87	Apples	0.71	Oranges	0.43	Wheat
	2.28	NL child	0.58	Oranges	0.50	Wheat	0.46	Apples
	1.78	WHO cluster diet B	0.89	Wheat	0.22	Tomatoes	0.16	Oranges
	1.56	FR toddler	0.37	Oranges	0.27	Wheat	0.26	Potatoes
	1.32	UK toddler	0.41	Wheat	0.37	Oranges	0.18	Potatoes
	1.29	ES child	0.46	Wheat	0.40	Oranges	0.09	Potatoes
	1.23	DK child	0.58	Wheat	0.17	Apples	0.12	Potatoes
	1.16	WHO cluster diet D	0.68	Wheat	0.21	Potatoes	0.07	Tomatoes
	1.16	IT child/toddler	0.69	Wheat	0.10	Tomatoes	0.09	Oranges
	1.14	PT (GP)	0.41	Wheat	0.27	Potatoes	0.11	Oranges
	1.08	SE (GP)	0.33	Wheat	0.21	Potatoes	0.14	Oranges
	1.07	UK infant	0.27	Wheat	0.24	Oranges	0.16	Potatoes

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.5	1556	4.11	0.06	0.84	2	256.22	UK infant	PF 0.46
2011	Mandarins	0.7	1276	2.51		0.09		24.76	UK toddler	
2011	Pears	0.2	1477	4.33	0.07	0.28	1	127.04	DE child	
2011	Potatoes	0.1	1565	0.13		0.02		17.68	UK infant	
2011	Carrots	0.1	1282	0.08		0.01		4.44	UK infant	
2011	Cucumbers	0.1	1318	1.37	0.30	0.47	1	137.43	NL child	
2011	Spinach	0.1	875	0.23	0.23	0.20		22.60	BE child	
2011	Beans (with pods)	0.2	1076	5.76	0.19	0.30		17.02	NL child	
2011	Rice	0.01	825	0.61	1.09	0.06		3.97	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

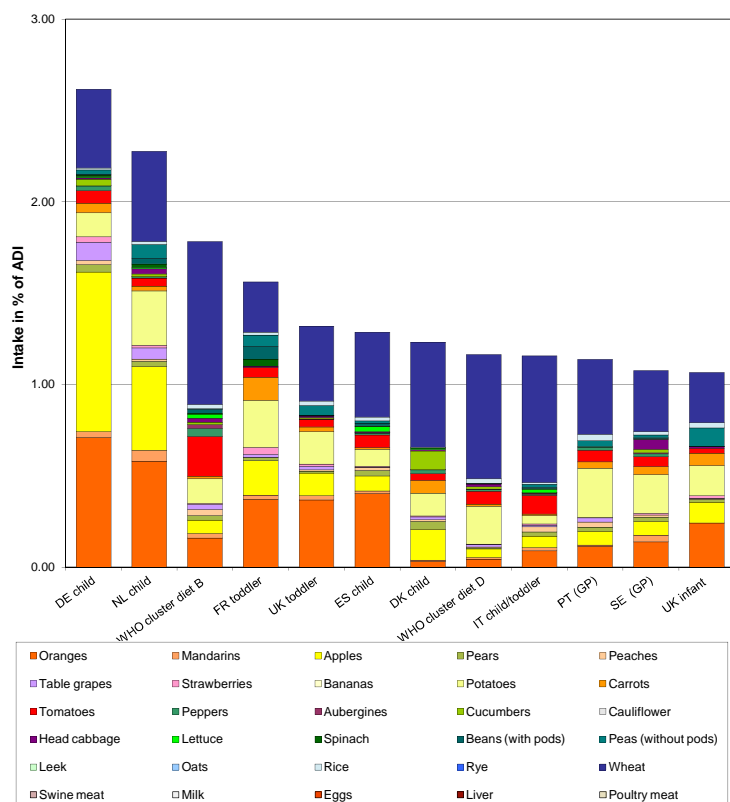
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

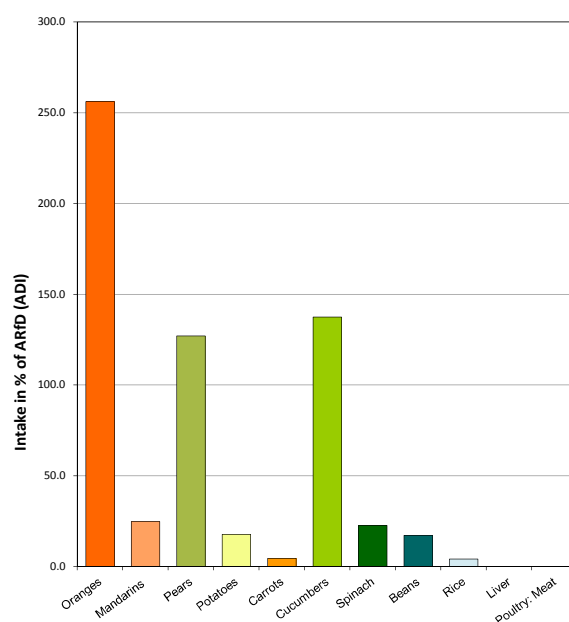
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Carbendazim (RD)



Acute risk assessment: Carbendazim (RD)



Carbofuran (RD)									
Status of the active substance:				Not approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N		
Toxicological end points									
ADI (mg/kg bw/day):				0.00015	ARID (mg/kg bw):		0.00015		
Source of ADI:				EFSA	Source of ARID:		EFSA		
Year of evaluation:				2009	Year of evaluation:		2009		

Full residue definition: Carbofuran (sum of carbofuran and 3-hydroxy-carbofuran expressed as carbofuran)

Chronic risk assessment									
	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	31.53	DE child		25.56	Oranges	3.10	Mandarins	2.03	Peppers
	30.06	NL child		20.92	Oranges	5.63	Mandarins	3.04	Cauliflower
	18.00	FR toddler		13.42	Oranges	2.58	Cauliflower	2.00	Mandarins
	16.95	ES child		14.55	Oranges	1.27	Mandarins	0.80	Peppers
	16.27	UK toddler		13.29	Oranges	2.13	Mandarins	0.71	Cauliflower
	13.59	NL (GP)		9.98	Oranges	1.61	Mandarins	1.54	Cauliflower
	13.36	IE adult		7.01	Oranges	4.34	Mandarins	1.06	Cauliflower
	12.10	WHO cluster diet B		5.73	Oranges	3.47	Peppers	2.41	Mandarins
	11.21	ES adult		8.67	Oranges	1.08	Peppers	1.07	Mandarins
	10.36	UK infant		8.72	Oranges	1.65	Cauliflower		FRUIT (FRESH OR FROZEN)
	10.21	SE (GP)		5.01	Oranges	3.35	Mandarins	1.31	Peppers
	7.95	FR infant		6.10	Oranges	1.03	Mandarins	0.74	Cauliflower

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL e)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges		1654	0.48		0.05	8	4420.69	UK infant	
2011	Mandarins		1391	0.29		0.16	4	5935.82	UK toddler	
2011	Pears	0.02	1602							
2011	Potatoes	0.02	1848							
2011	Carrots	0.02	1393							
2011	Cucumbers	0.02	1457							
2011	Spinach	0.02	963							
2011	Beans (with pods)	0.02	1147		0.09	0.03	1	203.45	NL child	
2011	Rice	0.02	889							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis to the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

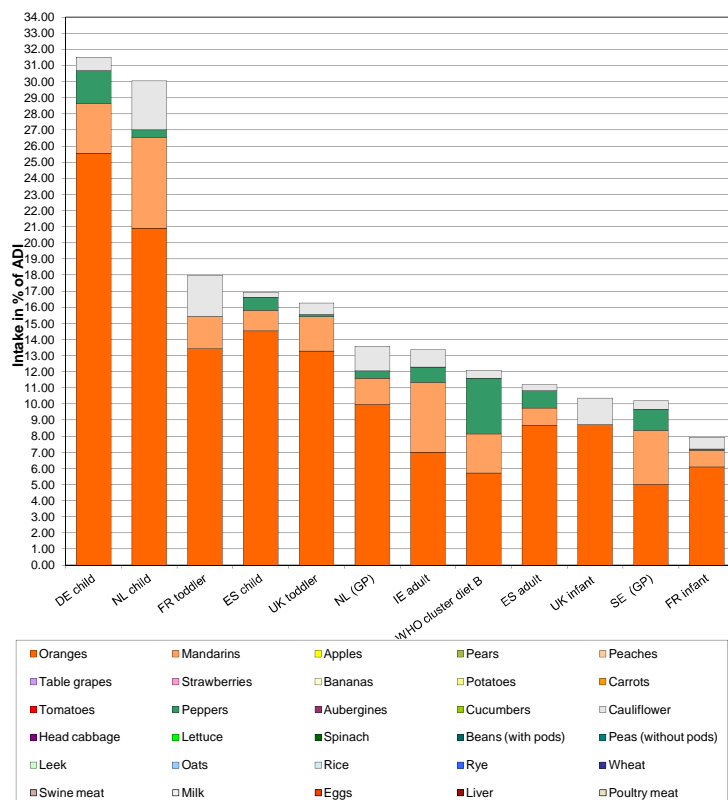
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

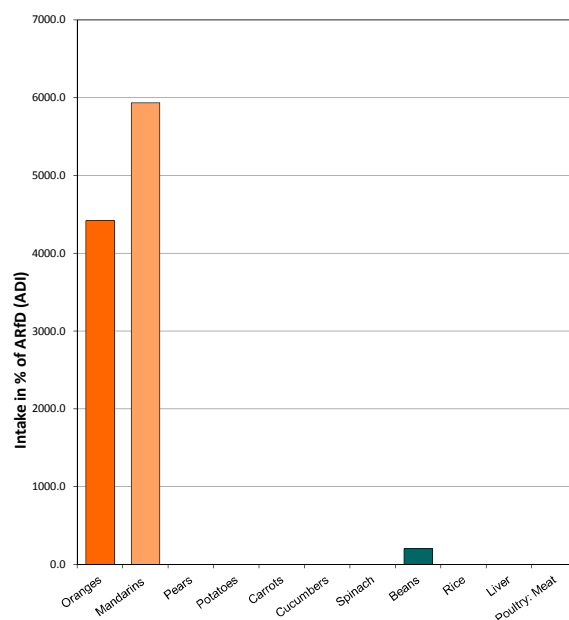
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Carbofuran (RD)



Acute risk assessment: Carbofuran (RD)





Carbosulfan			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.005	ARID (mg/kg bw):	0.005
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2009	Year of evaluation:	2009

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.33	FR toddler	0.23	Strawberries	0.10	Rice		FRUIT (FRESH OR FROZEN)
	0.25	DE child	0.18	Strawberries	0.07	Rice		FRUIT (FRESH OR FROZEN)
	0.25	UK infant	0.17	Rice	0.08	Strawberries		FRUIT (FRESH OR FROZEN)
	0.23	UK toddler	0.16	Rice	0.07	Strawberries		FRUIT (FRESH OR FROZEN)
	0.23	PT (GP)	0.21	Rice	0.01	Strawberries		FRUIT (FRESH OR FROZEN)
	0.21	FR infant	0.18	Strawberries	0.02	Rice		FRUIT (FRESH OR FROZEN)
	0.18	NL child	0.10	Rice	0.08	Strawberries		FRUIT (FRESH OR FROZEN)
	0.17	WHO cluster diet B	0.14	Rice	0.03	Strawberries		FRUIT (FRESH OR FROZEN)
	0.17	SE (GP)	0.11	Rice	0.06	Strawberries		FRUIT (FRESH OR FROZEN)
	0.16	WHO cluster diet D	0.15	Rice	0.01	Strawberries		FRUIT (FRESH OR FROZEN)
	0.16	ES child	0.13	Rice	0.03	Strawberries		FRUIT (FRESH OR FROZEN)
	0.14	IE adult	0.09	Strawberries	0.05	Rice		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARID) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges		1195							
2011	Mandarins		951							
2011	Pears	0.05	1092							
2011	Potatoes	0.05	1267							
2011	Carrots	0.1	1057							
2011	Cucumbers	0.05	1080							
2011	Spinach	0.05	727							
2011	Beans (with pods)	0.05	861							
2011	Rice	0.05	631	0.16		0.03		8.57	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

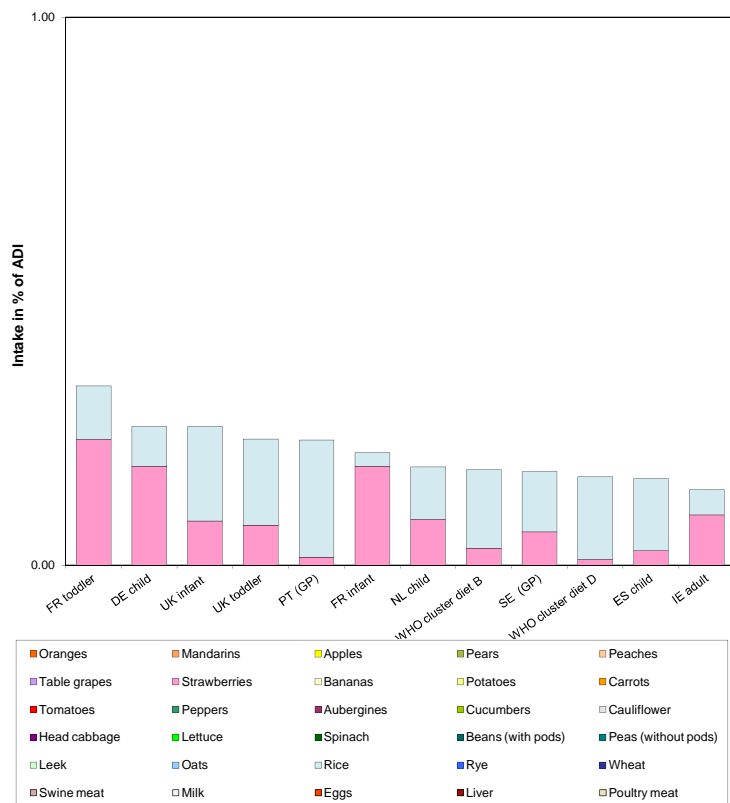
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

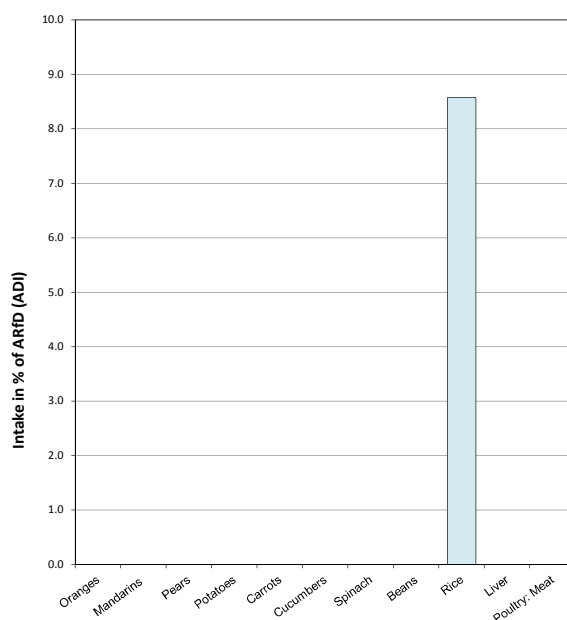
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Carbosulfan



Acute risk assessment: Carbosulfan



Chlordane (RD)										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				A		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):				0.0005		ARfD (mg/kg bw):				
Source of ADI:				JMPR		Source of ARfD:				
Year of evaluation:				1994		Year of evaluation:				

Active substance not assessed regarding the setting of an ARfD. Acute RA is performed with ADI value.

Full residue definition: Chlordane (sum of cis- and trans-chlordane). For products of animal origin-terrestrial animal: sum of cis- and trans-isomers and oxychlordane expressed as chlordane

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	
	3.24		FR toddler	3.24	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
	3.16		UK infant	3.16	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
	2.40		NL child	2.40	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
	2.10		FR infant	2.10	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
	1.69		UK toddler	1.69	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
	1.17		DE child	1.17	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
	1.03		DK child	1.03	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
	1.02		ES child	1.02	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
	1.01		SE (GP)	1.01	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
	0.54		NL (GP)	0.54	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
	0.46		FI adult	0.46	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
	0.44		DK adult	0.44	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges									
2011	Mandarins									
2011	Pears									
2011	Potatoes									
2011	Carrots									
2011	Cucumbers									
2011	Spinach									
2011	Beans (with pods)									
2011	Rice									
2011	Liver	0.05	439							Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.05	408							

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

d) TRL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported

f) The exposure is calculated on the basis to the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

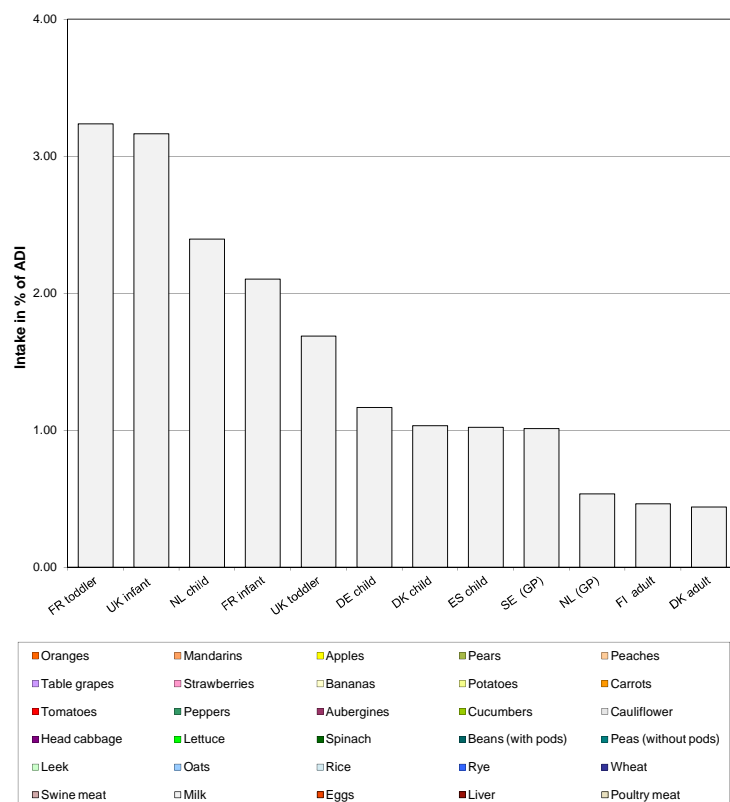
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

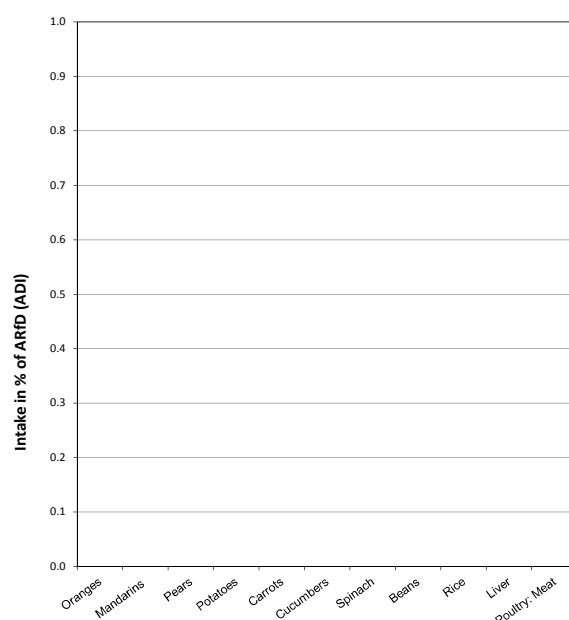
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Chlordane (RD)



Acute risk assessment: Chlordane (RD)



Chlorfenapyr			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.015	ARID (mg/kg bw):	0.015
Source of ADI:	ECCO	Source of ARID:	EFSA
Year of evaluation:	1999	Year of evaluation:	2006

Chronic risk assessment							
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)
	0.54	DE child	0.29	Oranges	0.12	Table grapes	0.07
	0.42	NL child	0.24	Oranges	0.07	Table grapes	0.06
	0.39	WHO cluster diet B	0.23	Tomatoes	0.07	Oranges	0.04
	0.27	ES child	0.17	Oranges	0.07	Tomatoes	0.01
	0.25	FR toddler	0.15	Oranges	0.06	Tomatoes	0.02
	0.24	UK toddler	0.15	Oranges	0.04	Tomatoes	0.02
	0.19	NL (GP)	0.12	Oranges	0.03	Tomatoes	0.02
	0.19	IE adult	0.08	Oranges	0.04	Mandarins	0.03
	0.19	ES adult	0.10	Oranges	0.06	Tomatoes	0.01
	0.18	IT child/toddler	0.11	Tomatoes	0.04	Oranges	0.02
	0.16	SE (GP)	0.06	Oranges	0.06	Tomatoes	0.03
	0.16	PT (GP)	0.07	Tomatoes	0.05	Oranges	0.03

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARID) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.05	1471	0.41		0.04		35.37	UK infant	
2011	Mandarins	0.05	1208		0.08	0.06		21.15	UK toddler	
2011	Pears	0.05	1392							
2011	Potatoes	0.05	1635							
2011	Carrots	0.05	1228	0.08		0.02		8.45	UK infant	
2011	Cucumbers	0.05	1201							
2011	Spinach	0.05	803							
2011	Beans (with pods)	0.05	993	0.20		0.01		0.76	NL child	
2011	Rice	0.05	731							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

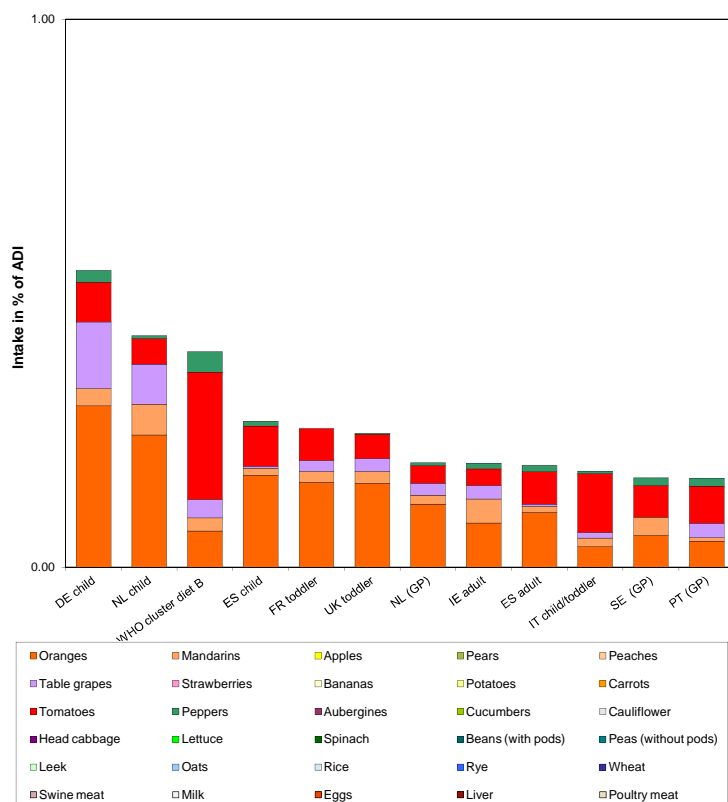
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

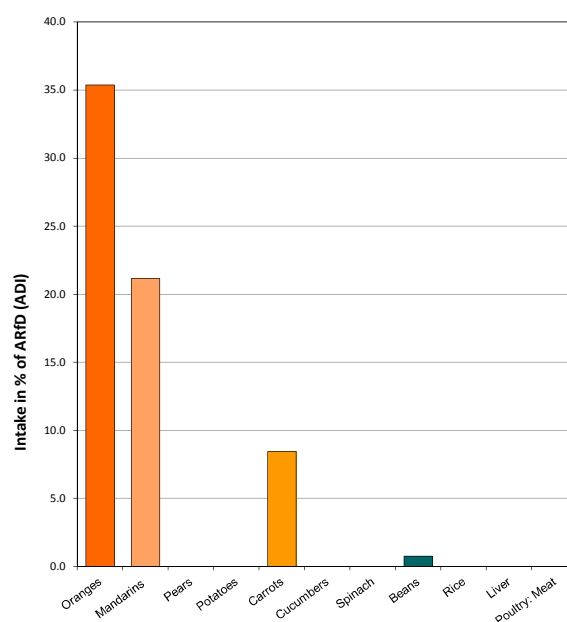
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Chlorfenapyr



Acute risk assessment: Chlorfenapyr



Chlorfenvinphos			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.0005	ARfD (mg/kg bw):	
Source of ADI:	JMPR	Source of ARfD:	
Year of evaluation:	1994	Year of evaluation:	

Active substance not assessed regarding the setting of an ARfD. Acute RA is performed with ADI value.

Chronic risk assessment									
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	
	9.45	DE child	8.13	Oranges	1.32	Pears		FRUIT (FRESH OR FROZEN)	
	7.55	NL child	6.65	Oranges	0.90	Pears		FRUIT (FRESH OR FROZEN)	
	5.57	ES child	4.63	Oranges	0.95	Pears		FRUIT (FRESH OR FROZEN)	
	4.81	FR toddler	4.27	Oranges	0.54	Pears		FRUIT (FRESH OR FROZEN)	
	4.60	UK toddler	4.22	Oranges	0.38	Pears		FRUIT (FRESH OR FROZEN)	
	3.65	IE adult	2.23	Oranges	1.42	Pears		FRUIT (FRESH OR FROZEN)	
	3.54	NL (GP)	3.17	Oranges	0.37	Pears		FRUIT (FRESH OR FROZEN)	
	3.45	ES adult	2.76	Oranges	0.70	Pears		FRUIT (FRESH OR FROZEN)	
	3.31	UK infant	2.77	Oranges	0.54	Pears		FRUIT (FRESH OR FROZEN)	
	2.62	FR infant	1.94	Oranges	0.68	Pears		FRUIT (FRESH OR FROZEN)	
	2.61	WHO cluster diet B	1.82	Oranges	0.79	Pears		FRUIT (FRESH OR FROZEN)	
	2.32	SE (GP)	1.59	Oranges	0.73	Pears		FRUIT (FRESH OR FROZEN)	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL e)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1897	0.05		0.01	1	159.14	UK infant	
2011	Mandarins	0.02	1518							
2011	Pears	0.02	1786	0.06		0.01	1	200.36	DE child	
2011	Potatoes	0.02	2112							
2011	Carrots		1581							
2011	Cucumbers	0.02	1614							
2011	Spinach		1020							
2011	Beans (with pods)	0.02	1201							
2011	Rice	0.02	1065							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

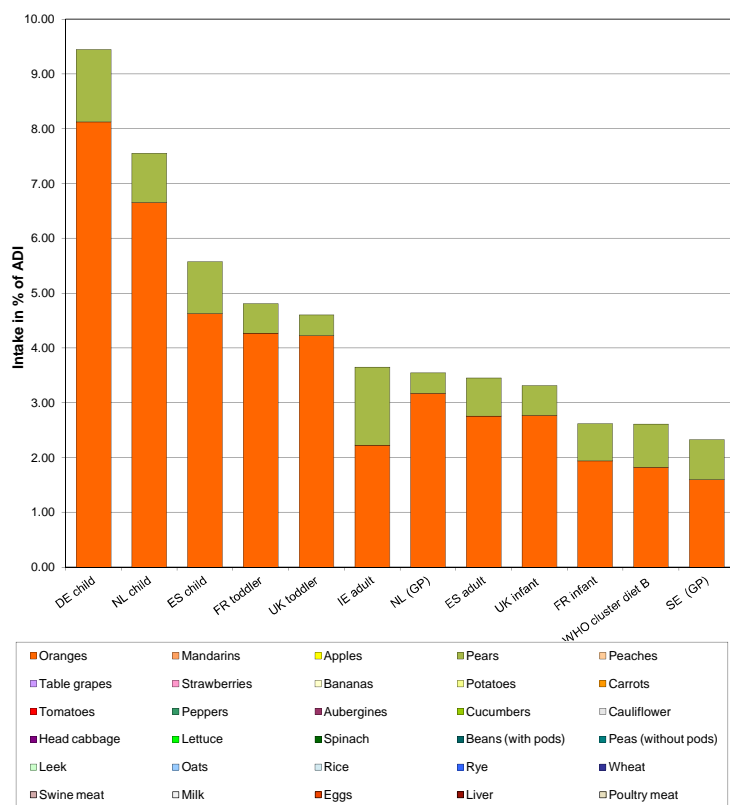
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

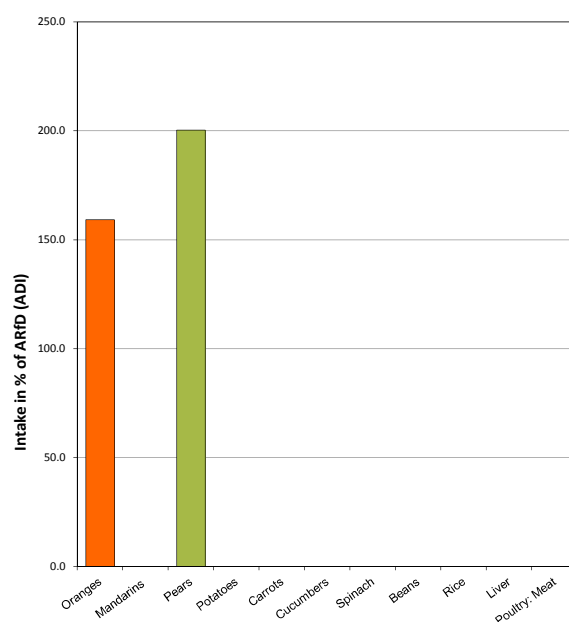
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Chlorfenvinphos



Acute risk assessment: Chlorfenvinphos



Chlormequat			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	Y
Toxicological end points			
ADI (mg/kg bw/day):	0.031	ARfD (mg/kg bw):	0.07
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2009	Year of evaluation:	2009

Toxicological reference values derived fro chlormequat chloride (ADI: 0.04 mg/kg bw per d and ARfD: 0.09 mg/kg bw) were recalculated to chlormequat ion to match with the residue definition. Mandatory only in cereals (excluding rice) and pears.

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	4.61	DK child			1.91	Rye	1.38	Wheat	1.16	Oats
	2.26	WHO cluster diet B			2.14	Wheat	0.04	Pears	0.03	Rye
	2.14	DE child			1.03	Wheat	0.60	Oats	0.34	Rye
	2.04	WHO cluster diet D			1.63	Wheat	0.21	Oats	0.18	Rye
	1.72	IT child/toddler			1.67	Wheat	0.04	Pears	0.01	Table grapes
	1.69	WHO Cluster diet F			0.90	Wheat	0.44	Oats	0.33	Rye
	1.68	NL child			1.19	Wheat	0.31	Oats	0.08	Rye
	1.49	WHO cluster diet E			0.99	Wheat	0.28	Oats	0.19	Rye
	1.43	UK infant			0.74	Oats	0.66	Wheat	0.03	Pears
	1.27	IE adult			0.58	Wheat	0.54	Oats	0.08	Pears
	1.19	PT (GP)			0.98	Wheat	0.09	Oats	0.06	Rye
	1.18	DK adult			0.51	Wheat	0.34	Oats	0.29	Rye

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.1	829	8.81	0.60	10.40	2	1353.06	DE child	
2011	Mandarins									
2011	Pears									
2011	Potatoes									
2011	Carrots									
2011	Cucumbers									
2011	Spinach									
2011	Beans (with pods)									
2011	Rice									
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

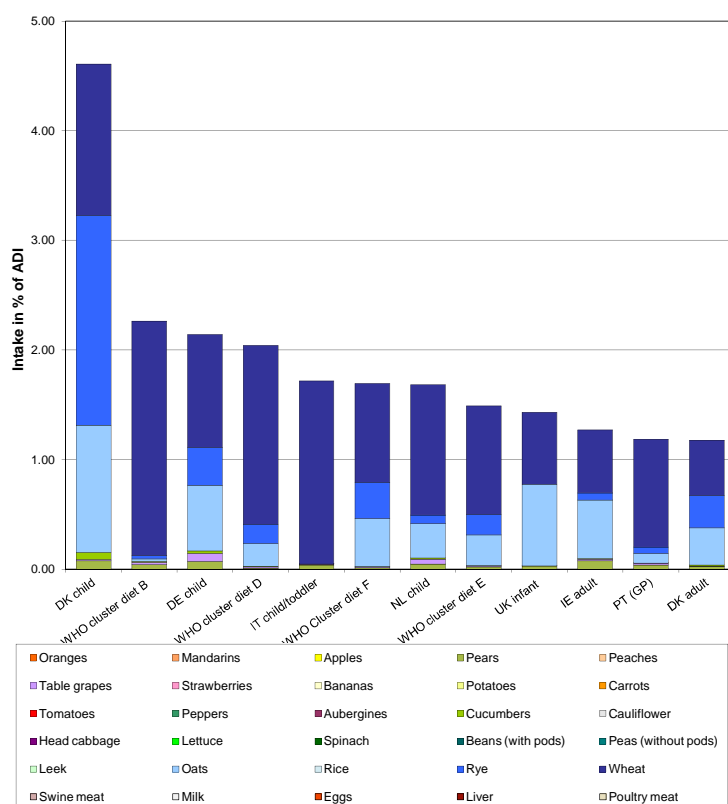
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

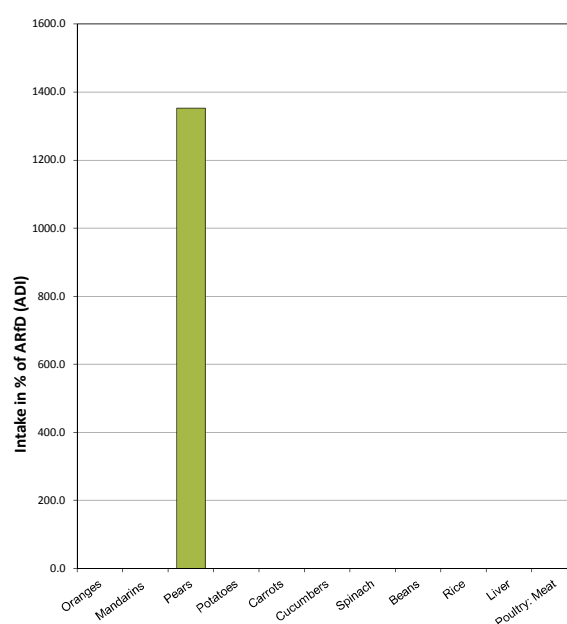
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported. <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Chlormequat



Acute risk assessment: Chlormequat



Chlorobenzilate										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				A		Analysis on voluntary basis?		Y		
Toxicological end points										
ADI (mg/kg bw/day):				0.02		ARfD (mg/kg bw):				
Source of ADI:				JMPR		Source of ARfD:				
Year of evaluation:				1980		Year of evaluation:				

Active substance not assessed regarding the setting of an ARfD. Acute RA is performed with ADI value. Pesticide to be analysed on a voluntary basis only.

Chronic risk assessment										
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)			2nd contributor to MS diet (in % of ADI)			3rd contributor to MS diet (in % of ADI)	
Top 12 diets			Commodity / group of commodities			Commodity / group of commodities			Commodity / group of commodities	
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges									
2011	Mandarins									
2011	Pears									
2011	Potatoes									
2011	Carrots									
2011	Cucumbers									
2011	Spinach									
2011	Beans (with pods)									
2011	Rice									
2011	Liver	0.1	556							Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.1	574							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis to the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

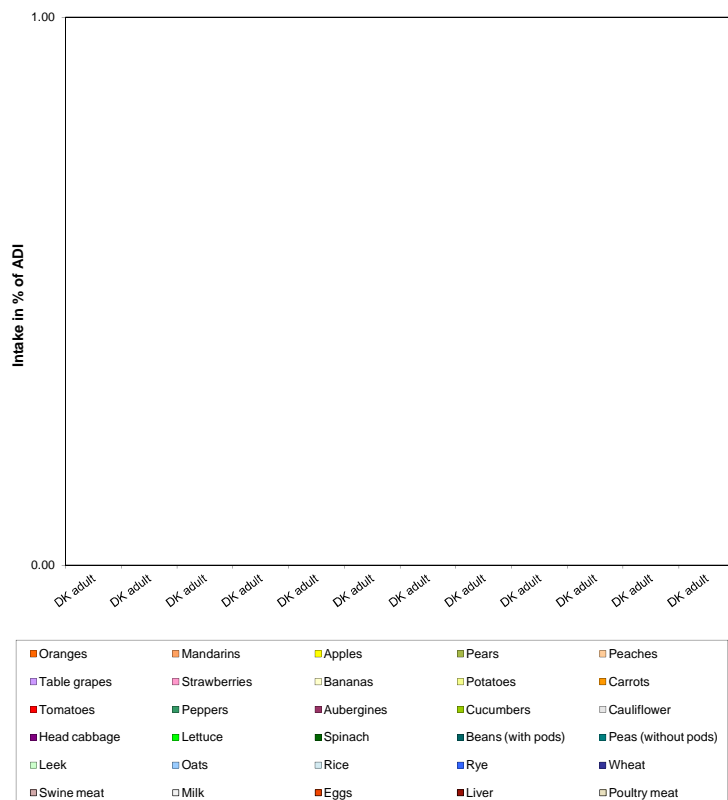
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

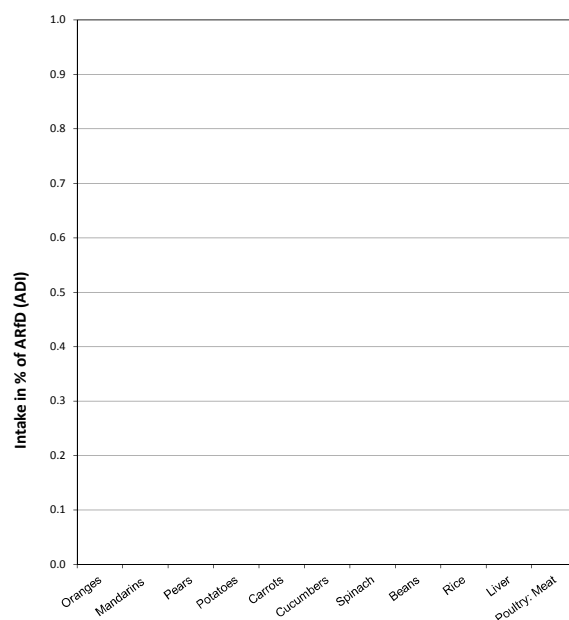
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Chlorobenzilate



Acute risk assessment: Chlorobenzilate



Chlorothalonil			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.015	ARID (mg/kg bw):	0.6
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2006	Year of evaluation:	2006

Chronic risk assessment								
	Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
	Top 12 diets		Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
	2.90	DE child	1.52	Apples	0.33	Wheat	0.22	Bananas
	2.03	NL child	0.80	Apples	0.38	Wheat	0.24	Bananas
	1.86	WHO cluster diet B	0.69	Wheat	0.50	Tomatoes	0.13	Apples
	1.63	DK child	0.44	Wheat	0.29	Apples	0.26	Cucumbers
	1.63	FR toddler	0.33	Apples	0.32	Carrots	0.21	Wheat
	1.19	FR infant	0.35	Carrots	0.32	Apples	0.12	Beans (with pods)
	1.19	IT child/toddler	0.53	Wheat	0.23	Tomatoes	0.11	Apples
	1.15	SE (GP)	0.26	Wheat	0.25	Bananas	0.13	Apples
	1.06	ES child	0.36	Wheat	0.16	Tomatoes	0.14	Apples
	0.98	UK toddler	0.31	Wheat	0.22	Apples	0.15	Bananas
	0.94	WHO cluster diet D	0.52	Wheat	0.16	Tomatoes	0.08	Apples
	0.94	UK infant	0.21	Wheat	0.20	Bananas	0.20	Apples

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARID) e)	Most critical diet	Comment
2011	Oranges	0.01	1875							
2011	Mandarins	0.01	1523							
2011	Pears	1	1923	0.68		0.18		2.73	DE child	
2011	Potatoes	0.01	2136							
2011	Carrots	1	1570	0.25		0.04		0.42	UK infant	
2011	Cucumbers	1	1654	5.44	0.09	0.68		6.63	NL child	
2011	Spinach	0.01	1085			0.17		0.64	BE child	
2011	Beans (with pods)	5	1244	0.80		1.13		2.14	NL child	
2011	Rice	0.01	1028							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

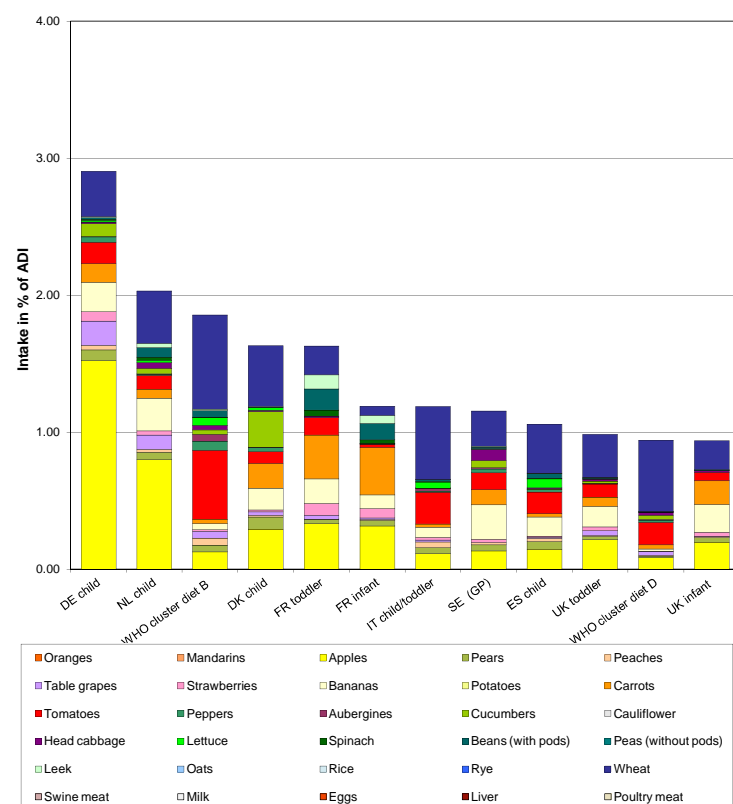
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

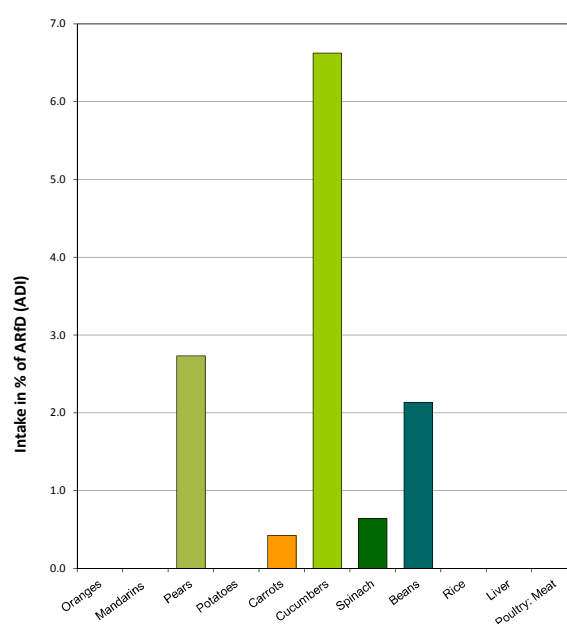
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Chlorothalonil



Acute risk assessment: Chlorothalonil





Chlorpropham (RD)				
Status of the active substance:		Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	N
Toxicological end points				
ADI (mg/kg bw/day):		0.05	ARID (mg/kg bw):	0.5
Source of ADI:		COM	Source of ARID:	COM
Year of evaluation:		2004	Year of evaluation:	2004

Full residue definition: Chlorpropham (chlorpropham and 3-chloroaniline, expressed as chlorpropham). For potatoes: chlorpropham. For products of animal origin-terrestrial animal: chlorpropham and 4'-hydroxychlorpropham-O-sulphonic acid (4-HSA).

Chronic risk assessment									
	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	1.38		NL child	1.16	Potatoes	0.09	Wheat	0.04	Bananas
	1.21		FR toddler	1.00	Potatoes	0.09	Carrots	0.05	Wheat
	1.18		PT (GP)	1.05	Potatoes	0.08	Wheat	0.02	Carrots
	0.99		SE (GP)	0.82	Potatoes	0.06	Wheat	0.04	Bananas
	0.97		FR infant	0.81	Potatoes	0.10	Carrots	0.02	Wheat
	0.96		WHO cluster diet D	0.80	Potatoes	0.13	Wheat	0.01	Carrots
	0.91		WHO regional diet	0.79	Potatoes	0.06	Wheat	0.01	Carrots
	0.88		WHO cluster diet E	0.76	Potatoes	0.08	Wheat	0.02	Carrots
	0.83		UK toddler	0.69	Potatoes	0.08	Wheat	0.02	Bananas
	0.80		WHO Cluster diet F	0.67	Potatoes	0.07	Wheat	0.02	Carrots
	0.79		UK infant	0.64	Potatoes	0.05	Wheat	0.05	Carrots
	0.76		WHO cluster diet B	0.53	Potatoes	0.17	Wheat	0.01	Pears

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05	1447							
2011	Mandarins	0.05	1183							
2011	Pears	0.05	1301	0.15		0.02		0.27	DE child	
2011	Potatoes									
2011	Carrots	0.05	1121	0.18		0.05		0.57	UK infant	
2011	Cucumbers	0.05	1216							
2011	Spinach	0.05	785	0.25		0.00		0.01	BE child	
2011	Beans (with pods)	0.05	884							
2011	Rice	0.02	691							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

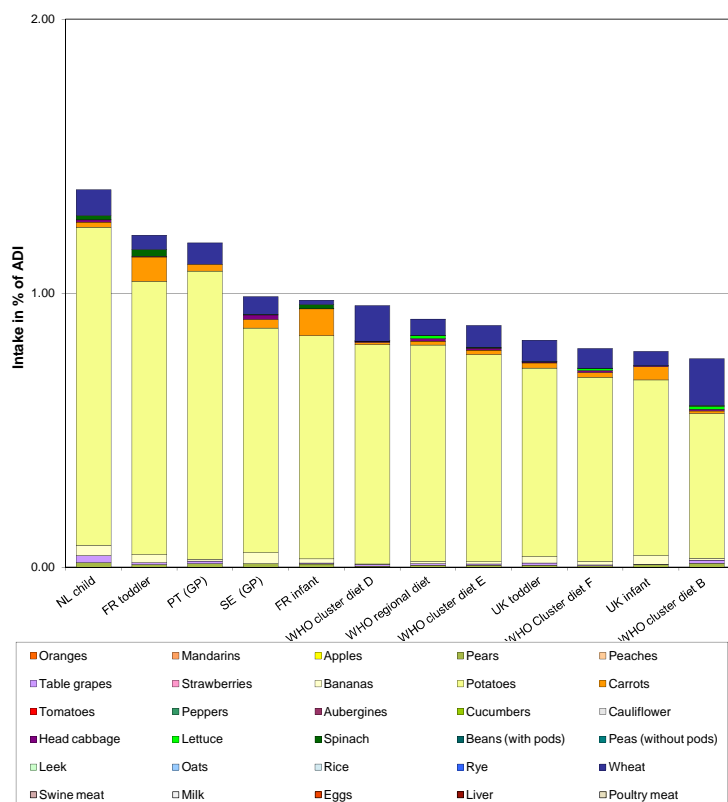
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

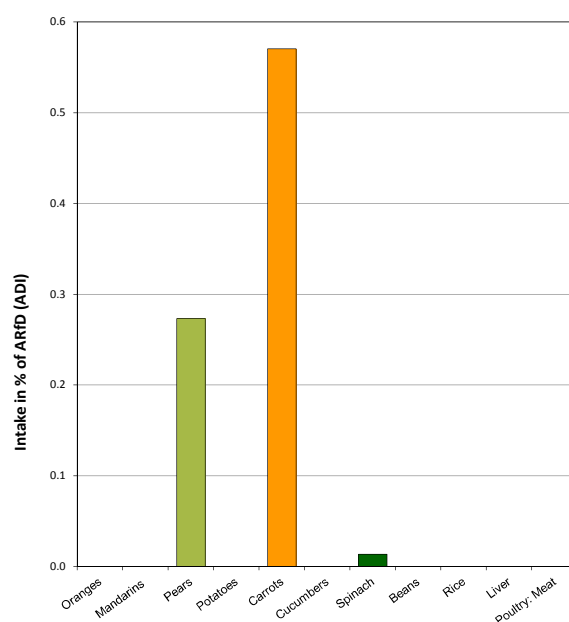
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Chlorpropham (RD)



Acute risk assessment: Chlorpropham (RD)



Chlorpyrifos			
Status of the active substance:		Approved	Monitoring year: 2011
To be analysed in plant (P) or animal (A) products		P, A	Analysis on voluntary basis? N
Toxicological end points			
ADI (mg/kg bw/day):		0.01	ARID (mg/kg bw): 0.1
Source of ADI:		COM	Source of ARID: COM
Year of evaluation:		2005	Year of evaluation: 2005

Chronic risk assessment								
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)		
Top 12 diets	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	
6.28	DE child	2.22	Apples	1.31	Oranges	0.65	Wheat	
5.64	NL child	1.16	Apples	1.08	Oranges	0.81	Potatoes	
4.03	FR toddler	0.70	Potatoes	0.69	Oranges	0.48	Apples	
3.53	WHO cluster diet B	1.34	Wheat	0.40	Tomatoes	0.37	Potatoes	
3.07	UK toddler	0.68	Oranges	0.62	Wheat	0.48	Potatoes	
2.90	SE (GP)	0.57	Potatoes	0.50	Wheat	0.48	Bananas	
2.89	DK child	0.87	Wheat	0.43	Apples	0.33	Potatoes	
2.81	ES child	0.75	Oranges	0.70	Wheat	0.27	Bananas	
2.70	UK infant	0.45	Oranges	0.45	Potatoes	0.41	Wheat	
2.68	FR infant	0.57	Potatoes	0.46	Apples	0.41	Carrots	
2.54	PT (GP)	0.73	Potatoes	0.62	Wheat	0.21	Oranges	
2.47	IE adult	0.36	Wheat	0.36	Oranges	0.32	Potatoes	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARID) e)	Most critical diet	Comment
2011	Oranges	0.3	1981	40.48	0.25	0.40		2.12	UK infant	PF 0.04
2011	Mandarins	2	1627	48.92		0.56		1.25	UK toddler	PF 0.04
2011	Pears	0.5	2035	16.81		0.41		37.34	DE child	
2011	Potatoes	0.05	2246	0.36	0.13	0.52		79.95	UK infant	
2011	Carrots	0.1	1659	2.41	0.36	0.73		46.28	UK infant	
2011	Cucumbers	0.05	1752	0.80	0.34	0.48		28.07	NL child	
2011	Spinach	0.05	1142	1.66	0.79	0.83		18.67	BE child	
2011	Beans (with pods)	0.05	1299	1.31	0.46	0.15		1.70	NL child	
2011	Rice	0.01	1099	2.00		0.04		0.50	UK toddler	
2011	Liver	715								Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.05	606							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

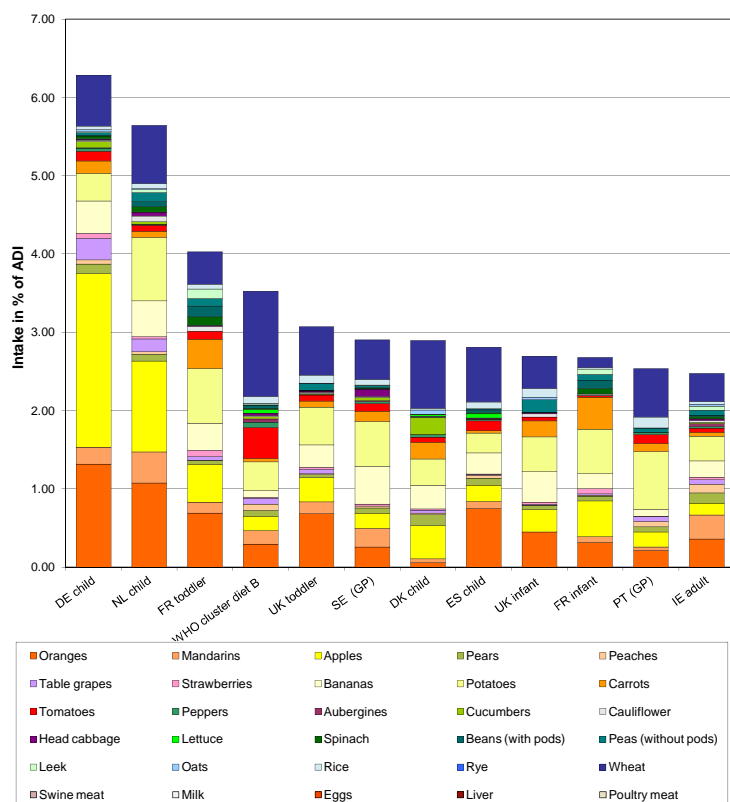
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

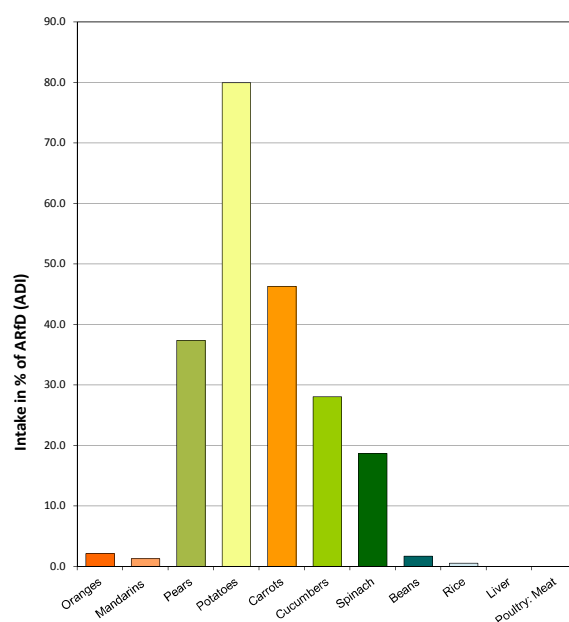
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Chlorpyrifos



Acute risk assessment: Chlorpyrifos



Chlorpyrifos-methyl			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P, A	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARfD (mg/kg bw):	0.1
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2005	Year of evaluation:	2005

Chronic risk assessment														
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
	4.52	DE child	1.46	Apples	1.20	Wheat	0.54	Oranges						
	3.96	NL child	1.39	Wheat	0.77	Apples	0.74	Potatoes						
	3.90	WHO cluster diet B	2.50	Wheat	0.37	Tomatoes	0.34	Potatoes						
	3.88	DK child	1.61	Wheat	0.94	Rye	0.31	Potatoes						
	2.97	WHO cluster diet D	1.90	Wheat	0.51	Potatoes	0.12	Tomatoes						
	2.65	IT child/toddler	1.95	Wheat	0.17	Tomatoes	0.11	Potatoes						
	2.64	FR toddler	0.77	Wheat	0.64	Potatoes	0.32	Apples						
	2.56	PT (GP)	1.15	Wheat	0.67	Potatoes	0.13	Rice						
	2.46	UK toddler	1.15	Wheat	0.44	Potatoes	0.28	Oranges						
	2.38	ES child	1.30	Wheat	0.31	Oranges	0.23	Potatoes						
	2.23	SE (GP)	0.94	Wheat	0.52	Potatoes	0.13	Apples						
	2.20	WHO cluster diet E	1.15	Wheat	0.48	Potatoes	0.10	Apples						

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.5	1981	4.54		0.27		36.34	UK infant	
2011	Mandarins	1	1625	6.34		0.79		43.96	UK toddler	
2011	Pears	0.5	2025	0.69		0.43		39.16	DE child	
2011	Potatoes	0.05	2239	0.18		0.02		3.23	UK infant	
2011	Carrots	0.05	1648	0.30		0.05		3.17	UK infant	
2011	Cucumbers	0.05	1749	0.06		0.03		1.75	NL child	
2011	Spinach	0.05	1150							
2011	Beans (with pods)	0.05	1305							
2011	Rice	3	1144	0.35		0.02		0.28	UK toddler	
2011	Liver	0.05	741							Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.05	621							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

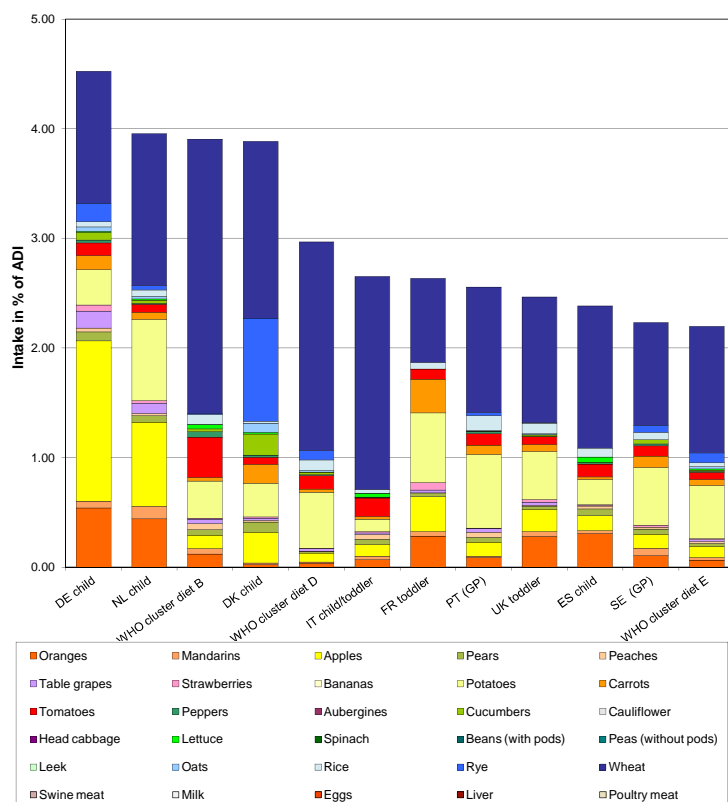
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRfL: toxicological threshold level

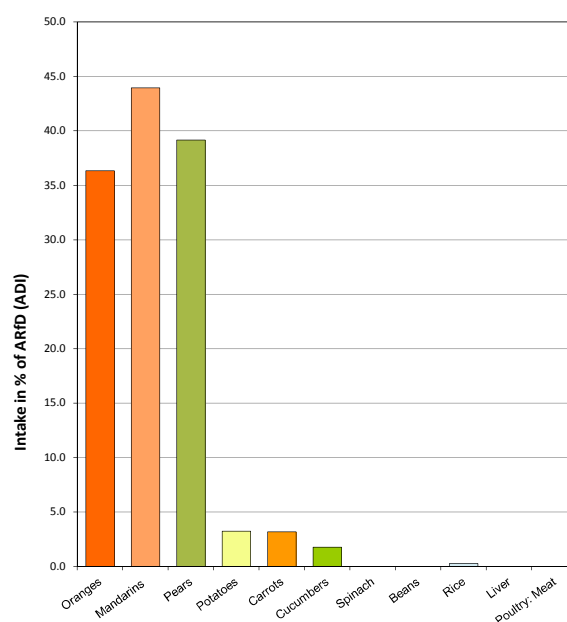
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Chlorpyrifos-methyl



Acute risk assessment: Chlorpyrifos-methyl



Clofentezine (RD)			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.02	ARfD (mg/kg bw):	n.n.
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2010	Year of evaluation:	2010

Full residue definition: Clofentezine expressed as clofentezine. For products of animal origin-terrestrial animal: sum of all compounds containing the 2-chlorobenzoyl moiety expressed as clofentezine

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	1.10	DE child	0.73	Apples	0.22	Oranges	0.07	Tomatoes
	0.68	NL child	0.38	Apples	0.18	Oranges	0.05	Mandarins
	0.40	FR toddler	0.16	Apples	0.12	Oranges	0.06	Strawberries
	0.38	WHO cluster diet B	0.21	Tomatoes	0.06	Apples	0.05	Oranges
	0.30	UK toddler	0.12	Oranges	0.10	Apples	0.04	Tomatoes
	0.29	ES child	0.13	Oranges	0.07	Apples	0.07	Tomatoes
	0.27	FR infant	0.15	Apples	0.05	Oranges	0.04	Strawberries
	0.22	UK infant	0.09	Apples	0.08	Oranges	0.03	Tomatoes
	0.21	DK child	0.14	Apples	0.04	Tomatoes	0.01	Peppers
	0.21	SE (GP)	0.06	Apples	0.05	Tomatoes	0.04	Oranges
	0.21	NL (GP)	0.09	Oranges	0.07	Apples	0.03	Tomatoes
	0.21	IT child/toddler	0.10	Tomatoes	0.05	Apples	0.03	Oranges

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	95					not assessed		
2011	Mandarins							not assessed		
2011	Pears							not assessed		
2011	Potatoes							not assessed		
2011	Carrots							not assessed		
2011	Cucumbers							not assessed		
2011	Spinach							not assessed		
2011	Beans (with pods)							not assessed		
2011	Rice							not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

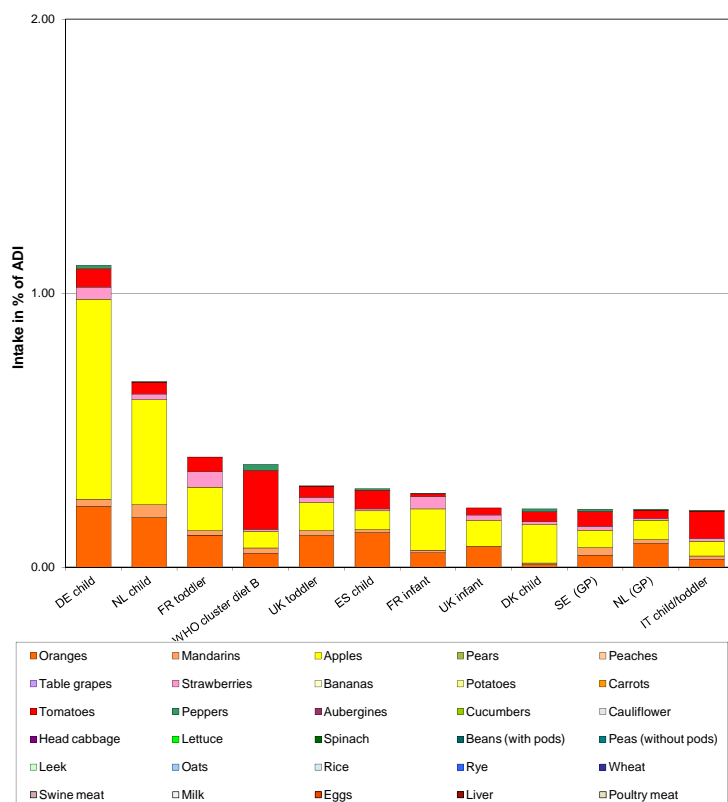
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

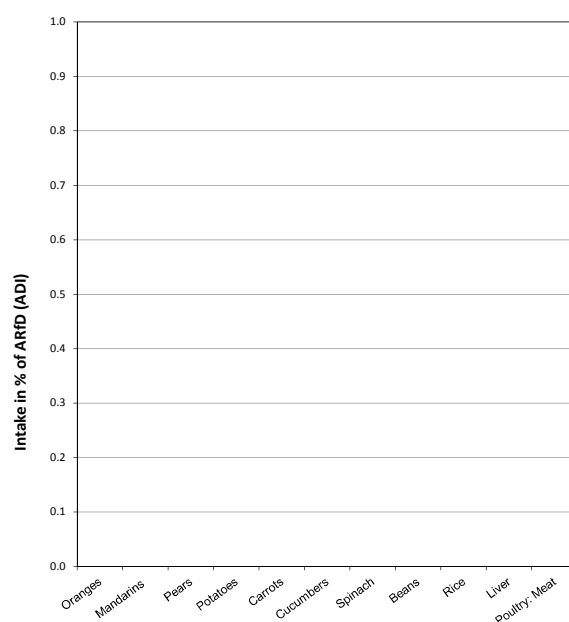
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Clofentazine (RD)



Acute risk assessment: Clofentazine (RD)



Clothianidin			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.097	ARID (mg/kg bw):	0.1
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2006	Year of evaluation:	2006

Chronic risk assessment								
	Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
	Top 12 diets		Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
	0.09	NL child	0.06	Potatoes	0.01	Table grapes	0.01	Tomatoes
	0.08	WHO cluster diet B	0.03	Tomatoes	0.03	Potatoes	0.01	Peppers
	0.07	PT (GP)	0.05	Potatoes	0.01	Tomatoes	0.00	Peaches
	0.07	FR toddler	0.05	Potatoes	0.01	Tomatoes	0.01	Spinach
	0.07	DE child	0.02	Potatoes	0.01	Table grapes	0.01	Tomatoes
	0.06	WHO regional diet	0.04	Potatoes	0.01	Tomatoes	0.00	Lettuce
	0.06	SE (GP)	0.04	Potatoes	0.01	Tomatoes	0.00	Pears
	0.06	DK child	0.02	Potatoes	0.02	Cucumbers	0.01	Pears
	0.06	WHO cluster diet D	0.04	Potatoes	0.01	Tomatoes	0.00	Table grapes
	0.05	WHO cluster diet E	0.04	Potatoes	0.01	Tomatoes	0.00	Pears
	0.05	FR infant	0.04	Potatoes	0.00	Spinach	0.00	Pears
	0.05	PL (GP)	0.03	Potatoes	0.01	Tomatoes	0.00	Table grapes

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARID) e)	Most critical diet	Comment
2011	Oranges	0.1	974							
2011	Mandarins	0.1	812							
2011	Pears	0.05	800	0.88		0.05		4.55	DE child	
2011	Potatoes	0.05	863	0.23		0.01		1.54	UK infant	
2011	Carrots	0.05	696							
2011	Cucumbers	0.02	778	0.13		0.01		0.35	NL child	
2011	Spinach	0.02	521	1.92	0.77	0.15		3.39	BE child	
2011	Beans (with pods)	0.2	686							
2011	Rice	0.02	557	0.18		0.01		0.13	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

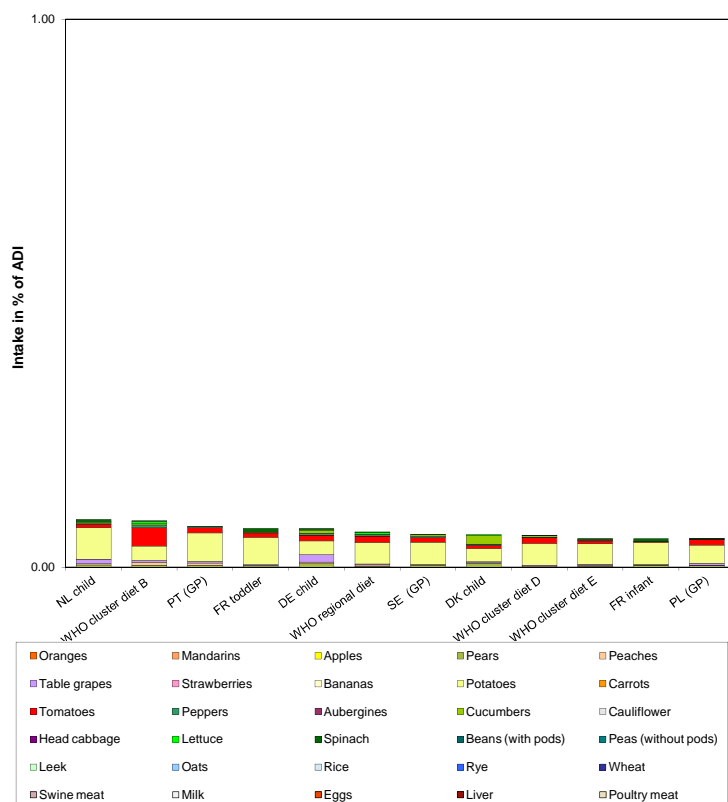
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

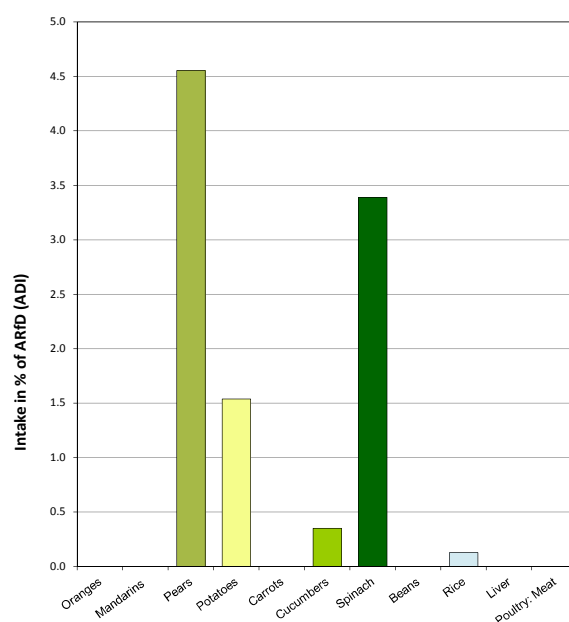
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Clothianidin



Acute risk assessment: Clothianidin



Cyfluthrin (RD)			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P, A	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.003	ARID (mg/kg bw):	0.02
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2003	Year of evaluation:	2003

The risk assessment is performed with the toxicological reference values derived for cyfluthrin. For beta-cyfluthrin the same toxicological reference values were established.

Full residue definition: Cyfluthrin (cyfluthrin including other mixtures of constituent isomers (sum of isomers))

#### Chronic risk assessment

Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
10.80	DE child	8.73	Apples	1.02	Table grapes	0.74	Bananas
6.49	NL child	4.58	Apples	0.81	Bananas	0.61	Table grapes
2.77	FR toddler	1.90	Apples	0.61	Bananas	0.17	Table grapes
2.62	DK child	1.68	Apples	0.54	Bananas	0.15	Table grapes
2.33	SE (GP)	0.86	Bananas	0.76	Apples	0.62	Head cabbage
2.26	FR infant	1.81	Apples	0.34	Bananas	0.06	Table grapes
2.24	PL (GP)	1.48	Apples	0.36	Head cabbage	0.26	Table grapes
2.10	UK toddler	1.23	Apples	0.51	Bananas	0.20	Table grapes
1.98	UK infant	1.13	Apples	0.69	Bananas	0.10	Head cabbage
1.94	WHO cluster diet B	0.73	Apples	0.28	Peaches	0.28	Table grapes
1.83	LT adult	1.35	Apples	0.39	Head cabbage	0.05	Lettuce
1.82	ES child	0.83	Apples	0.48	Bananas	0.31	Lettuce

#### Acute risk assessment

Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARID) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.02	1414							
2011	Mandarins	0.02	1190							
2011	Pears	0.2	1505	0.60		0.07		31.87	DE child	
2011	Potatoes	0.04	1648							
2011	Carrots	0.02	1218							
2011	Cucumbers	0.1	1295	0.08		0.00		0.58	NL child	
2011	Spinach	0.02	813							
2011	Beans (with pods)	0.1	976	0.10		0.07		3.97	NL child	
2011	Rice	0.05	835							
2011	Liver	0.05	455							Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.05	445							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

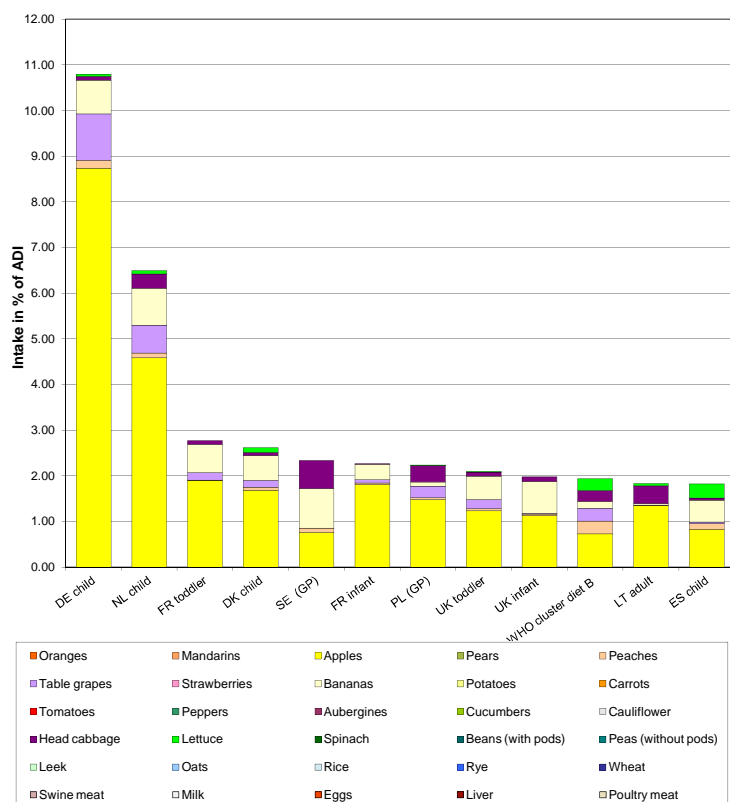
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

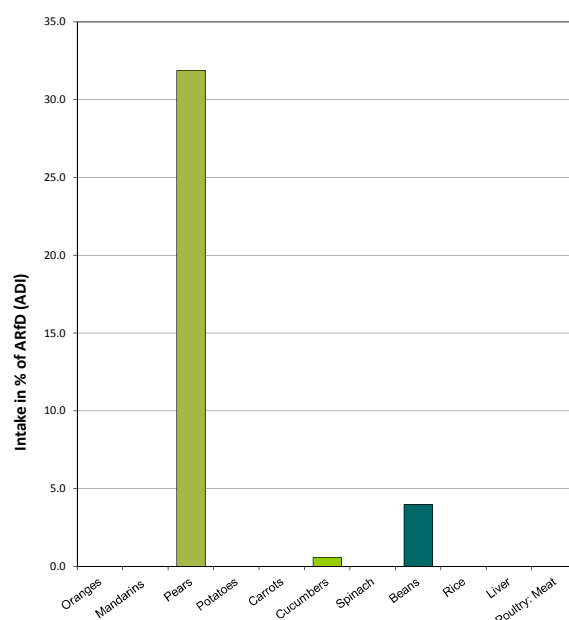
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Cyfluthrin (RD)



Acute risk assessment: Cyfluthrin (RD)



Cypermethrin (RD)			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P, A	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.05	ARID (mg/kg bw):	0.2
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2005	Year of evaluation:	2005

The risk assessment is performed with the toxicological reference values for cypermethrin. Other toxicological reference values for cypermethrin isomers are: alpha-cypermethrin (ADI: 0.015; ARID:0.04), zeta-cypermethrin (ADI: 0.04; ARID: 0.125).

Full residue definition: Cypermethrin (cypermethrin including other mixtures of constituent isomers (sum of isomers))

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	1.14	DE child	0.51	Apples	0.17	Wheat	0.14	Oranges
	0.87	NL child	0.27	Apples	0.19	Wheat	0.11	Oranges
	0.79	WHO cluster diet B	0.35	Wheat	0.16	Tomatoes	0.04	Apples
	0.58	FR toddler	0.11	Apples	0.11	Wheat	0.07	Oranges
	0.55	DK child	0.22	Wheat	0.10	Apples	0.07	Cucumbers
	0.51	IT child/toddler	0.27	Wheat	0.08	Tomatoes	0.04	Apples
	0.49	ES child	0.18	Wheat	0.08	Oranges	0.05	Tomatoes
	0.43	UK toddler	0.16	Wheat	0.07	Apples	0.07	Oranges
	0.41	WHO cluster diet D	0.27	Wheat	0.05	Tomatoes	0.03	Apples
	0.41	SE (GP)	0.13	Wheat	0.06	Bananas	0.04	Apples
	0.40	IE adult	0.09	Wheat	0.04	Oranges	0.03	Apples
	0.38	IT adult	0.17	Wheat	0.06	Tomatoes	0.03	Apples

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	2	1695	0.94		0.20		13.26	UK infant	
2011	Mandarins	2	1416	0.56		0.10		2.78	UK toddler	
2011	Pears	1	1735	2.19		0.74		33.70	DE child	
2011	Potatoes	0.05	1995							
2011	Carrots	0.05	1468							
2011	Cucumbers	0.2	1610	0.75		0.13		3.80	NL child	
2011	Spinach	0.7	1025	3.02	0.88	2.80		31.64	BE child	
2011	Beans (with pods)	0.7	1149	4.18	0.17	1.20		6.81	NL child	
2011	Rice	2	966							
2011	Liver	0.2	542							Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat		566							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

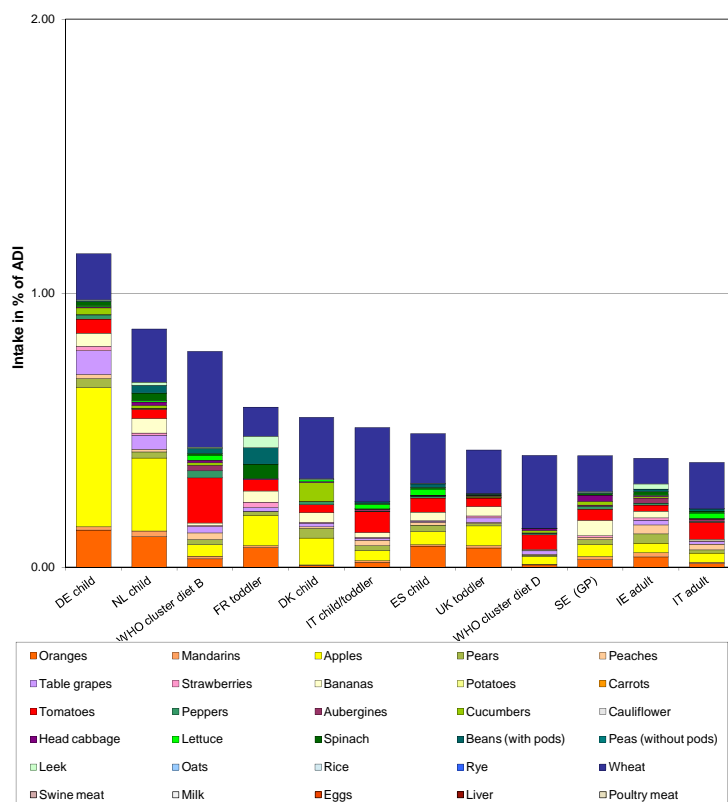
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

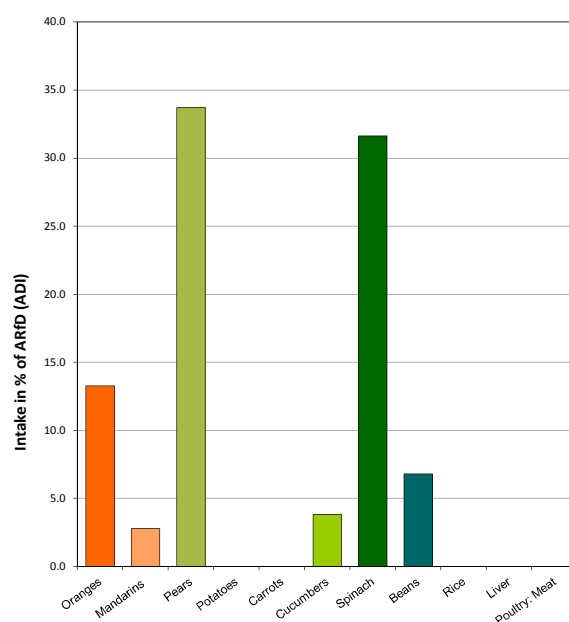
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Cypermethrin (RD)



Acute risk assessment: Cypermethrin (RD)



Chlorpropham (RD)			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.05	ARID (mg/kg bw):	0.5
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2004	Year of evaluation:	2004

Full residue definition: Chlorpropham (chlorpropham and 3-chloroaniline, expressed as chlorpropham). For potatoes: chlorpropham. For products of animal origin-terrestrial animal: chlorpropham and 4'-hydroxychlorpropham-O-sulphonic acid (4-HSA), expressed as chlorpropham

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	3.23	NL child	2.85	Potatoes	0.12	Wheat	0.11	Oranges
	2.75	PT (GP)	2.57	Potatoes	0.10	Wheat	0.02	Carrots
	2.75	FR toddler	2.45	Potatoes	0.08	Carrots	0.07	Oranges
	2.25	SE (GP)	2.01	Potatoes	0.08	Wheat	0.04	Bananas
	2.20	FR infant	2.00	Potatoes	0.09	Carrots	0.03	Oranges
	2.17	WHO cluster diet D	1.96	Potatoes	0.17	Wheat	0.01	Oranges
	2.09	WHO regional diet	1.94	Potatoes	0.08	Wheat	0.02	Oranges
	2.03	WHO cluster diet E	1.85	Potatoes	0.10	Wheat	0.02	Carrots
	1.93	UK toddler	1.69	Potatoes	0.10	Wheat	0.07	Oranges
	1.83	WHO Cluster diet F	1.65	Potatoes	0.09	Wheat	0.03	Oranges
	1.77	UK infant	1.57	Potatoes	0.07	Wheat	0.05	Carrots
	1.71	PL (GP)	1.66	Potatoes	0.01	Table grapes	0.01	Pears

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARID) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.05	1447							
2011	Mandarins	0.05	1183							
2011	Pears	0.05	1301	0.15		0.015		0.27	DE child	
2011	Potatoes	10	1991	22.80	0.10	18.00	8	315.51	UK infant	PF 0.57
2011	Carrots	0.05	1121	0.18		0.05		0.57	UK infant	
2011	Cucumbers	0.05	1216							
2011	Spinach	0.05	785	0.25		0.003		0.01	BE child	
2011	Beans (with pods)	0.05	884							
2011	Rice	0.02	691							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

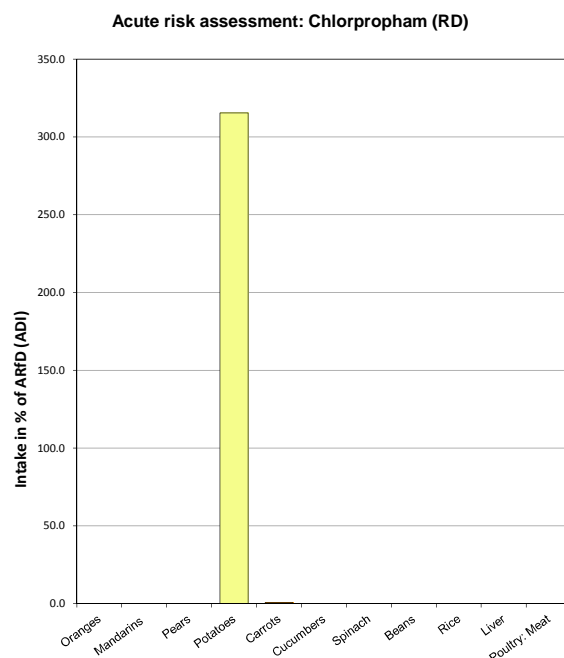
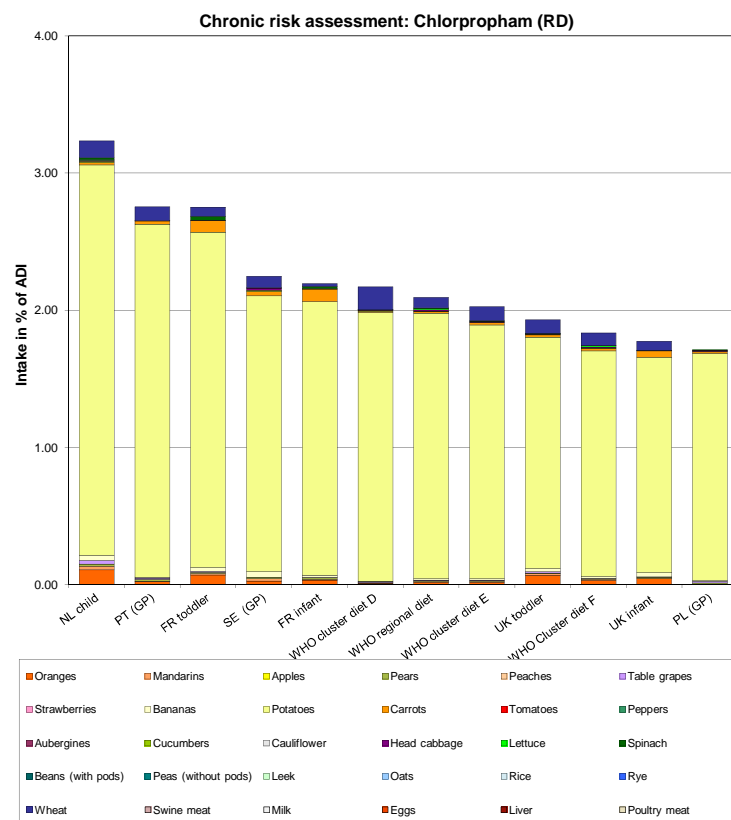
<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.





Cyprodinil (RD)			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.03	ARID (mg/kg bw):	n.n.
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2006	Year of evaluation:	2006

Full residue definition: Cyprodinil expressed as cyprodinil. For products of animal origin-terrestrial animal: sum cyprodinil and metabolite CGA 304075

#### Chronic risk assessment

Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.19	DE child	0.67	Apples	0.19	Table grapes	0.08	Strawberries
0.73	NL child	0.35	Apples	0.11	Table grapes	0.04	Pears
0.55	FR toddler	0.15	Apples	0.10	Strawberries	0.10	Carrots
0.52	WHO cluster diet B	0.18	Tomatoes	0.07	Lettuce	0.06	Apples
0.45	FR infant	0.14	Apples	0.10	Carrots	0.08	Strawberries
0.44	DK child	0.13	Apples	0.07	Cucumbers	0.06	Pears
0.35	IE adult	0.06	Pears	0.05	Apples	0.04	Peaches
0.32	IT child/toddler	0.08	Tomatoes	0.05	Lettuce	0.05	Apples
0.31	ES child	0.08	Lettuce	0.06	Apples	0.06	Tomatoes
0.30	WHO regional diet	0.07	Lettuce	0.07	Tomatoes	0.04	Apples
0.29	IT adult	0.07	Tomatoes	0.07	Lettuce	0.04	Apples
0.29	UK toddler	0.09	Apples	0.04	Table grapes	0.03	Tomatoes

#### Acute risk assessment

Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARID) e)	Most critical diet	Comment
2011	Oranges	0.05	1933							
2011	Mandarins	0.05	1570	0.06		0.02		not assessed		
2011	Pears	1	1942	10.97		0.99		not assessed		
2011	Potatoes	0.05	2200	0.05		0.01		not assessed		
2011	Carrots	2	1587	0.38		0.04		not assessed		
2011	Cucumbers	0.5	1638	9.04		0.20		not assessed		
2011	Spinach	8	1088	0.09		0.00		not assessed		
2011	Beans (with pods)	2	1282	7.02		0.50		not assessed		
2011	Rice	0.05	1072					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

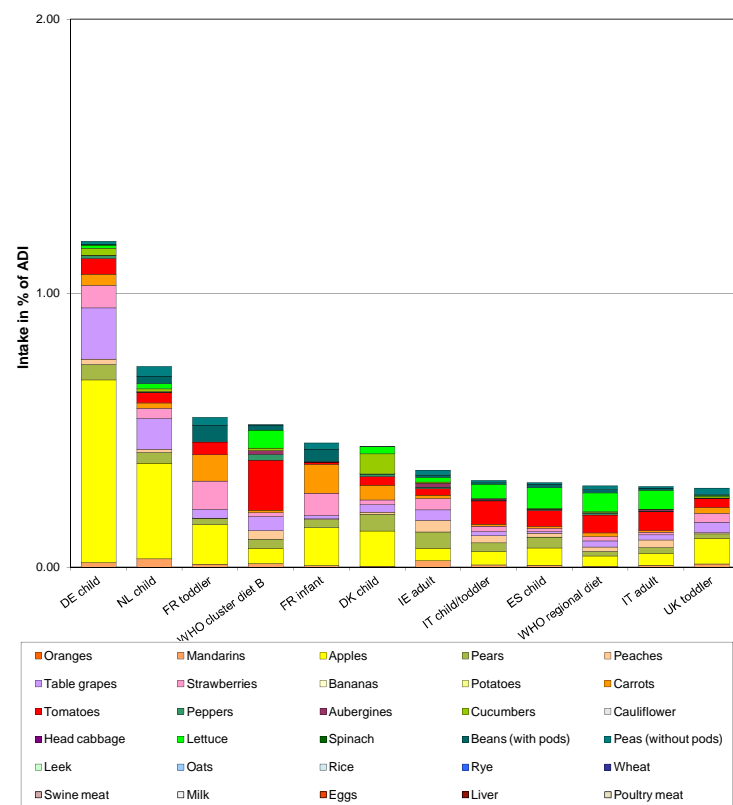
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

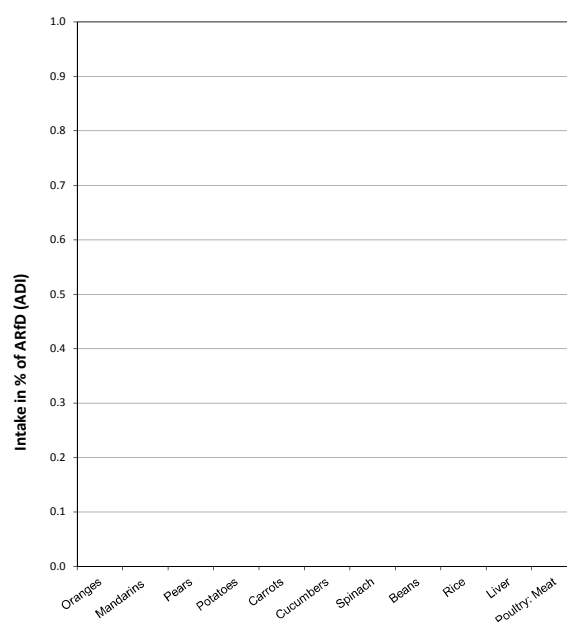
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Cyprodinil (RD)



Acute risk assessment: Cyprodinil (RD)



DDT (RD)			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	A	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARID (mg/kg bw):	n.n.
Source of ADI:	JMPR	Source of ARID:	JMPR
Year of evaluation:	2000	Year of evaluation:	2000

Full residue definition: DDT (sum of p,p'-DDT, o,p'-DDT, p,p'-DDE and p,p'-DDE (DDD) expressed as DDT)

#### Chronic risk assessment

Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
2.46	FR toddler	1.02	Milk	0.63	Potatoes	0.32	Carrots
2.35	NL child	0.75	Milk	0.74	Potatoes	0.28	Swine: meat
1.90	UK infant	0.99	Milk	0.41	Potatoes	0.24	Bananas
1.80	DK child	0.74	Rye	0.32	Milk	0.30	Potatoes
1.77	FR infant	0.66	Milk	0.52	Potatoes	0.35	Carrots
1.51	SE (GP)	0.52	Potatoes	0.32	Milk	0.29	Bananas
1.42	DE child	0.37	Milk	0.32	Potatoes	0.25	Bananas
1.28	UK toddler	0.53	Milk	0.44	Potatoes	0.17	Bananas
1.15	WHO regional diet	0.50	Potatoes	0.23	Swine: meat	0.12	Milk
1.14	WHO Cluster diet F	0.43	Potatoes	0.21	Swine: meat	0.13	Rye
1.10	ES child	0.32	Milk	0.23	Potatoes	0.22	Swine: meat
1.03	LT adult	0.40	Potatoes	0.18	Rye	0.17	Swine: meat

#### Acute risk assessment

Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARID e)	Most critical diet	Comment
2011	Oranges							not assessed		
2011	Mandarins							not assessed		
2011	Pears							not assessed		
2011	Potatoes							not assessed		
2011	Carrots							not assessed		
2011	Cucumbers							not assessed		
2011	Spinach							not assessed		
2011	Beans (with pods)							not assessed		
2011	Rice							not assessed		
2011	Liver	1	664	2.86	0.01	0.06		not assessed		Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	1	607	1.32		0.01		not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

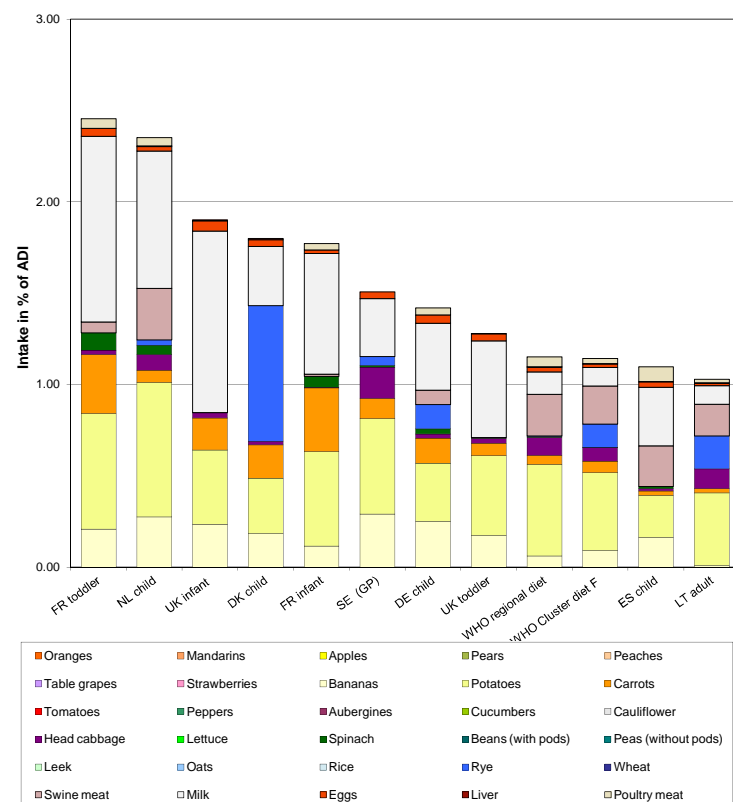
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

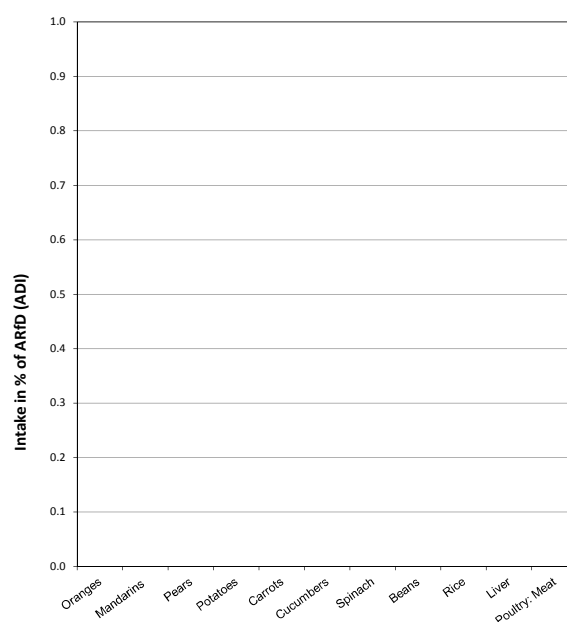
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

#### Chronic risk assessment: DDT (RD)



#### Acute risk assessment: DDT (RD)



Deltamethrin			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P, A	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARID (mg/kg bw):	0.01
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2003	Year of evaluation:	2003

Chronic risk assessment									
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)			
Top 12 diets	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities	Commodity / group of commodities		
4.94	DE child	2.40	Apples	0.85	Wheat	0.29	Table grapes		
3.62	NL child	1.26	Apples	0.98	Wheat	0.31	Bananas		
3.59	DK child	1.14	Wheat	0.99	Rye	0.46	Apples		
3.49	WHO cluster diet B	1.76	Wheat	0.56	Tomatoes	0.22	Rice		
2.74	FR toddler	0.54	Wheat	0.52	Apples	0.43	Carrots		
2.34	IT child/toddler	1.37	Wheat	0.26	Tomatoes	0.18	Apples		
2.20	WHO cluster diet D	1.34	Wheat	0.23	Rice	0.19	Tomatoes		
2.09	ES child	0.92	Wheat	0.23	Apples	0.20	Rice		
2.07	SE (GP)	0.66	Wheat	0.33	Bananas	0.21	Apples		
1.98	UK toddler	0.81	Wheat	0.34	Apples	0.24	Rice		
1.96	PT (GP)	0.81	Wheat	0.32	Rice	0.21	Apples		
1.87	UK infant	0.54	Wheat	0.31	Apples	0.27	Bananas		

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARID) e)	Most critical diet	Comment
2011	Oranges	0.05	1793							
2011	Mandarins	0.05	1444	0.07		0.04		22.26	UK toddler	
2011	Pears	0.1	2016	0.69		0.06		54.64	DE child	
2011	Potatoes		2215							
2011	Carrots	0.05	1633	0.06		0.01		6.34	UK infant	
2011	Cucumbers	0.2	1730	0.06		0.00		1.75	NL child	
2011	Spinach	0.5	1160	4.31		0.27		61.02	BE child	
2011	Beans (with pods)	2	1304	1.23		0.08		9.08	NL child	
2011	Rice		1130	5.13	0.09	2.50	7	314.79	UK toddler	
2011	Liver	0.03	607							Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.1	661							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

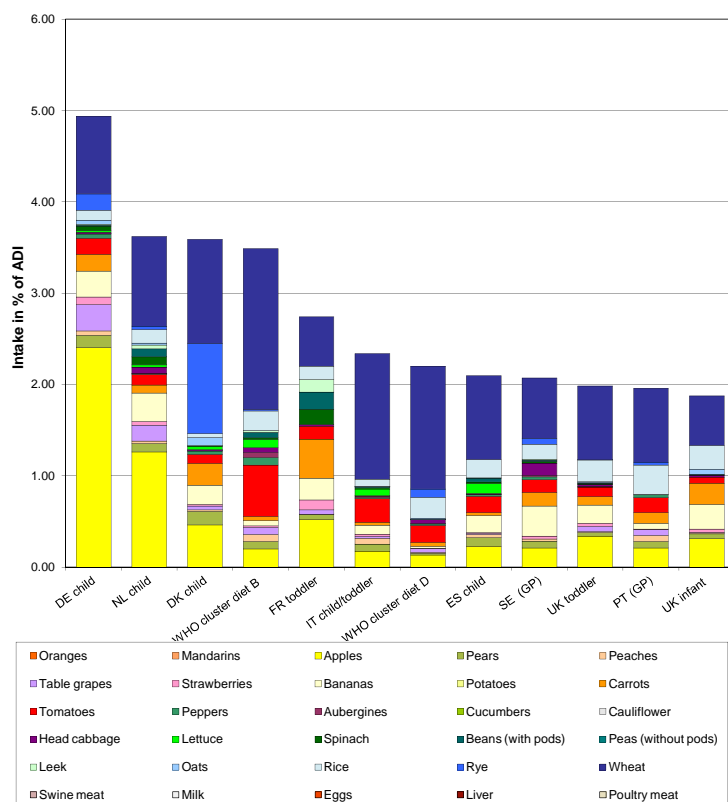
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

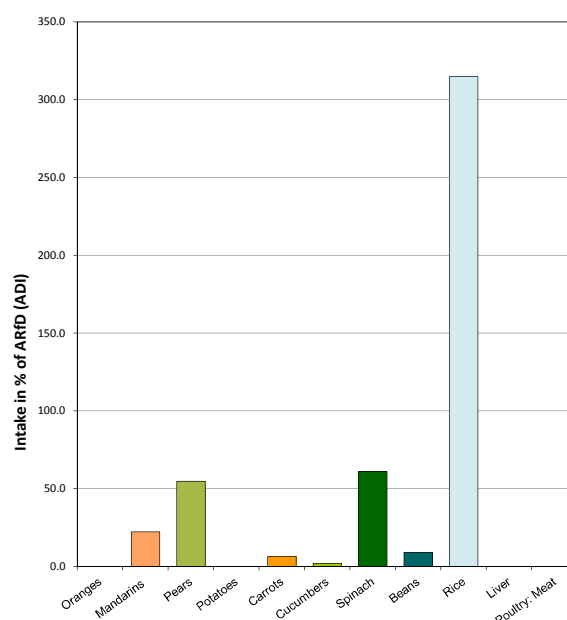
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Deltamethrin



Acute risk assessment: Deltamethrin



Diazinon			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P, A	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.0002	ARID (mg/kg bw):	0.025
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

Chronic risk assessment															
Highest calculated exposure in % of ADI		Top 12 diets		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
	73.43	DE child		57.61	Apples			6.10	Table grapes			4.80	Carrots		
	40.95	NL child		30.23	Apples			3.65	Table grapes			3.55	Mandarins		
	26.23	FR toddler		12.52	Apples			11.40	Carrots			1.26	Mandarins		
	25.66	FR infant		12.35	Carrots			11.93	Apples			0.65	Mandarins		
	20.62	DK child		11.09	Apples			6.40	Carrots			1.30	Peppers		
	14.10	WHO cluster diet B		4.81	Apples			2.91	Peppers			2.01	Peaches		
	13.96	UK infant		7.46	Apples			6.17	Carrots			0.22	Peaches		
	13.61	PL (GP)		9.75	Apples			1.54	Table grapes			1.41	Carrots		
	13.55	UK toddler		8.14	Apples			2.43	Carrots			1.34	Mandarins		
	12.91	IE adult		3.92	Apples			2.74	Mandarins			2.71	Peaches		
	12.88	SE (GP)		5.01	Apples			3.96	Carrots			2.11	Mandarins		
	12.69	PT (GP)		5.01	Apples			3.11	Carrots			1.70	Peaches		

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARID) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.01	1999		0.05	0.02		12.73	UK infant	
2011	Mandarins	0.01	1622		0.06	0.01		2.89	UK toddler	
2011	Pears	0.01	2034							
2011	Potatoes	0.01	2275							
2011	Carrots	0.01	1656	0.06	0.12	0.02		5.07	UK infant	
2011	Cucumbers	0.01	1767							
2011	Spinach	0.01	1172							
2011	Beans (with pods)	0.01	1322	0.08		0.01		0.45	NL child	
2011	Rice	0.02	1148							
2011	Liver	0.05	744							Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.05	606							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

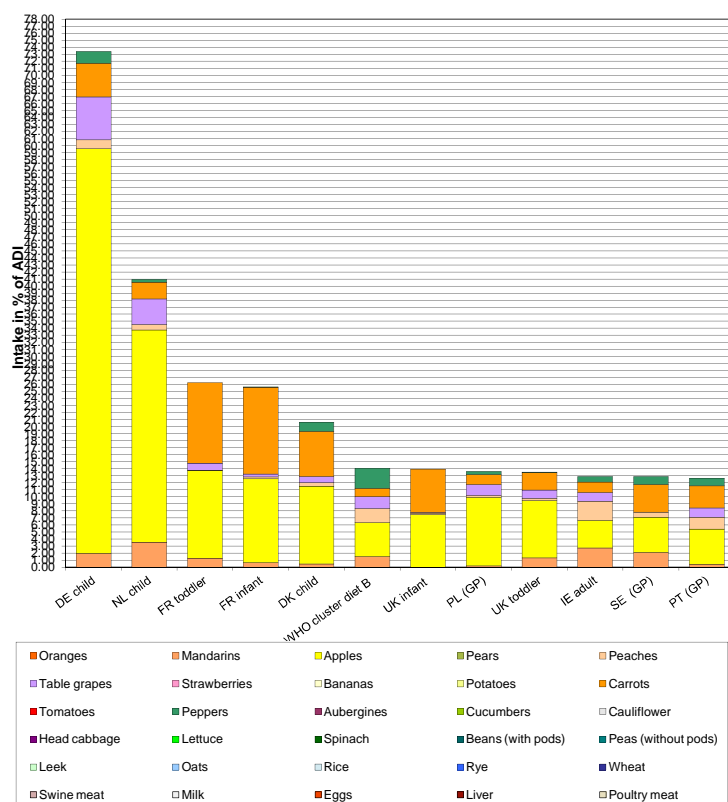
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

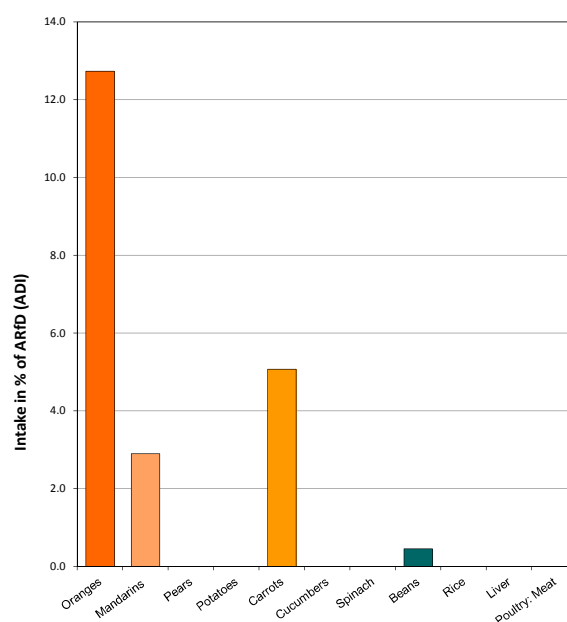
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Diazinon



Acute risk assessment: Diazinon



Dichlofluanid			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.3	ARfD (mg/kg bw):	
Source of ADI:	JMPR	Source of ARfD:	
Year of evaluation:	1983	Year of evaluation:	

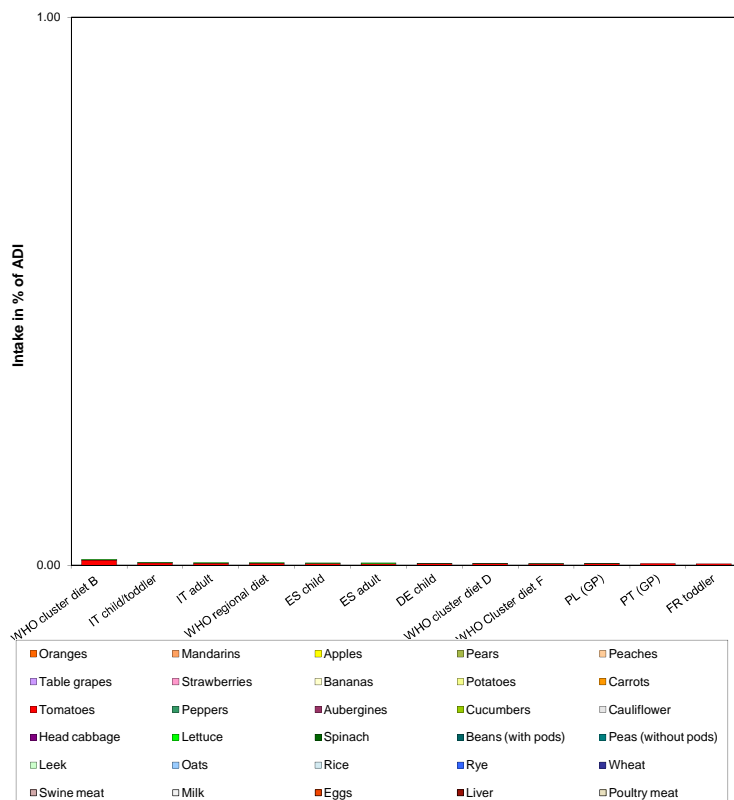
Active substance not assessed regarding the setting of an ARfD. Acute RA is performed with ADI value.

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.01	WHO cluster diet B	0.01	Tomatoes	0.00	Lettuce		FRUIT (FRESH OR FROZEN)
	0.01	IT child/toddler	0.00	Tomatoes	0.00	Lettuce		FRUIT (FRESH OR FROZEN)
	0.00	IT adult	0.00	Tomatoes	0.00	Lettuce		FRUIT (FRESH OR FROZEN)
	0.00	WHO regional diet	0.00	Tomatoes	0.00	Lettuce		FRUIT (FRESH OR FROZEN)
	0.00	ES child	0.00	Tomatoes	0.00	Lettuce		FRUIT (FRESH OR FROZEN)
	0.00	ES adult	0.00	Tomatoes	0.00	Lettuce		FRUIT (FRESH OR FROZEN)
	0.00	DE child	0.00	Tomatoes	0.00	Lettuce		FRUIT (FRESH OR FROZEN)
	0.00	WHO cluster diet D	0.00	Tomatoes	0.00	Lettuce		FRUIT (FRESH OR FROZEN)
	0.00	WHO Cluster diet F	0.00	Tomatoes	0.00	Lettuce		FRUIT (FRESH OR FROZEN)
	0.00	PL (GP)	0.00	Tomatoes	0.00	Lettuce		FRUIT (FRESH OR FROZEN)
	0.00	PT (GP)	0.00	Tomatoes		Lettuce		FRUIT (FRESH OR FROZEN)
	0.00	FR toddler	0.00	Tomatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

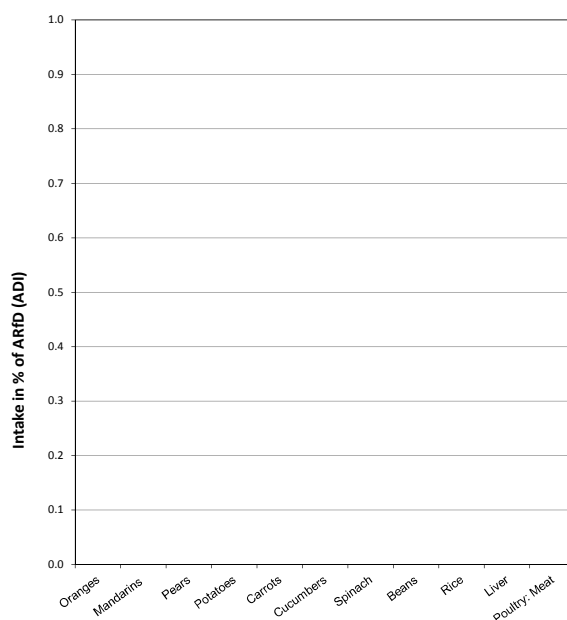
Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARfD) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.01	1811							
2011	Mandarins	0.01	1498							
2011	Pears	0.01	1801							
2011	Potatoes	0.01	2120							
2011	Carrots	0.01	1546							
2011	Cucumbers	0.01	1626							
2011	Spinach	0.01	1052							
2011	Beans (with pods)	0.01	1217							
2011	Rice	0.01	1001							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.  
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.  
<sup>c)</sup> MRL in place on 01/01/2011.  
<sup>d)</sup> For liver, only the MRL for bovine liver is reported  
<sup>e)</sup> TRL: toxicological threshold level  
<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Dichlofluanid



Acute risk assessment: Dichlofluanid



Dichlorvos			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.00008	ARID (mg/kg bw):	0.002
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

Chronic risk assessment								
	Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
	Top 12 diets		Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
	24.68	DK child	19.72	Cucumbers	2.56	Peppers	1.20	Strawberries
	19.12	DE child	7.09	Cucumbers	5.63	Strawberries	3.35	Peppers
	15.29	WHO cluster diet B	6.05	Rice	5.73	Peppers	2.55	Cucumbers
	12.50	SE (GP)	4.62	Rice	3.82	Cucumbers	2.17	Peppers
	12.03	PT (GP)	9.02	Rice	2.22	Peppers	0.46	Strawberries
	11.28	FR toddler	7.16	Strawberries	4.12	Rice		FRUIT (FRESH OR FROZEN)
	10.52	NL child	4.05	Rice	3.09	Cucumbers	2.60	Strawberries
	10.45	UK toddler	6.61	Rice	2.28	Strawberries	1.32	Cucumbers
	10.22	WHO cluster diet D	6.36	Rice	2.33	Cucumbers	1.21	Peppers
	9.78	UK infant	7.27	Rice	2.51	Strawberries		FRUIT (FRESH OR FROZEN)
	8.07	ES child	5.55	Rice	1.32	Peppers	0.81	Strawberries
	7.84	LT adult	4.72	Cucumbers	2.46	Rice	0.42	Strawberries

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARID) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.01	1850							
2011	Mandarins	0.01	1467							
2011	Pears	0.01	1793	0.06		0.00		13.66	DE child	
2011	Potatoes	0.01	2079							
2011	Carrots	0.01	1521							
2011	Cucumbers	0.01	1605	0.06	0.12	0.13	2	380.12	NL child	
2011	Spinach	0.01	1038					6.24	NL child	
2011	Beans (with pods)	0.01	1223		0.08	0.01		6.30	UK toddler	
2011	Rice	0.01	1115	0.09		0.01				
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

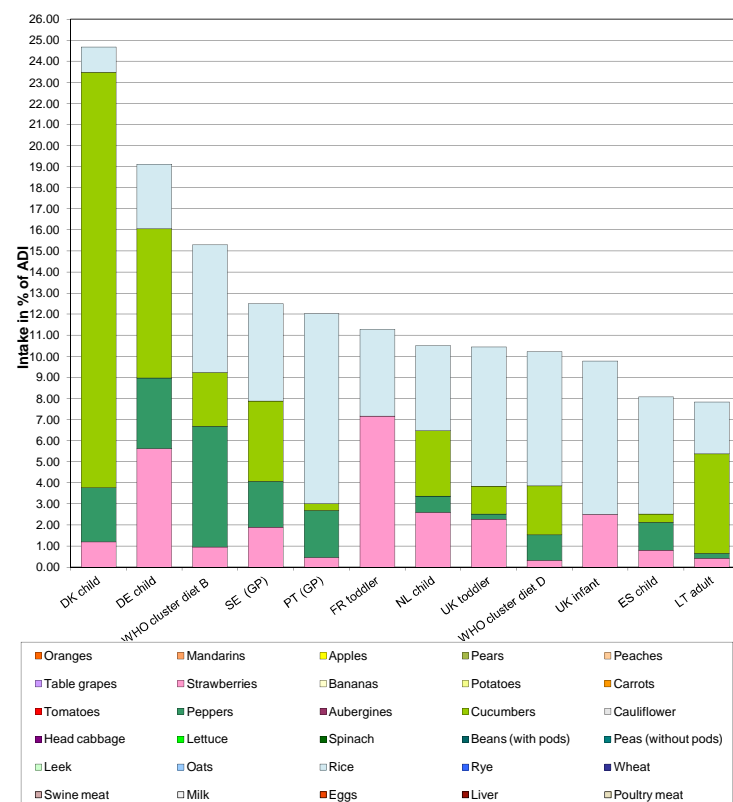
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

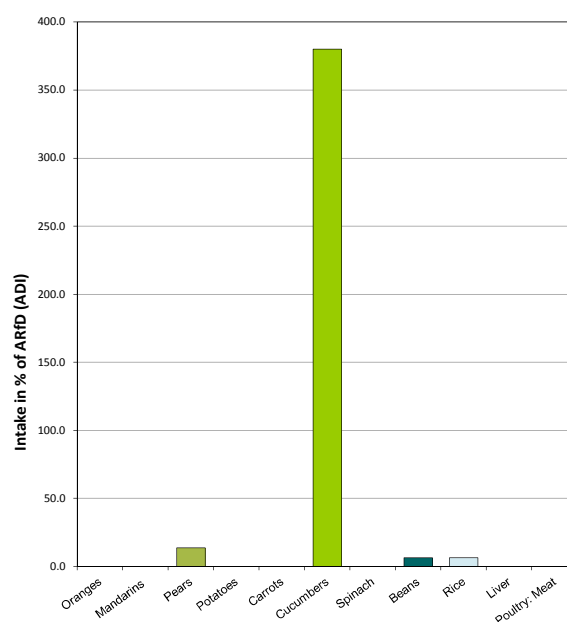
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Dichlorvos



Acute risk assessment: Dichlorvos



Dicloran			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.005	ARID (mg/kg bw):	0.025
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2010	Year of evaluation:	2010

Chronic risk assessment								
	Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
	Top 12 diets		Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
	0.77	FR toddler	0.53	Carrots	0.18	Strawberries	0.06	Table grapes
	0.74	FR infant	0.58	Carrots	0.14	Strawberries	0.02	Table grapes
	0.72	DE child	0.34	Table grapes	0.22	Carrots	0.14	Strawberries
	0.41	DK child	0.30	Carrots	0.05	Table grapes	0.03	Lettuce
	0.40	NL child	0.20	Table grapes	0.11	Carrots	0.07	Strawberries
	0.36	UK infant	0.29	Carrots	0.06	Strawberries	0.01	Table grapes
	0.32	WHO cluster diet B	0.09	Table grapes	0.08	Lettuce	0.07	Aubergines (egg plants)
	0.30	IE adult	0.07	Strawberries	0.07	Carrots	0.07	Table grapes
	0.25	SE (GP)	0.19	Carrots	0.05	Strawberries	0.02	Aubergines (egg plants)
	0.24	UK toddler	0.11	Carrots	0.07	Table grapes	0.06	Strawberries
	0.24	WHO regional diet	0.08	Lettuce	0.08	Carrots	0.04	Table grapes
	0.23	PT (GP)	0.15	Carrots	0.07	Table grapes	0.01	Strawberries

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARID) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.1	1771	0.07		0.02		5.07	UK infant	
2011	Mandarins	0.1	1458							
2011	Pears	0.1	1758							
2011	Potatoes	0.1	2032							
2011	Carrots	0.1	1520							
2011	Cucumbers	0.3	1492							
2011	Spinach	0.1	1002							
2011	Beans (with pods)	2	1180							
2011	Rice	0.01	858							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

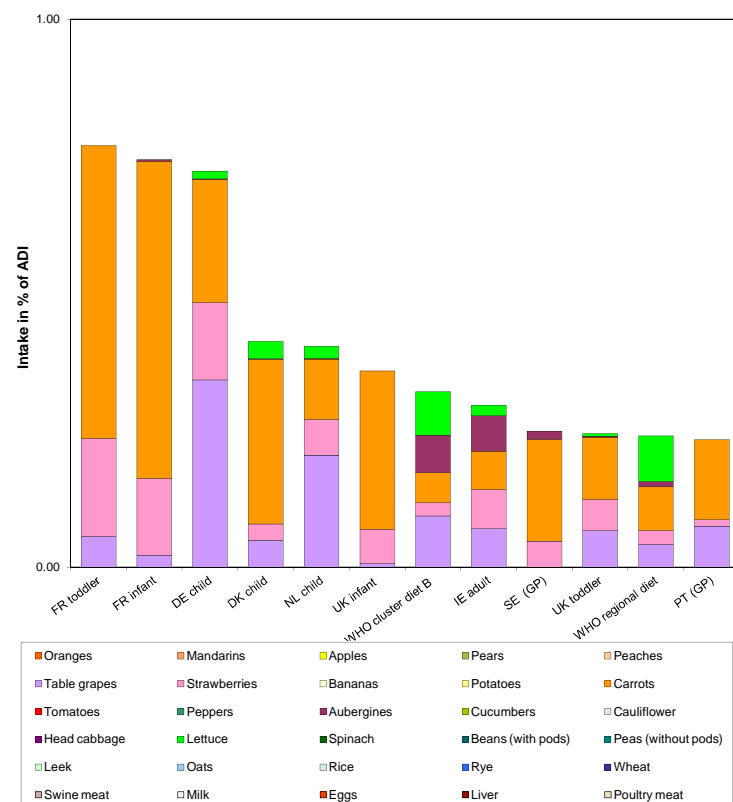
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

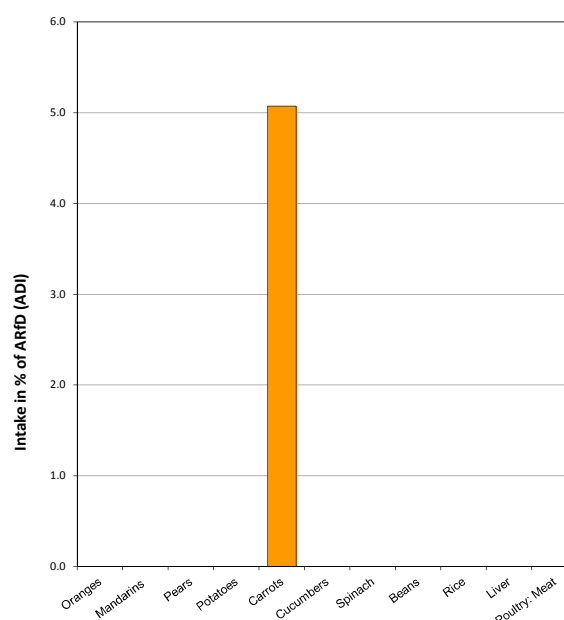
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Dicloran



Acute risk assessment: Dicloran



Dicofol (RD)			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.002	ARfD (mg/kg bw):	0.2
Source of ADI:	JMPR	Source of ARfD:	JMPR
Year of evaluation:	1992	Year of evaluation:	2011

Full residue definition: Dicofol (sum of p, p' and o,p' isomers)

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	12.78	DE child	7.96	Apples	3.35	Oranges	0.96	Tomatoes
	8.20	NL child	4.17	Apples	2.74	Oranges	0.63	Mandarins
	5.05	WHO cluster diet B	3.05	Tomatoes	0.75	Oranges	0.66	Apples
	4.48	FR toddler	1.76	Oranges	1.73	Apples	0.77	Tomatoes
	3.84	ES child	1.91	Oranges	0.97	Tomatoes	0.75	Apples
	3.70	UK toddler	1.74	Oranges	1.12	Apples	0.58	Tomatoes
	2.73	NL (GP)	1.31	Oranges	0.78	Apples	0.42	Tomatoes
	2.72	FR infant	1.65	Apples	0.80	Oranges	0.15	Tomatoes
	2.64	ES adult	1.14	Oranges	0.78	Tomatoes	0.51	Apples
	2.63	IT child/toddler	1.41	Tomatoes	0.58	Apples	0.42	Oranges
	2.60	SE (GP)	0.76	Tomatoes	0.69	Apples	0.66	Oranges
	2.54	UK infant	1.14	Oranges	1.03	Apples	0.36	Tomatoes

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	2	1731	0.52		0.50		33.16	UK infant	
2011	Mandarins	2	1432	1.26		0.52		14.47	UK toddler	
2011	Pears	0.02	1754							
2011	Potatoes	0.02	1930							
2011	Carrots	0.02	1433							
2011	Cucumbers	0.2	1440							
2011	Spinach	0.02	952		0.11	0.30		3.39	BE child	
2011	Beans (with pods)	0.02	1131	0.09	0.09	0.07		0.40	NL child	
2011	Rice	0.02	777							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

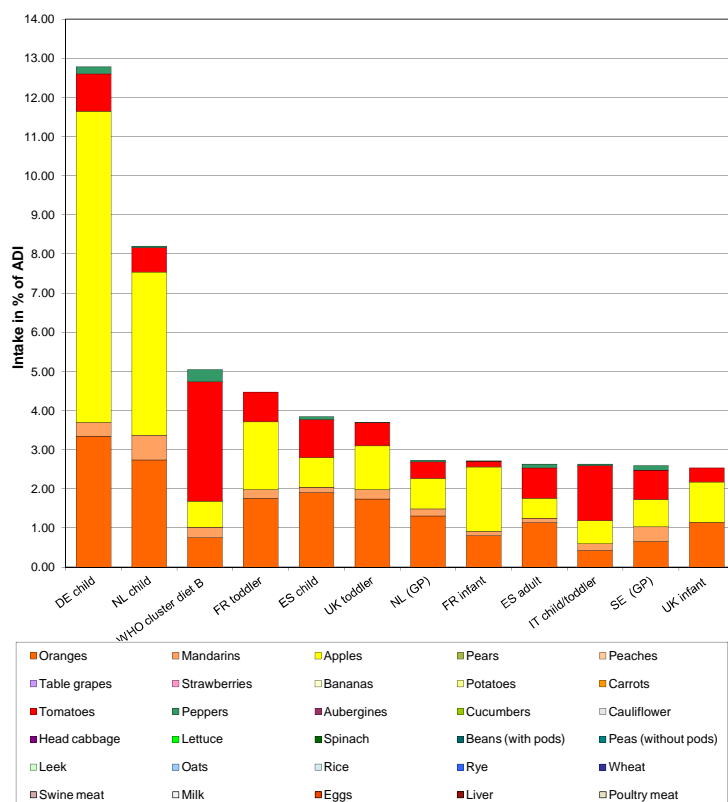
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

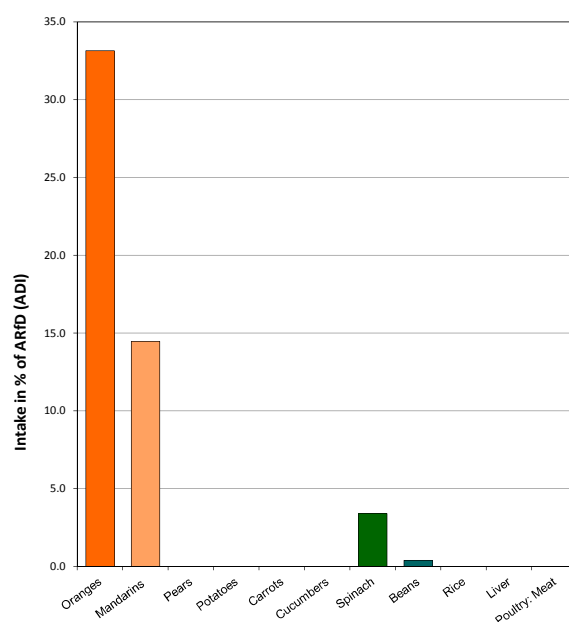
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Dicofol (RD)



Acute risk assessment: Dicofol (RD)





Dicrotophos										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P		Analysis on voluntary basis?		Y		
Toxicological end points										
ADI (mg/kg bw/day):						ARID (mg/kg bw):				
Source of ADI:						Source of ARID:				
Year of evaluation:						Year of evaluation:				

No ADI and no ARID allocated. Mandatory only in beans.

Chronic risk assessment													
	Highest calculated exposure in % of ADI		Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARID) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.01	767							
2011	Mandarins									
2011	Pears									
2011	Potatoes									
2011	Carrots									
2011	Cucumbers									
2011	Spinach									
2011	Beans (with pods)									
2011	Rice									
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

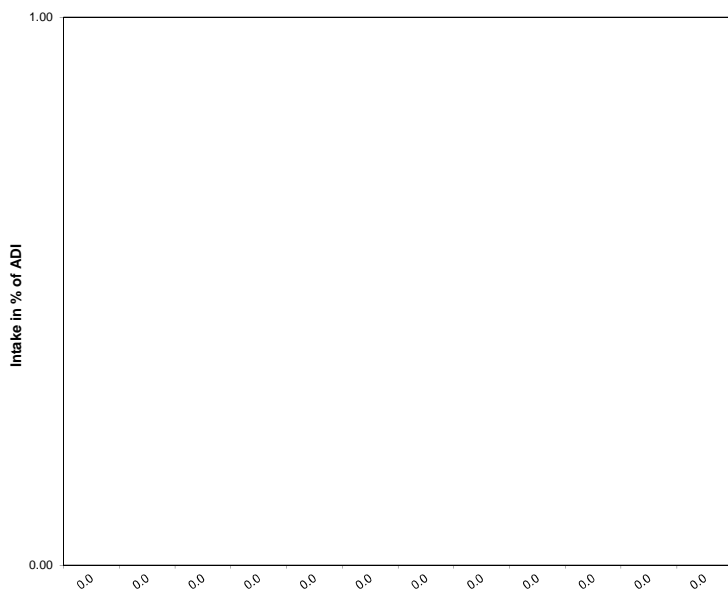
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

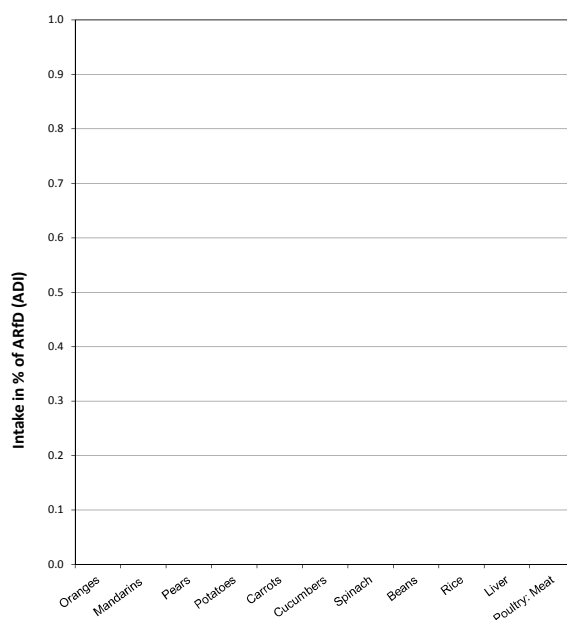
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Dicrotophos



Acute risk assessment: Dicrotophos



Oranges	Mandarins	Apples	Pears	Peaches
Table grapes	Strawberries	Bananas	Potatoes	Carrots
Tomatoes	Peppers	Aubergines	Cucumbers	Cauliflower
Head cabbage	Lettuce	Spinach	Beans (with pods)	Peas (without pods)
Leek	Oats	Rice	Rye	Wheat
Swine meat	Milk	Eggs	Liver	Poultry meat

Dieldrin (RD)			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	A	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.0001	ARfD (mg/kg bw):	0.003
Source of ADI:	JMPR	Source of ARfD:	EFSA
Year of evaluation:	1994	Year of evaluation:	2007

Full residue definition: Aldrin and dieldrin (aldrin and dieldrin combined expressed as dieldrin)	
Chronic risk assessment	

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

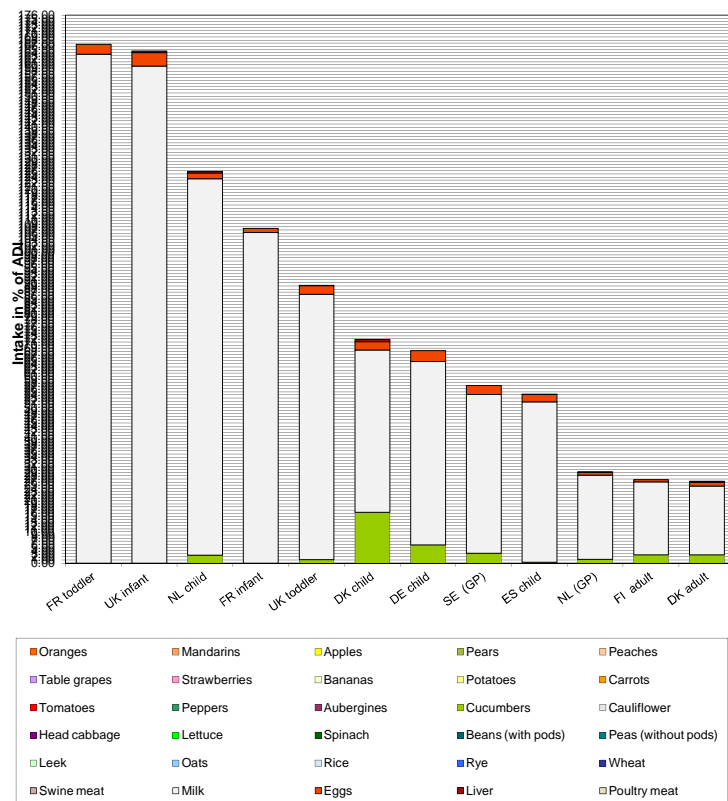
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

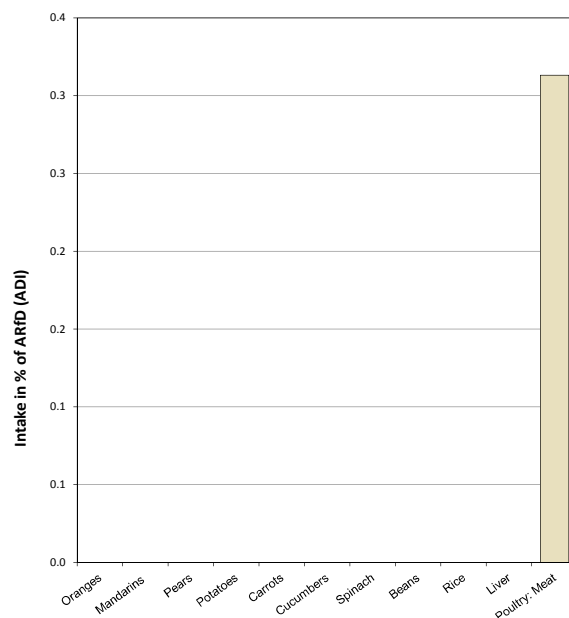
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Dieldrin (RD)



Acute risk assessment: Dieldrin (RD)



Difenoconazole			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARID (mg/kg bw):	0.16
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2008	Year of evaluation:	2008

Chronic risk assessment															
Highest calculated exposure in % of ADI		Top 12 diets		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
	2.94	DE child		1.74	Apples			0.22	Bananas			0.17	Table grapes		
	1.97	NL child		0.91	Apples			0.25	Bananas			0.10	Table grapes		
	1.65	FR toddler		0.38	Apples			0.35	Carrots			0.19	Bananas		
	1.39	WHO cluster diet B		0.50	Tomatoes			0.15	Apples			0.10	Peppers		
	1.28	FR infant		0.38	Carrots			0.36	Apples			0.12	Beans (with pods)		
	1.26	DK child		0.33	Apples			0.22	Cucumbers			0.20	Carrots		
	1.09	SE (GP)		0.26	Bananas			0.15	Apples			0.12	Tomatoes		
	0.93	IE adult		0.13	Peaches			0.12	Apples			0.11	Bananas		
	0.87	UK infant		0.22	Apples			0.21	Bananas			0.19	Carrots		
	0.85	ES child		0.16	Apples			0.16	Tomatoes			0.15	Bananas		
	0.83	UK toddler		0.25	Apples			0.16	Bananas			0.10	Tomatoes		
	0.77	PT (GP)		0.15	Apples			0.15	Tomatoes			0.11	Rice		

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARID) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.1	1883	0.05		0.01		0.66	UK infant	
2011	Mandarins	0.1	1542	0.32		0.02		0.80	UK toddler	
2011	Pears	0.5	1912	2.14		0.04		2.46	DE child	
2011	Potatoes	0.1	2134							
2011	Carrots	0.3	1564	6.84		0.10		3.84	UK infant	
2011	Cucumbers	0.1	1658	0.24		0.07		2.41	NL child	
2011	Spinach	2	1064	0.38		0.10		1.41	BE child	
2011	Beans (with pods)	1	1267	1.66		0.26		1.84	NL child	
2011	Rice	0.05	1023	0.20		0.03		0.23	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

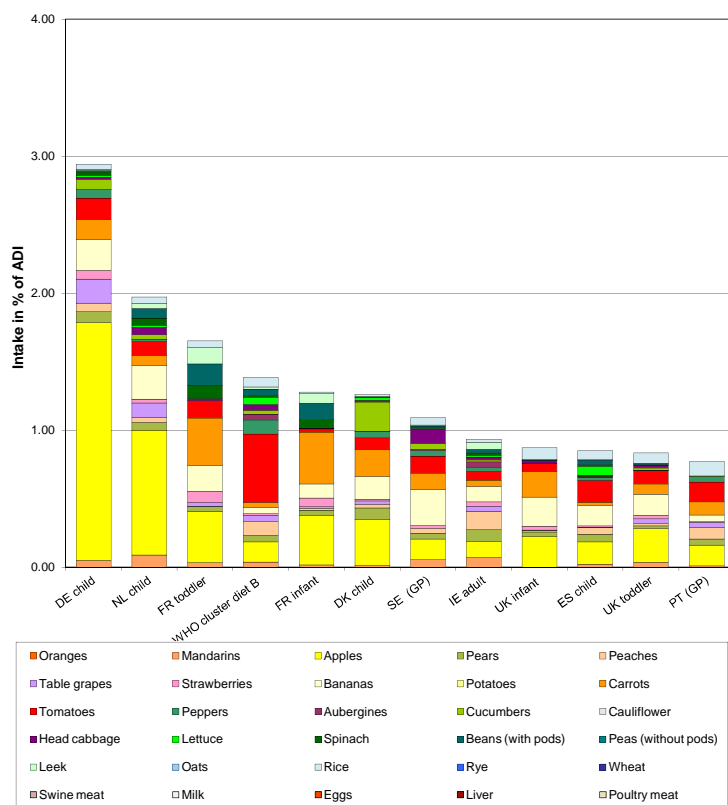
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

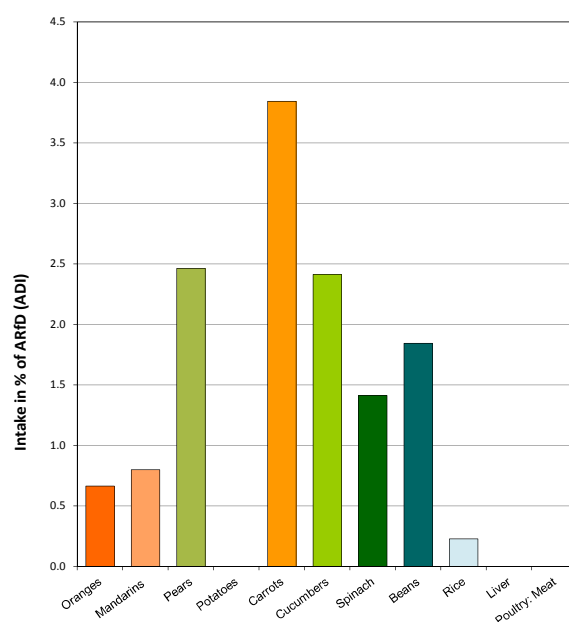
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Difenoconazole



Acute risk assessment: Difenoconazole



Dimethoate (RD)				
Status of the active substance:		Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	N
Toxicological end points				
ADI (mg/kg bw/day):		0.001	ARfD (mg/kg bw):	0.01
Source of ADI:		COM	Source of ARfD:	COM
Year of evaluation:		2007	Year of evaluation:	2007

In this RA scenario only those residue results that are compliant with the residue definition were taken into account.

Full residue definition: Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)

Chronic risk assessment									
	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	33.40	DE child		12.95	Apples	5.05	Wheat	3.69	Oranges
	29.89	NL child		6.80	Apples	5.82	Wheat	5.61	Potatoes
	23.49	DK child		6.76	Wheat	5.70	Rye	2.49	Apples
	22.89	FR toddler		4.82	Potatoes	3.22	Wheat	2.82	Apples
	22.40	WHO cluster diet B		10.48	Wheat	3.20	Tomatoes	2.55	Potatoes
	16.11	SE (GP)		3.96	Potatoes	3.93	Wheat	1.87	Bananas
	15.91	UK toddler		4.81	Wheat	3.32	Potatoes	1.92	Oranges
	15.71	WHO cluster diet D		7.98	Wheat	3.86	Potatoes	1.05	Tomatoes
	15.58	FR infant		3.93	Potatoes	2.68	Apples	2.57	Carrots
	15.03	PT (GP)		5.07	Potatoes	4.81	Wheat	1.13	Apples
	14.53	ES child		5.45	Wheat	2.10	Oranges	1.75	Potatoes
	14.39	IT child/toddler		8.16	Wheat	1.48	Tomatoes	0.95	Apples

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1660	0.24	0.24	0.16		29.71	UK infant	PF 0.14
2011	Mandarins	0.02	1341	0.07		0.01		6.12	UK toddler	
2011	Pears	0.02	1625							
2011	Potatoes	0.02	1875	0.11		0.02		23.06	UK infant	
2011	Carrots	0.02	1373	0.07		0.01		6.97	UK infant	
2011	Cucumbers	0.02	1512	0.13	0.13	1.80	2	1052.63	NL child	
2011	Spinach	0.02	996	0.80	0.40	10.27	1	2320.01	BE child	
2011	Beans (with pods)	0.02	1070	1.12	1.12	0.61		69.20	NL child	
2011	Rice	0.02	921							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis to the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

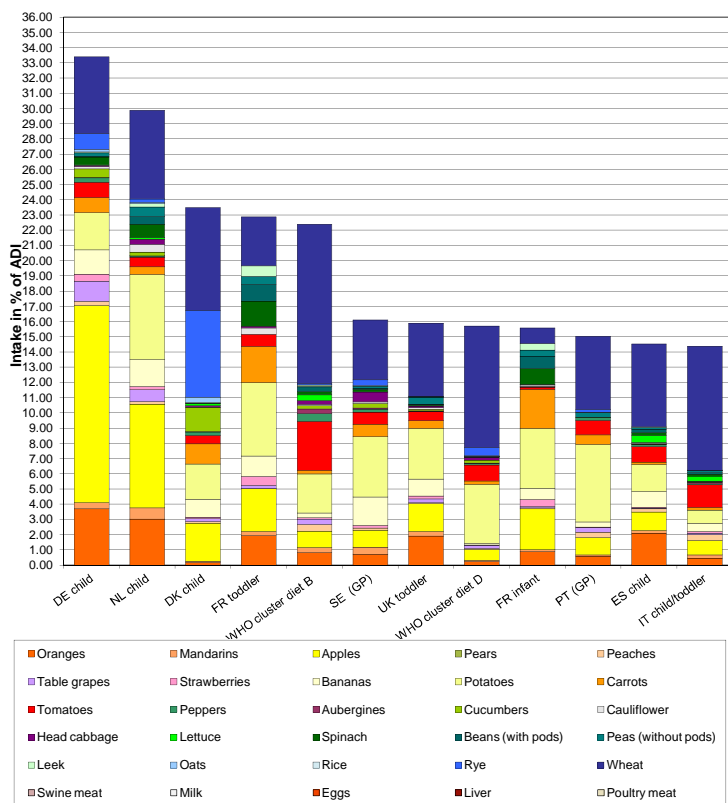
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

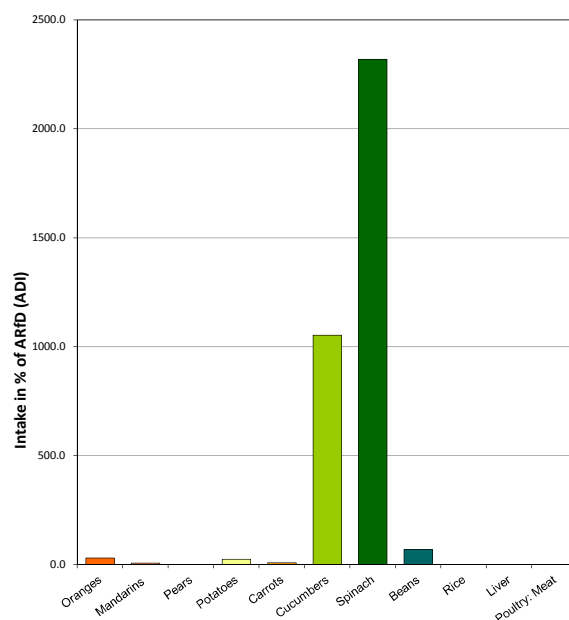
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Dimethoate (RD)



Acute risk assessment: Dimethoate (RD)



Omethoate scenario			
Status of the active substance:		Monitoring year: 2011	
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis? N
Toxicological end points			
ADI (mg/kg bw/day):		0.0003	ARfD (mg/kg bw): 0.002
Source of ADI:		COM	Source of ARfD: COM
Year of evaluation:		2007	Year of evaluation: 2007

In this RA scenario all residue results reported for the sum of dimethoate and omethoate were considered as being omethoate, and the exposure is compared with the toxicological reference values for omethoate.

Chronic risk assessment							
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets		Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
57.58	DE child	44.70	Apples	4.54	Table grapes	3.64	Tomatoes
35.69	NL child	23.46	Apples	2.71	Table grapes	2.35	Tomatoes
23.66	FR toddler	9.72	Apples	3.84	Beans (with pods)	2.92	Tomatoes
23.46	WHO cluster diet B	11.62	Tomatoes	3.74	Apples	1.78	Peppers
16.89	FR infant	9.26	Apples	2.93	Beans (with pods)	1.70	Strawberries
13.96	PL (GP)	7.57	Apples	3.33	Tomatoes	1.14	Table grapes
13.30	DK child	8.60	Apples	2.00	Tomatoes	0.79	Peppers
12.27	WHO regional diet	4.15	Tomatoes	2.47	Apples	1.32	Lettuce
11.75	IT child/toddler	5.37	Tomatoes	3.29	Apples	1.02	Lettuce
11.69	ES child	4.23	Apples	3.70	Tomatoes	1.47	Lettuce
11.23	UK toddler	6.32	Apples	2.22	Tomatoes	0.88	Table grapes
11.09	IT adult	4.39	Tomatoes	2.94	Apples	1.33	Lettuce

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1660	0.24	0.24	0.16		148.54	UK infant	PF 0.14
2011	Mandarins	0.02	1341	0.07		0.01		30.61	UK toddler	
2011	Pears	0.02	1625							
2011	Potatoes	0.02	1875	0.11		0.02		115.32	UK infant	
2011	Carrots	0.02	1373	0.07		0.01		34.87	UK infant	
2011	Cucumbers	0.02	1512	0.13	0.13	1.80		5263.16	NL child	
2011	Spinach	0.02	996	0.80	0.40	10.27		11600.03	BE child	
2011	Beans (with pods)	0.02	1070	1.12	1.12	0.61		346.02	NL child	
2011	Rice	0.02	921							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

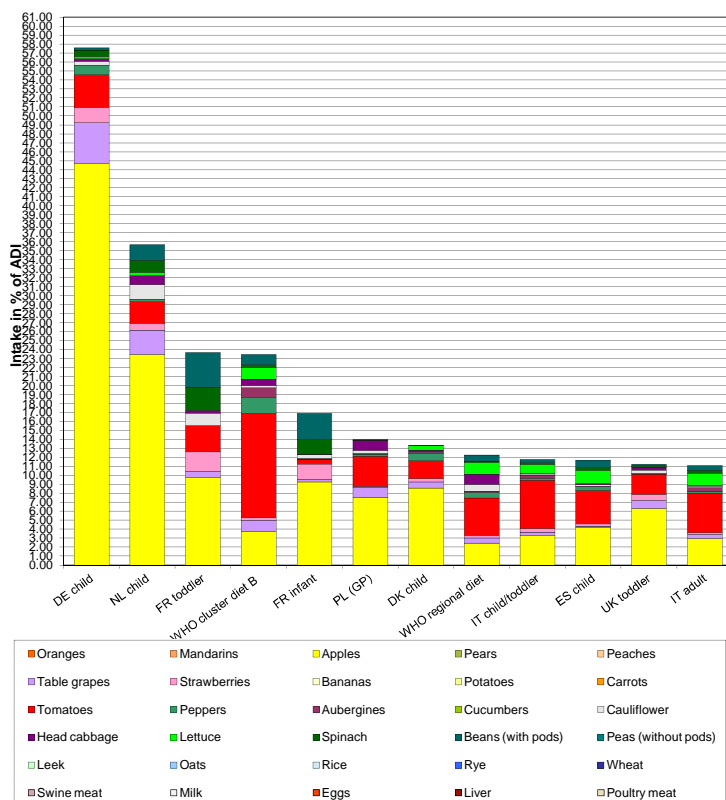
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

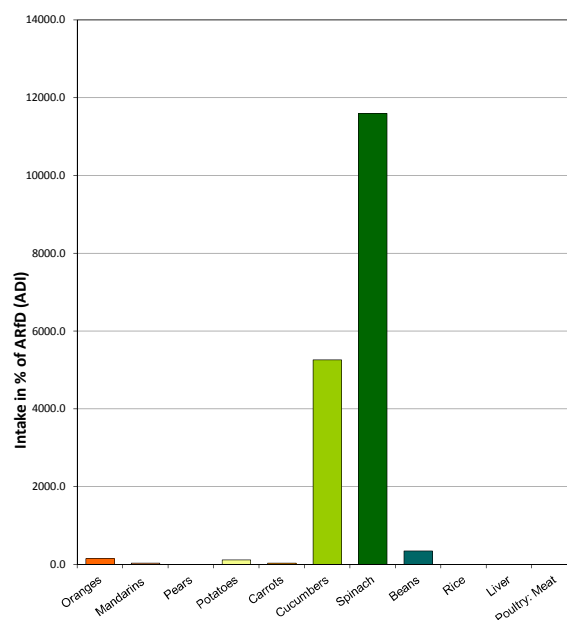
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Omethoate scenario



Acute risk assessment: Omethoate scenario



Dimethomorph			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.05	ARID (mg/kg bw):	0.6
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2007	Year of evaluation:	2007

Chronic risk assessment								
	Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
	Top 12 diets		Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
	0.69	DE child	0.34	Apples	0.11	Oranges	0.07	Table grapes
	0.57	NL child	0.18	Apples	0.15	Potatoes	0.09	Oranges
	0.40	FR toddler	0.12	Potatoes	0.07	Apples	0.06	Oranges
	0.32	WHO cluster diet B	0.09	Tomatoes	0.07	Potatoes	0.03	Apples
	0.28	FR infant	0.10	Potatoes	0.07	Apples	0.03	Oranges
	0.25	UK toddler	0.09	Potatoes	0.06	Oranges	0.05	Apples
	0.25	PT (GP)	0.13	Potatoes	0.03	Apples	0.03	Tomatoes
	0.24	WHO regional diet	0.10	Potatoes	0.03	Tomatoes	0.02	Lettuce
	0.24	DK child	0.07	Apples	0.06	Potatoes	0.04	Cucumbers
	0.24	SE (GP)	0.10	Potatoes	0.03	Apples	0.02	Tomatoes
	0.23	ES child	0.06	Oranges	0.05	Potatoes	0.03	Apples
	0.22	NL (GP)	0.07	Potatoes	0.04	Oranges	0.03	Apples

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARID) e)	Most critical diet	Comment
2011	Oranges		1760	0.40		0.70		15.54	UK infant	
2011	Mandarins	0.05	1429	0.14		0.02		0.16	UK toddler	
2011	Pears	0.05	1704	0.18	0.06	0.11		1.67	DE child	
2011	Potatoes	0.5	1967	0.20		0.30		7.69	UK infant	
2011	Carrots	0.05	1450	0.07		0.00		0.01	UK infant	
2011	Cucumbers	1	1503	5.99		0.12		1.17	NL child	
2011	Spinach	0.1	997	0.80	0.50	0.21		0.79	BE child	
2011	Beans (with pods)	0.05	1200	0.25	0.08	0.27		0.51	NL child	
2011	Rice	0.05	884							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

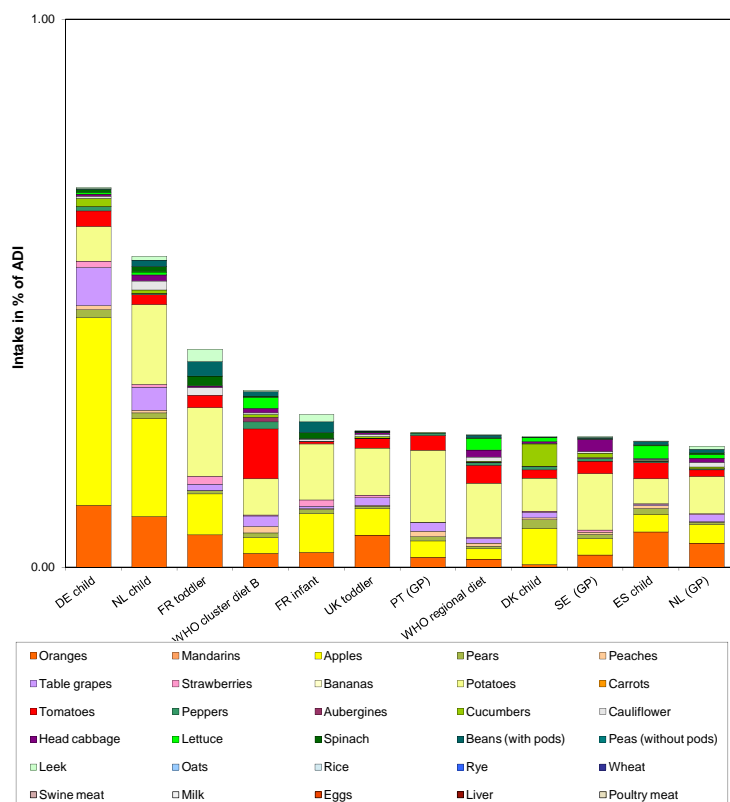
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

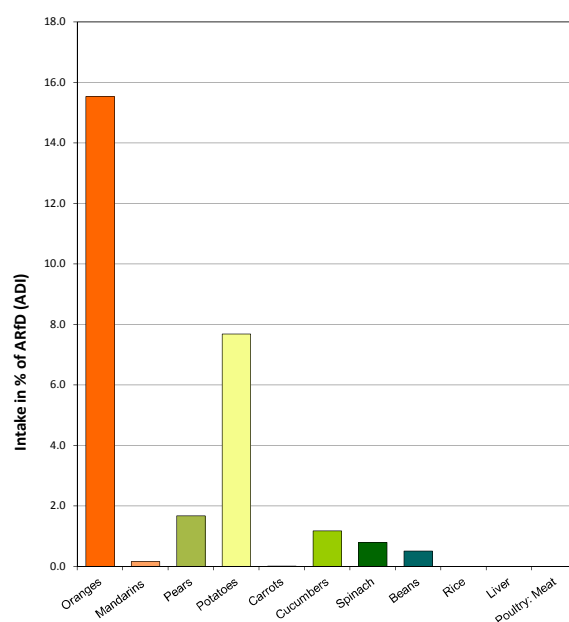
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Dimethomorph



Acute risk assessment: Dimethomorph



Dinocap (RD)			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	Y
Toxicological end points			
ADI (mg/kg bw/day):	0.004	ARID (mg/kg bw):	0.004
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2007	Year of evaluation:	2007

Pesticide to be analysed on a voluntary basis only.

Full residue definition: Dinocap (sum of dinocap isomers and their corresponding phenols expressed as dinocap)

Chronic risk assessment								
Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.54		DE child	1.28	Oranges	0.26	Table grapes		FRUIT (FRESH OR FROZEN)
1.21		NL child	1.05	Oranges	0.16	Table grapes		FRUIT (FRESH OR FROZEN)
0.74		ES child	0.73	Oranges	0.01	Table grapes		FRUIT (FRESH OR FROZEN)
0.72		UK toddler	0.67	Oranges	0.05	Table grapes		FRUIT (FRESH OR FROZEN)
0.72		FR toddler	0.67	Oranges	0.04	Table grapes		FRUIT (FRESH OR FROZEN)
0.55		NL (GP)	0.50	Oranges	0.05	Table grapes		FRUIT (FRESH OR FROZEN)
0.44		ES adult	0.43	Oranges	0.01	Table grapes		FRUIT (FRESH OR FROZEN)
0.44		UK infant	0.44	Oranges	0.00	Table grapes		FRUIT (FRESH OR FROZEN)
0.40		IE adult	0.35	Oranges	0.05	Table grapes		FRUIT (FRESH OR FROZEN)
0.36		WHO cluster diet B	0.29	Oranges	0.07	Table grapes		FRUIT (FRESH OR FROZEN)
0.33		FI adult	0.33	Oranges	0.00	Table grapes		FRUIT (FRESH OR FROZEN)
0.32		FR infant	0.31	Oranges	0.02	Table grapes		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05	173							
2011	Mandarins	0.05	180							
2011	Pears	0.05	295							
2011	Potatoes	0.05	228							
2011	Carrots	0.05	310							
2011	Cucumbers	0.05	288							
2011	Spinach	0.05	243							
2011	Beans (with pods)	0.05	339							
2011	Rice	0.05	211							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

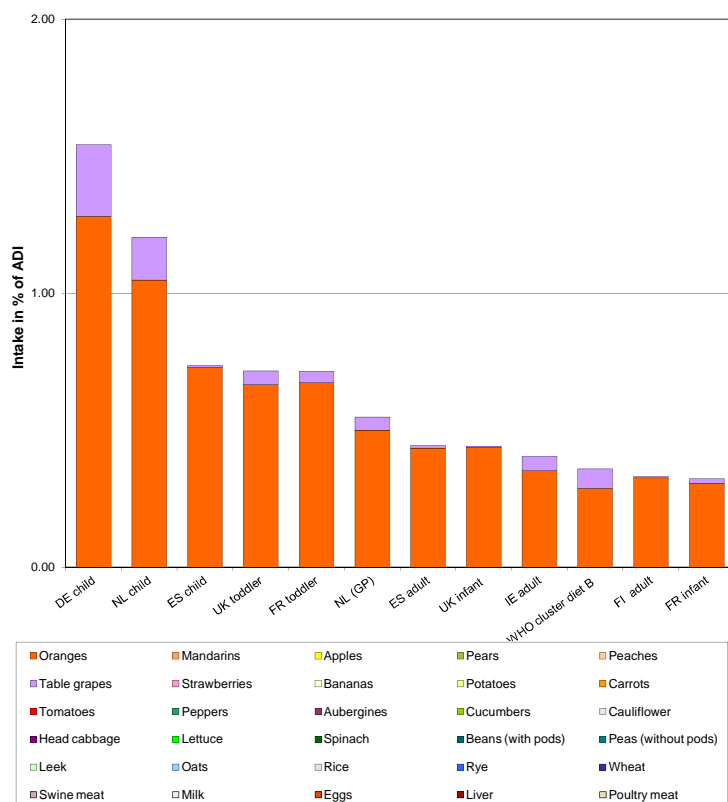
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

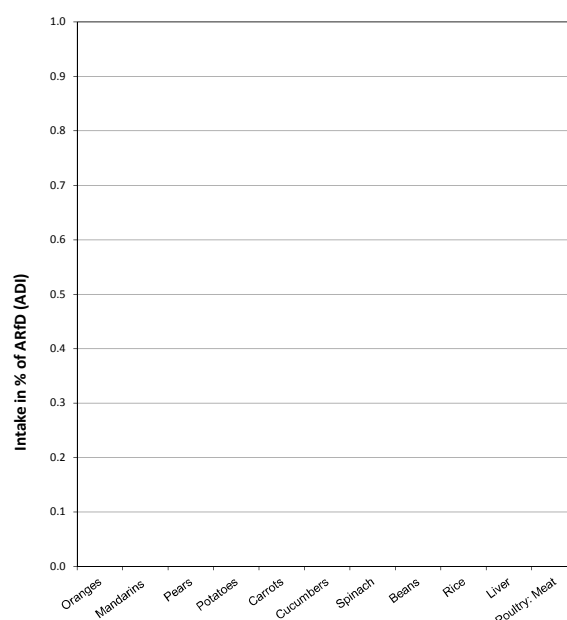
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Dinocap (RD)



Acute risk assessment: Dinocap (RD)



Diphenylamine			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.075	ARID (mg/kg bw):	n.n.
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2008	Year of evaluation:	2008

Chronic risk assessment									
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)			
Top 12 diets		Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities			
0.95	DE child	0.84	Apples	0.05	Pears	0.03	Bananas		
0.53	NL child	0.44	Apples	0.04	Pears	0.03	Bananas		
0.25	DK child	0.16	Apples	0.06	Pears	0.02	Bananas		
0.24	FR toddler	0.18	Apples	0.02	Bananas	0.02	Pears		
0.23	FR infant	0.17	Apples	0.03	Pears	0.01	Bananas		
0.17	PL (GP)	0.14	Apples	0.02	Pears	0.00	Bananas		
0.16	UK toddler	0.12	Apples	0.02	Bananas	0.02	Pears		
0.16	UK infant	0.11	Apples	0.03	Bananas	0.02	Pears		
0.16	IE adult	0.06	Apples	0.06	Pears	0.01	Bananas		
0.15	SE (GP)	0.07	Apples	0.03	Bananas	0.03	Pears		
0.15	ES child	0.08	Apples	0.04	Pears	0.02	Bananas		
0.15	LT adult	0.13	Apples	0.01	Pears	0.00	Bananas		

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARID) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.05	1801	0.11		0.07		not assessed		
2011	Mandarins	0.05	1471	0.34		0.05		not assessed		
2011	Pears	10	1840	7.39		5.70		not assessed		
2011	Potatoes	0.05	2005	0.05		0.04		not assessed		
2011	Carrots	0.05	1523					not assessed		
2011	Cucumbers	0.05	1493					not assessed		
2011	Spinach	0.05	987					not assessed		
2011	Beans (with pods)	0.05	1198					not assessed		
2011	Rice	0.05	869					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

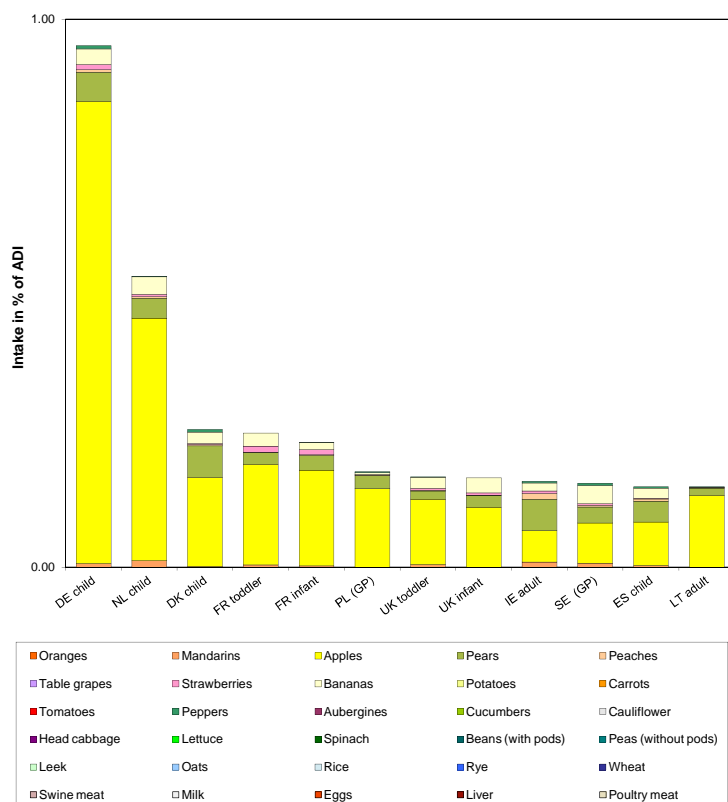
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

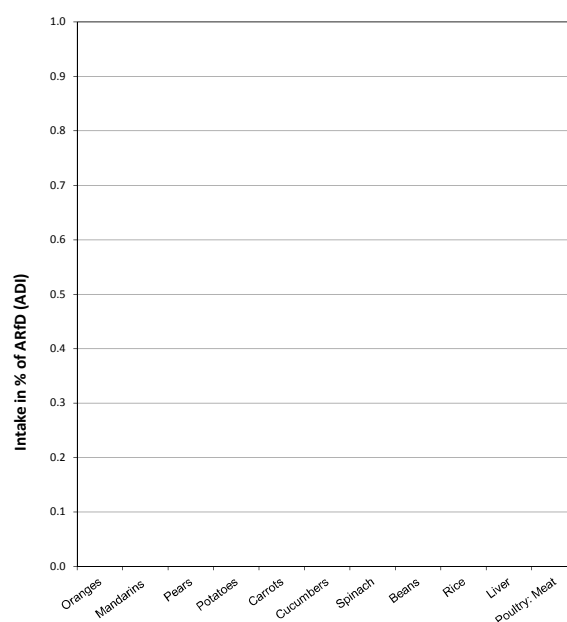
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Diphenylamine



Acute risk assessment: Diphenylamine





## Dithiocarbamates (RD) - ziram scenario

Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
<b>Toxicological end points</b>			
ADI (mg/kg bw/day):	0.003	ARID (mg/kg bw):	0.04
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2004	Year of evaluation:	2004

Ziram toxicological reference values are ADI: 0.006 and ARID: 0.08. These were recalculated to CS2 to match the residue definition: (tox.value)\*((12+32\*2)\*2)/306.

## Chronic risk assessment

	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	90.08	DE child	48.33	Apples	6.69	Oranges	6.60	Bananas
	69.78	NL child	25.36	Apples	9.63	Potatoes	7.27	Bananas
	50.69	DK child	15.93	Rye	9.30	Apples	4.87	Bananas
	50.48	FR toddler	10.50	Apples	8.28	Potatoes	5.51	Bananas
	38.84	WHO cluster diet B	9.81	Tomatoes	4.38	Potatoes	4.04	Apples
	36.48	FR infant	10.01	Apples	6.76	Potatoes	4.52	Carrots
	36.37	SE (GP)	7.71	Bananas	6.81	Potatoes	4.34	Head cabbage
	30.62	IE adult	3.74	Potatoes	3.60	Pears	3.32	Bananas
	29.71	ES child	4.57	Apples	4.31	Bananas	4.15	Lettuce
	29.61	UK toddler	6.83	Apples	5.71	Potatoes	4.59	Bananas
	29.57	UK infant	6.26	Apples	6.23	Bananas	5.31	Potatoes
	28.54	WHO regional diet	6.56	Potatoes	3.74	Lettuce	3.50	Tomatoes

## Acute risk assessment

Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL e)	Maximum acute exposure (expressed in % of the ARID) e)	Most critical diet	Comment
2011	Oranges	5	784	7.02		1.57	4	458.36	UK infant	PF 0.88; residue may result from ziram (worst case assumption)
2011	Mandarins	5	572	6.29		2.50	1	306.07	UK toddler	PF 0.88; residue may result from ziram (worst case assumption)
2011	Pears	5	1180	40.08		2.60	93	591.96	DE child	residue may result from ziram (worst case assumption)
2011	Potatoes	0.3	804	2.74						
2011	Carrots	0.2	873	2.63						
2011	Cucumbers	2	989	9.91			2			
2011	Spinach	0.05	595	5.88	4.87	3.78	2	213.58	BE child	residue may result from ziram (worst case assumption)
2011	Beans (with pods)	1	790	9.37	0.51					
2011	Rice	0.05	346	0.58		0.05		1.58	UK toddler	residue may result from ziram (worst case assumption)
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

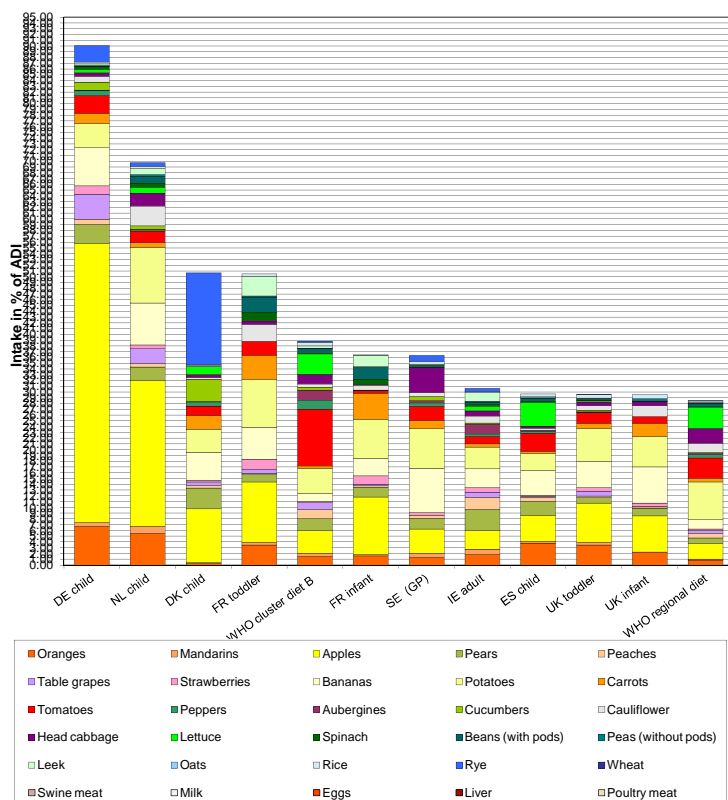
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

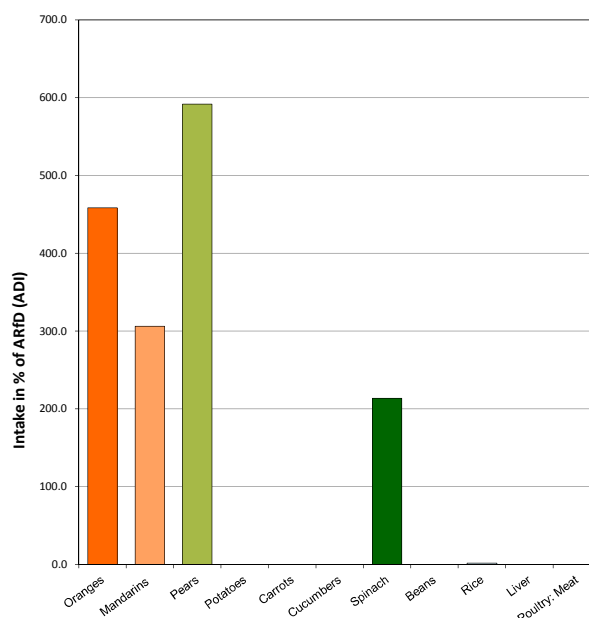
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Dithiocarbamates (RD) - ziram scenario



Acute risk assessment: Dithiocarbamates (RD) - ziram scenario



**Dithiocarbamates (RD) - propineb scenario**

Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
<b>Toxicological end points</b>			
ADI (mg/kg bw/day):	0.004	ARfD (mg/kg bw):	0.053
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2003	Year of evaluation:	2003

Propineb toxicological reference values are ADI: 0.007 and ARfD: 0.1. These were recalculated to CS2 to match the residue definition:  $(\text{tox.value}) * ((12 + 32 * 2) * 2) / 289.9$ .

**Chronic risk assessment**

	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	67.56	DE child	36.25	Apples	5.02	Oranges	4.95	Bananas
	52.34	NL child	19.02	Apples	7.22	Potatoes	5.45	Bananas
	38.02	DK child	11.94	Rye	6.98	Apples	3.65	Bananas
	37.86	FR toddler	7.88	Apples	6.21	Potatoes	4.14	Bananas
	29.13	WHO cluster diet B	7.35	Tomatoes	3.28	Potatoes	3.03	Apples
	27.36	FR infant	7.51	Apples	5.07	Potatoes	3.39	Carrots
	27.28	SE (GP)	5.78	Bananas	5.10	Potatoes	3.25	Head cabbage
	22.96	IE adult	2.81	Potatoes	2.70	Pears	2.49	Bananas
	22.28	ES child	3.43	Apples	3.23	Bananas	3.11	Lettuce
	22.21	UK toddler	5.12	Apples	4.28	Potatoes	3.44	Bananas
	22.18	UK infant	4.70	Apples	4.67	Bananas	3.99	Potatoes
	21.41	WHO regional diet	4.92	Potatoes	2.81	Lettuce	2.62	Tomatoes

**Acute risk assessment**

Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	5	784	7.02			4			
2011	Mandarins	5	572	6.29			1			
2011	Pears	5	1180	40.08			93			
2011	Potatoes	0.3	804	2.74		0.30		85.87	UK infant	residue most likely results from propineb
2011	Carrots	0.2	873	2.63						
2011	Cucumbers	2	989	9.91		0.83	2	91.58	NL child	residue most likely results from propineb
2011	Spinach	0.05	595	5.88	4.87		2			
2011	Beans (with pods)	1	790	9.37	0.51					
2011	Rice	0.05	346	0.58						
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

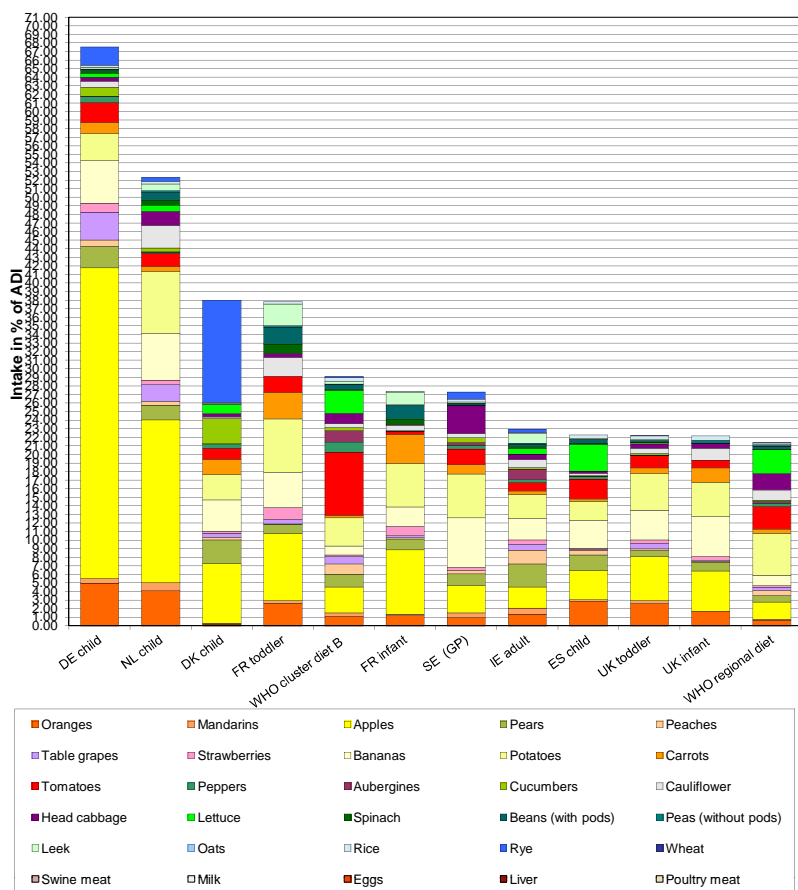
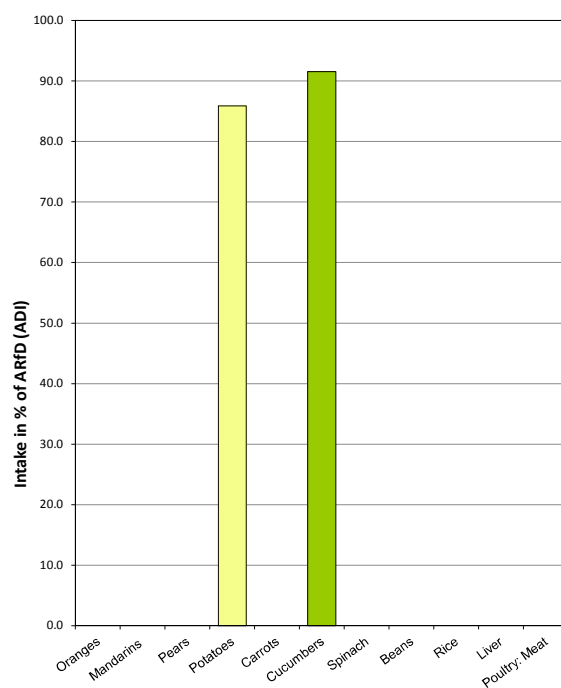
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

**Chronic risk assessment: Dithiocarbamates (RD) - propineb scenario****Acute risk assessment: Dithiocarbamates (RD) - propineb scenario**

**Dithiocarbamates (RD) - mancozeb scenario**

Status of the active substance:  
To be analysed in plant (P) or animal (A)  
products

**Approved**  
**P**

Monitoring year:  
Analysis on  
voluntary basis?

**2011**  
**N**

**Toxicological end points**

ADI (mg/kg bw/day):

**0.028**

ARfD (mg/kg bw):

**0.337**

Source of ADI:

**COM**

Source of ARfD:

**COM**

Year of evaluation:

**2005**

Year of evaluation:

**2005**

Mancozeb toxicological reference values are ADI: 0.05 and ARfD: 0.6. These were recalculated to CS2 to match the residue definition:  $(\text{tox.value}) \times ((12 \times 32 \times 2)^2) / 271.3$ .

**Chronic risk assessment**

	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	9.65	DE child	5.18	Apples	0.72	Oranges	0.71	Bananas
	7.48	NL child	2.72	Apples	1.03	Potatoes	0.78	Bananas
	5.43	DK child	1.71	Rye	1.00	Apples	0.52	Bananas
	5.41	FR toddler	1.13	Apples	0.89	Potatoes	0.59	Bananas
	4.16	WHO cluster diet B	1.05	Tomatoes	0.47	Potatoes	0.43	Apples
	3.91	FR infant	1.07	Apples	0.72	Potatoes	0.48	Carrots
	3.90	SE (GP)	0.83	Bananas	0.73	Potatoes	0.46	Head cabbage
	3.28	IE adult	0.40	Potatoes	0.39	Pears	0.36	Bananas
	3.18	ES child	0.49	Apples	0.46	Bananas	0.44	Lettuce
	3.17	UK toddler	0.73	Apples	0.61	Potatoes	0.49	Bananas
	3.17	UK infant	0.67	Apples	0.67	Bananas	0.57	Potatoes
	3.06	WHO regional diet	0.70	Potatoes	0.40	Lettuce	0.37	Tomatoes

**Acute risk assessment**

Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	5	784	7.02			4			
2011	Mandarins	5	572	6.29			1			
2011	Pears	5	1180	40.08			93			
2011	Potatoes	0.3	804	2.74						
2011	Carrots	0.2	873	2.63		0.18		3.39	UK infant	residue most likely results from mancozeb
2011	Cucumbers	2	989	9.91			2			
2011	Spinach	0.05	595	5.88	4.87		2			
2011	Beans (with pods)	1	790	9.37	0.51	2.00		6.73	NL child	residue most likely results from mancozeb
2011	Rice	0.05	346	0.58						
2011	Liver									
2011	Poultry: Meat									

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

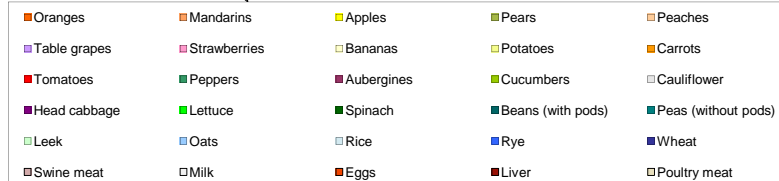
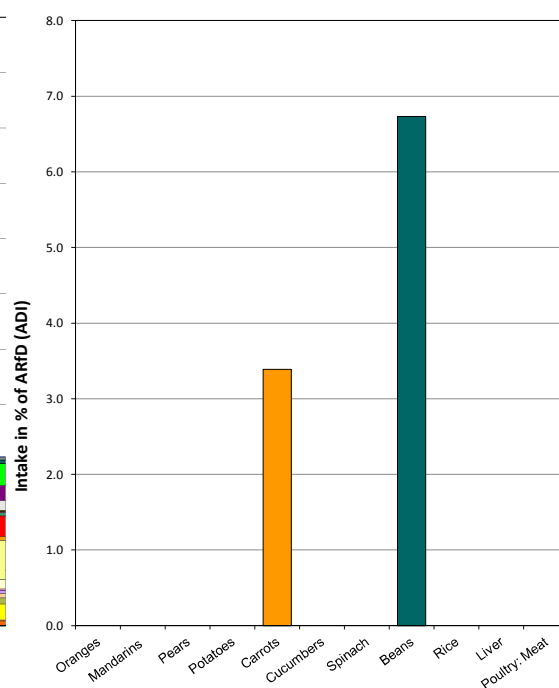
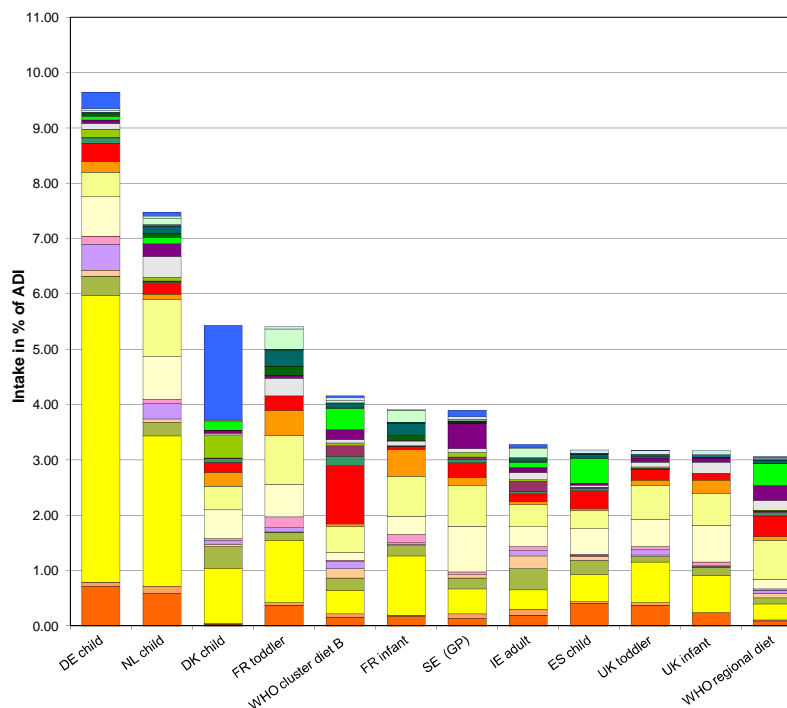
b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

d) TTL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported

f) The exposure is calculated on the basis of the consumption of bovine liver.

**Chronic risk assessment: Dithiocarbamates (RD) - mancozeb scenario****Acute risk assessment: Dithiocarbamates (RD) - mancozeb scenario**

Endosulfan (RD)				
Status of the active substance:		Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products		P, A	Analysis on voluntary basis?	N
Toxicological end points				
ADI (mg/kg bw/day):		0.006	ARfD (mg/kg bw):	0.015
Source of ADI:		JMPR	Source of ARfD:	ECCO
Year of evaluation:		2006	Year of evaluation:	2001

Full residue definition: Endosulfan (sum of alpha- and beta-isomers and endosulfan-sulphate expresses as endosulfan)

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	2.82	FR toddler	1.19	Potatoes	0.59	Carrots	0.43	Oranges
	2.63	NL child	1.38	Potatoes	0.66	Oranges	0.13	Tomatoes
	2.23	DE child	0.81	Oranges	0.60	Potatoes	0.25	Carrots
	2.14	FR infant	0.97	Potatoes	0.64	Carrots	0.19	Oranges
	1.98	PT (GP)	1.25	Potatoes	0.20	Rice	0.19	Tomatoes
	1.90	WHO cluster diet B	0.65	Tomatoes	0.63	Potatoes	0.18	Oranges
	1.76	SE (GP)	0.98	Potatoes	0.20	Carrots	0.16	Tomatoes
	1.71	UK toddler	0.82	Potatoes	0.42	Oranges	0.14	Rice
	1.66	UK infant	0.76	Potatoes	0.32	Carrots	0.28	Oranges
	1.54	DK child	0.57	Potatoes	0.39	Cucumbers	0.33	Carrots
	1.53	WHO regional diet	0.94	Potatoes	0.23	Tomatoes	0.11	Oranges
	1.49	WHO cluster diet D	0.95	Potatoes	0.21	Tomatoes	0.14	Rice

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05	1837	0.11		0.01		8.51	UK infant	
2011	Mandarins	0.05	1538							
2011	Pears		1909							
2011	Potatoes	0.05	2147	0.09		0.03		30.75	UK infant	
2011	Carrots	0.05	1552							
2011	Cucumbers	0.05	1660	0.18	0.06	0.66	1	257.31	NL child	
2011	Spinach	0.05	1094							
2011	Beans (with pods)	0.05	1238	0.40	0.32	0.15		11.35	NL child	
2011	Rice	0.05	1065	0.47		0.02		1.93	UK toddler	
2011	Liver	0.05	622	0.64		0.027		1.45	UK infant	Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.05	562							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

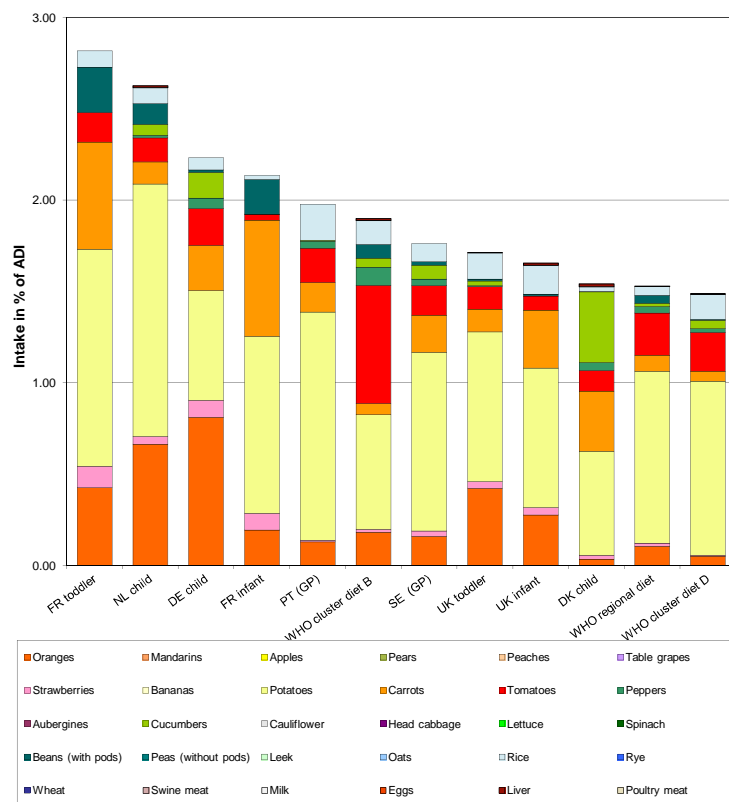
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

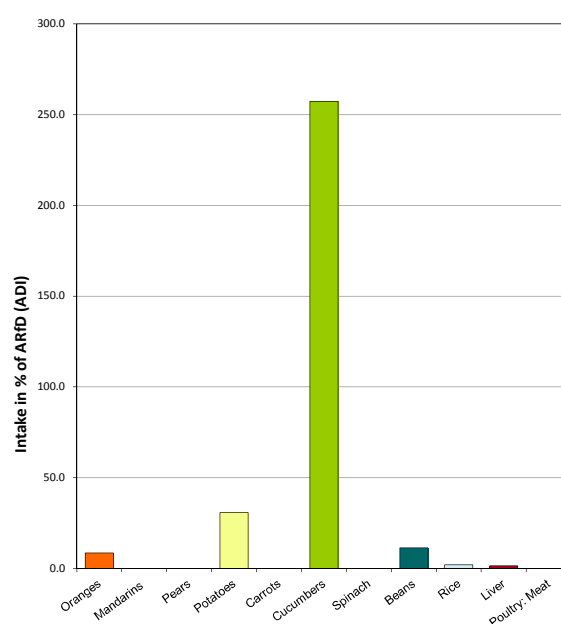
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Endosulfan (RD)



Acute risk assessment: Endosulfan (RD)



**Chronic risk assessment: Endrin**

Intake in % of ADI

DK adult DK adult DK adult DK adult DK adult DK adult DK adult DK adult DK adult DK adult DK adult DK adult DK adult

**Acute risk assessment: Endrin**

Intake in % of ADI

Oranges Mandarins Pears Potatoes Carrots Cucumbers Spinach Beans Rice Liver Poultry meat Wheat Rye Oats Leek

Legend:

- Oranges
- Mandarins
- Apples
- Pears
- Peaches
- Table grapes
- Strawberries
- Bananas
- Potatoes
- Carrots
- Tomatoes
- Peppers
- Aubergines
- Cucumbers
- Cauliflower
- Head cabbage
- Lettuce
- Spinach
- Beans (with pods)
- Peas (without pods)
- Leek
- Oats
- Rice
- Rye
- Wheat
- Swine meat
- Milk
- Eggs
- Liver
- Poultry meat

EPN										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):						ARfD (mg/kg bw):				
Source of ADI:						Source of ARfD:				
Year of evaluation:						Year of evaluation:				

No ADI and no ARfD allocated.

Chronic risk assessment														
	Highest calculated exposure in % of ADI			Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	
										</				

Epoxiconazole			
Status of the active substance:		Approved	Monitoring year: 2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis? N
Toxicological end points			
ADI (mg/kg bw/day):		0.008	ARfD (mg/kg bw): 0.023
Source of ADI:		COM	Source of ARfD: COM
Year of evaluation:		2008	Year of evaluation: 2008

Chronic risk assessment										
Highest calculated exposure in % of ADI				Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)		
Top 12 diets				Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities		
2.12	DK child			0.75	Wheat	0.60	Rye	0.31	Potatoes	
2.10	WHO cluster diet B			1.17	Wheat	0.42	Tomatoes	0.34	Potatoes	
1.90	NL child			0.75	Potatoes	0.65	Wheat	0.27	Bananas	
1.73	WHO cluster diet D			0.89	Wheat	0.52	Potatoes	0.14	Tomatoes	
1.70	FR toddler			0.64	Potatoes	0.36	Wheat	0.33	Carrots	
1.61	PT (GP)			0.68	Potatoes	0.54	Wheat	0.12	Tomatoes	
1.57	SE (GP)			0.53	Potatoes	0.44	Wheat	0.29	Bananas	
1.55	DE child			0.56	Wheat	0.33	Potatoes	0.25	Bananas	
1.39	UK toddler			0.54	Wheat	0.44	Potatoes	0.17	Bananas	
1.36	IT child/toddler			0.91	Wheat	0.19	Tomatoes	0.11	Potatoes	
1.32	UK infant			0.41	Potatoes	0.36	Wheat	0.23	Bananas	
1.31	WHO Cluster diet F			0.49	Wheat	0.43	Potatoes	0.10	Rye	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05	1755							
2011	Mandarins	0.05	1421							
2011	Pears	0.05	1642							
2011	Potatoes	0.05	1917	0.05		0.01		6.69	UK infant	
2011	Carrots	0.05	1466	0.20		0.05		13.78	UK infant	
2011	Cucumbers	0.05	1469							
2011	Spinach	0.05	980							
2011	Beans (with pods)	0.05	1154	0.09		0.04		1.97	NL child	
2011	Rice	0.1	929		0.11	0.19		10.41	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

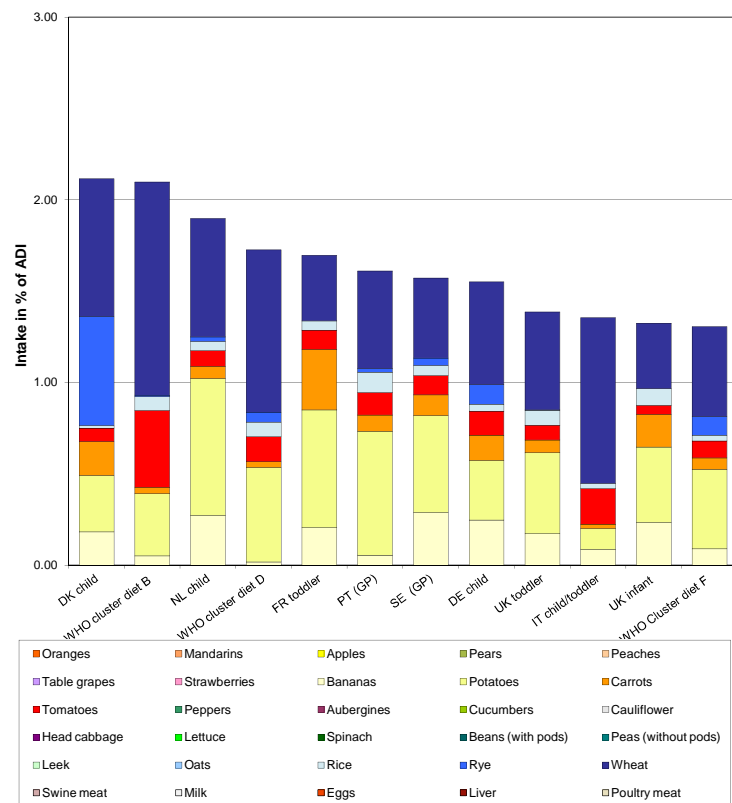
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

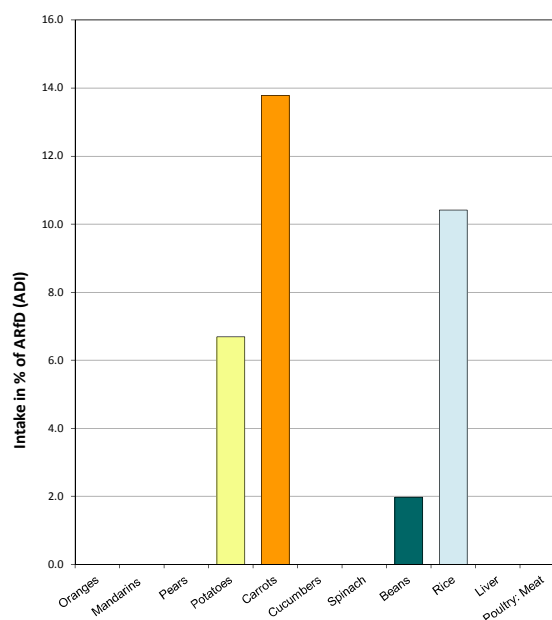
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported      <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Epoxiconazole



Acute risk assessment: Epoxiconazole



Esfenvalerate (RD)			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P, A	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.02	ARfD (mg/kg bw):	0.05
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2000	Year of evaluation:	2000

For the risk assessment the ADI and ARfD derived for esfenvalerate are used.

Full residue definition: Sum of fenvalerate (any ratio of constituent isomers: RR, SS, RS and SR, including esfenvalerate)

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.19	WHO cluster diet B	0.17	Tomatoes	0.02	Table grapes		FRUIT (FRESH OR FROZEN)
	0.13	DE child	0.08	Table grapes	0.05	Tomatoes		FRUIT (FRESH OR FROZEN)
	0.09	IT child/toddler	0.08	Tomatoes	0.01	Table grapes		FRUIT (FRESH OR FROZEN)
	0.08	NL child	0.05	Table grapes	0.03	Tomatoes		FRUIT (FRESH OR FROZEN)
	0.07	IT adult	0.06	Tomatoes	0.01	Table grapes		FRUIT (FRESH OR FROZEN)
	0.07	WHO regional diet	0.06	Tomatoes	0.01	Table grapes		FRUIT (FRESH OR FROZEN)
	0.07	PL (GP)	0.05	Tomatoes	0.02	Table grapes		FRUIT (FRESH OR FROZEN)
	0.07	WHO cluster diet D	0.06	Tomatoes	0.01	Table grapes		FRUIT (FRESH OR FROZEN)
	0.07	PT (GP)	0.05	Tomatoes	0.02	Table grapes		FRUIT (FRESH OR FROZEN)
	0.06	ES child	0.05	Tomatoes	0.00	Table grapes		FRUIT (FRESH OR FROZEN)
	0.06	FR toddler	0.04	Tomatoes	0.01	Table grapes		FRUIT (FRESH OR FROZEN)
	0.05	UK toddler	0.03	Tomatoes	0.01	Table grapes		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	2214							
2011	Mandarins	0.02	1876	0.21		0.02		2.23	UK toddler	
2011	Pears	0.05	2226	0.04		0.010		1.82	DE child	
2011	Potatoes	0.02	2630							
2011	Carrots	0.02	1870							
2011	Cucumbers	0.02	1956							
2011	Spinach	0.02	1370							
2011	Beans (with pods)	0.02	1494		0.20	0.50		11.35	NL child	
2011	Rice	0.02	1206							
2011	Liver	0.2	734							
2011	Poultry: Meat	0.02	698							

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

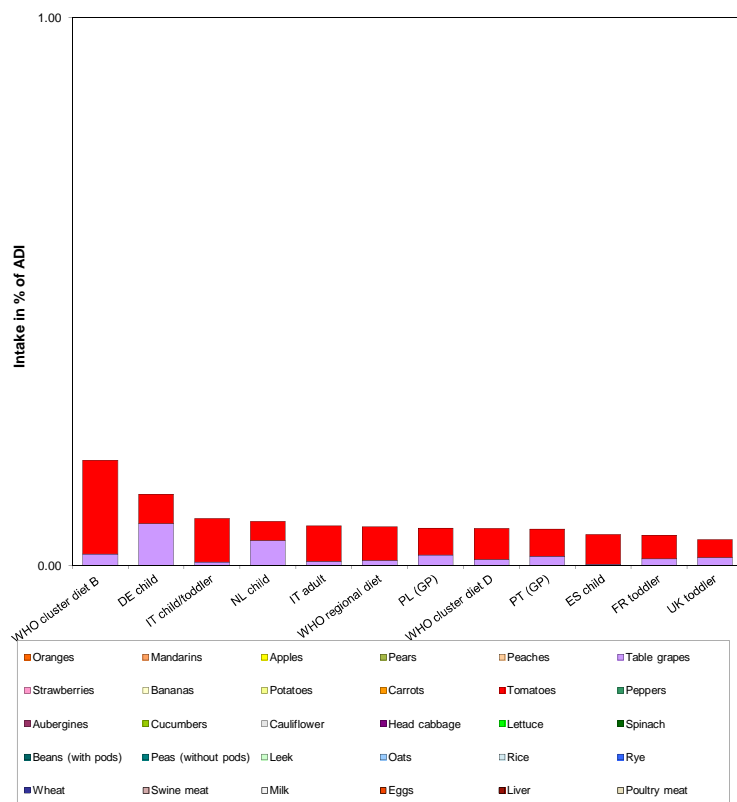
c) MRL in place on 01/01/2011.

d) TTL: toxicological threshold level

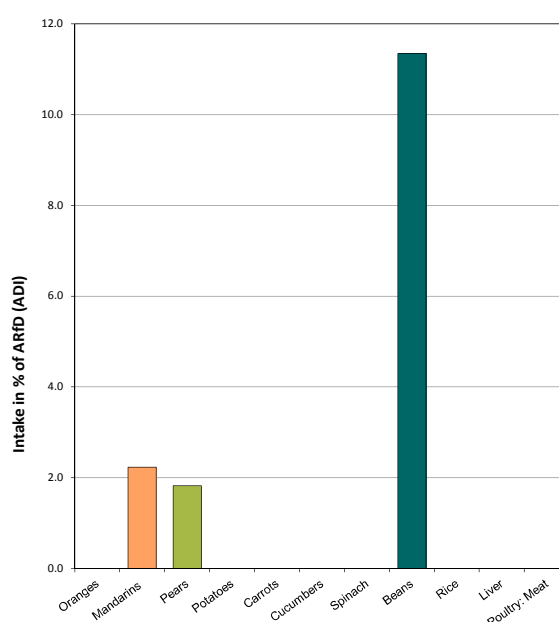
e) For liver, only the MRL for bovine liver is reported

f) The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Esfenvalerate (RD)



Acute risk assessment: Esfenvalerate (RD)





Ethephon										
Status of the active substance:				Approved	Monitoring year:		2011			
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		Y			
Toxicological end points										
ADI (mg/kg bw/day):				0.03	ARfD (mg/kg bw):		0.05			
Source of ADI:				COM	Source of ARfD:		COM			
Year of evaluation:				2006	Year of evaluation:		2008			

Pesticide to be analysed on a voluntary basis only.										
Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	
	5.40	WHO cluster diet B		4.69	Wheat	0.38	Tomatoes	0.09	Apples	
	4.18	DE child		2.26	Wheat	1.10	Apples	0.29	Table grapes	
	4.01	IT child/toddler		3.66	Wheat	0.18	Tomatoes	0.08	Apples	
	3.86	WHO cluster diet D		3.58	Wheat	0.13	Tomatoes	0.06	Apples	
	3.71	NL child		2.61	Wheat	0.58	Apples	0.20	Oranges	
	3.55	DK child		3.03	Wheat	0.21	Apples	0.13	Carrots	
	2.86	ES child		2.44	Wheat	0.14	Oranges	0.12	Tomatoes	
	2.62	UK toddler		2.15	Wheat	0.16	Apples	0.12	Oranges	
	2.58	IT adult		2.27	Wheat	0.14	Tomatoes	0.07	Apples	
	2.57	PT (GP)		2.16	Wheat	0.11	Tomatoes	0.10	Apples	
	2.44	WHO cluster diet E		2.17	Wheat	0.08	Apples	0.07	Tomatoes	
	2.26	WHO Cluster diet F		1.98	Wheat	0.08	Tomatoes	0.06	Apples	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05	184	6.52		0.04		11.67	UK infant	
2011	Mandarins	0.05	126							
2011	Pears	0.05	217	0.92		0.01		1.64	DE child	
2011	Potatoes	0.05	153							
2011	Carrots	0.05	170	9.41		0.05		6.34	UK infant	
2011	Cucumbers	0.05	166							
2011	Spinach	0.05	155							
2011	Beans (with pods)	0.05	167							
2011	Rice	0.05	106							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

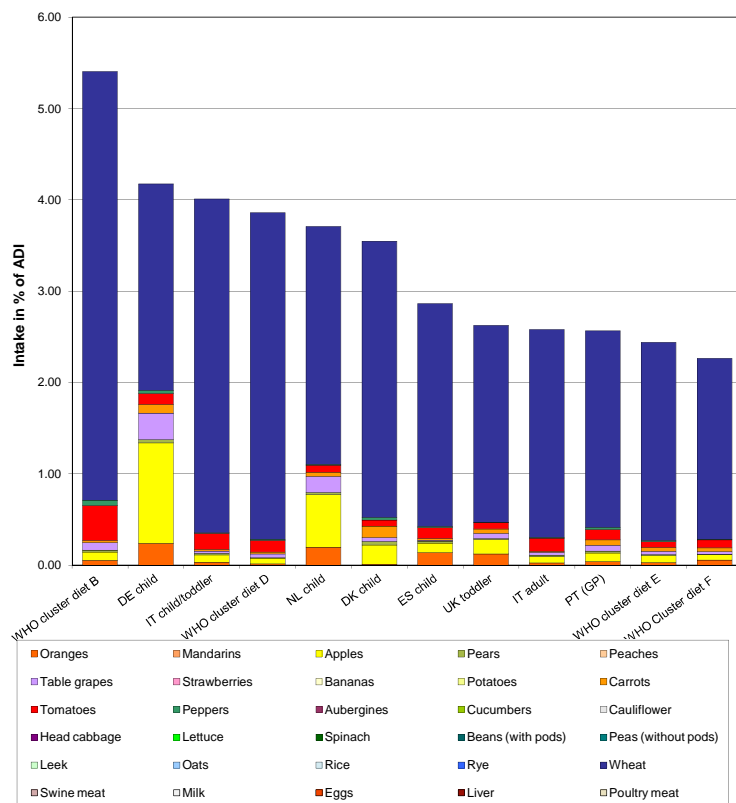
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

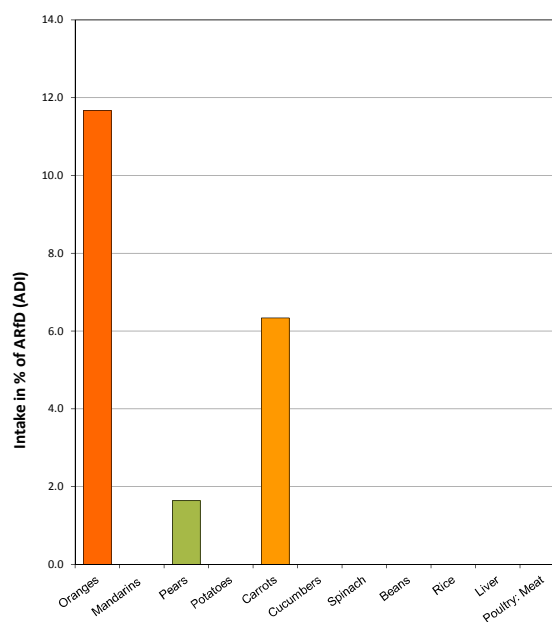
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Ethephon



Acute risk assessment: Ethephon



Ethion										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):				0.002		ARfD (mg/kg bw):				
Source of ADI:				JMPR		Source of ARfD:				
Year of evaluation:				1990		Year of evaluation:				

Active substance not assessed regarding the setting of an ARfD. Acute RA is performed with ADI.

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	
	2.10		DE child	1.75	Oranges	0.22	Strawberries	0.13	Peppers	
	1.57		NL child	1.43	Oranges	0.10	Strawberries	0.03	Peppers	
	1.20		FR toddler	0.92	Oranges	0.28	Strawberries		FRUIT (FRESH OR FROZEN)	
	1.08		ES child	1.00	Oranges	0.05	Peppers	0.03	Strawberries	
	1.01		UK toddler	0.91	Oranges	0.09	Strawberries	0.01	Peppers	
	0.79		WHO cluster diet B	0.39	Oranges	0.22	Peppers	0.13	Aubergines (egg plants)	
	0.78		IE adult	0.48	Oranges	0.13	Aubergines (egg plants)	0.11	Strawberries	
	0.75		NL (GP)	0.68	Oranges	0.03	Strawberries	0.03	Peppers	
	0.71		ES adult	0.59	Oranges	0.07	Peppers	0.03	Strawberries	
	0.70		UK infant	0.60	Oranges	0.10	Strawberries		FRUIT (FRESH OR FROZEN)	
	0.65		FR infant	0.42	Oranges	0.22	Strawberries	0.01	Aubergines (egg plants)	
	0.53		SE (GP)	0.34	Oranges	0.08	Peppers	0.07	Strawberries	

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.01	1899		0.05	0.02		3.38	UK infant	PF 0.03
2011	Mandarins	0.01	1528							
2011	Pears	0.01	1866							
2011	Potatoes	0.01	2157							
2011	Carrots	0.01	1558							
2011	Cucumbers	0.01	1668							
2011	Spinach	0.01	1030							
2011	Beans (with pods)	0.01	1253	0.08	0.08	0.02		11.35	NL child	
2011	Rice	0.01	1050							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

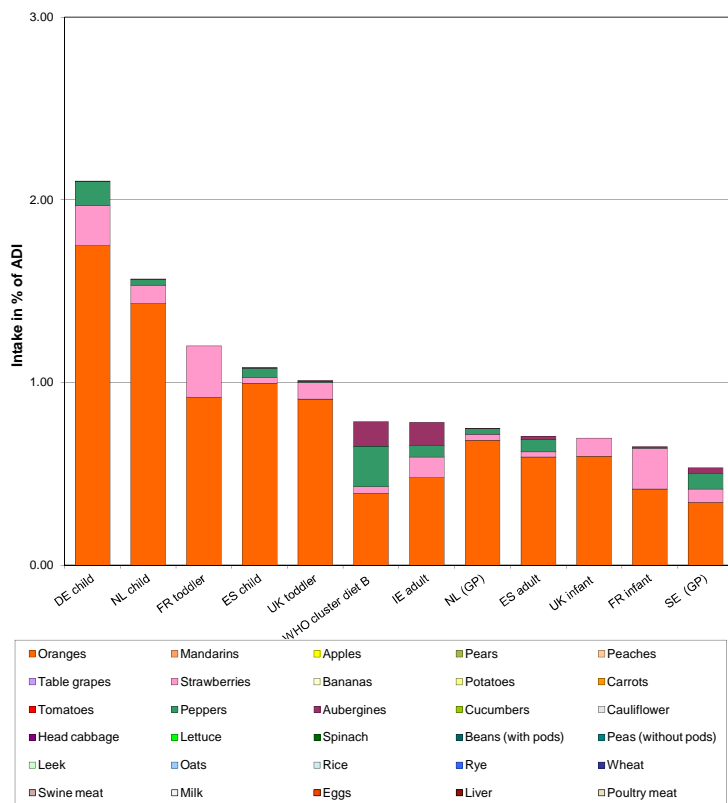
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

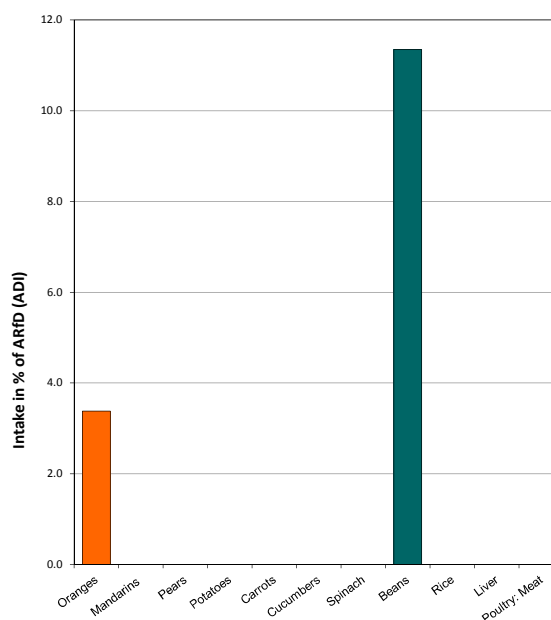
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Ethion



Acute risk assessment: Ethion



Ethoprophos			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	Y
Toxicological end points			
ADI (mg/kg bw/day):	0.0004	ARfD (mg/kg bw):	0.01
Source of ADI:	EFSA	Source of ARfD:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

Pesticide to be analysed on a voluntary basis only.

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	4.95	DK child	4.30	Cucumbers	0.65	Peppers		FRUIT (FRESH OR FROZEN)
	2.40	DE child	1.55	Cucumbers	0.85	Peppers		FRUIT (FRESH OR FROZEN)
	2.01	WHO cluster diet B	1.45	Peppers	0.56	Cucumbers		FRUIT (FRESH OR FROZEN)
	1.38	SE (GP)	0.83	Cucumbers	0.55	Peppers		FRUIT (FRESH OR FROZEN)
	1.09	LT adult	1.03	Cucumbers	0.06	Peppers		FRUIT (FRESH OR FROZEN)
	1.02	DK adult	0.71	Cucumbers	0.31	Peppers		FRUIT (FRESH OR FROZEN)
	0.87	NL child	0.67	Cucumbers	0.20	Peppers		FRUIT (FRESH OR FROZEN)
	0.86	FI adult	0.71	Cucumbers	0.15	Peppers		FRUIT (FRESH OR FROZEN)
	0.81	WHO cluster diet D	0.51	Cucumbers	0.31	Peppers		FRUIT (FRESH OR FROZEN)
	0.70	WHO regional diet	0.51	Peppers	0.20	Cucumbers		FRUIT (FRESH OR FROZEN)
	0.68	IE adult	0.40	Peppers	0.28	Cucumbers		FRUIT (FRESH OR FROZEN)
	0.63	PT (GP)	0.56	Peppers	0.07	Cucumbers		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.02	1670							
2011	Mandarins	0.02	1356							
2011	Pears	0.02	1638							
2011	Potatoes	0.05	1882							
2011	Carrots	0.02	1368							
2011	Cucumbers	0.02	1439		0.07	0.02		12.87	NL child	
2011	Spinach	0.02	939							
2011	Beans (with pods)	0.02	1124							
2011	Rice	0.02	854							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

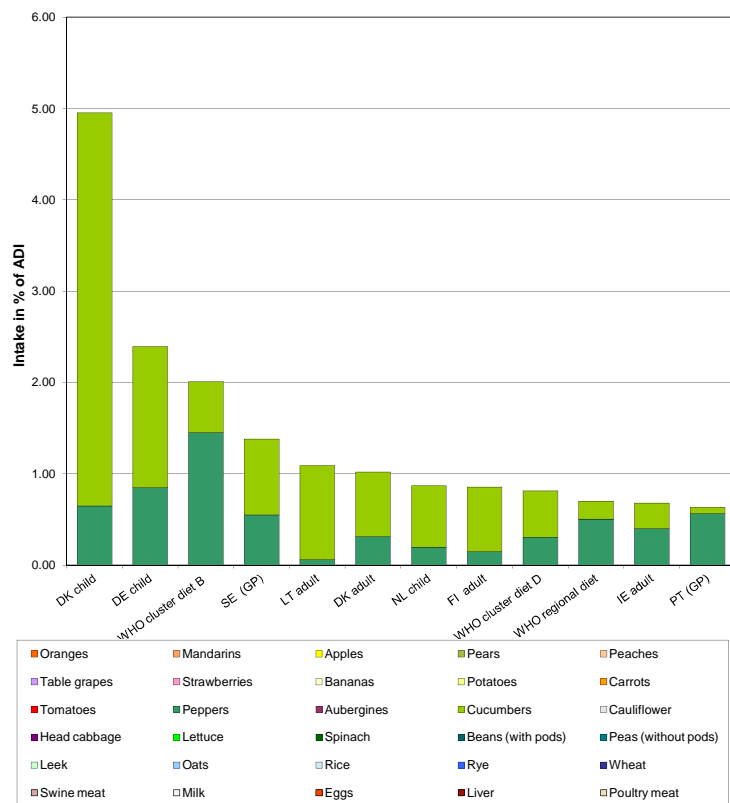
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

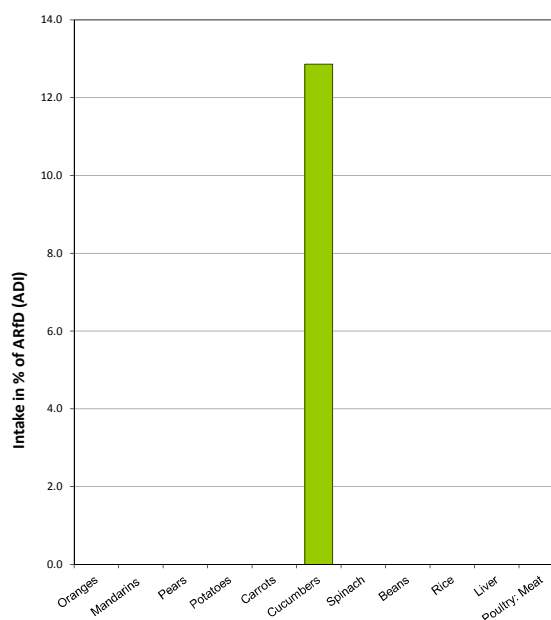
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported      <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Ethoprophos



Acute risk assessment: Ethoprophos



Etofenprox			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	Y
Toxicological end points			
ADI (mg/kg bw/day):	0.03	ARfD (mg/kg bw):	1
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2009	Year of evaluation:	2009

Pesticide to be analysed on a voluntary basis only.

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets			Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
0.75	DE child	0.44	Apples	0.14	Oranges	0.04	Table grapes	
0.48	NL child	0.23	Apples	0.11	Oranges	0.03	Mandarins	
0.28	WHO cluster diet B	0.10	Tomatoes	0.04	Apples	0.03	Oranges	
0.27	FR toddler	0.10	Apples	0.07	Oranges	0.03	Spinach	
0.21	ES child	0.08	Oranges	0.04	Apples	0.03	Tomatoes	
0.21	IE adult	0.04	Oranges	0.04	Peaches	0.03	Apples	
0.19	UK toddler	0.07	Oranges	0.06	Apples	0.02	Tomatoes	
0.19	FR infant	0.09	Apples	0.03	Oranges	0.02	Spinach	
0.17	DK child	0.08	Apples	0.02	Pears	0.02	Tomatoes	
0.16	SE (GP)	0.04	Apples	0.03	Oranges	0.02	Tomatoes	
0.16	IT child/toddler	0.05	Tomatoes	0.03	Apples	0.02	Peaches	
0.16	ES adult	0.05	Oranges	0.03	Apples	0.02	Tomatoes	

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	1	1496	1.40		0.19		2.52	UK infant	
2011	Mandarins	1	1241	2.42		0.44		2.45	UK toddler	
2011	Pears	1	1471	1.22		0.20		1.82	DE child	
2011	Potatoes	0.5	1582	0.06		0.02		0.25	UK infant	
2011	Carrots	0.01	1200							
2011	Cucumbers	0.2	1181							
2011	Spinach	3	792	0.88		0.63		1.42	BE child	
2011	Beans (with pods)	0.5	1012							
2011	Rice	0.5	693							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

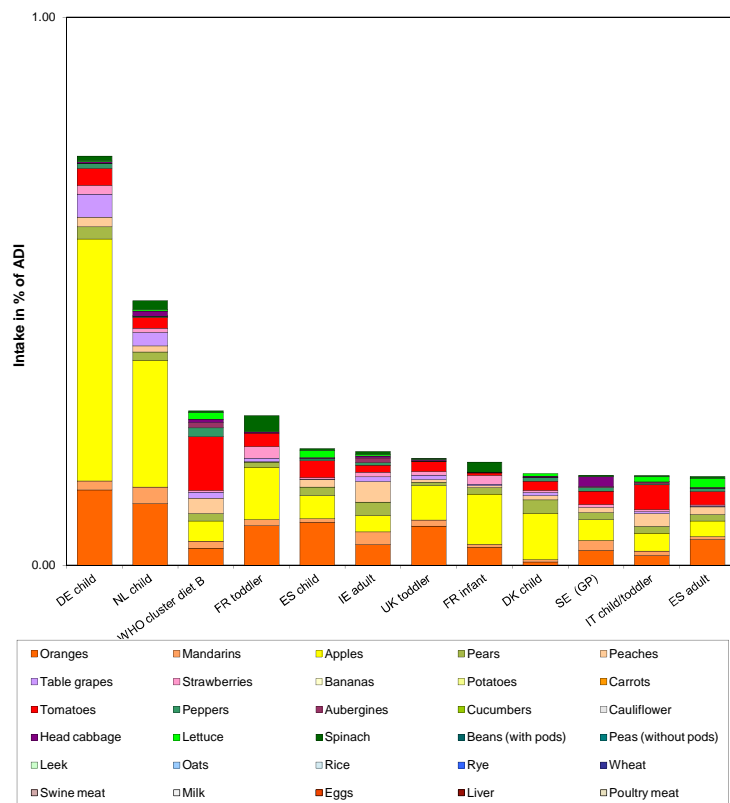
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

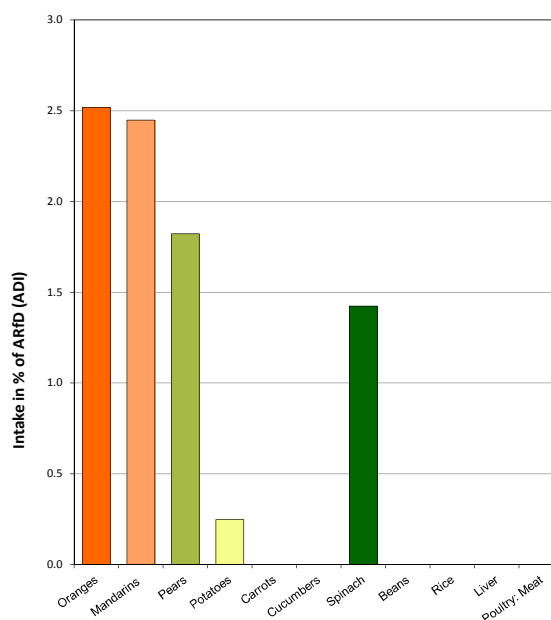
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Etofenprox



Acute risk assessment: Etofenprox



Fenamiphos (RD)			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.0008	ARfD (mg/kg bw):	0.0025
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2006	Year of evaluation:	2006

Full residue definition: Fenamiphos (sum of fenamiphos and its sulfoxide and sulfone expressed as fenamiphos)

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	7.03	DE child	4.97	Oranges	1.29	Tomatoes	0.68	Cucumbers
	6.38	WHO cluster diet B	4.10	Tomatoes	1.11	Oranges	0.50	Aubergines (egg plants)
	5.84	NL child	4.07	Oranges	0.83	Tomatoes	0.63	Beans (with pods)
	5.01	FR toddler	2.61	Oranges	1.37	Beans (with pods)	1.03	Tomatoes
	4.49	ES child	2.83	Oranges	1.31	Tomatoes	0.30	Beans (with pods)
	3.57	UK toddler	2.59	Oranges	0.78	Tomatoes	0.13	Cucumbers
	3.12	ES adult	1.69	Oranges	1.04	Tomatoes	0.29	Beans (with pods)
	2.98	NL (GP)	1.94	Oranges	0.57	Tomatoes	0.31	Beans (with pods)
	2.84	IT child/toddler	1.90	Tomatoes	0.63	Oranges	0.17	Aubergines (egg plants)
	2.83	DK child	1.88	Cucumbers	0.71	Tomatoes	0.22	Oranges
	2.70	IE adult	1.36	Oranges	0.53	Tomatoes	0.48	Aubergines (egg plants)
	2.58	SE (GP)	1.02	Tomatoes	0.98	Oranges	0.36	Cucumbers

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.02	1123		0.09	0.36	1	1904.43	UK infant	
2011	Mandarins	0.02	940							
2011	Pears	0.02	1320	0.15		0.00		4.95	DE child	
2011	Potatoes	0.02	1504							
2011	Carrots	0.02	1113							
2011	Cucumbers	0.02	1142	0.09	0.09	0.11	1	257.31	NL child	
2011	Spinach	0.02	740							
2011	Beans (with pods)	0.02	824	0.12		0.02		8.35	NL child	
2011	Rice	0.02	628							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

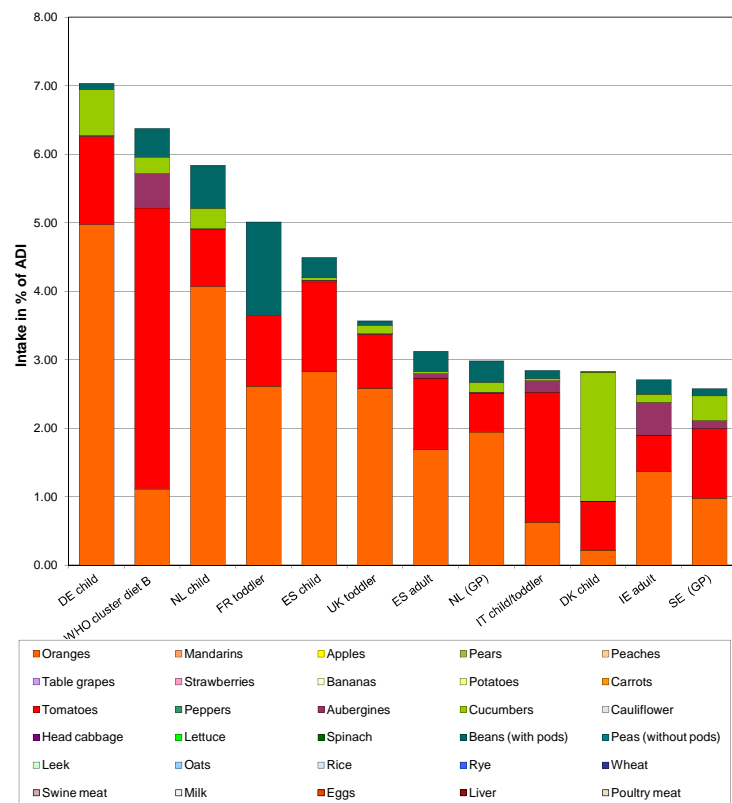
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

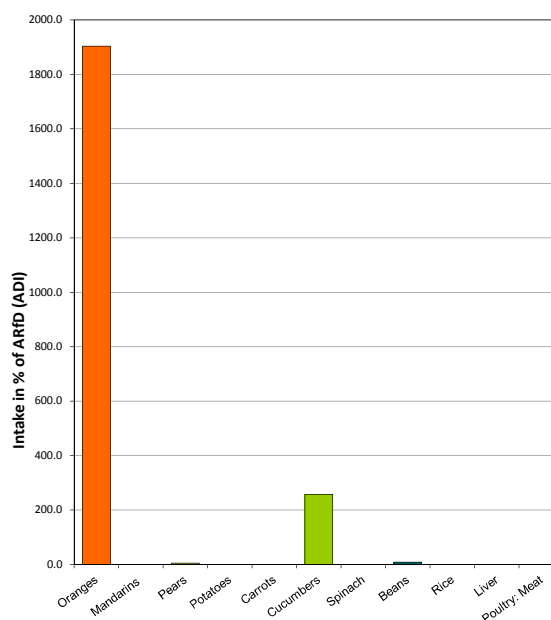
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Fenamiphos (RD)



Acute risk assessment: Fenamiphos (RD)



Fenarimol										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):				0.01		ARfD (mg/kg bw):		0.02		
Source of ADI:				COM		Source of ARfD:		COM		
Year of evaluation:				2006		Year of evaluation:		2006		

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	
	1.86		DE child	1.59	Apples	0.14	Table grapes	0.06	Strawberries	
	0.99		NL child	0.83	Apples	0.09	Table grapes	0.03	Strawberries	
	0.44		FR toddler	0.35	Apples	0.07	Strawberries	0.02	Table grapes	
	0.40		FR infant	0.33	Apples	0.06	Strawberries	0.01	Table grapes	
	0.39		DK child	0.31	Apples	0.02	Peppers	0.02	Table grapes	
	0.33		WHO cluster diet B	0.13	Apples	0.06	Peaches	0.05	Peppers	
	0.33		PL (GP)	0.27	Apples	0.04	Table grapes	0.01	Peppers	
	0.29		UK toddler	0.22	Apples	0.03	Table grapes	0.02	Strawberries	
	0.26		IE adult	0.11	Apples	0.08	Peaches	0.03	Table grapes	
	0.26		LT adult	0.25	Apples	0.01	Lettuce	0.00	Strawberries	
	0.24		ES child	0.15	Apples	0.04	Lettuce	0.03	Peaches	
	0.24		PT (GP)	0.14	Apples	0.05	Peaches	0.03	Table grapes	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1703	0.06		0.01		7.29	UK infant	
2011	Mandarins	0.02	1374							
2011	Pears	0.3	1952							
2011	Potatoes	0.02	2143	0.05		0.02		13.84	UK infant	
2011	Carrots	0.02	1592							
2011	Cucumbers	0.2	1683							
2011	Spinach	0.02	1088							
2011	Beans (with pods)	0.02	1282							
2011	Rice	0.02	969							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

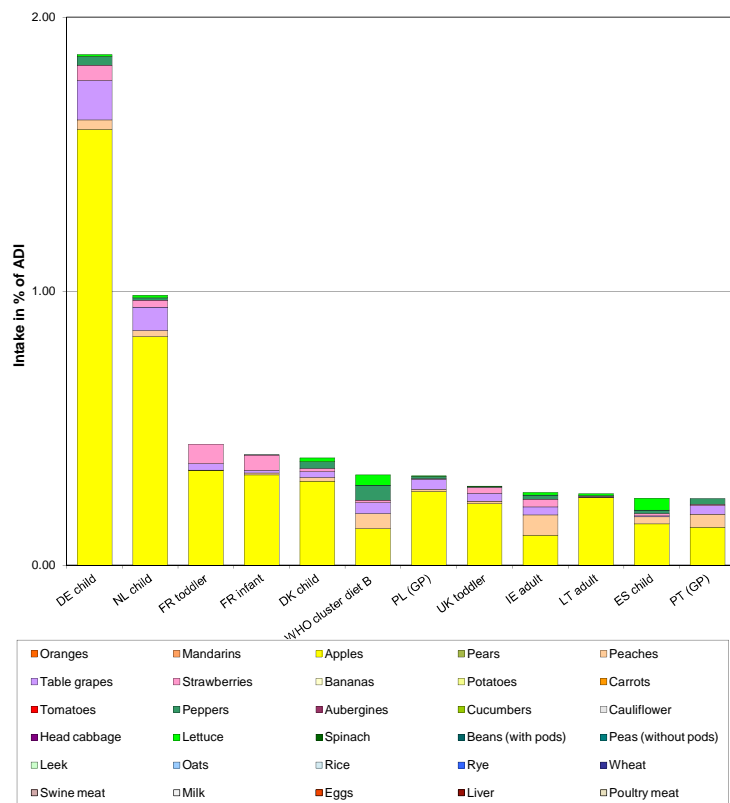
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

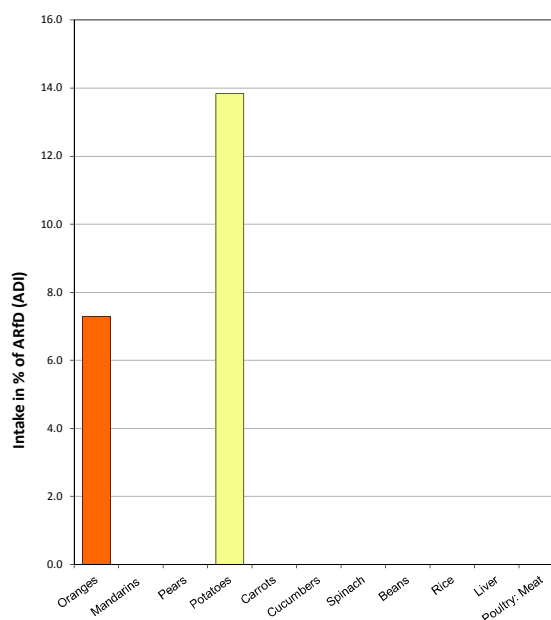
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Fenarimol



Acute risk assessment: Fenarimol



Fenazaquin			
Status of the active substance:		Approved	Monitoring year: 2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis? N
Toxicological end points			
ADI (mg/kg bw/day):		0.005	ARfD (mg/kg bw): 0.1
Source of ADI:		COM	Source of ARfD: COM
Year of evaluation:		2011	Year of evaluation: 2011

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	4.81	DE child	2.61	Apples	0.83	Oranges	0.31	Bananas
	3.19	NL child	1.37	Apples	0.68	Oranges	0.34	Bananas
	1.93	FR toddler	0.57	Apples	0.43	Oranges	0.26	Bananas
	1.71	WHO cluster diet B	0.64	Tomatoes	0.22	Apples	0.19	Oranges
	1.51	DK child	0.50	Apples	0.34	Cucumbers	0.23	Bananas
	1.40	ES child	0.47	Oranges	0.25	Apples	0.20	Tomatoes
	1.38	UK toddler	0.43	Oranges	0.37	Apples	0.21	Bananas
	1.32	FR infant	0.54	Apples	0.20	Oranges	0.17	Beans (with pods)
	1.28	IE adult	0.23	Oranges	0.18	Apples	0.16	Bananas
	1.28	SE (GP)	0.36	Bananas	0.23	Apples	0.16	Oranges
	1.11	UK infant	0.34	Apples	0.29	Bananas	0.28	Oranges
	1.00	IT child/toddler	0.30	Tomatoes	0.19	Apples	0.11	Bananas

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.5	1710	0.18		0.07		9.28	UK infant	
2011	Mandarins	0.5	1415	0.92		0.05		2.78	UK toddler	
2011	Pears	0.1	1670	0.12		0.03		2.55	DE child	
2011	Potatoes	0.01	1791							
2011	Carrots	0.01	1422							
2011	Cucumbers	0.2	1402	0.36		0.07		4.09	NL child	
2011	Spinach	0.01	915							
2011	Beans (with pods)	0.1	1140	0.18	0.09	0.27		3.06	NL child	
2011	Rice	0.01	864							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

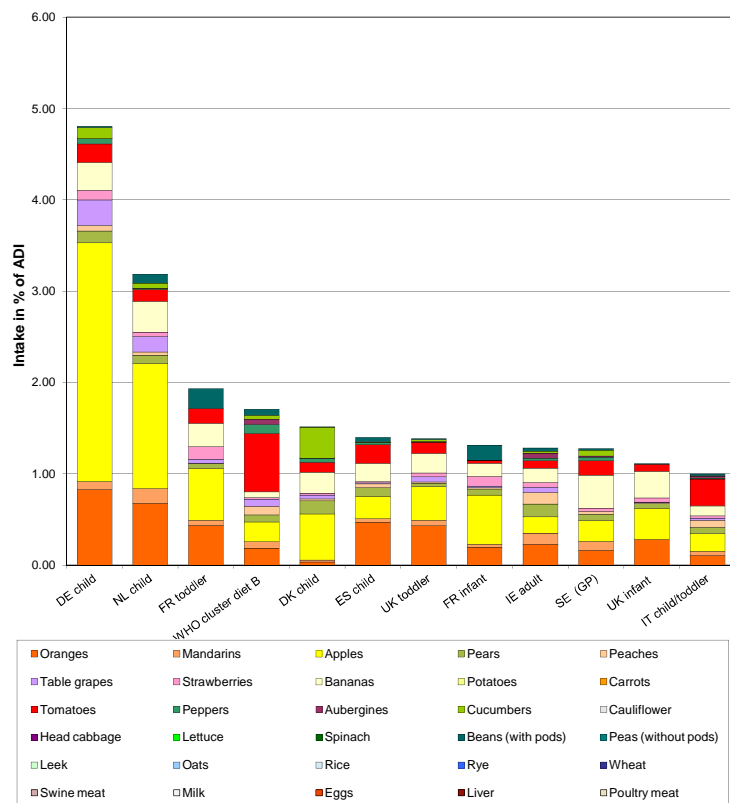
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

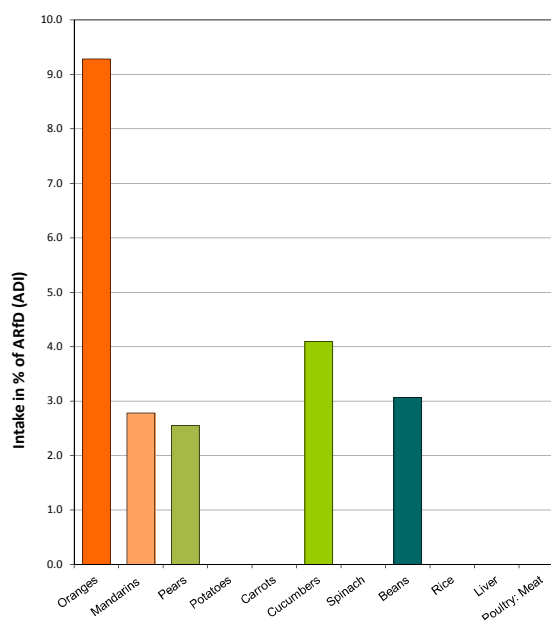
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported      <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Fenazaquin



Acute risk assessment: Fenazaquin



Fenbuconazole										
Status of the active substance:				Approved	Monitoring year:		2011			
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N			
Toxicological end points										
ADI (mg/kg bw/day):				0.006	ARfD (mg/kg bw):		0.3			
Source of ADI:				COM	Source of ARfD:		COM			
Year of evaluation:				2010	Year of evaluation:		2010			

Chronic risk assessment										
Year	Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)		
	Top 12 diets			Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities		
	4.10	DE child		2.75	Apples	0.83	Oranges	0.28	Table grapes	
	2.42	NL child		1.45	Apples	0.68	Oranges	0.17	Table grapes	
	1.13	FR toddler		0.60	Apples	0.43	Oranges	0.05	Table grapes	
	0.93	UK toddler		0.43	Oranges	0.39	Apples	0.06	Table grapes	
	0.89	ES child		0.47	Oranges	0.26	Apples	0.08	Pears	
	0.86	FR infant		0.57	Apples	0.20	Oranges	0.06	Pears	
	0.80	DK child		0.53	Apples	0.12	Pears	0.04	Table grapes	
	0.77	IE adult		0.23	Oranges	0.19	Apples	0.15	Peaches	
	0.75	WHO cluster diet B		0.23	Apples	0.19	Oranges	0.11	Peaches	
	0.70	UK infant		0.36	Apples	0.28	Oranges	0.05	Pears	
	0.70	NL (GP)		0.32	Oranges	0.27	Apples	0.05	Table grapes	
	0.62	PT (GP)		0.24	Apples	0.13	Oranges	0.09	Peaches	

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	1	1631	0.06		0.00		0.13	UK infant	
2011	Mandarins	0.05	1355							
2011	Pears	0.2	1638	0.18		0.03		0.91	DE child	
2011	Potatoes	0.05	1748							
2011	Carrots	0.05	1339							
2011	Cucumbers	0.2	1342							
2011	Spinach	0.05	904							
2011	Beans (with pods)	0.05	1139							
2011	Rice	0.05	851							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

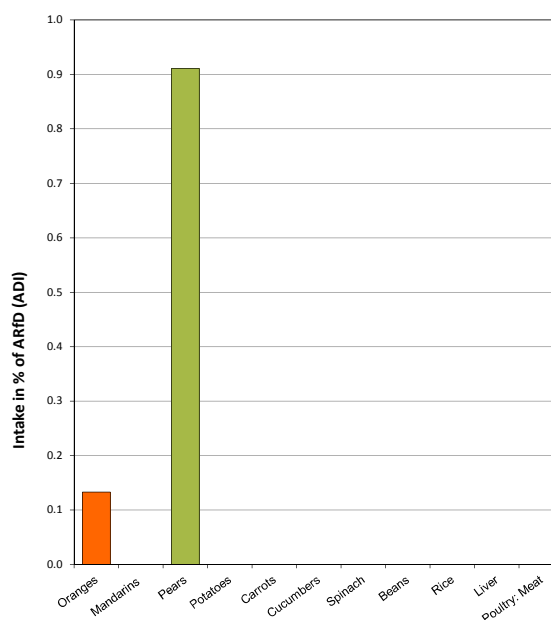
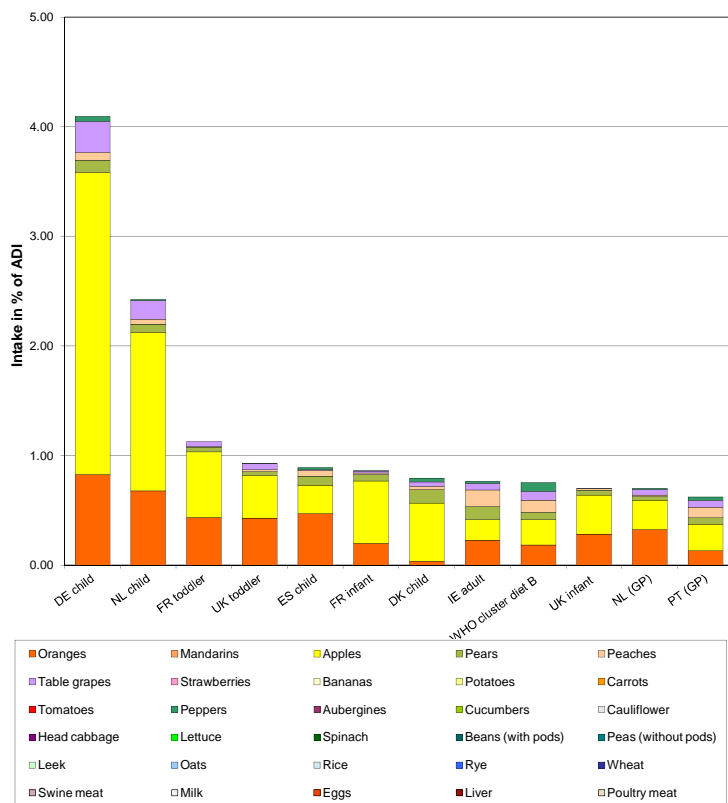
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported      <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Fenbuconazole

Acute risk assessment: Fenbuconazole





Fenbutatin oxide										
Status of the active substance:				Approved	Monitoring year:		2011			
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		Y			
Toxicological end points										
ADI (mg/kg bw/day):				0.05	ARfD (mg/kg bw):		0.1			
Source of ADI:				COM	Source of ARfD:		COM			
Year of evaluation:				2011	Year of evaluation:		2011			

Pesticide to be analysed on a voluntary basis only.

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	
	0.75		DE child	0.44	Apples	0.11	Table grapes	0.10	Oranges	
	0.48		NL child	0.23	Apples	0.08	Oranges	0.06	Table grapes	
	0.24		FR toddler	0.10	Apples	0.05	Oranges	0.04	Bananas	
	0.19		UK toddler	0.06	Apples	0.05	Oranges	0.03	Bananas	
	0.18		DK child	0.08	Apples	0.03	Bananas	0.03	Pears	
	0.18		ES child	0.06	Oranges	0.04	Apples	0.03	Bananas	
	0.18		FR infant	0.09	Apples	0.02	Oranges	0.02	Bananas	
	0.17		IE adult	0.03	Pears	0.03	Apples	0.03	Oranges	
	0.16		WHO cluster diet B	0.04	Apples	0.03	Table grapes	0.02	Oranges	
	0.15		UK infant	0.06	Apples	0.04	Bananas	0.03	Oranges	
	0.15		SE (GP)	0.05	Bananas	0.04	Apples	0.02	Oranges	
	0.13		NL (GP)	0.04	Apples	0.04	Oranges	0.02	Table grapes	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	5	699	2.72		0.65		86.34	UK infant	
2011	Mandarins	5	601	7.99		0.67		37.45	UK toddler	
2011	Pears	2	621	0.16		0.14		12.93	DE child	
2011	Potatoes	0.05	688							
2011	Carrots	0.05	571							
2011	Cucumbers	0.5	500							
2011	Spinach	0.05	397	0.25	0.25	0.53		11.98	BE child	
2011	Beans (with pods)	0.05	475	0.21		0.01		0.12	NL child	
2011	Rice	0.05	279							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

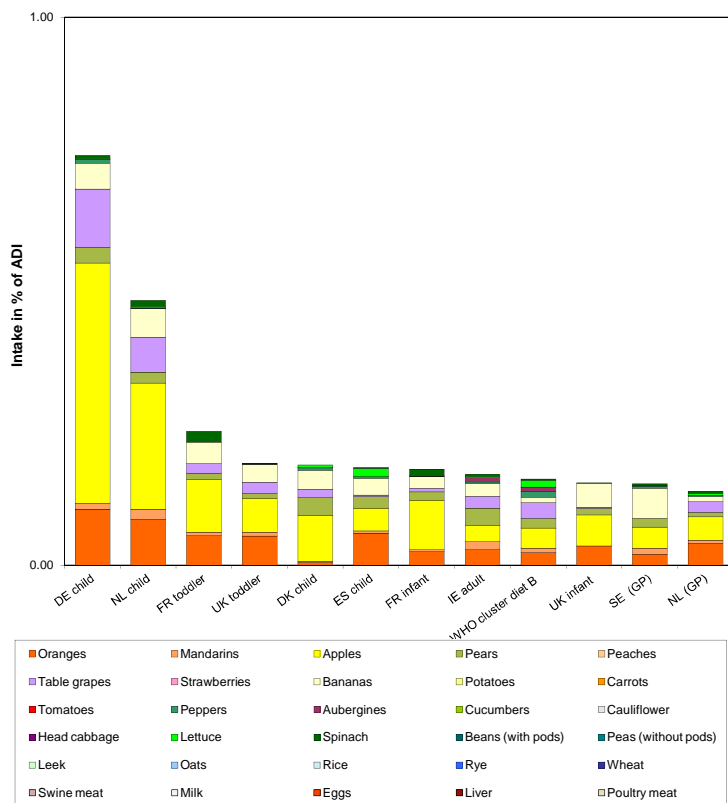
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

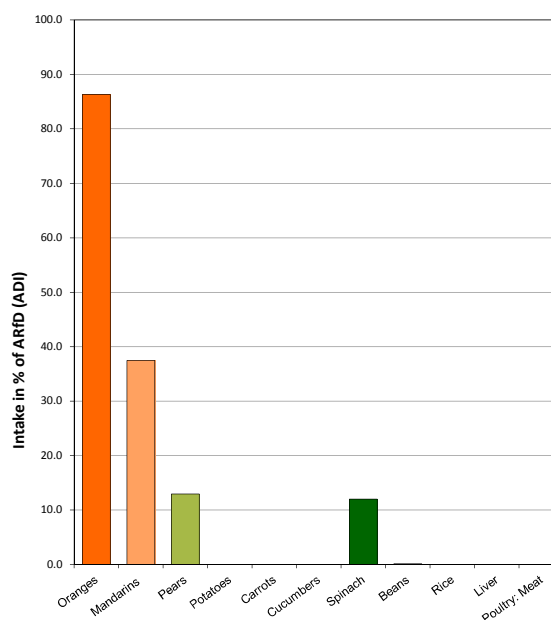
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Fenbutatin oxide



Acute risk assessment: Fenbutatin oxide



Fenhexamid										
Status of the active substance:				Approved	Monitoring year:		2011			
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N			
Toxicological end points										
ADI (mg/kg bw/day):				0.2	ARfD (mg/kg bw):		n.n.			
Source of ADI:				COM	Source of ARfD:		COM			
Year of evaluation:				2001	Year of evaluation:		2001			

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	
	0.32		DE child	0.11	Apples	0.07	Table grapes	0.04	Wheat	
	0.23		NL child	0.06	Apples	0.05	Wheat	0.04	Table grapes	
	0.19		WHO cluster diet B	0.08	Wheat	0.04	Tomatoes	0.02	Table grapes	
	0.15		FR toddler	0.03	Strawberries	0.03	Wheat	0.02	Apples	
	0.13		DK child	0.05	Wheat	0.02	Apples	0.01	Cucumbers	
	0.13		IT child/toddler	0.06	Wheat	0.02	Tomatoes	0.01	Apples	
	0.12		UK toddler	0.04	Wheat	0.02	Apples	0.01	Oranges	
	0.12		ES child	0.04	Wheat	0.02	Oranges	0.01	Tomatoes	
	0.11		IE adult	0.02	Wheat	0.02	Table grapes	0.01	Strawberries	
	0.10		WHO cluster diet D	0.06	Wheat	0.01	Tomatoes	0.01	Table grapes	
	0.10		IT adult	0.04	Wheat	0.01	Tomatoes	0.01	Lettuce	
	0.10		PT (GP)	0.04	Wheat	0.02	Table grapes	0.01	Tomatoes	

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.05	1901	0.26		0.05		not assessed		
2011	Mandarins	0.05	1539	0.19		0.01		not assessed		
2011	Pears	0.05	1961	0.15		0.03		not assessed		
2011	Potatoes	0.05	2162					not assessed		
2011	Carrots	0.05	1599	0.06		0.02		not assessed		
2011	Cucumbers	1	1643	1.58		0.15		not assessed		
2011	Spinach	0.05	1103	0.36		0.04		not assessed		
2011	Beans (with pods)	2	1300	0.69		0.08		not assessed		
2011	Rice	0.05	1063					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

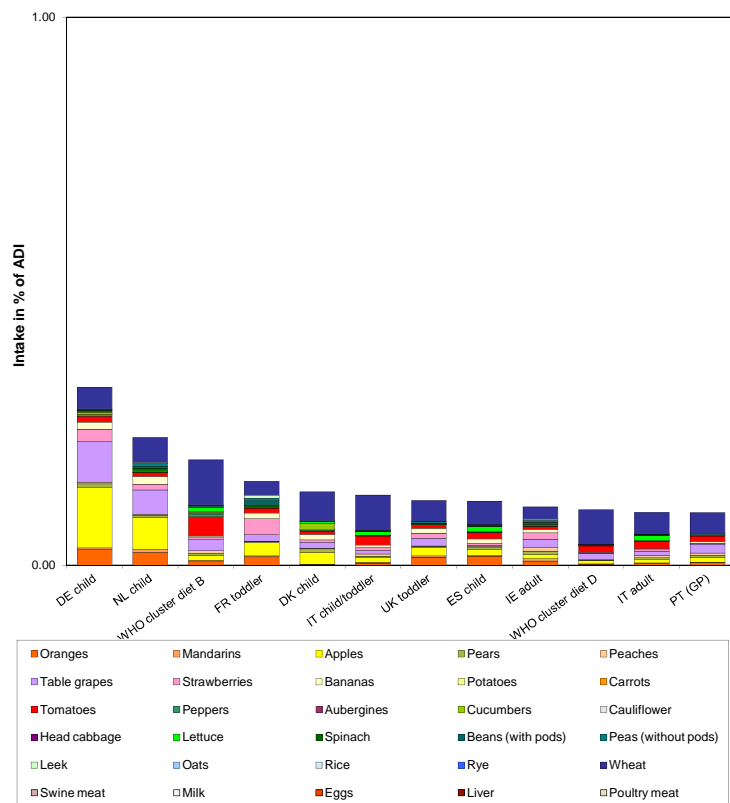
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

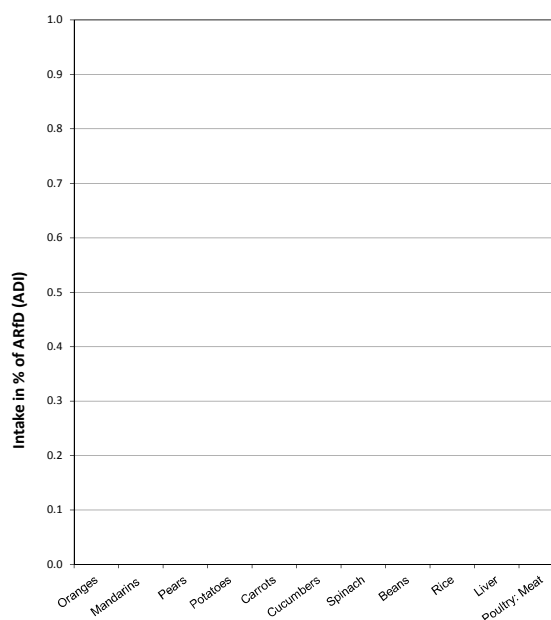
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Fenhexamid



Acute risk assessment: Fenhexamid



Fenitrothion									
Status of the active substance:				Not approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N		
Toxicological end points									
ADI (mg/kg bw/day):				0.005	ARfD (mg/kg bw):		0.013		
Source of ADI:				EFSA	Source of ARfD:		EFSA		
Year of evaluation:				2006	Year of evaluation:		2006		

Chronic risk assessment															
Highest calculated exposure in % of ADI				Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
Top 12 diets															
0.69				DE child		0.69		Oranges		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.57				NL child		0.57		Oranges		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.40				ES child		0.40		Oranges		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.36				FR toddler		0.36		Oranges		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.36				UK toddler		0.36		Oranges		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.27				NL (GP)		0.27		Oranges		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.24				UK infant		0.24		Oranges		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.24				ES adult		0.24		Oranges		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.19				IE adult		0.19		Oranges		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.18				FI adult		0.18		Oranges		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.17				FR infant		0.17		Oranges		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.16				WHO Cluster diet F		0.16		Oranges		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.01	1915	0.05	0.05	0.24	1	244.84	UK infant	
2011	Mandarins	0.01	1574							
2011	Pears	0.01	1967							
2011	Potatoes	0.01	2222							
2011	Carrots	0.01	1592							
2011	Cucumbers	0.01	1714							
2011	Spinach	0.01	1097							
2011	Beans (with pods)	0.01	1307							
2011	Rice	0.05	1073							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

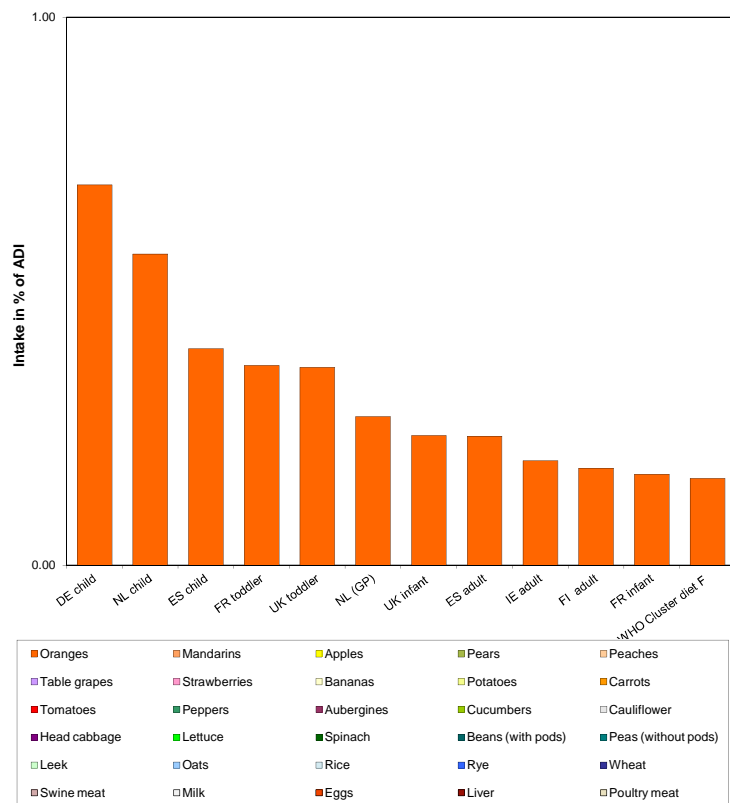
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

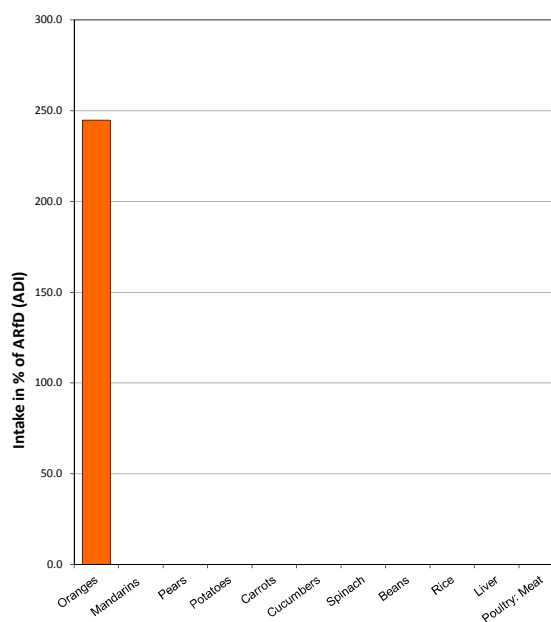
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported      <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Fenitrothion



Acute risk assessment: Fenitrothion



Fenoxycarb										
Status of the active substance:				Approved	Monitoring year:		2011			
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N			
Toxicological end points										
ADI (mg/kg bw/day):				0.053	ARfD (mg/kg bw):		2			
Source of ADI:				COM	Source of ARfD:		COM			
Year of evaluation:				2011	Year of evaluation:		2011			

Chronic risk assessment											
	Highest calculated exposure in % of ADI			Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.43	DE child		0.35	Apples	0.04	Table grapes	0.02	Pears		
	0.25	NL child		0.19	Apples	0.02	Table grapes	0.02	Mandarins		
	0.10	DK child		0.07	Apples	0.02	Pears	0.01	Table grapes		
	0.10	FR toddler		0.08	Apples	0.01	Pears	0.01	Table grapes		
	0.09	FR infant		0.07	Apples	0.01	Pears	0.00	Mandarins		
	0.08	IE adult		0.02	Apples	0.02	Pears	0.02	Peaches		
	0.08	PL (GP)		0.06	Apples	0.01	Table grapes	0.01	Pears		
	0.07	WHO cluster diet B		0.03	Apples	0.01	Peaches	0.01	Pears		
	0.07	UK toddler		0.05	Apples	0.01	Table grapes	0.01	Mandarins		
	0.06	PT (GP)		0.03	Apples	0.01	Peaches	0.01	Pears		
	0.06	LT adult		0.05	Apples	0.00	Pears	0.00	Table grapes		
	0.06	ES child		0.03	Apples	0.01	Pears	0.01	Peaches		

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	2	1724							
2011	Mandarins	2	1432	0.07		0.02		0.06	UK toddler	
2011	Pears	1	1739	3.45		0.30		1.37	DE child	
2011	Potatoes	0.05	1977							
2011	Carrots	0.05	1453							
2011	Cucumbers	0.05	1445							
2011	Spinach	0.05	998							
2011	Beans (with pods)	0.05	1192							
2011	Rice	0.05	874							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

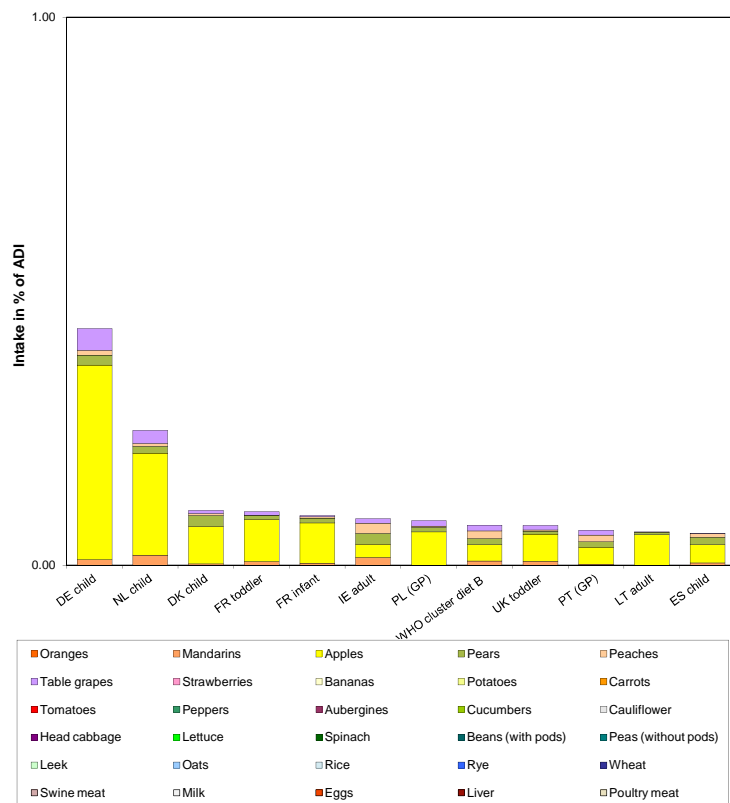
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

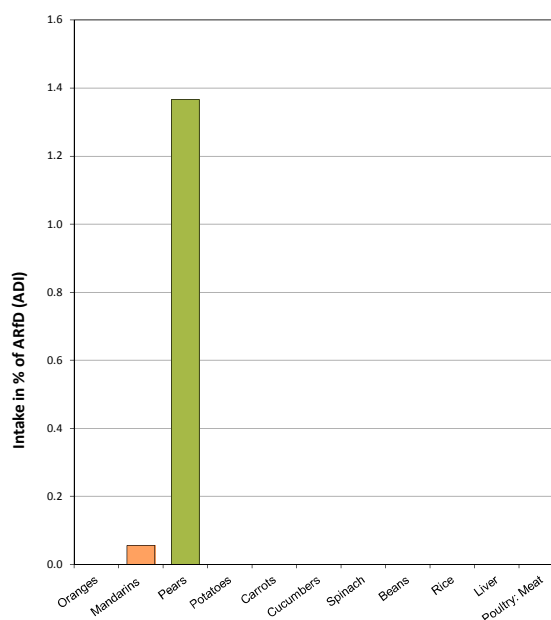
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Fenoxycarb



Acute risk assessment: Fenoxycarb



Fenpropathrin										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):				0.03		ARfD (mg/kg bw):		0.03		
Source of ADI:				JMPR		Source of ARfD:		JMPR		
Year of evaluation:				1993		Year of evaluation:		2012		

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	
	0.28		DE child	0.17	Oranges	0.04	Table grapes	0.03	Tomatoes	
	0.24		NL child	0.14	Oranges	0.03	Mandarins	0.02	Table grapes	
	0.19		FR toddler	0.09	Oranges	0.03	Beans (with pods)	0.02	Tomatoes	
	0.17		WHO cluster diet B	0.09	Tomatoes	0.04	Oranges	0.01	Mandarins	
	0.15		ES child	0.10	Oranges	0.03	Tomatoes	0.01	Beans (with pods)	
	0.14		UK toddler	0.09	Oranges	0.02	Tomatoes	0.01	Mandarins	
	0.11		NL (GP)	0.07	Oranges	0.01	Tomatoes	0.01	Mandarins	
	0.11		IE adult	0.05	Oranges	0.02	Mandarins	0.01	Tomatoes	
	0.10		ES adult	0.06	Oranges	0.02	Tomatoes	0.01	Beans (with pods)	
	0.10		FR infant	0.04	Oranges	0.03	Beans (with pods)	0.02	Strawberries	
	0.08		IT child/toddler	0.04	Tomatoes	0.02	Oranges	0.01	Mandarins	
	0.08		SE (GP)	0.03	Oranges	0.02	Tomatoes	0.02	Mandarins	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	2	1771	0.45		0.06		25.20	UK infant	
2011	Mandarins	2	1453	0.48		0.23		42.66	UK toddler	
2011	Pears	0.01	1743							
2011	Potatoes	0.01	1957							
2011	Carrots	0.01	1483							
2011	Cucumbers	0.01	1602							
2011	Spinach	0.01	992							
2011	Beans (with pods)	0.01	1207	0.08		0.01		0.38	NL child	
2011	Rice	0.01	964							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

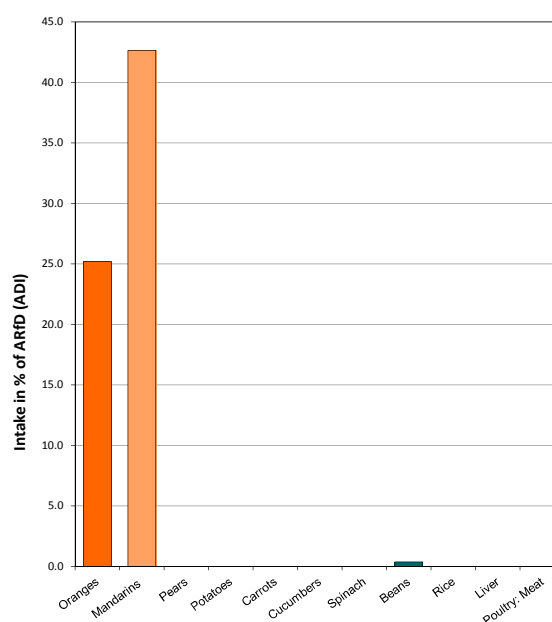
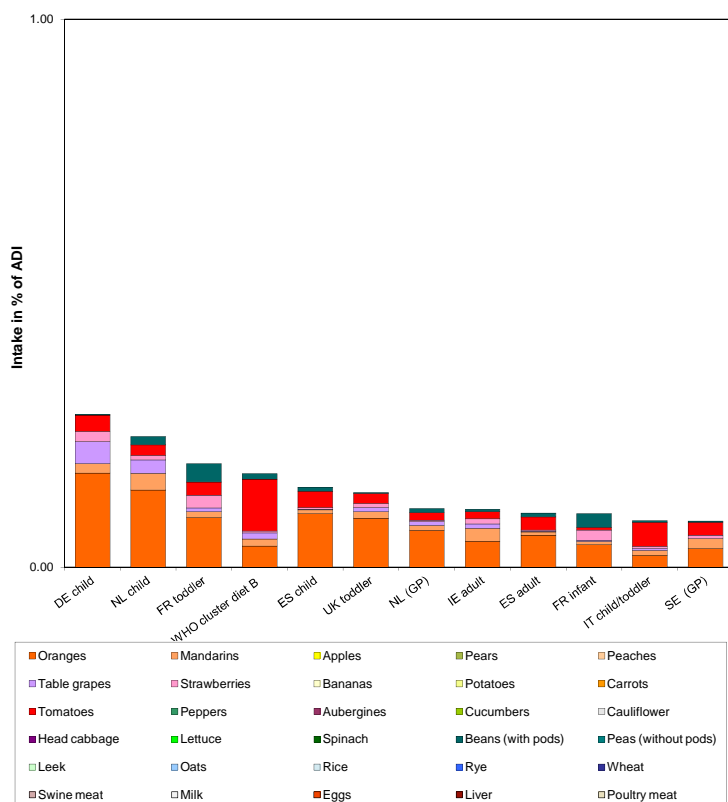
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Fenpropathrin

Acute risk assessment: Fenpropathrin



Fenpropimorph (RD)										
Status of the active substance:				Approved	Monitoring year:		2011			
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N			
Toxicological end points										
ADI (mg/kg bw/day):				0.003	ARfD (mg/kg bw):		0.03			
Source of ADI:				COM	Source of ARfD:		COM			
Year of evaluation:				2008	Year of evaluation:		2008			

Full residue definition: Fenpropimorph expressed as fenpropimorph. For products of animal origin-terrestrial animal: fenpropimorph carboxylic acid (BF 421-2) expressed as fenpropimorph

Chronic risk assessment										
Year	Highest calculated exposure in % of ADI		Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	7.78	DE child		4.71	Apples	1.73	Wheat	0.66	Bananas	
	5.68	NL child		2.47	Apples	1.99	Wheat	0.73	Bananas	
	4.32	WHO cluster diet B		3.58	Wheat	0.39	Apples	0.14	Bananas	
	3.84	DK child		2.31	Wheat	0.91	Apples	0.49	Bananas	
	3.45	IT child/toddler		2.79	Wheat	0.35	Apples	0.23	Bananas	
	3.37	FR toddler		1.10	Wheat	1.02	Apples	0.55	Bananas	
	3.12	WHO cluster diet D		2.73	Wheat	0.26	Apples	0.07	Table grapes	
	2.94	UK toddler		1.64	Wheat	0.67	Apples	0.46	Bananas	
	2.80	ES child		1.86	Wheat	0.45	Apples	0.43	Bananas	
	2.62	SE (GP)		1.34	Wheat	0.78	Bananas	0.41	Apples	
	2.42	UK infant		1.10	Wheat	0.63	Bananas	0.61	Apples	
	2.32	PT (GP)		1.64	Wheat	0.41	Apples	0.15	Bananas	

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.05	1589							
2011	Mandarins	0.05	1285							
2011	Pears	0.05	1495							
2011	Potatoes	0.05	1726							
2011	Carrots	0.05	1329							
2011	Cucumbers	0.05	1292							
2011	Spinach	0.05	880							
2011	Beans (with pods)	0.05	1085							
2011	Rice	0.05	819							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

Fenthion (RD)										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P, A		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):				0.007		ARfD (mg/kg bw):		0.01		
Source of ADI:				JMPR		Source of ARfD:		JMPR		
Year of evaluation:				2000		Year of evaluation:		2000		

Full residue definition: Fenthion (sum of fenthion and its oxygen analogue, their sulfoxides and sulfone expressed as fenthion)

Chronic risk assessment										
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities		
	0.62	DE child	0.56	Oranges	0.07	Mandarins		FRUIT (FRESH OR FROZEN)		
	0.58	NL child	0.46	Oranges	0.12	Mandarins		FRUIT (FRESH OR FROZEN)		
	0.34	ES child	0.32	Oranges	0.03	Mandarins		FRUIT (FRESH OR FROZEN)		
	0.34	FR toddler	0.29	Oranges	0.04	Mandarins		FRUIT (FRESH OR FROZEN)		
	0.34	UK toddler	0.29	Oranges	0.05	Mandarins		FRUIT (FRESH OR FROZEN)		
	0.25	NL (GP)	0.22	Oranges	0.03	Mandarins		FRUIT (FRESH OR FROZEN)		
	0.25	IE adult	0.15	Oranges	0.09	Mandarins		FRUIT (FRESH OR FROZEN)		
	0.21	ES adult	0.19	Oranges	0.02	Mandarins		FRUIT (FRESH OR FROZEN)		
	0.19	UK infant	0.19	Oranges		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		
	0.18	SE (GP)	0.11	Oranges	0.07	Mandarins		FRUIT (FRESH OR FROZEN)		
	0.18	WHO cluster diet B	0.12	Oranges	0.05	Mandarins		FRUIT (FRESH OR FROZEN)		
	0.16	FI adult	0.14	Oranges	0.02	Mandarins		FRUIT (FRESH OR FROZEN)		

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges		1480	0.20	0.20	0.10	2	131.29	UK infant	Liver (swine, bovine, sheep, goat, poultry)
2011	Mandarins		1256	0.40		0.23	1	127.99	UK toddler	
2011	Pears	0.01	1415							
2011	Potatoes	0.01	1599							
2011	Carrots	0.01	1249							
2011	Cucumbers	0.01	1295							
2011	Spinach	0.01	852							
2011	Beans (with pods)	0.01	1050							
2011	Rice	0.01	732							
2011	Liver	0.05	366							
2011	Poultry: Meat	0.05	346							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

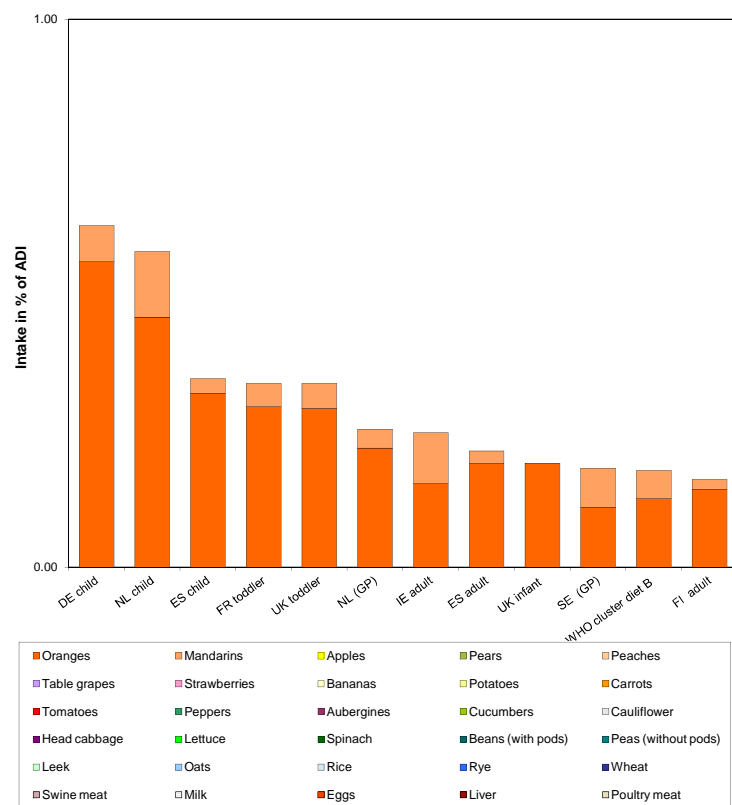
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

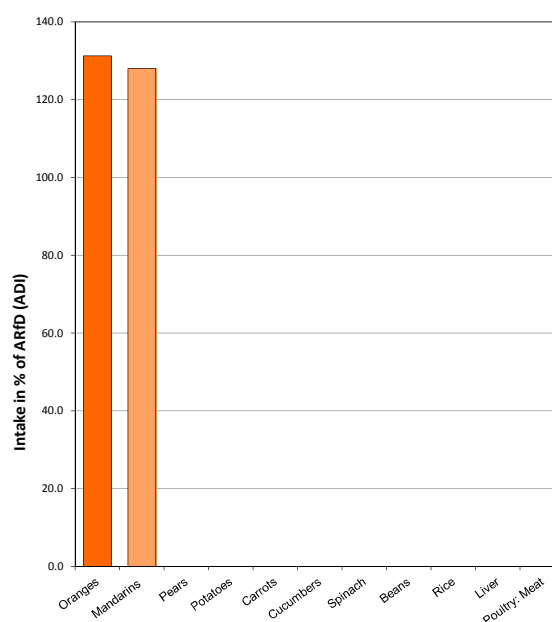
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Fenthion (RD)



Acute risk assessment: Fenthion (RD)



Fipronil (RD)										
Status of the active substance:				Approved	Monitoring year:		2011			
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N			
Toxicological end points										
ADI (mg/kg bw/day):				0.0002	ARfD (mg/kg bw):		0.009			
Source of ADI:				COM	Source of ARfD:		COM			
Year of evaluation:				2007	Year of evaluation:		2007			

Full residue definition: Fipronil (sum fipronil + sulfone metabolite (MB46136) expressed as fipronil)										
Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	
	19.97		FR toddler	13.72	Carrots	6.26	Bananas			FRUIT (FRESH OR FROZEN)
	18.33		FR infant	14.87	Carrots	3.47	Bananas			FRUIT (FRESH OR FROZEN)
	14.49		UK infant	7.42	Carrots	7.07	Bananas			FRUIT (FRESH OR FROZEN)
	13.51		SE (GP)	8.74	Bananas	4.76	Carrots			FRUIT (FRESH OR FROZEN)
	13.26		DE child	7.49	Bananas	5.77	Carrots			FRUIT (FRESH OR FROZEN)
	13.23		DK child	7.71	Carrots	5.52	Bananas			FRUIT (FRESH OR FROZEN)
	11.07		NL child	8.25	Bananas	2.82	Carrots			FRUIT (FRESH OR FROZEN)
	8.13		UK toddler	5.20	Bananas	2.92	Carrots			FRUIT (FRESH OR FROZEN)
	5.90		ES child	4.89	Bananas	1.01	Carrots			FRUIT (FRESH OR FROZEN)
	5.57		IE adult	3.77	Bananas	1.80	Carrots			FRUIT (FRESH OR FROZEN)
	5.38		WHO Cluster diet F	2.73	Bananas	2.66	Carrots			FRUIT (FRESH OR FROZEN)
	5.38		PT (GP)	3.74	Carrots	1.64	Bananas			FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.005	1226							
2011	Mandarins	0.005	1055							
2011	Pears	0.005	1145							
2011	Potatoes	0.01	1316							
2011	Carrots	0.005	1038		0.29	0.01		6.34	UK infant	
2011	Cucumbers	0.005	1036							
2011	Spinach	0.005	659							
2011	Beans (with pods)	0.005	853		0.23	0.10		12.61	NL child	
2011	Rice	0.005	538							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

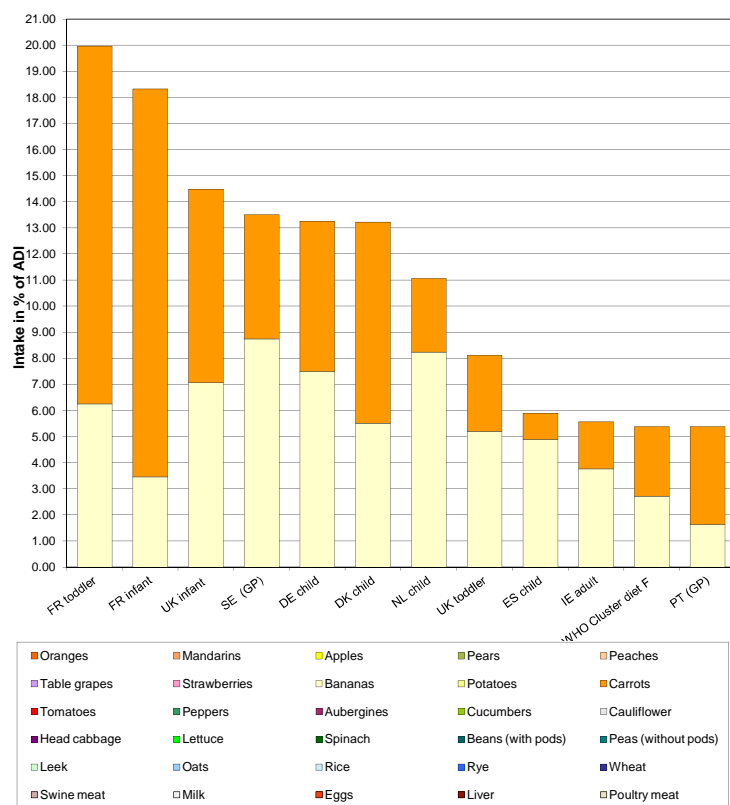
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

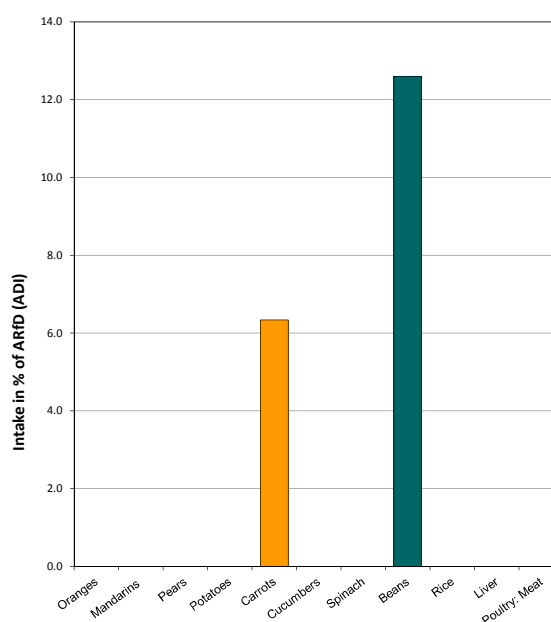
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported      <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Fipronil (RD)



Acute risk assessment: Fipronil (RD)





Fluazifop-P-butyl (RD)			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	Y
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARfD (mg/kg bw):	0.017
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2011	Year of evaluation:	2011

The tox. values are expressed as fluazifop acid to match with the residue definition. Pesticide to be analysed on a voluntary basis only.

Full residue definition: Fluazifop-P-butyl (fluazifop acid (free and conjugate))

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.76	FR toddler	0.48	Potatoes	0.10	Beans (with pods)	0.10	Spinach
	0.69	NL child	0.56	Potatoes	0.05	Spinach	0.04	Beans (with pods)
	0.60	FR infant	0.39	Potatoes	0.07	Beans (with pods)	0.07	Strawberries
	0.51	PT (GP)	0.51	Potatoes	0.01	Strawberries		FRUIT (FRESH OR FROZEN)
	0.43	SE (GP)	0.40	Potatoes	0.02	Strawberries	0.01	Spinach
	0.42	WHO regional diet	0.38	Potatoes	0.02	Beans (with pods)	0.01	Strawberries
	0.41	WHO cluster diet E	0.36	Potatoes	0.02	Beans (with pods)	0.01	Strawberries
	0.39	WHO cluster diet D	0.39	Potatoes	0.00	Strawberries	0.00	Beans (with pods)
	0.37	UK toddler	0.33	Potatoes	0.03	Strawberries	0.00	Beans (with pods)
	0.34	DE child	0.24	Potatoes	0.07	Strawberries	0.03	Spinach
	0.34	UK infant	0.31	Potatoes	0.03	Strawberries	0.00	Beans (with pods)
	0.33	WHO Cluster diet F	0.32	Potatoes	0.01	Strawberries	0.00	Spinach

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.1	629							
2011	Mandarins	0.2	548							
2011	Pears	0.2	574							
2011	Potatoes	0.1	719	0.14		0.03		27.13	UK infant	
2011	Carrots	0.3	540	0.19		0.04		14.17	UK infant	
2011	Cucumbers	0.2	546	0.18		0.01		3.44	NL child	
2011	Spinach	1	363	2.48		0.33		43.87	BE child	
2011	Beans (with pods)	1	405	0.74		0.05		3.00	NL child	
2011	Rice	0.1	416							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

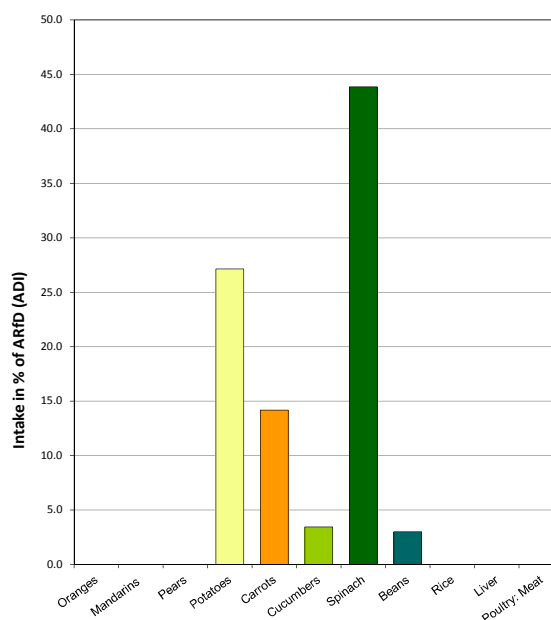
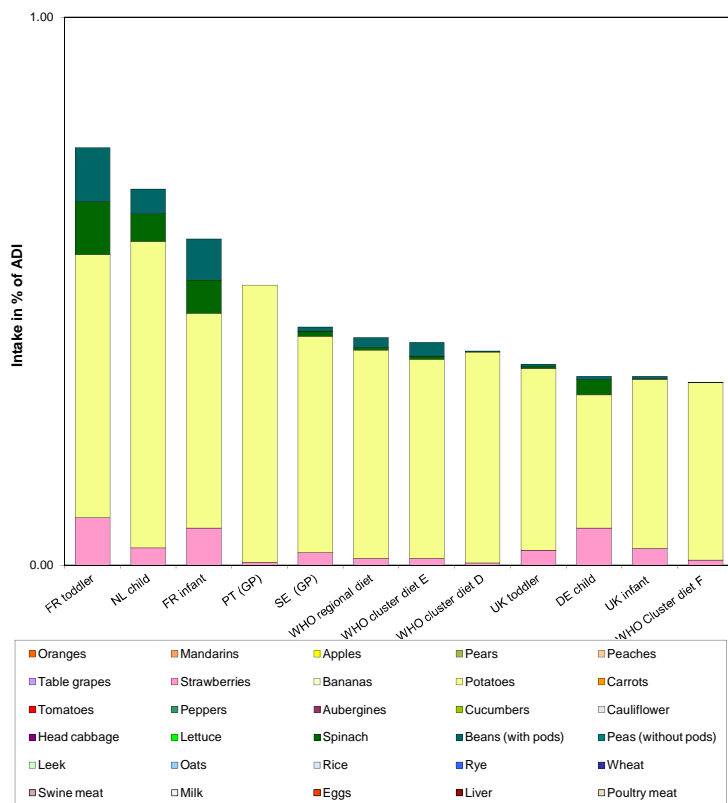
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Fluazifop-P-butyl (RD)

Acute risk assessment: Fluazifop-P-butyl (RD)



Fludioxonil										
Status of the active substance:				Approved	Monitoring year:		2011			
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N			
Toxicological end points										
ADI (mg/kg bw/day):				0.37	ARfD (mg/kg bw):		n.n.			
Source of ADI:				COM	Source of ARfD:		COM			
Year of evaluation:				2007	Year of evaluation:		2007			

Chronic risk assessment																	
	Highest calculated exposure in % of ADI			Top 12 diets		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
		0.12		DE child		0.06		Apples		0.01		Oranges		0.01		Table grapes	
		0.09		NL child		0.03		Apples		0.02		Potatoes		0.01		Oranges	
		0.07		FR toddler		0.02		Potatoes		0.01		Apples		0.01		Carrots	
		0.06		FR infant		0.01		Potatoes		0.01		Apples		0.01		Carrots	
		0.05		WHO cluster diet B		0.01		Tomatoes		0.01		Potatoes		0.01		Lettuce	
		0.04		DK child		0.01		Apples		0.01		Potatoes		0.01		Cucumbers	
		0.04		UK toddler		0.01		Potatoes		0.01		Apples		0.01		Oranges	
		0.04		PT (GP)		0.02		Potatoes		0.01		Apples		0.00		Tomatoes	
		0.04		IE adult		0.01		Potatoes		0.00		Apples		0.00		Peaches	
		0.04		WHO regional diet		0.01		Potatoes		0.01		Lettuce		0.00		Tomatoes	
		0.04		ES child		0.01		Oranges		0.01		Potatoes		0.01		Lettuce	
		0.04		UK infant		0.01		Potatoes		0.01		Apples		0.00		Oranges	

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	7	1867	0.11		0.07		not assessed		
2011	Mandarins	7	1535	0.65		1.11		not assessed		
2011	Pears	5	1805	10.75		1.70		not assessed		
2011	Potatoes	1	2100	0.14		0.02		not assessed		
2011	Carrots	1	1527	0.39		0.02		not assessed		
2011	Cucumbers	1	1579	2.98		0.24		not assessed		
2011	Spinach	7	1035	0.48		0.04		not assessed		
2011	Beans (with pods)	1	1233	1.62		0.08		not assessed		
2011	Rice	0.05	981					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

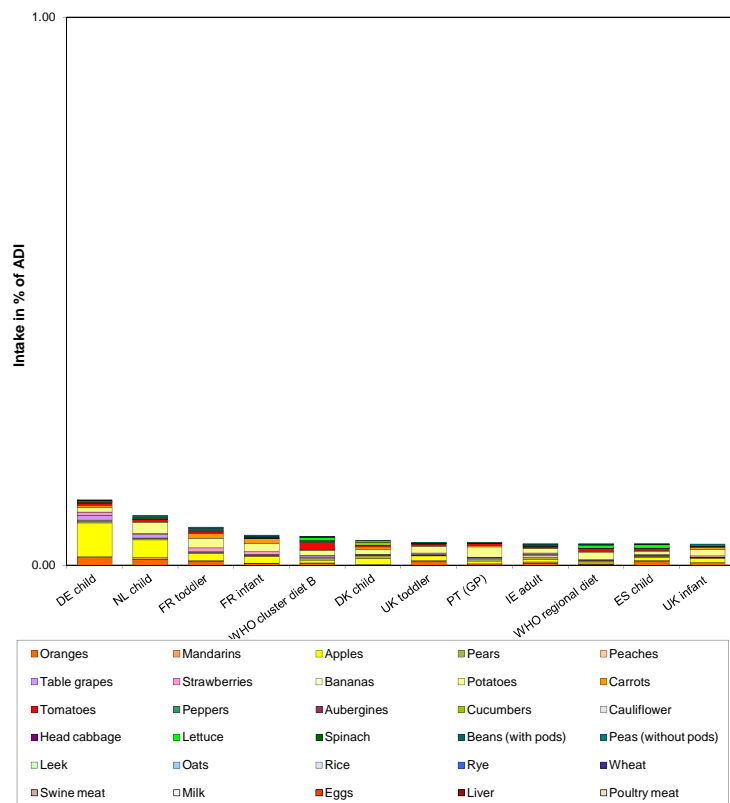
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

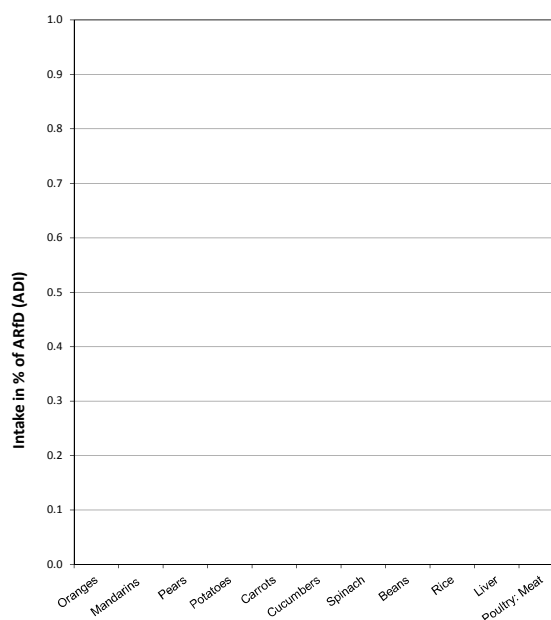
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Fludioxonil



Acute risk assessment: Fludioxonil



Flufenoxuron										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):				0.01		ARfD (mg/kg bw):		n.n.		
Source of ADI:				EFSA		Source of ARfD:		EFSA		
Year of evaluation:				2011		Year of evaluation:		2011		

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	
	1.82		DE child	1.49	Apples	0.19	Table grapes	0.08	Pears	
	1.03		NL child	0.78	Apples	0.11	Table grapes	0.06	Beans (with pods)	
	0.58		FR toddler	0.32	Apples	0.12	Beans (with pods)	0.07	Strawberries	
	0.51		FR infant	0.31	Apples	0.09	Beans (with pods)	0.06	Strawberries	
	0.41		DK child	0.29	Apples	0.08	Pears	0.03	Table grapes	
	0.34		PL (GP)	0.25	Apples	0.05	Table grapes	0.03	Pears	
	0.30		UK toddler	0.21	Apples	0.04	Table grapes	0.02	Strawberries	
	0.27		IE adult	0.10	Apples	0.08	Pears	0.04	Table grapes	
	0.27		WHO cluster diet B	0.12	Apples	0.05	Table grapes	0.05	Pears	
	0.26		UK infant	0.19	Apples	0.03	Pears	0.02	Strawberries	
	0.26		LT adult	0.23	Apples	0.02	Pears	0.00	Strawberries	
	0.24		NL (GP)	0.15	Apples	0.03	Table grapes	0.03	Beans (with pods)	

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.3	1552					not assessed		
2011	Mandarins	0.3	1263					not assessed		
2011	Pears	0.5	1501	2.53		0.11		not assessed		
2011	Potatoes	0.05	1577					not assessed		
2011	Carrots	0.05	1285					not assessed		
2011	Cucumbers	0.2	1213	0.08		0.01		not assessed		
2011	Spinach	0.05	838					not assessed		
2011	Beans (with pods)	0.5	1055	0.28		0.05		not assessed		
2011	Rice	0.05	776					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

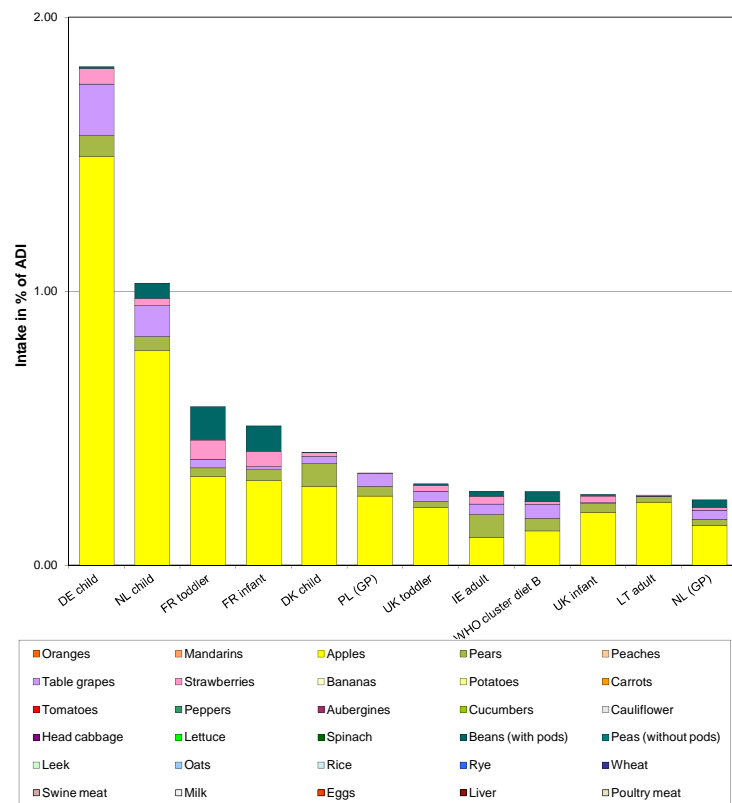
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

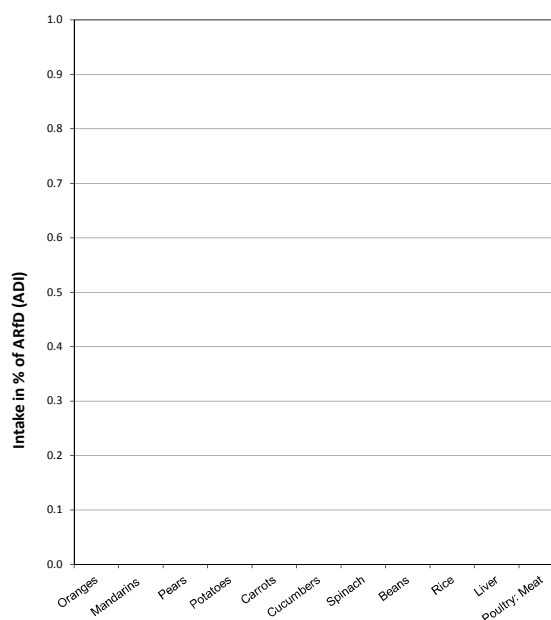
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Flufenoxuron



Acute risk assessment: Flufenoxuron



Fluquinconazole										
Status of the active substance:				Approved	Monitoring year:		2011			
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N			
Toxicological end points										
ADI (mg/kg bw/day):				0.002	ARfD (mg/kg bw):		0.02			
Source of ADI:				COM	Source of ARfD:		COM			
Year of evaluation:				2011	Year of evaluation:		2011			

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	
	8.99		DE child	7.97	Apples	0.88	Table grapes	0.14	Spinach	
	4.96		NL child	4.18	Apples	0.52	Table grapes	0.26	Spinach	
	2.37		FR toddler	1.73	Apples	0.49	Spinach	0.14	Table grapes	
	2.01		FR infant	1.65	Apples	0.31	Spinach	0.05	Table grapes	
	1.66		DK child	1.53	Apples	0.13	Table grapes		FRUIT (FRESH OR FROZEN)	
	1.57		PL (GP)	1.35	Apples	0.22	Table grapes	0.00	Spinach	
	1.32		UK toddler	1.13	Apples	0.17	Table grapes	0.02	Spinach	
	1.24		LT adult	1.23	Apples	0.01	Table grapes		FRUIT (FRESH OR FROZEN)	
	1.06		UK infant	1.03	Apples	0.02	Table grapes	0.01	Spinach	
	1.04		NL (GP)	0.78	Apples	0.16	Table grapes	0.10	Spinach	
	0.96		WHO cluster diet B	0.67	Apples	0.24	Table grapes	0.06	Spinach	
	0.89		PT (GP)	0.69	Apples	0.19	Table grapes		FRUIT (FRESH OR FROZEN)	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05	1583	0.07		0.02		8.20	DE child	
2011	Mandarins	0.05	1310							
2011	Pears	0.2	1532							
2011	Potatoes	0.05	1861							
2011	Carrots	0.05	1332	0.11		0.01		0.90	BE child	
2011	Cucumbers	0.05	1338							
2011	Spinach	0.05	879							
2011	Beans (with pods)	0.05	991							
2011	Rice	0.05	892	0.10		0.02		1.08	NL child	
2011	Liver									
2011	Poultry: Meat									
2011										

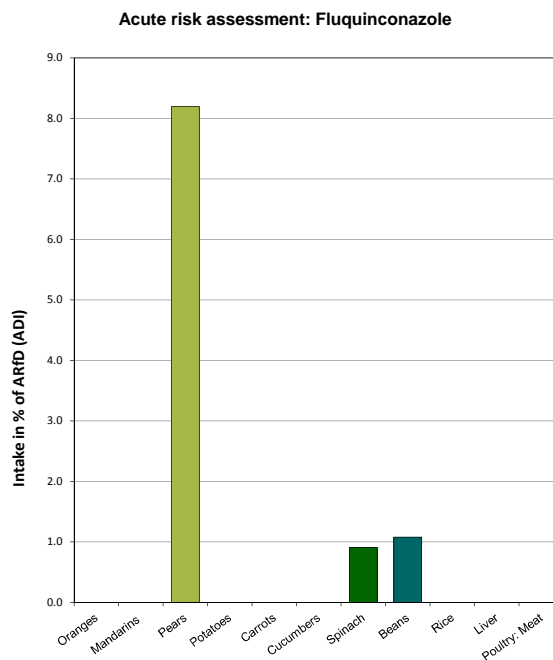
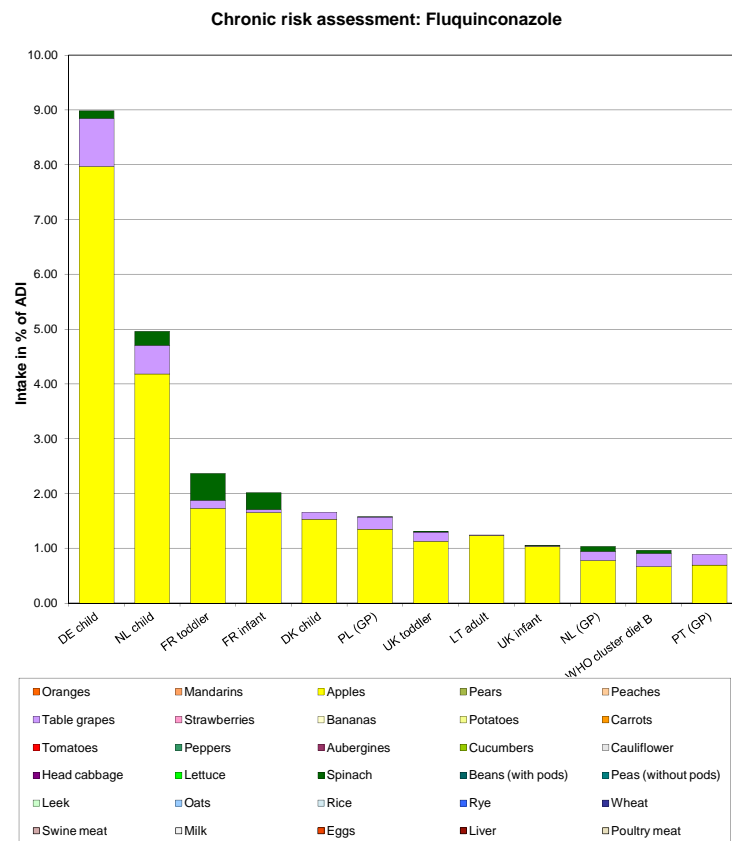
<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported      <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.



Flusilazole (RD)									
Status of the active substance:				Not approved		Monitoring year:		2011	
To be analysed in plant (P) or animal (A) products				P		Analysis on voluntary basis?		N	
Toxicological end points									
ADI (mg/kg bw/day):				0.002		ARfD (mg/kg bw):		0.005	
Source of ADI:				COM		Source of ARfD:		COM	
Year of evaluation:				2007		Year of evaluation:		2007	

Full residue definition: Flusilazole expressed as flusilazole. For products of animal origin-terrestrial animal: sum of flusilazole and its metabolite IN-F7321 ([bis-(4-fluorophenyl)methyl]silanol) expressed as flusilazole

Chronic risk assessment									
	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	1.20		DE child	0.71	Table grapes	0.16	Peppers	0.15	Peaches
	1.17		WHO cluster diet B	0.29	Rice	0.28	Peppers	0.23	Peaches
	1.02		NL child	0.43	Table grapes	0.27	Beans (with pods)	0.19	Rice
	0.92		FR toddler	0.60	Beans (with pods)	0.19	Rice	0.12	Table grapes
	0.89		PT (GP)	0.43	Rice	0.20	Peaches	0.16	Table grapes
	0.72		IE adult	0.32	Peaches	0.15	Table grapes	0.09	Rice
	0.59		FR infant	0.46	Beans (with pods)	0.05	Rice	0.04	Table grapes
	0.58		ES child	0.26	Rice	0.13	Beans (with pods)	0.11	Peaches
	0.53		UK toddler	0.31	Rice	0.14	Table grapes	0.04	Peaches
	0.51		WHO regional diet	0.12	Peaches	0.11	Beans (with pods)	0.11	Rice
	0.51		WHO cluster diet D	0.30	Rice	0.11	Table grapes	0.06	Peppers
	0.50		IT adult	0.21	Peaches	0.10	Rice	0.08	Beans (with pods)

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.1	1723							
2011	Mandarins	0.1	1419							
2011	Pears	0.02	1732							
2011	Potatoes	0.02	1976							
2011	Carrots	0.02	1421							
2011	Cucumbers	0.02	1472							
2011	Spinach	0.02	977							
2011	Beans (with pods)	0.02	1191	0.25		0.02		4.54	NL child	
2011	Rice	0.02	975	0.21		0.02		5.04	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

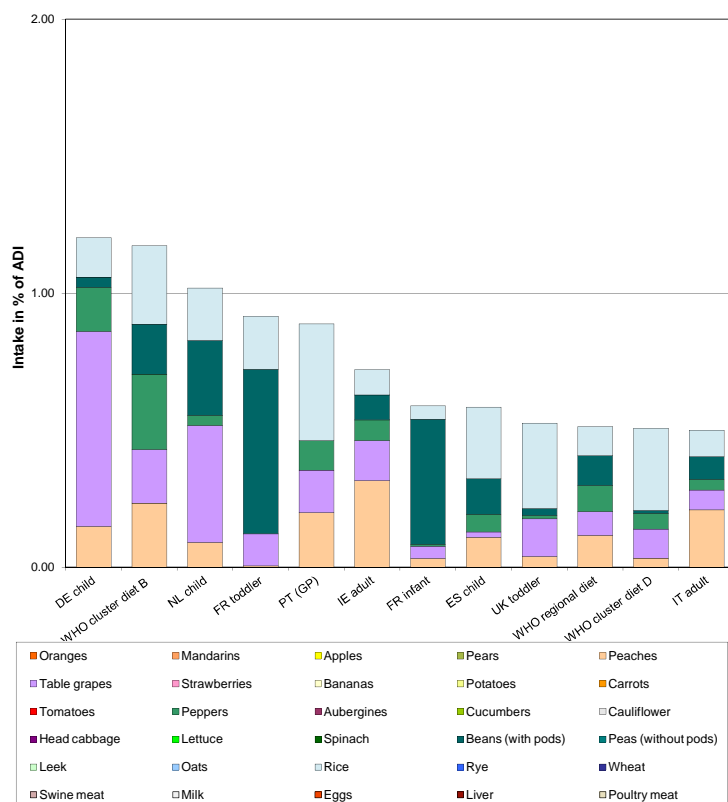
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

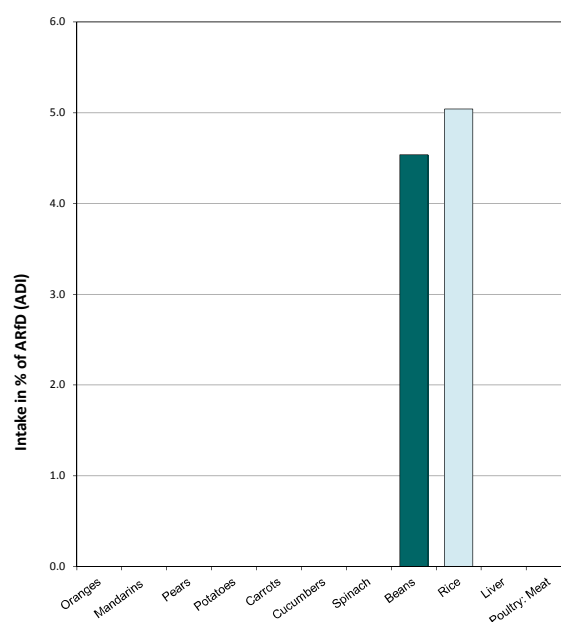
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported. <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Flusilazole (RD)



Acute risk assessment: Flusilazole (RD)



Flutriafol					
Status of the active substance:		Approved	Monitoring year:		2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?		N
Toxicological end points					
ADI (mg/kg bw/day):		0.01	ARfD (mg/kg bw):		0.05
Source of ADI:		COM	Source of ARfD:		COM
Year of evaluation:		2011	Year of evaluation:		2011

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets			Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
2.33 DE child			1.58 Apples		0.15 Table grapes		0.15 Carrots	
1.43 NL child			0.83 Apples		0.12 Mandarins		0.09 Table grapes	
1.22 FR toddler			0.36 Carrots		0.34 Apples		0.14 Beans (with pods)	
1.01 FR infant			0.39 Carrots		0.33 Apples		0.11 Beans (with pods)	
0.93 WHO cluster diet B			0.38 Tomatoes		0.13 Apples		0.08 Peppers	
0.89 DK child			0.31 Apples		0.20 Carrots		0.20 Cucumbers	
0.59 SE (GP)			0.14 Apples		0.13 Carrots		0.09 Tomatoes	
0.58 UK toddler			0.22 Apples		0.08 Carrots		0.07 Rice	
0.57 UK infant			0.21 Apples		0.20 Carrots		0.08 Rice	
0.53 PT (GP)			0.14 Apples		0.11 Tomatoes		0.10 Rice	
0.52 ES child			0.15 Apples		0.12 Tomatoes		0.06 Rice	
0.49 PL (GP)			0.27 Apples		0.11 Tomatoes		0.05 Carrots	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.2	1474							
2011	Mandarins	0.2	1168	0.68		0.04		4.79	UK toddler	
2011	Pears	0.05	1523							
2011	Potatoes	0.2	1803							
2011	Carrots	0.2	1358	0.15		0.02		3.04	UK infant	
2011	Cucumbers	0.05	1367	0.07		0.02		2.34	NL child	
2011	Spinach	0.05	902	0.22		0.03		1.45	BE child	
2011	Beans (with pods)	0.05	1100	0.09	0.09	0.10		2.20	NL child	
2011	Rice	0.5	871	0.34		0.10		2.52	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

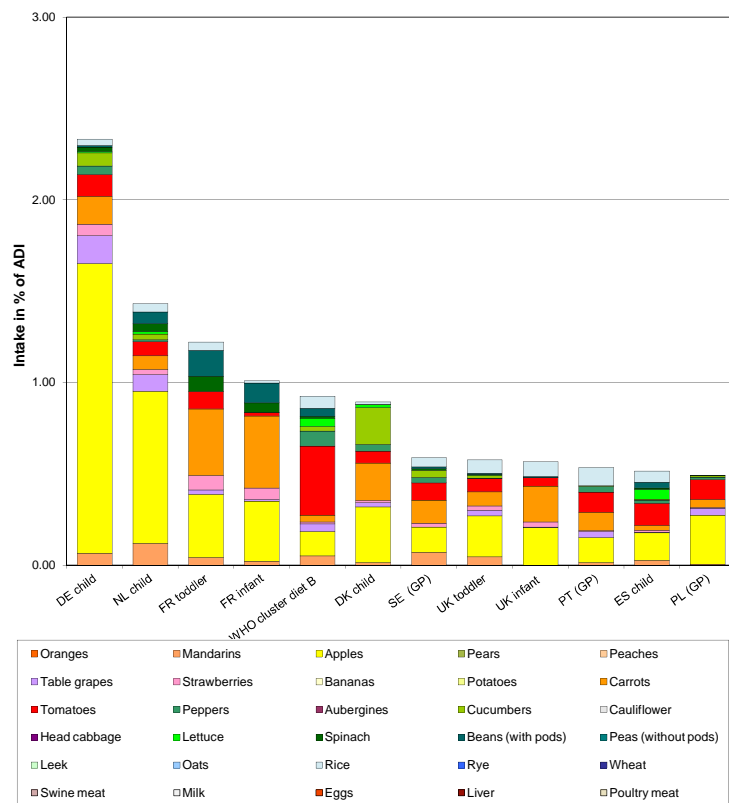
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

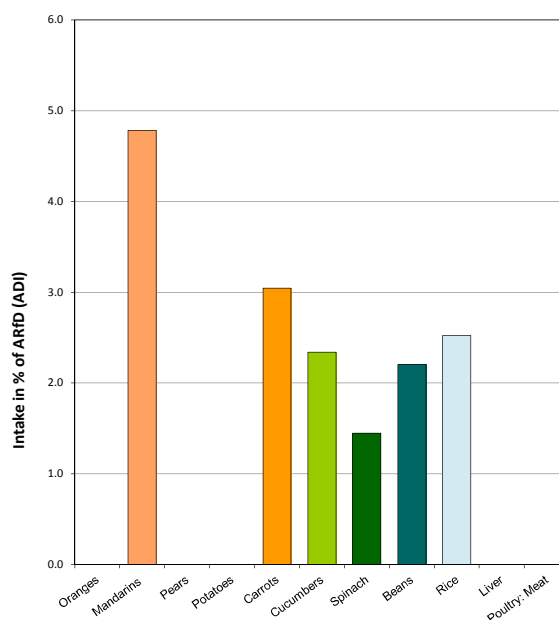
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Flutriafol



Acute risk assessment: Flutriafol



Folpet (RD)									
Status of the active substance:				Approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N		
Toxicological end points									
ADI (mg/kg bw/day):				0.1	ARfD (mg/kg bw):		0.2		
Source of ADI:				EFSA	Source of ARfD:		EFSA		
Year of evaluation:				2013	Year of evaluation:		2013		

Full residue definition: Folpet expressed as folpet. For products pome fruit, strawberries, blackberries, raspberries, currants, gooseberries, tomatoes, beans (with and without pods): the sum of captan and folpet											
Chronic risk assessment											
	Highest calculated exposure in % of ADI			Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.49	DE child			0.38	Apples	0.03	Tomatoes	0.02	Pears	
	0.29	NL child			0.20	Apples	0.02	Tomatoes	0.02	Pears	
	0.19	FR toddler			0.08	Apples	0.03	Beans (with pods)	0.02	Tomatoes	
	0.19	WHO cluster diet B			0.09	Tomatoes	0.03	Apples	0.02	Lettuce	
	0.15	FR infant			0.08	Apples	0.02	Beans (with pods)	0.02	Strawberries	
	0.15	DK child			0.07	Apples	0.03	Pears	0.02	Cucumbers	
	0.12	ES child			0.04	Apples	0.03	Tomatoes	0.02	Pears	
	0.11	IT child/toddler			0.04	Tomatoes	0.03	Apples	0.01	Pears	
	0.11	PL (GP)			0.06	Apples	0.03	Tomatoes	0.01	Pears	
	0.10	IT adult			0.04	Tomatoes	0.02	Apples	0.02	Lettuce	
	0.10	ES adult			0.02	Apples	0.02	Tomatoes	0.02	Lettuce	
	0.10	IE adult			0.03	Pears	0.03	Apples	0.01	Tomatoes	

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARfD) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.02	1370							
2011	Mandarins	0.02	1122							
2011	Pears	3	962	16.84	0.10	3.86		175.77	DE child	
2011	Potatoes	0.1	1714							
2011	Carrots	0.02	1256		0.08	0.11		3.49	UK infant	
2011	Cucumbers	0.02	1384	0.07		0.01		0.41	NL child	
2011	Spinach	10	898	0.33		0.72		8.08	BE child	
2011	Beans (with pods)	2	472							
2011	Rice	0.02	844							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

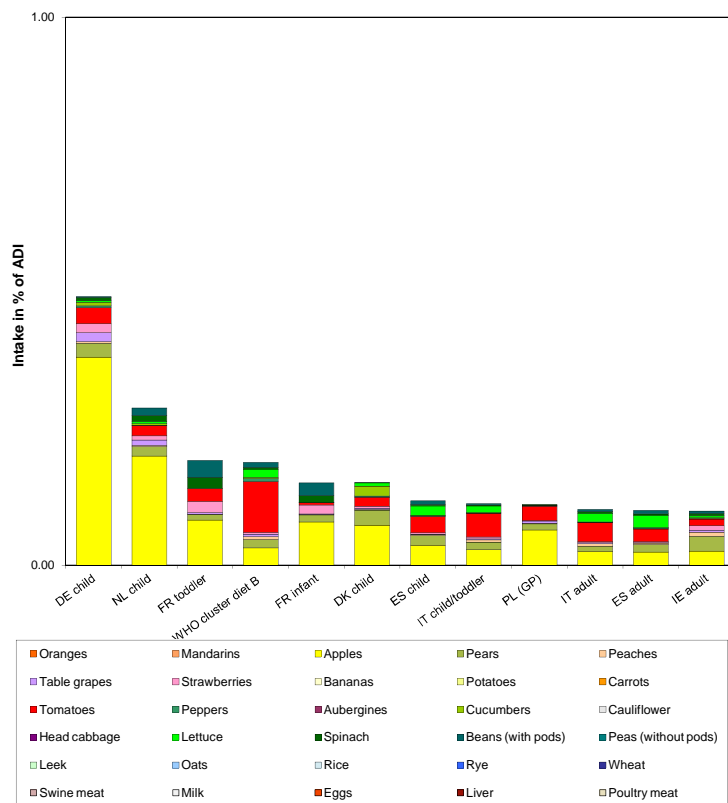
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

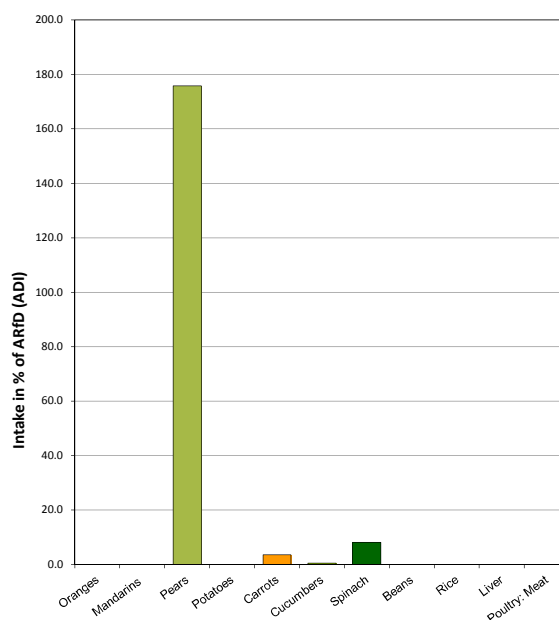
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Folpet (RD)



Acute risk assessment: Folpet (RD)



Formetanate (RD)			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.004	ARfD (mg/kg bw):	0.005
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2007	Year of evaluation:	2007

Full residue definition: Formetanate (sum of formetanate and its salts expressed as formetanate (hydrochloride))

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	Top 12 diets							
2.41	DE child	1.48	Oranges	0.37	Table grapes	0.28	Tomatoes	
1.72	NL child	1.21	Oranges	0.22	Table grapes	0.18	Tomatoes	
1.59	WHO cluster diet B	0.89	Tomatoes	0.33	Oranges	0.14	Peppers	
1.18	ES child	0.84	Oranges	0.28	Tomatoes	0.03	Peppers	
1.06	FR toddler	0.78	Oranges	0.22	Tomatoes	0.06	Table grapes	
1.05	UK toddler	0.77	Oranges	0.17	Tomatoes	0.07	Table grapes	
0.88	DK child	0.55	Cucumbers	0.15	Tomatoes	0.07	Oranges	
0.83	NL (GP)	0.58	Oranges	0.12	Tomatoes	0.07	Table grapes	
0.80	ES adult	0.50	Oranges	0.23	Tomatoes	0.04	Peppers	
0.73	IE adult	0.40	Oranges	0.12	Tomatoes	0.08	Table grapes	
0.68	SE (GP)	0.29	Oranges	0.22	Tomatoes	0.11	Cucumbers	
0.68	IT child/toddler	0.41	Tomatoes	0.19	Oranges	0.03	Table grapes	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05	1032	0.10		0.02		39.79	UK infant	
2011	Mandarins	0.05	818	0.24		0.01		7.79	UK toddler	
2011	Pears	0.05	928							
2011	Potatoes	0.05	1018							
2011	Carrots	0.05	824							
2011	Cucumbers	0.05	735	0.82	0.41	0.23	3	269.01	NL child	
2011	Spinach	0.05	524							
2011	Beans (with pods)	0.3	631							
2011	Rice	0.05	497							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

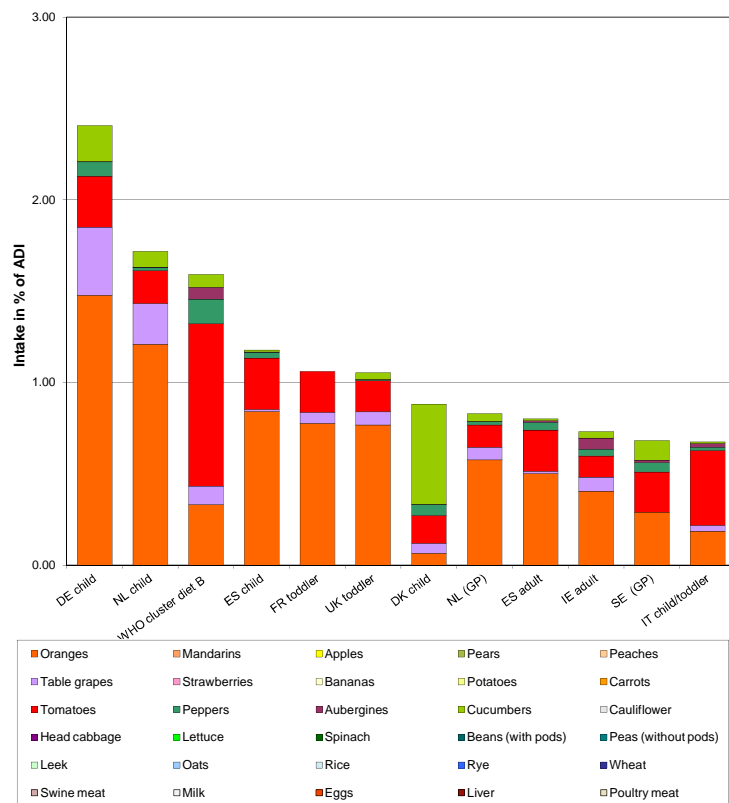
b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

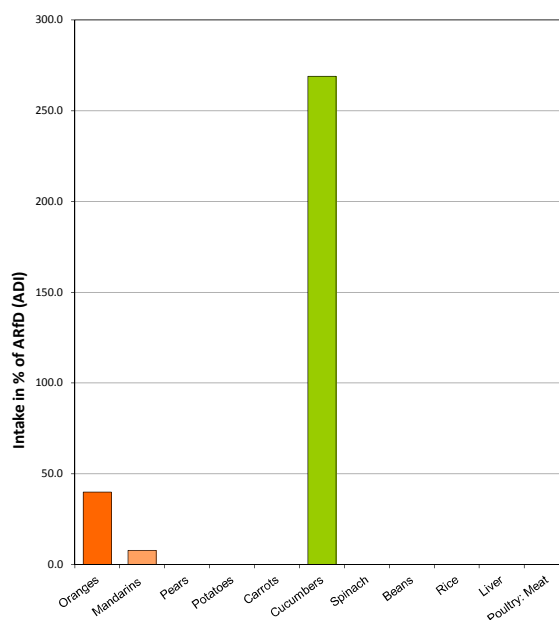
d) TTL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported. f) The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Formetanate (RD)



Acute risk assessment: Formetanate (RD)





Fosthiazate										
Status of the active substance:				Approved	Monitoring year:		2011			
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N			
Toxicological end points										
ADI (mg/kg bw/day):				0.004	ARfD (mg/kg bw):		0.005			
Source of ADI:				COM	Source of ARfD:		COM			
Year of evaluation:				2003	Year of evaluation:		2003			

Chronic risk assessment															
Highest calculated exposure in % of ADI				Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
Top 12 diets				1.37		NL child		0.02		Lettuce		0.01		Peppers	
1.25				1.21		PT (GP)		0.04		Peppers				FRUIT (FRESH OR FROZEN)	
1.15				1.15		FR toddler				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
1.03				0.91		WHO regional diet		0.08		Lettuce		0.04		Peppers	
0.99				0.94		SE (GP)		0.04		Peppers				FRUIT (FRESH OR FROZEN)	
0.94				0.92		WHO cluster diet D		0.02		Peppers		0.00		Lettuce	
0.94				0.94		FR infant		0.00		Peppers				FRUIT (FRESH OR FROZEN)	
0.91				0.87		WHO cluster diet E		0.02		Peppers		0.02		Lettuce	
0.85				0.77		WHO Cluster diet F		0.07		Lettuce		0.01		Peppers	
0.80				0.79		UK toddler		0.00		Lettuce		0.00		Peppers	
0.80				0.78		PL (GP)		0.02		Peppers		0.00		Lettuce	
0.80				0.61		WHO cluster diet B		0.11		Peppers		0.08		Lettuce	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1259							
2011	Mandarins	0.02	1074							
2011	Pears	0.02	1265							
2011	Potatoes	0.02	1433	0.42	0.14	0.05	1	153.76	UK infant	
2011	Carrots	0.02	1060							
2011	Cucumbers	0.02	1058	0.19		0.02		23.39	NL child	
2011	Spinach	0.02	675							
2011	Beans (with pods)	0.02	809							
2011	Rice	0.02	629							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

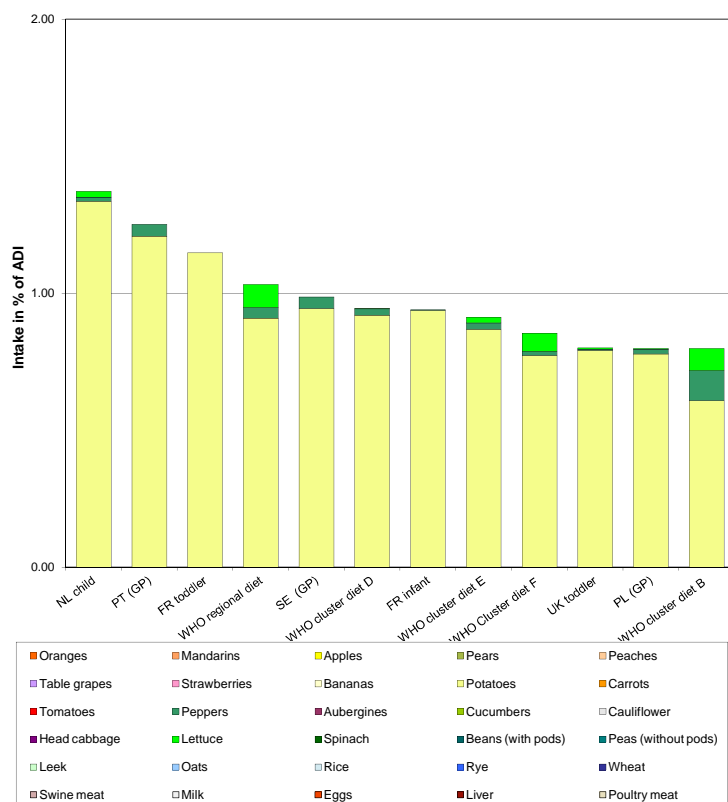
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

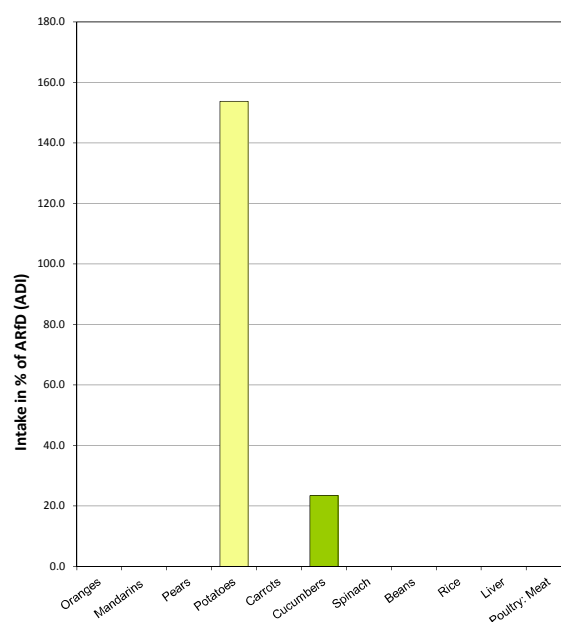
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Fosthiazate



Acute risk assessment: Fosthiazate



Glyphosate			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	Y
Toxicological end points			
ADI (mg/kg bw/day):	0.3	ARfD (mg/kg bw):	n.n.
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2001	Year of evaluation:	2001

Mandatory only in cereals.

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.51	WHO cluster diet B	0.50	Wheat	0.01	Rice	0.00	Oats
	0.40	WHO cluster diet D	0.38	Wheat	0.01	Rice	0.01	Oats
	0.40	IT child/toddler	0.39	Wheat	0.00	Rice	0.00	Oats
	0.36	DK child	0.32	Wheat	0.03	Oats	0.00	Rice
	0.29	NL child	0.28	Wheat	0.01	Oats	0.01	Rice
	0.27	ES child	0.26	Wheat	0.01	Rice		FRUIT (FRESH OR FROZEN)
	0.26	DE child	0.24	Wheat	0.02	Oats	0.00	Rice
	0.25	IT adult	0.24	Wheat	0.00	Rice	0.00	Oats
	0.25	PT (GP)	0.23	Wheat	0.01	Rice	0.00	Oats
	0.24	UK toddler	0.23	Wheat	0.01	Rice	0.00	Oats
	0.24	WHO cluster diet E	0.23	Wheat	0.01	Oats	0.00	Rice
	0.23	WHO Cluster diet F	0.21	Wheat	0.01	Oats	0.00	Rice

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges							not assessed		
2011	Mandarins							not assessed		
2011	Pears							not assessed		
2011	Potatoes							not assessed		
2011	Carrots							not assessed		
2011	Cucumbers							not assessed		
2011	Spinach							not assessed		
2011	Beans (with pods)							not assessed		
2011	Rice	0.1	260	3.08		0.10		not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

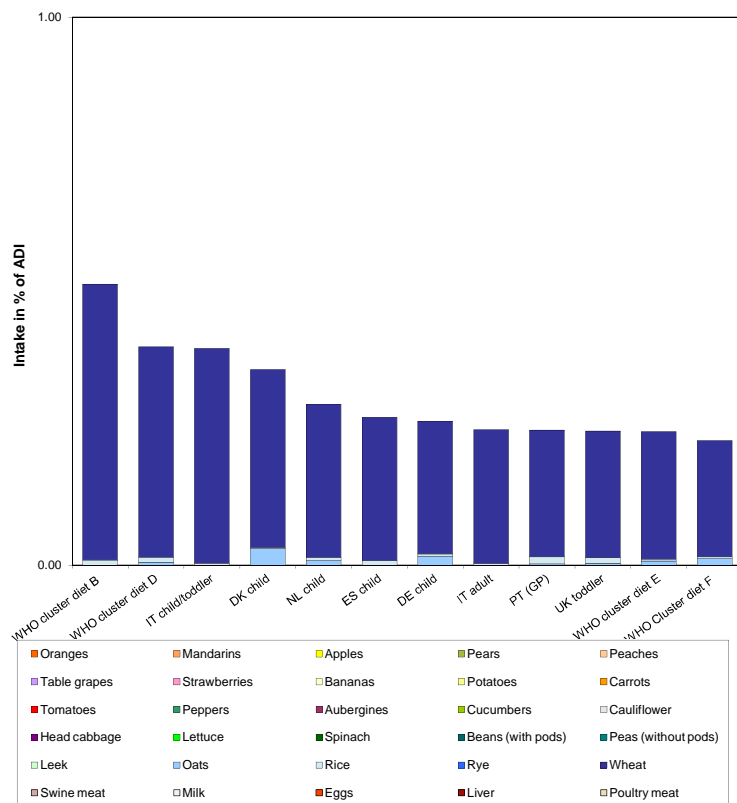
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

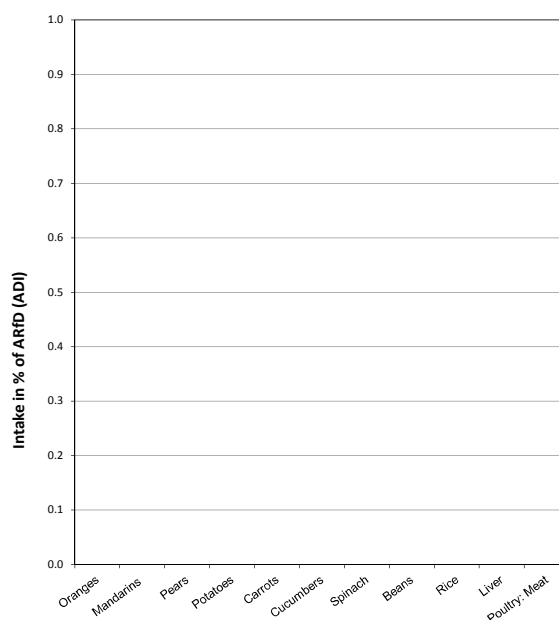
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Glyphosate



Acute risk assessment: Glyphosate



Haloxypop (RD)			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	Y
Toxicological end points			
ADI (mg/kg bw/day):	0.00065	ARID (mg/kg bw):	0.075
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

Pesticide to be analysed on a voluntary basis only.

Full residue definition: Haloxypop including haloxypop-R (haloxypop-R methyl ester, haloxypop-R and conjugates of haloxypop-R expressed as haloxypop-R). For products of animal origin-terrestrial animal: haloxypop-R and conjugates of haloxypop-R expressed as haloxypop-R

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	10.88	NL child	9.06	Potatoes	1.17	Table grapes	0.65	Pears
	9.14	PT (GP)	8.20	Potatoes	0.52	Pears	0.43	Table grapes
	8.49	FR toddler	7.78	Potatoes	0.39	Pears	0.32	Table grapes
	6.96	FR infant	6.36	Potatoes	0.49	Pears	0.12	Table grapes
	6.93	SE (GP)	6.40	Potatoes	0.52	Pears		FRUIT (FRESH OR FROZEN)
	6.84	DE child	3.94	Potatoes	1.96	Table grapes	0.94	Pears
	6.69	WHO regional diet	6.17	Potatoes	0.29	Pears	0.24	Table grapes
	6.65	WHO cluster diet D	6.24	Potatoes	0.29	Table grapes	0.12	Pears
	6.40	WHO cluster diet E	5.89	Potatoes	0.27	Pears	0.24	Table grapes
	6.20	PL (GP)	5.28	Potatoes	0.49	Table grapes	0.43	Pears
	6.02	UK toddler	5.37	Potatoes	0.38	Table grapes	0.27	Pears
	5.59	WHO Cluster diet F	5.24	Potatoes	0.17	Table grapes	0.17	Pears

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARID) e)	Most critical diet	Comment
2011	Oranges	0.05	501							
2011	Mandarins	0.05	404							
2011	Pears	0.05	454							
2011	Potatoes	0.1	432							
2011	Carrots	0.1	411							
2011	Cucumbers	0.05	412							
2011	Spinach	0.3	307							
2011	Beans (with pods)	0.1	405							
2011	Rice	0.1	316							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

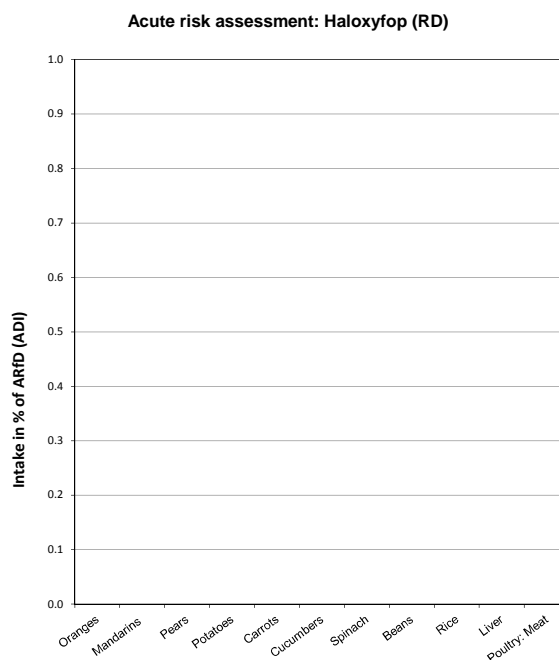
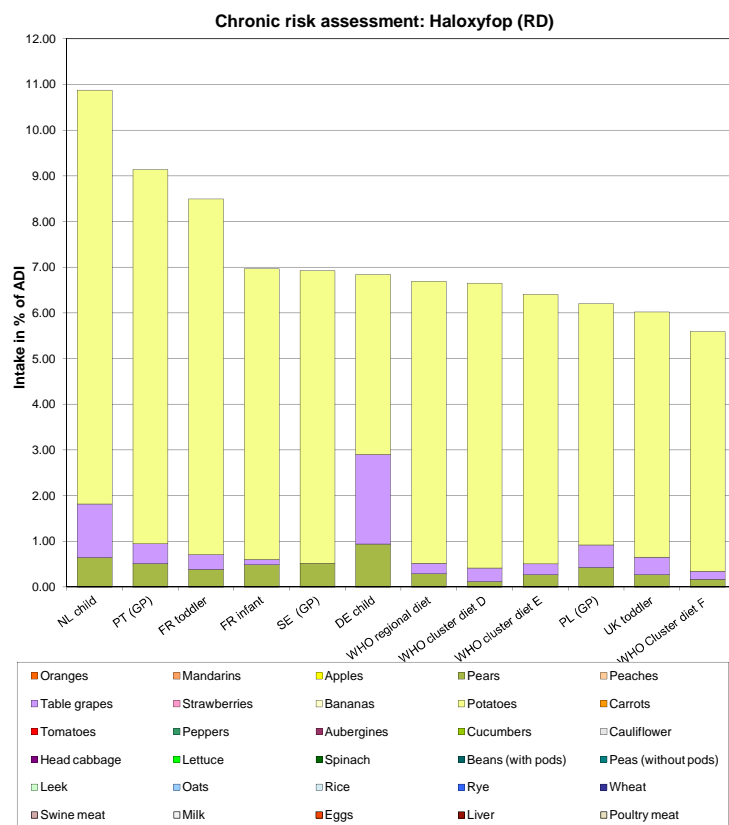
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.



Heptachlor (RD)			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	A	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.0001	ARfD (mg/kg bw):	
Source of ADI:	JMPR	Source of ARfD:	
Year of evaluation:	1994	Year of evaluation:	

Active substance not assessed regarding the setting of an ARfD setting. Acute RA is performed with the ADI value.

Full residue definition: Heptachlor (sum of heptachlor and heptachlor epoxide expressed as heptachlor)

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	129.15	FR toddler	129.15	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	126.18	UK infant	126.18	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	95.55	NL child	95.55	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	83.89	FR infant	83.89	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	67.33	UK toddler	67.33	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	46.50	DE child	46.50	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	41.17	DK child	41.17	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	40.72	ES child	40.72	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	40.34	SE (GP)	40.34	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	21.37	NL (GP)	21.37	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	18.49	FI adult	18.49	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	17.49	DK adult	17.49	Milk		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges									
2011	Mandarins									
2011	Pears									
2011	Potatoes									
2011	Carrots									
2011	Cucumbers									
2011	Spinach									
2011	Beans (with pods)									
2011	Rice									
2011	Liver	0.2	497							Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.2	478							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis to the consumption of bovine liver.

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

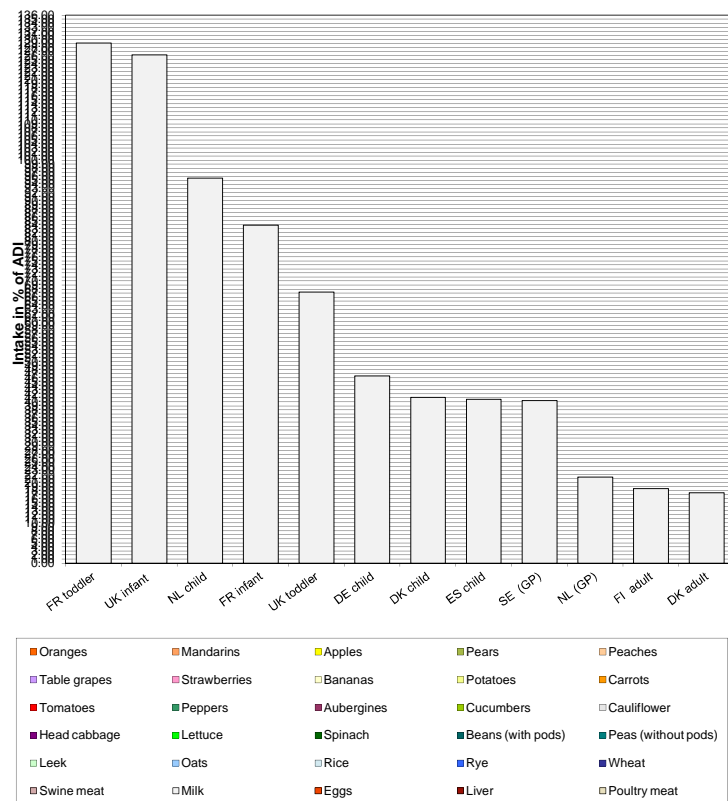
b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

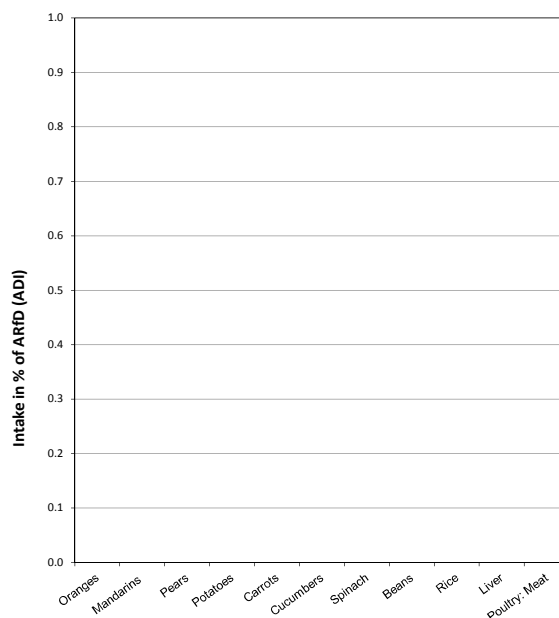
d) TTL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported <sup>1)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Heptachlor (RD)



Acute risk assessment: Heptachlor (RD)

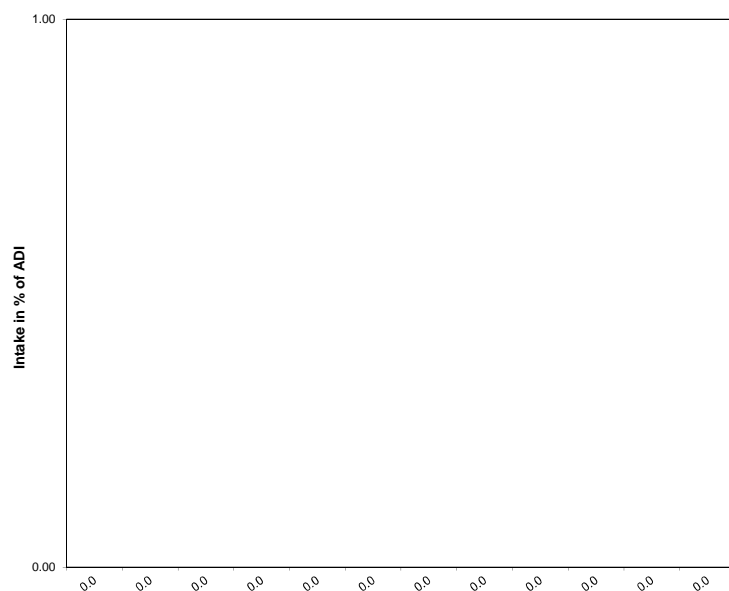


Hexachlorobenzene			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	A	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):		ARfD (mg/kg bw):	
Source of ADI:		Source of ARfD:	
Year of evaluation:		Year of evaluation:	

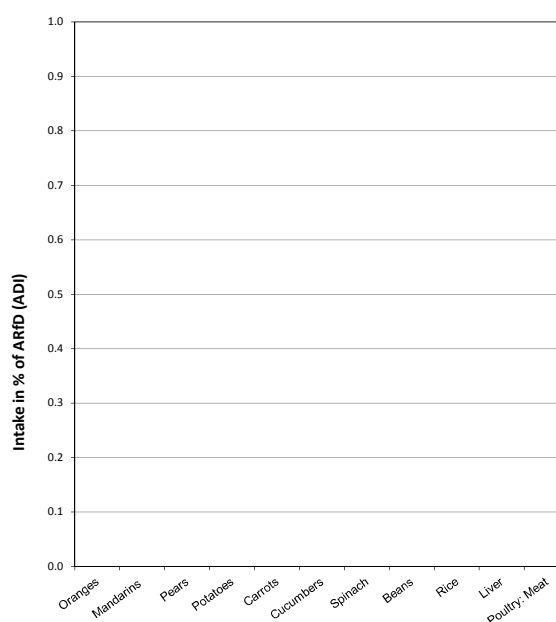
No ADI and no ARfD allocated.

Chronic risk assessment			
	Highest calculated exposure in % of ADI	Top 12 diets	

Chronic risk assessment: Hexachlorobenzene



Acute risk assessment: Hexachlorobenzene



Oranges	Mandarins	Apples	Pears	Peaches
Table grapes	Strawberries	Bananas	Potatoes	Carrots
Tomatoes	Peppers	Aubergines	Cucumbers	Cauliflower
Head cabbage	Lettuce	Spinach	Beans (with pods)	Peas (without pods)
Leek	Oats	Rice	Rye	Wheat
Swine meat	Milk	Eggs	Liver	Poultry meat

Hexachlorocyclohexane (alpha)				
Status of the active substance:		Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products		A	Analysis on voluntary basis?	N
Toxicological end points				
ADI (mg/kg bw/day):		ARfD (mg/kg bw):		
Source of ADI:		Source of ARfD:		
Year of evaluation:		Year of evaluation:		

No ADI and no ARfD allocated.

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges									
2011	Mandarins									
2011	Pears									
2011	Potatoes									
2011	Carrots									
2011	Cucumbers									
2011	Spinach									
2011	Beans (with pods)									
2011	Rice									
2011	Liver	0.2	1084							
2011	Poultry: Meat	0.2	316	0.32		0.00				

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

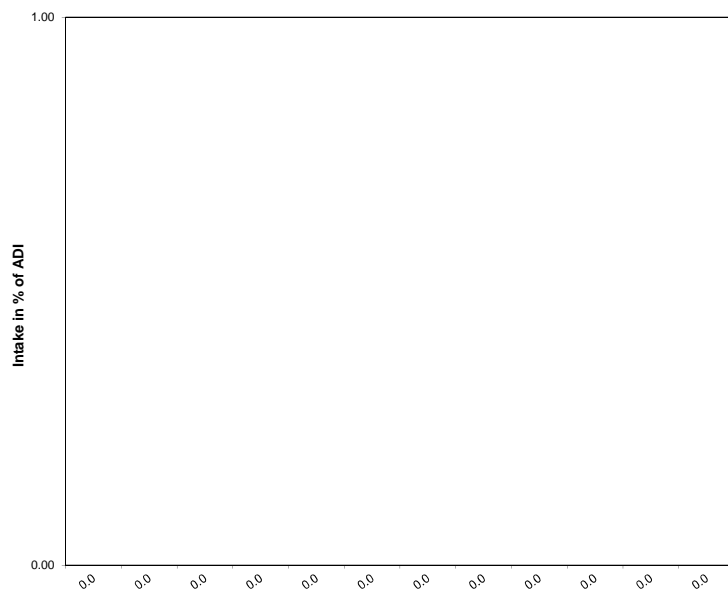
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

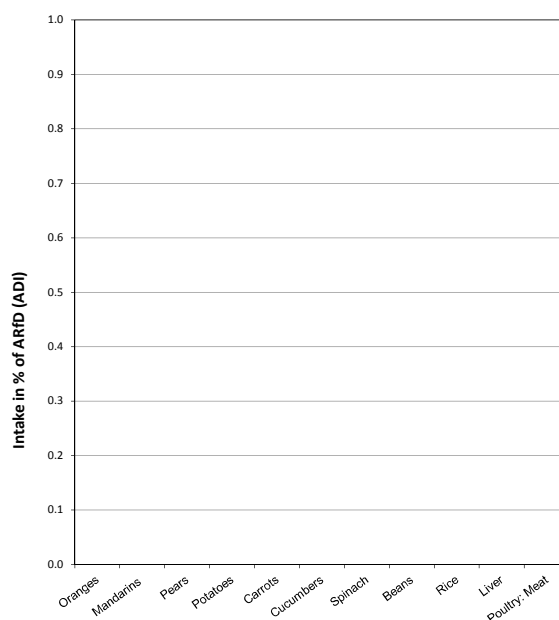
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Hexachlorocyclohexane (alpha)



Acute risk assessment: Hexachlorocyclohexane (alpha)



Oranges	Mandarins	Apples	Pears	Peaches
Table grapes	Strawberries	Bananas	Potatoes	Carrots
Tomatoes	Peppers	Aubergines	Cucumbers	Cauliflower
Head cabbage	Lettuce	Spinach	Beans (with pods)	Peas (without pods)
Leek	Oats	Rice	Rye	Wheat
Swine meat	Milk	Eggs	Liver	Poultry meat

Hexachlorocyclohexane (beta)										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				A		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):				ARfD (mg/kg bw):						
Source of ADI:				Source of ARfD:						
Year of evaluation:				Year of evaluation:						

No ADI and no ARfD allocated.

Chronic risk assessment										
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)			2nd contributor to MS diet (in % of ADI)			3rd contributor to MS diet (in % of ADI)	
Top 12 diets			Commodity / group of commodities			Commodity / group of commodities			Commodity / group of commodities	

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges									
2011	Mandarins									
2011	Pears									
2011	Potatoes									
2011	Carrots									
2011	Cucumbers									
2011	Spinach									
2011	Beans (with pods)									
2011	Rice		1050							
2011	Liver	0.1	313							
2011	Poultry: Meat	0.1								

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

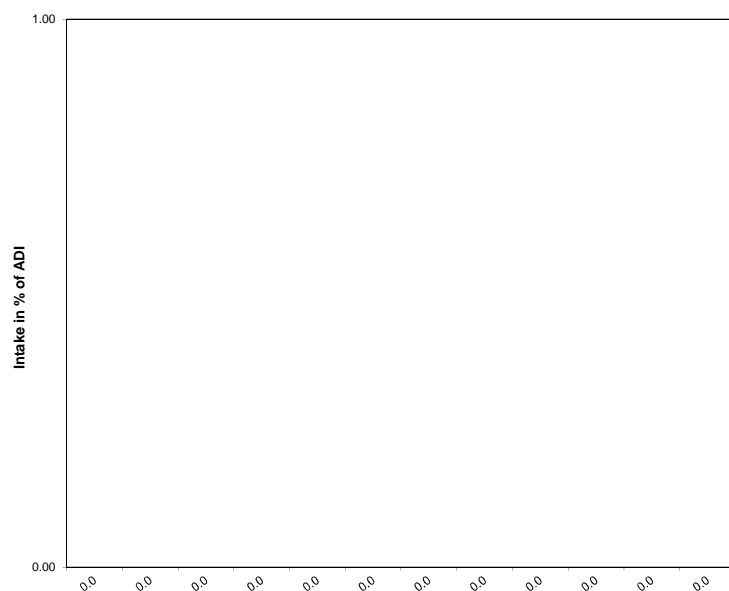
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

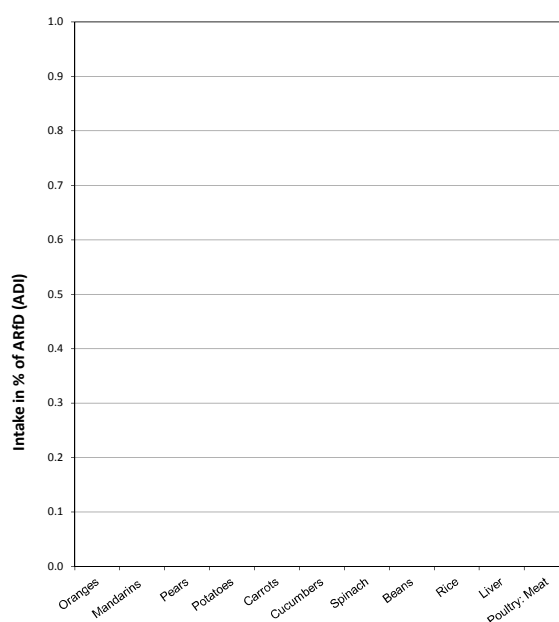
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis to the consumption of bovine liver.

Chronic risk assessment: Hexachlorocyclohexane (beta)



Acute risk assessment: Hexachlorocyclohexane (beta)



Oranges	Mandarins	Apples	Pears	Peaches
Table grapes	Strawberries	Bananas	Potatoes	Carrots
Tomatoes	Peppers	Aubergines	Cucumbers	Cauliflower
Head cabbage	Lettuce	Spinach	Beans (with pods)	Peas (without pods)
Leek	Oats	Rice	Rye	Wheat
Swine meat	Milk	Eggs	Liver	Poultry meat

Hexaconazole									
Status of the active substance:				Not approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N		
Toxicological end points									
ADI (mg/kg bw/day):				0.005	ARfD (mg/kg bw):				
Source of ADI:				JMPR	Source of ARfD:				
Year of evaluation:				1990	Year of evaluation:				

Active substance not assessed regarding the setting of an ARfD setting. Acute RA is performed with the ADI value.

Chronic risk assessment										
Highest calculated exposure in % of ADI			Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	1.39		DE child		0.80	Oranges	0.27	Table grapes	0.10	Strawberries
	1.21		NL child		0.65	Oranges	0.16	Table grapes	0.15	Mandarins
	0.96		FR toddler		0.42	Oranges	0.23	Beans (with pods)	0.13	Strawberries
	0.71		UK toddler		0.41	Oranges	0.12	Rice	0.06	Mandarins
	0.69		ES child		0.45	Oranges	0.10	Rice	0.05	Beans (with pods)
	0.64		WHO cluster diet B		0.18	Oranges	0.12	Peppers	0.11	Rice
	0.55		IE adult		0.22	Oranges	0.12	Mandarins	0.05	Table grapes
	0.54		FR infant		0.19	Oranges	0.18	Beans (with pods)	0.10	Strawberries
	0.52		NL (GP)		0.31	Oranges	0.05	Beans (with pods)	0.05	Table grapes
	0.47		UK infant		0.27	Oranges	0.14	Rice	0.05	Strawberries
	0.46		ES adult		0.27	Oranges	0.05	Rice	0.05	Beans (with pods)
	0.43		SE (GP)		0.16	Oranges	0.09	Mandarins	0.09	Rice

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.02	1849	0.05		0.02		53.05	UK infant	
2011	Mandarins	0.02	1493	0.13		0.01		15.58	UK toddler	
2011	Pears	0.1	1811							
2011	Potatoes	0.02	2091							
2011	Carrots	0.02	1562							
2011	Cucumbers	0.02	1558							
2011	Spinach	0.02	1049							
2011	Beans (with pods)	0.02	1230	0.49	0.16	0.08		17.02	NL child	
2011	Rice	0.02	1054	0.09	0.19	0.05		12.61	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

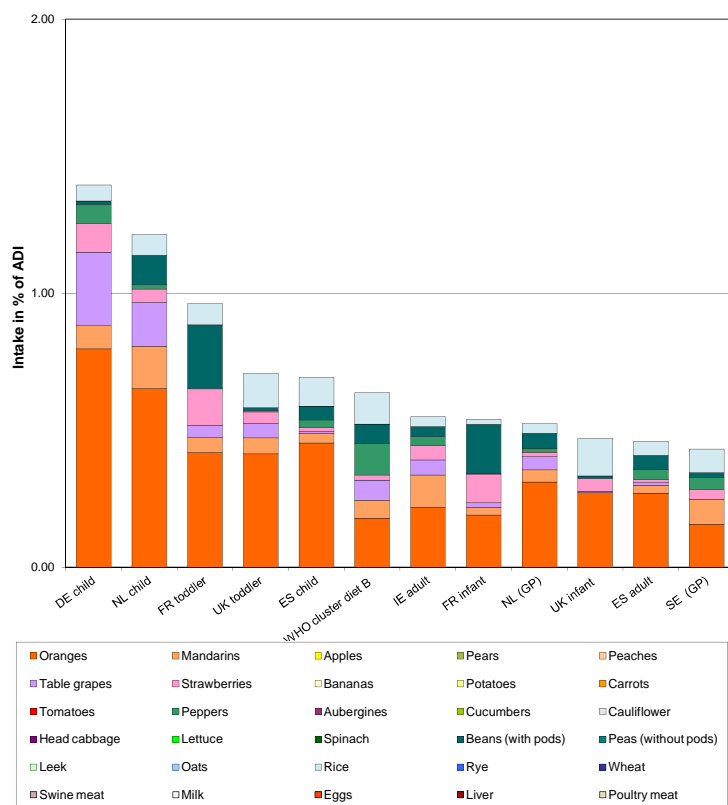
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

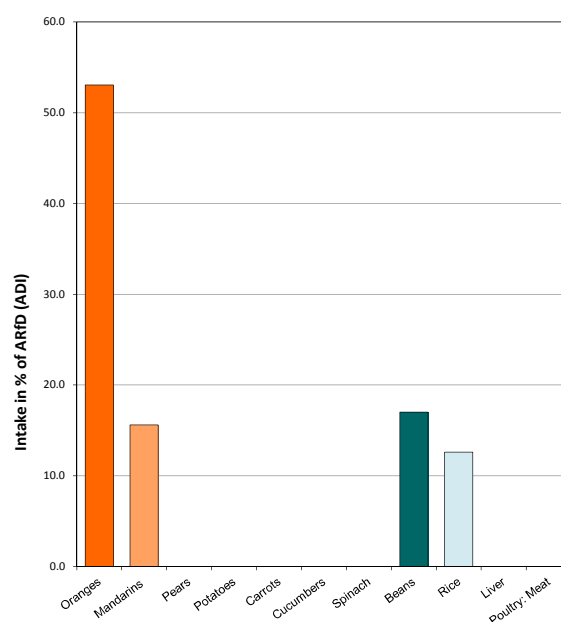
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Hexaconazole



Acute risk assessment: Hexaconazole





Hexythiazox									
Status of the active substance:				Approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N		
Toxicological end points									
ADI (mg/kg bw/day):				0.03	ARfD (mg/kg bw):		n.n.		
Source of ADI:				COM	Source of ARfD:		COM		
Year of evaluation:				2011	Year of evaluation:		2011		

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	1.09	DE child			0.55	Apples	0.18	Oranges	0.07	Table grapes
	0.73	NL child			0.29	Apples	0.15	Oranges	0.07	Bananas
	0.59	FR toddler			0.13	Carrots	0.12	Apples	0.10	Oranges
	0.43	WHO cluster diet B			0.16	Tomatoes	0.05	Apples	0.04	Oranges
	0.43	FR infant			0.14	Carrots	0.11	Apples	0.04	Oranges
	0.37	DK child			0.11	Apples	0.07	Carrots	0.07	Cucumbers
	0.36	UK toddler			0.09	Oranges	0.08	Apples	0.05	Bananas
	0.34	SE (GP)			0.08	Bananas	0.05	Apples	0.04	Carrots
	0.34	UK infant			0.07	Apples	0.07	Carrots	0.06	Bananas
	0.33	ES child			0.10	Oranges	0.05	Apples	0.05	Tomatoes
	0.29	IE adult			0.05	Oranges	0.04	Apples	0.03	Bananas
	0.27	PT (GP)			0.05	Apples	0.05	Tomatoes	0.04	Rice

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	1	1721	1.45		0.08		not assessed		
2011	Mandarins	1	1395	4.44		0.20		not assessed		
2011	Pears	1	1643	0.18		0.06		not assessed		
2011	Potatoes	0.05	1890					not assessed		
2011	Carrots	0.5	1427	0.07		0.01		not assessed		
2011	Cucumbers	0.5	1455	0.34		0.02		not assessed		
2011	Spinach	0.5	977	0.10		0.02		not assessed		
2011	Beans (with pods)	0.5	1172	0.26		0.04		not assessed		
2011	Rice	0.5	867	0.12		0.02		not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

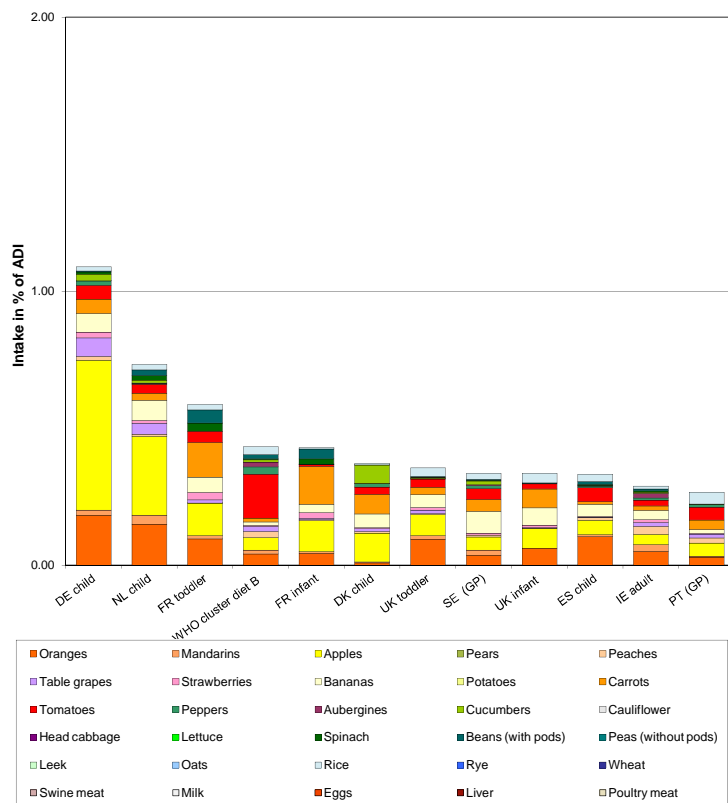
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

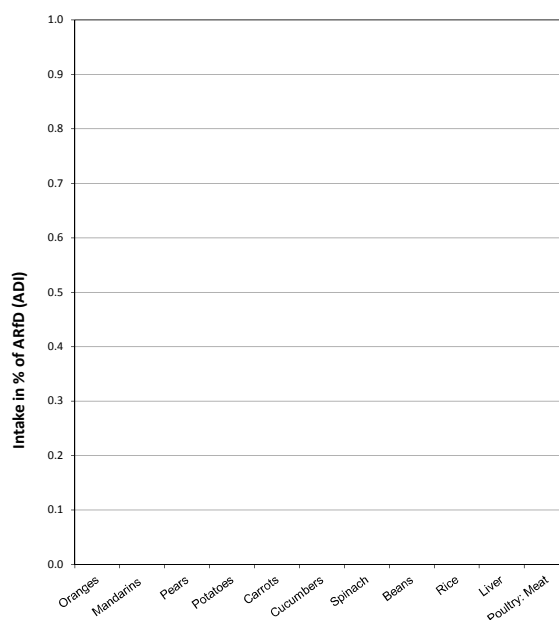
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Hexythiazox



Acute risk assessment: Hexythiazox



Imazalil										
Status of the active substance:				Approved	Monitoring year:			2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?			N		
Toxicological end points										
ADI (mg/kg bw/day):				0.025	ARfD (mg/kg bw):			0.05		
Source of ADI:				COM	Source of ARfD:			COM		
Year of evaluation:				2011	Year of evaluation:			2011		

Chronic risk assessment																	
Highest calculated exposure in % of ADI				Top 12 diets		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
14.34				DE child		10.75		Oranges		1.41		Mandarins		0.74		Apples	
13.36				NL child		8.80		Oranges		2.56		Mandarins		0.68		Bananas	
8.06				FR toddler		5.65		Oranges		0.91		Mandarins		0.52		Bananas	
7.78				ES child		6.12		Oranges		0.58		Mandarins		0.40		Bananas	
7.68				UK toddler		5.59		Oranges		0.97		Mandarins		0.43		Bananas	
5.84				IE adult		2.95		Oranges		1.97		Mandarins		0.31		Bananas	
5.55				NL (GP)		4.20		Oranges		0.73		Mandarins		0.17		Potatoes	
5.08				SE (GP)		2.11		Oranges		1.52		Mandarins		0.72		Bananas	
4.87				UK infant		3.67		Oranges		0.58		Bananas		0.20		Potatoes	
4.76				WHO cluster diet B		2.41		Oranges		1.10		Mandarins		0.53		Wheat	
4.72				ES adult		3.65		Oranges		0.49		Mandarins		0.15		Wheat	
4.09				FR infant		2.57		Oranges		0.47		Mandarins		0.29		Bananas	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	5	1933	66.22	0.67	11.55	18	245.08	UK infant	PF 0.08
2011	Mandarins	5	1563	65.45	0.32	6.78		52.82	UK toddler	PF 0.07
2011	Pears	2	1973	5.32	0.15	4.99	43	908.89	DE child	
2011	Potatoes	3	2215	0.50		1.20		51.66	UK infant	PF 0.14
2011	Carrots	0.05	1611	0.06		0.01		1.65	UK infant	
2011	Cucumbers	0.2	1662	0.60		0.09		9.94	NL child	
2011	Spinach	0.05	1108	0.27		0.02		0.90	BE child	
2011	Beans (with pods)	0.05	1285	0.16		0.05		1.11	NL child	
2011	Rice	0.05	1044							
2011	Liver									
2011	Poultry: Meat									

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

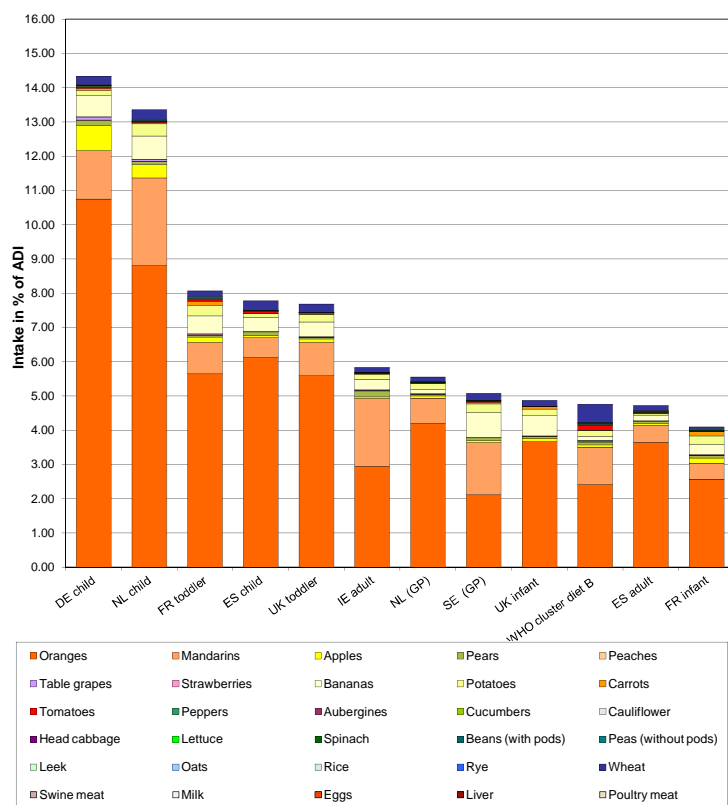
c) MRL in place on 01/01/2011.

d) TTL: toxicological threshold level

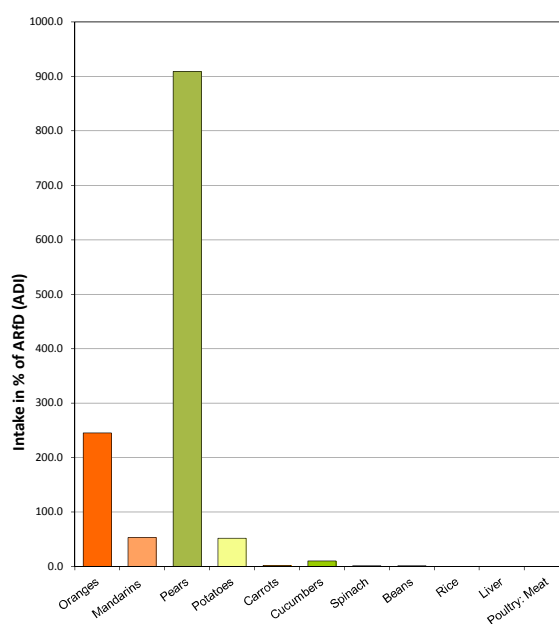
e) For liver, only the MRL for bovine liver is reported

f) The exposure is calculated on the basis of the consumption of bovine liver.

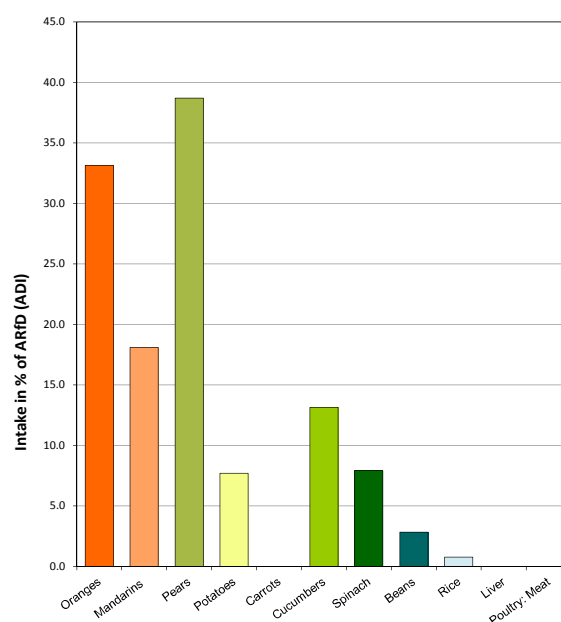
Chronic risk assessment: Imazalil



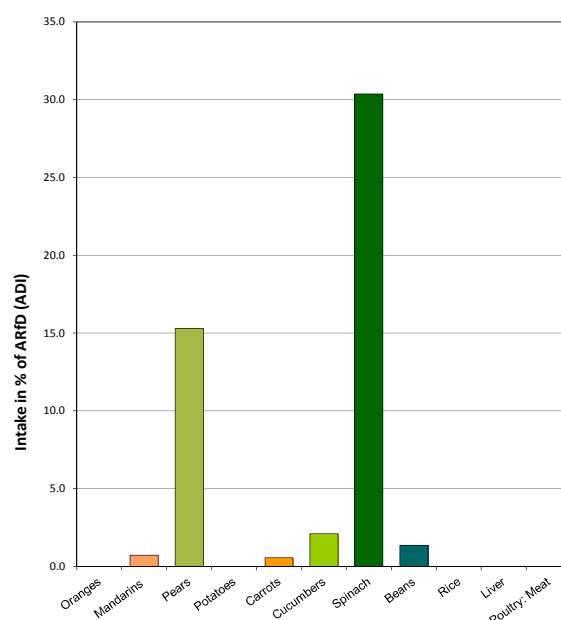
Acute risk assessment: Imazalil



### Acute risk assessment: Imidacloprid



**Acute risk assessment: Indoxacarb (RD)**



Iprodione									
Status of the active substance:				Approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N		
Toxicological end points									
ADI (mg/kg bw/day):				0.06	ARfD (mg/kg bw):		n.n.		
Source of ADI:				COM	Source of ARfD:		COM		
Year of evaluation:				2002	Year of evaluation:		2002		

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	1.29		DE child		0.63	Apples	0.16	Table grapes	0.11	Wheat
	0.91		NL child		0.33	Apples	0.12	Wheat	0.09	Table grapes
	0.86		WHO cluster diet B		0.22	Wheat	0.16	Tomatoes	0.15	Lettuce
	0.62		FR toddler		0.14	Apples	0.11	Carrots	0.07	Beans (with pods)
	0.61		DK child		0.14	Wheat	0.12	Apples	0.07	Cucumbers
	0.58		ES child		0.18	Lettuce	0.12	Wheat	0.06	Apples
	0.57		IT child/toddler		0.17	Wheat	0.13	Lettuce	0.07	Tomatoes
	0.52		ES adult		0.23	Lettuce	0.06	Wheat	0.04	Tomatoes
	0.51		IT adult		0.16	Lettuce	0.11	Wheat	0.06	Tomatoes
	0.49		WHO regional diet		0.16	Lettuce	0.08	Wheat	0.06	Tomatoes
	0.46		FR infant		0.13	Apples	0.12	Carrots	0.06	Beans (with pods)
	0.46		IE adult		0.08	Peaches	0.06	Wheat	0.06	Pears

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1853		0.05	0.14		not assessed		
2011	Mandarins	1	1536	0.26		0.05		not assessed		
2011	Pears	5	1931	5.39		4.152		not assessed		
2011	Potatoes	0.02	2037					not assessed		
2011	Carrots	0.5	1555	3.54	0.06	2.600		not assessed		
2011	Cucumbers	2	1666	3.96		0.40		not assessed		
2011	Spinach	0.02	1052	0.29	0.76	1.981		not assessed		
2011	Beans (with pods)	5	1244	10.61		3.43		not assessed		
2011	Rice	3	979	0.20		0.05		not assessed		
2011	Liver	0.05	100					not assessed		
2011	Poultry: Meat	0.05	89					not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

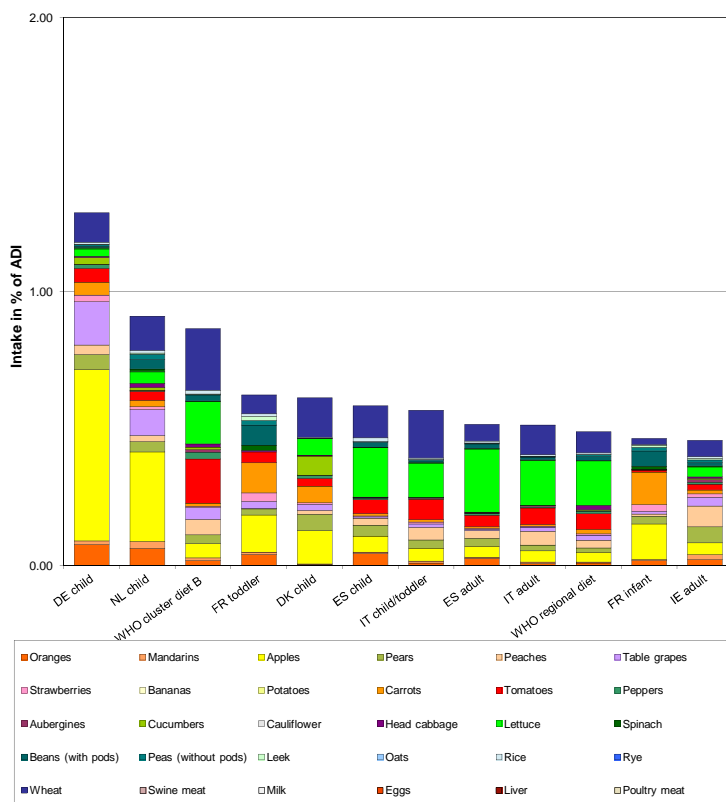
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

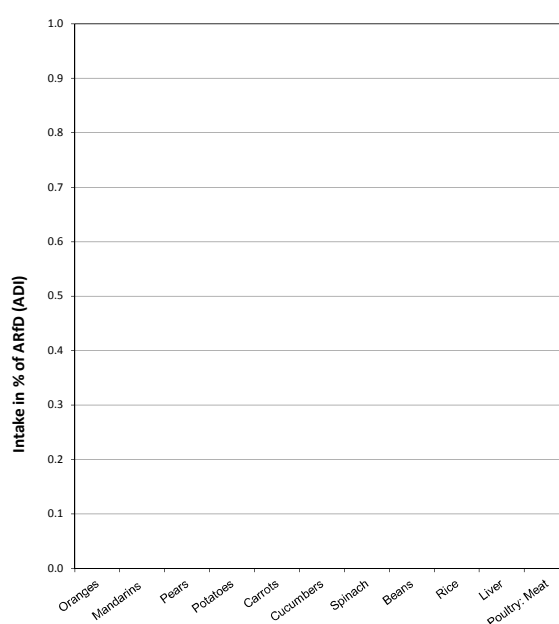
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Iprodione



Acute risk assessment: Iprodione



Iprovalicarb			
Status of the active substance:		Approved	Monitoring year:
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?
			2011
			N
Toxicological end points			
ADI (mg/kg bw/day):		0.015	ARfD (mg/kg bw):
Source of ADI:		COM	Source of ARfD:
Year of evaluation:		2002	Year of evaluation:
			n.n.
			COM
			2002

Chronic risk assessment							
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets		Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
0.41	WHO cluster diet B	0.28	Tomatoes	0.04	Peppers	0.04	Peaches
0.30	DE child	0.11	Table grapes	0.09	Tomatoes	0.04	Cucumbers
0.21	DK child	0.12	Cucumbers	0.05	Tomatoes	0.02	Peppers
0.18	IT child/toddler	0.13	Tomatoes	0.03	Peaches	0.01	Table grapes
0.17	NL child	0.07	Table grapes	0.06	Tomatoes	0.02	Cucumbers
0.16	IT adult	0.11	Tomatoes	0.04	Peaches	0.01	Table grapes
0.16	PT (GP)	0.08	Tomatoes	0.03	Peaches	0.03	Table grapes
0.16	WHO regional diet	0.10	Tomatoes	0.02	Peaches	0.01	Peppers
0.14	WHO cluster diet D	0.09	Tomatoes	0.02	Table grapes	0.01	Cucumbers
0.13	IE adult	0.05	Peaches	0.04	Tomatoes	0.02	Table grapes
0.13	PL (GP)	0.08	Tomatoes	0.03	Table grapes	0.01	Peppers
0.12	ES child	0.09	Tomatoes	0.02	Peaches	0.01	Peppers

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARfD) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.05	1790	0.13		0.03		not assessed		
2011	Mandarins	0.05	1490							
2011	Pears	0.05	1803							
2011	Potatoes	0.05	2023							
2011	Carrots	0.05	1500							
2011	Cucumbers	0.1	1526							
2011	Spinach	0.05	1042							
2011	Beans (with pods)	0.05	1218							
2011	Rice	0.05	866							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

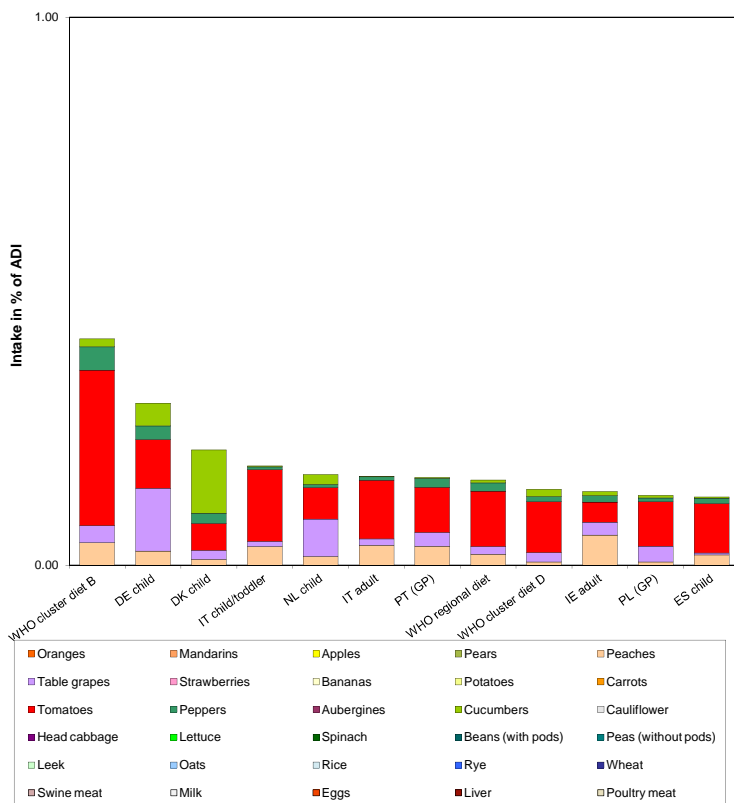
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

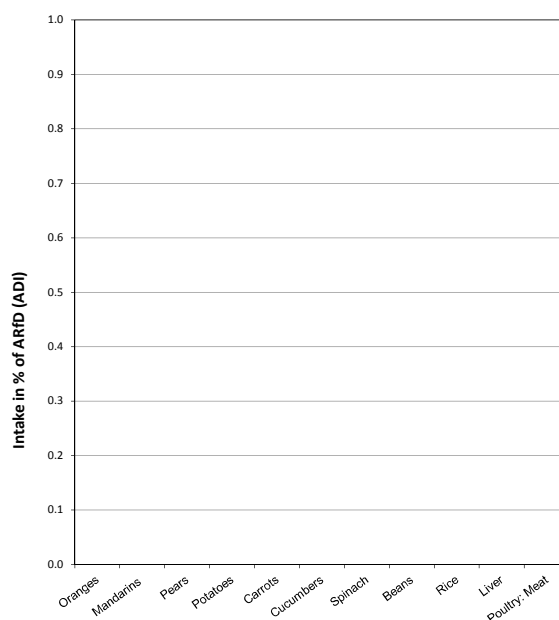
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Iprovalicarb



Acute risk assessment: Iprovalicarb



Kresoxim-methyl										
Status of the active substance:				Approved	Monitoring year:		2011			
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N			
Toxicological end points										
ADI (mg/kg bw/day):				0.4	ARfD (mg/kg bw):		n.n.			
Source of ADI:				COM	Source of ARfD:		COM			
Year of evaluation:				2011	Year of evaluation:		2011			

Chronic risk assessment																	
Highest calculated exposure in % of ADI				Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities			
Top 12 diets																	
0.08				DE child		0.04		Apples		0.01		Oranges		0.01		Potatoes	
0.07				NL child		0.02		Apples		0.02		Potatoes		0.01		Oranges	
0.05				FR toddler		0.02		Potatoes		0.01		Potatoes		0.01		Oranges	
0.04				WHO cluster diet B		0.01		Tomatoes		0.01		Potatoes		0.00		Apples	
0.03				FR infant		0.01		Potatoes		0.01		Apples		0.00		Oranges	
0.03				PT (GP)		0.02		Potatoes		0.00		Apples		0.00		Tomatoes	
0.03				SE (GP)		0.01		Potatoes		0.00		Apples		0.00		Tomatoes	
0.03				UK toddler		0.01		Potatoes		0.01		Oranges		0.01		Apples	
0.03				DK child		0.01		Apples		0.01		Potatoes		0.00		Cucumbers	
0.03				WHO regional diet		0.01		Potatoes		0.00		Tomatoes		0.00		Apples	
0.03				IE adult		0.01		Potatoes		0.00		Oranges		0.00		Apples	
0.03				ES child		0.01		Oranges		0.01		Potatoes		0.00		Apples	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05	1902	0.05		0.01		not assessed		
2011	Mandarins	0.05	1560	0.13		0.01		not assessed		
2011	Pears	0.2	1954	0.61		0.04		not assessed		
2011	Potatoes	0.05	2184		0.05	0.05		not assessed		
2011	Carrots	0.05	1571					not assessed		
2011	Cucumbers	0.05	1680	0.18		0.02		not assessed		
2011	Spinach	0.05	1083					not assessed		
2011	Beans (with pods)	0.05	1286	0.08		0.01		not assessed		
2011	Rice	0.05	1099	0.09		0.00		not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

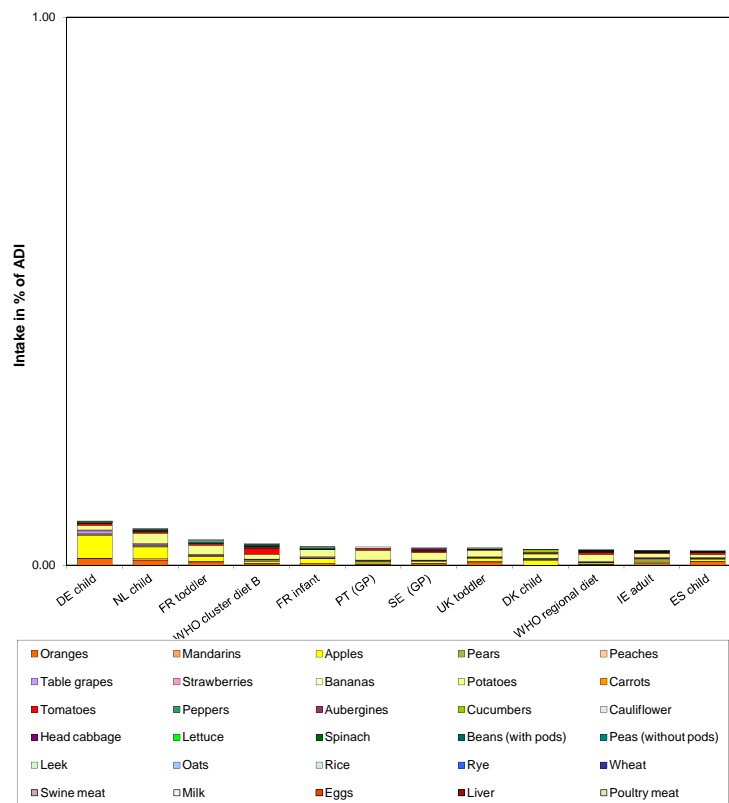
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

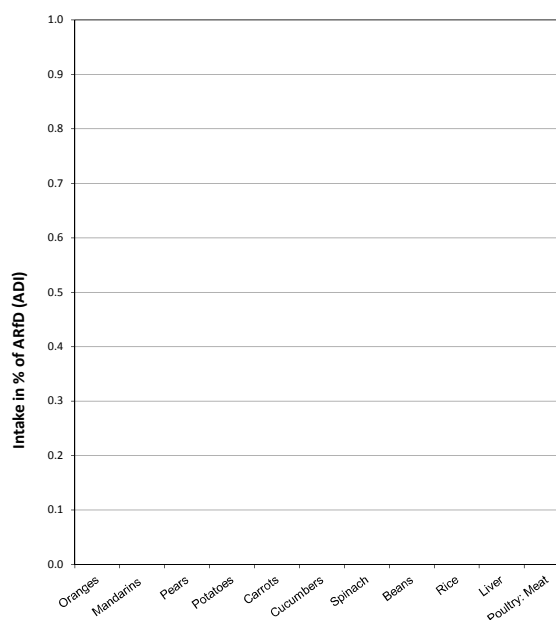
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Kresoxim-methyl



Acute risk assessment: Kresoxim-methyl



Lambda-cyhalothrin (RD)				
Status of the active substance:	Approved	Monitoring year:	2011	
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N	
Toxicological end points				
ADI (mg/kg bw/day):	0.005	ARfD (mg/kg bw):	0.0075	
Source of ADI:	COM	Source of ARfD:	COM	
Year of evaluation:	2001	Year of evaluation:	2001	

Full residue definition: Lambda-cyhalothrin expressed as lambda-cyhalothrin. For products of animal origin-terrestrial animal, except honey: lambda-cyhalothrin, including other mixed isomeric constituents (sum of isomers)

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	Top 12 diets							
7.40	DE child		3.21	Apples	0.99	Milk	0.91	Oranges
6.44	NL child		2.03	Milk	1.69	Apples	0.74	Oranges
6.18	FR toddler		2.75	Milk	0.70	Apples	0.52	Carrots
4.51	UK infant		2.69	Milk	0.42	Apples	0.36	Bananas
4.25	FR infant		1.79	Milk	0.67	Apples	0.56	Carrots
4.16	DK child		1.04	Rye	0.88	Milk	0.62	Apples
3.39	UK toddler		1.43	Milk	0.47	Oranges	0.45	Apples
2.99	SE (GP)		0.86	Milk	0.45	Bananas	0.28	Apples
2.89	ES child		0.87	Milk	0.52	Oranges	0.30	Apples
2.74	WHO cluster diet B		0.76	Tomatoes	0.27	Apples	0.21	Milk
2.11	IE adult		0.25	Oranges	0.22	Apples	0.19	Bananas
1.94	NL (GP)		0.46	Milk	0.35	Oranges	0.31	Apples

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.2	1811	1.88		0.14	3	247.56	UK infant	
2011	Mandarins	0.2	1507	4.84		0.12		89.04	UK toddler	
2011	Pears	0.1	1916	2.30	0.05	0.14	1	170.00	DE child	
2011	Potatoes	0.02	2100							
2011	Carrots	0.02	1554	0.13		0.01		10.14	UK infant	
2011	Cucumbers	0.1	1673	0.24		0.04		33.53	NL child	
2011	Spinach	0.5	1101	7.36	0.09	0.67	1	201.30	BE child	
2011	Beans (with pods)	0.2	1240	2.26		0.16		24.20	NL child	
2011	Rice	1	941	0.21		0.50		84.05	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

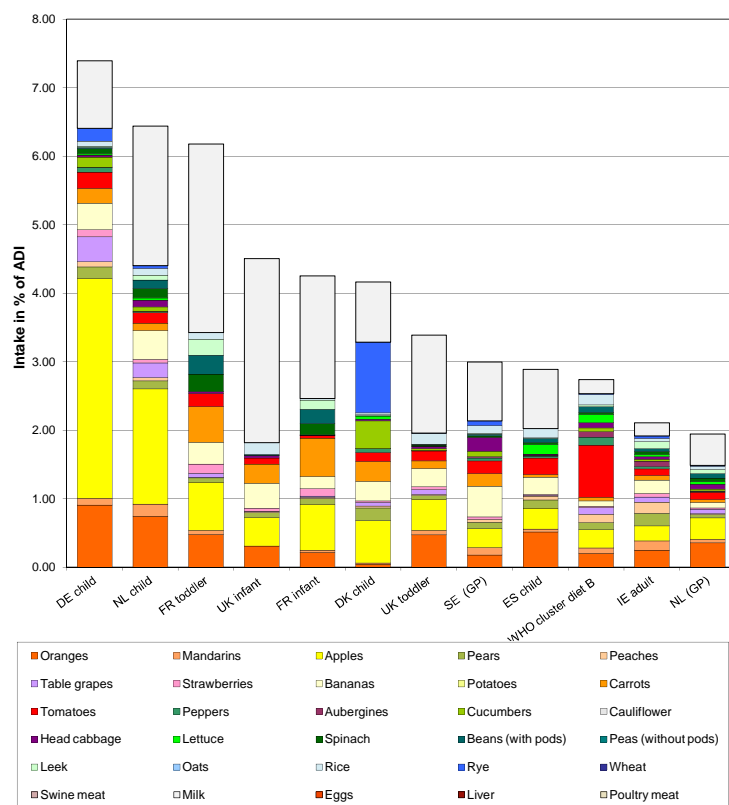
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

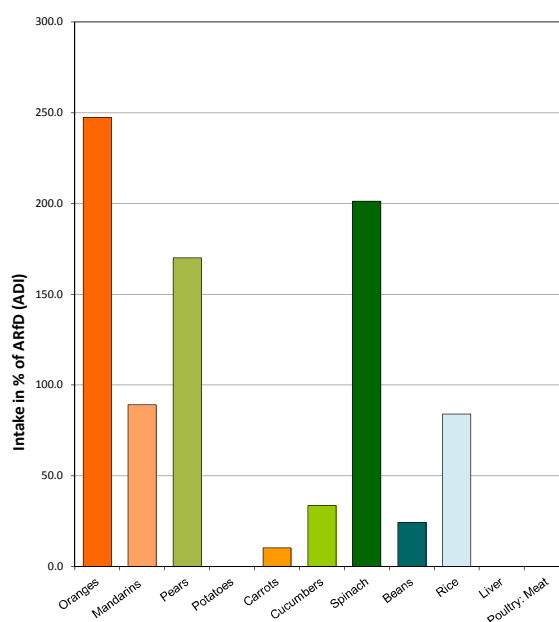
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported. <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Lambda-cyhalothrin (RD)



Acute risk assessment: Lambda-cyhalothrin (RD)





Lindane			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	A	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.005	ARfD (mg/kg bw):	0.06
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2000	Year of evaluation:	2000

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.85	FR toddler	0.45	Carrots	0.32	Milk	0.07	Eggs
	0.73	FR infant	0.49	Carrots	0.21	Milk	0.03	Eggs
	0.66	UK infant	0.32	Milk	0.24	Carrots	0.09	Eggs
	0.43	DK child	0.25	Carrots	0.10	Milk	0.06	Eggs
	0.38	DE child	0.19	Carrots	0.12	Milk	0.08	Eggs
	0.38	NL child	0.24	Milk	0.09	Carrots	0.04	Eggs
	0.33	UK toddler	0.17	Milk	0.10	Carrots	0.06	Eggs
	0.32	SE (GP)	0.16	Carrots	0.10	Milk	0.06	Eggs
	0.19	ES child	0.10	Milk	0.05	Eggs	0.03	Carrots
	0.16	DK adult	0.08	Carrots	0.04	Milk	0.03	Eggs
	0.15	WHO cluster diet E	0.08	Carrots	0.04	Eggs	0.02	Milk
	0.15	WHO Cluster diet F	0.09	Carrots	0.03	Milk	0.03	Eggs

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges									
2011	Mandarins									
2011	Pears									
2011	Potatoes									
2011	Carrots									
2011	Cucumbers									
2011	Spinach									
2011	Beans (with pods)									
2011	Rice									
2011	Liver	0.02	684	0.58		0.0035		0.05	UK infant	Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.02	615							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

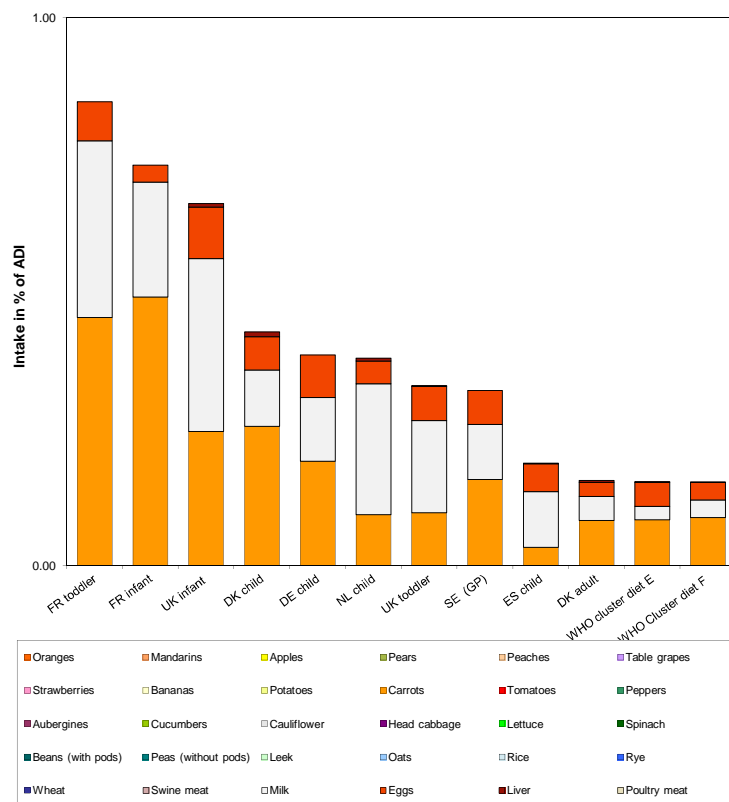
b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

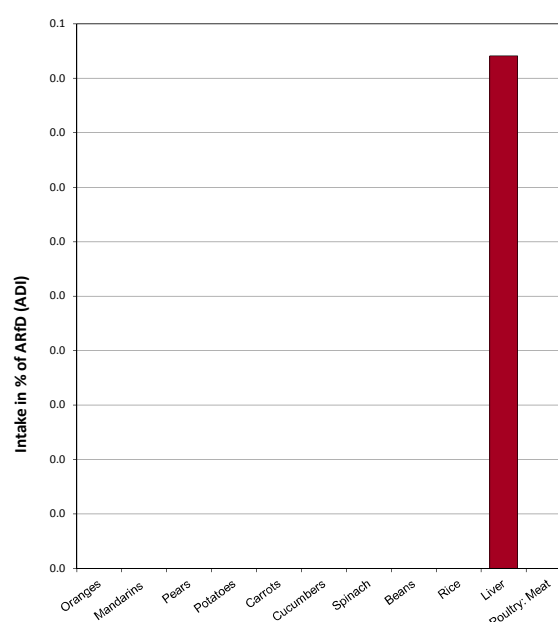
d) TTL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported. f) The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Lindane



Acute risk assessment: Lindane



Linuron											
Status of the active substance:				Approved		Monitoring year:		2011			
To be analysed in plant (P) or animal (A) products				P		Analysis on voluntary basis?		N			
Toxicological end points											
ADI (mg/kg bw/day):				0.003		ARfD (mg/kg bw):		0.03			
Source of ADI:				COM		Source of ARfD:		COM			
Year of evaluation:				2002		Year of evaluation:		2002			

Chronic risk assessment																	
	Highest calculated exposure in % of ADI			Top 12 diets		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
				3.37	FR toddler		1.73	Carrots		0.95	Oranges		0.37	Spinach			
				2.73	FR infant		1.88	Carrots		0.43	Oranges		0.23	Spinach			
				2.70	DE child		1.82	Oranges		0.73	Carrots		0.11	Spinach			
				2.17	NL child		1.49	Oranges		0.36	Carrots		0.19	Spinach			
				1.56	UK infant		0.94	Carrots		0.62	Oranges		0.01	Spinach			
				1.38	ES child		1.03	Oranges		0.16	Lettuce		0.13	Carrots			
				1.34	UK toddler		0.94	Oranges		0.37	Carrots		0.01	Spinach			
				1.13	DK child		0.97	Carrots		0.08	Oranges		0.05	Lettuce			
				1.07	NL (GP)		0.71	Oranges		0.15	Carrots		0.09	Leek			
				1.01	SE (GP)		0.60	Carrots		0.36	Oranges		0.03	Spinach			
				0.98	ES adult		0.62	Oranges		0.21	Lettuce		0.10	Carrots			
				0.96	IE adult		0.50	Oranges		0.23	Carrots		0.14	Leek			

Acute risk assessment											
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL e)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment	
2011	Oranges	0.05	1693	0.06		0.02		10.61	UK infant		
2011	Mandarins	0.05	1391								
2011	Pears	0.05	1730								
2011	Potatoes	0.05	1810								
2011	Carrots	0.2	1386	12.63	0.14	0.41		86.65	UK infant		
2011	Cucumbers	0.05	1398								
2011	Spinach	0.05	939	1.60	0.11	0.90		67.80	BE child		
2011	Beans (with pods)	0.05	1160								
2011	Rice	0.05	861								
2011	Liver										
2011	Poultry: Meat										

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis to the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

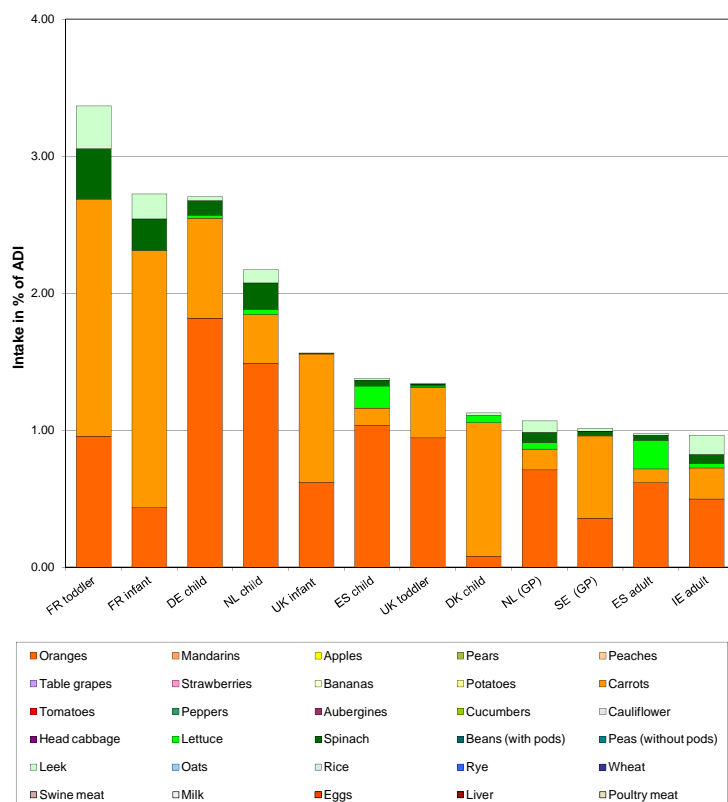
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

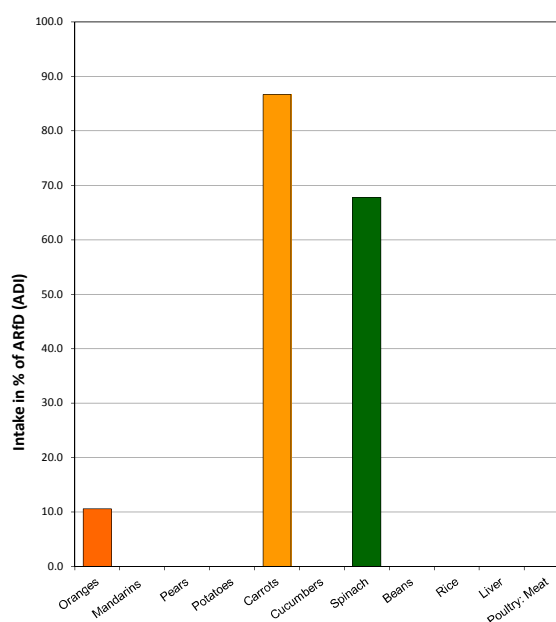
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Linuron



Acute risk assessment: Linuron



Lufenuron			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.015	ARfD (mg/kg bw):	n.n.
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2009	Year of evaluation:	2009

Chronic risk assessment									
Highest calculated exposure in % of ADI			Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	1.76	DE child		0.96	Apples	0.39	Oranges	0.12	Table grapes
	1.13	NL child		0.50	Apples	0.32	Oranges	0.07	Table grapes
	0.66	FR toddler		0.21	Apples	0.20	Oranges	0.07	Beans (with pods)
	0.62	WHO cluster diet B		0.23	Tomatoes	0.09	Oranges	0.08	Apples
	0.48	ES child		0.22	Oranges	0.09	Apples	0.07	Tomatoes
	0.48	UK toddler		0.20	Oranges	0.14	Apples	0.04	Tomatoes
	0.47	DK child		0.19	Apples	0.11	Cucumbers	0.05	Pears
	0.45	FR infant		0.20	Apples	0.09	Oranges	0.05	Beans (with pods)
	0.44	IE adult		0.11	Oranges	0.07	Apples	0.05	Mandarins
	0.37	NL (GP)		0.15	Oranges	0.09	Apples	0.03	Tomatoes
	0.35	SE (GP)		0.08	Apples	0.08	Oranges	0.06	Tomatoes
	0.34	ES adult		0.13	Oranges	0.06	Apples	0.06	Tomatoes

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	1	1533	0.07		0.04		not assessed		
2011	Mandarins	1	1255	0.08		0.02		not assessed		
2011	Pears	0.5	1481	0.07		0.02		not assessed		
2011	Potatoes	0.05	1529					not assessed		
2011	Carrots	0.02	1261					not assessed		
2011	Cucumbers	0.2	1239	0.73		0.07		not assessed		
2011	Spinach	0.02	822					not assessed		
2011	Beans (with pods)	0.02	1033	0.19		0.02		not assessed		
2011	Rice	0.02	769					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

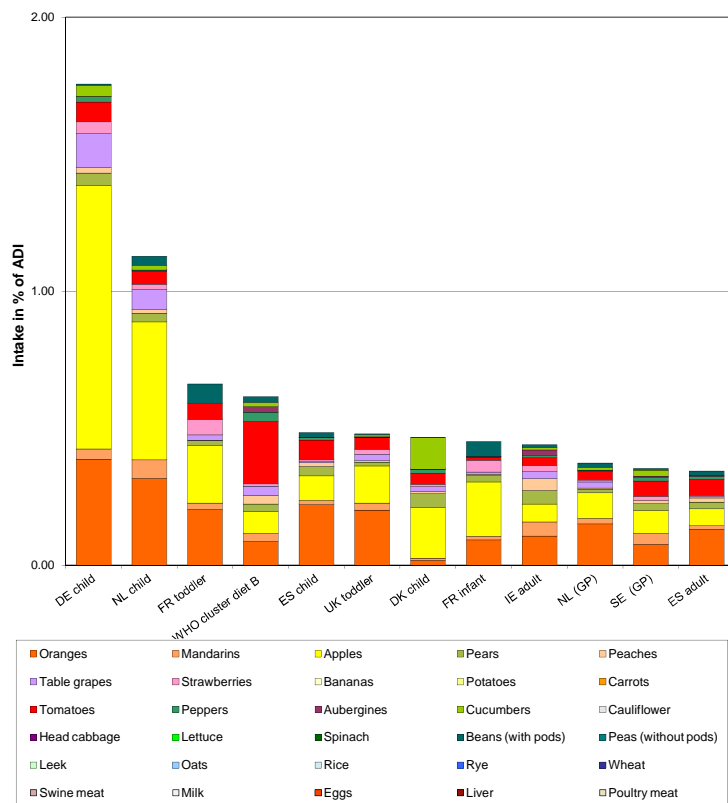
b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

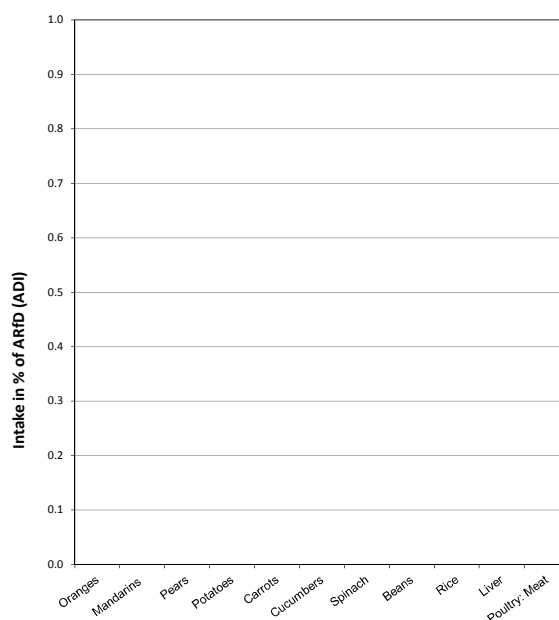
d) TTL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Lufenuron



Acute risk assessment: Lufenuron



Malathion (RD)											
Status of the active substance:				Approved	Monitoring year:		2011				
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N				
Toxicological end points											
ADI (mg/kg bw/day):				0.03	ARfD (mg/kg bw):		0.3				
Source of ADI:				COM	Source of ARfD:		COM				
Year of evaluation:				2010	Year of evaluation:		2010				

Full residue definition: Malathion (sum of malathion and malaoxon expressed as malathion)																	
Chronic risk assessment																	
Highest calculated exposure in % of ADI				Top 12 diets		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
0.45				WHO cluster diet B		0.35		Wheat		0.03		Oranges		0.02		Rice	
0.36				NL child		0.19		Wheat		0.11		Oranges		0.03		Mandarins	
0.35				DE child		0.17		Wheat		0.14		Oranges		0.02		Mandarins	
0.32				IT child/toddler		0.27		Wheat		0.02		Oranges		0.01		Peaches	
0.31				WHO cluster diet D		0.27		Wheat		0.03		Rice		0.01		Oranges	
0.30				ES child		0.18		Wheat		0.08		Oranges		0.02		Rice	
0.27				UK toddler		0.16		Wheat		0.07		Oranges		0.03		Rice	
0.25				DK child		0.22		Wheat		0.01		Peppers		0.01		Oranges	
0.24				PT (GP)		0.16		Wheat		0.04		Rice		0.02		Oranges	
0.21				IT adult		0.17		Wheat		0.01		Peaches		0.01		Oranges	
0.21				FR toddler		0.11		Wheat		0.07		Oranges		0.02		Rice	
0.21				SE (GP)		0.13		Wheat		0.03		Oranges		0.02		Rice	

Acute risk assessment											
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>e)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment	
2011	Oranges	0.02	1728	0.52	0.29	0.13		5.75	UK infant		
2011	Mandarins	0.02	1423	0.77	0.56	0.36		6.68	UK toddler		
2011	Pears	0.02	1688								
2011	Potatoes	0.02	1936								
2011	Carrots	0.02	1409								
2011	Cucumbers	0.02	1563								
2011	Spinach	0.02	966								
2011	Beans (with pods)	0.02	1146		0.09	0.03		0.09	NL child		
2011	Rice	8	968	0.62		1.10		4.62	UK toddler		
2011	Liver										
2011	Poultry: Meat										

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

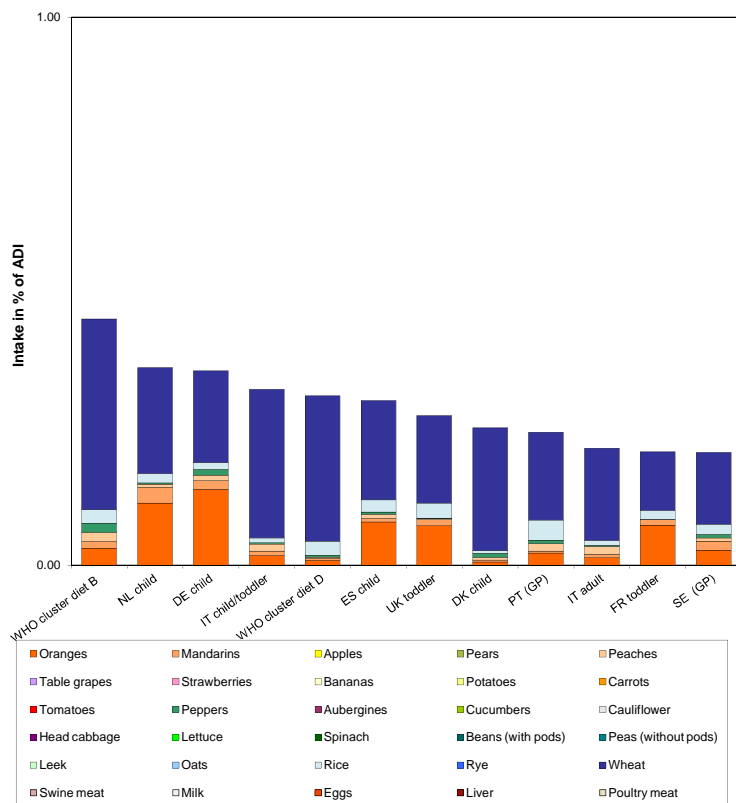
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

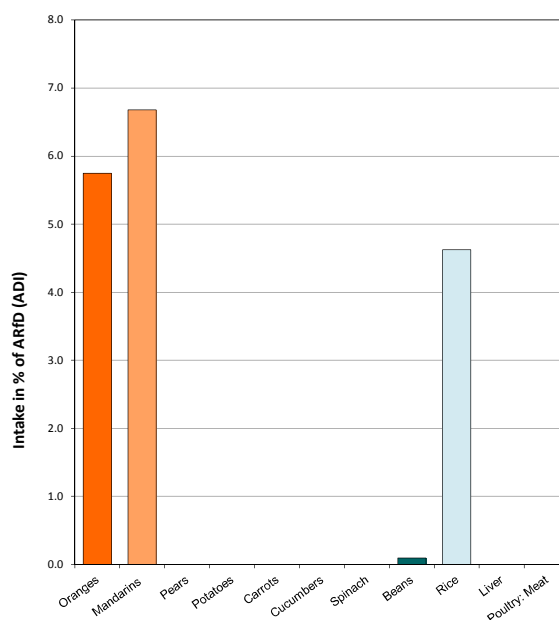
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Malathion (RD)



Acute risk assessment: Malathion (RD)



Mepanipyrim (RD)												
Status of the active substance:				Approved	Monitoring year:				2011			
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?				N			
Toxicological end points												
ADI (mg/kg bw/day):				0.02	ARfD (mg/kg bw):				n.n.			
Source of ADI:				COM	Source of ARfD:				COM			
Year of evaluation:				2004	Year of evaluation:				2004			

Full residue definition: Mepanipyrim (mepanipyrim and its metabolite (2-anilino-4(2-hydroxypropyl)-6-methylpyrimidine) expressed as mepanipyrim)																			
Chronic risk assessment																			
	Highest calculated exposure in % of ADI			Top 12 diets			Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities		
	0.19			WHO cluster diet B			0.17			Tomatoes		0.02			Table grapes	0.01			Strawberries
	0.16			DE child			0.06			Table grapes		0.05			Tomatoes	0.04			Strawberries
	0.11			FR toddler			0.06			Strawberries		0.04			Tomatoes	0.01			Table grapes
	0.09			IT child/toddler			0.08			Tomatoes		0.01			Strawberries	0.01			Table grapes
	0.09			NL child			0.04			Table grapes		0.03			Tomatoes	0.02			Strawberries
	0.08			WHO regional diet			0.06			Tomatoes		0.01			Strawberries	0.01			Table grapes
	0.07			IT adult			0.06			Tomatoes		0.01			Table grapes	0.00			Strawberries
	0.07			WHO cluster diet D			0.05			Tomatoes		0.01			Table grapes	0.00			Strawberries
	0.07			PT (GP)			0.05			Tomatoes		0.01			Table grapes	0.00			Strawberries
	0.07			PL (GP)			0.05			Tomatoes		0.02			Table grapes	0.00			Strawberries
	0.06			UK toddler			0.03			Tomatoes		0.02			Strawberries	0.01			Table grapes
	0.06			ES child			0.05			Tomatoes		0.01			Strawberries	0.00			Table grapes

Acute risk assessment											
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment	
2011	Oranges	0.01	1328					not assessed			
2011	Mandarins	0.01	1116					not assessed			
2011	Pears	0.01	1286					not assessed			
2011	Potatoes	0.01	1390					not assessed			
2011	Carrots	0.01	1054					not assessed			
2011	Cucumbers	0.01	1064					not assessed			
2011	Spinach	0.01	676					not assessed			
2011	Beans (with pods)	0.01	809					not assessed			
2011	Rice	0.01	698					not assessed			
2011	Liver							not assessed			
2011	Poultry: Meat							not assessed			

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

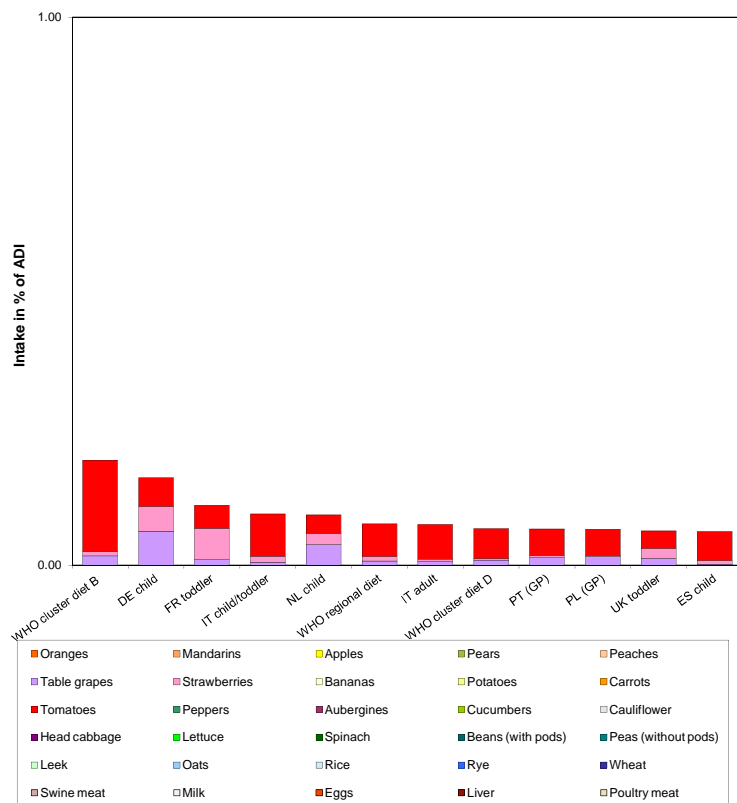
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

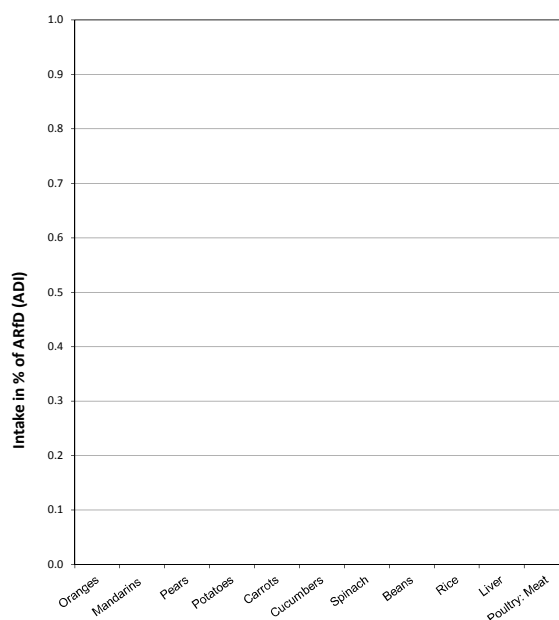
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Mepanipyrim (RD)



Acute risk assessment: Mepanipyrim (RD)



Mepiquat			
Status of the active substance:		Approved	Monitoring year: 2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis? Y
Toxicological end points			
ADI (mg/kg bw/day):		0.154	ARfD (mg/kg bw): 0.23
Source of ADI:		COM	Source of ARfD: COM
Year of evaluation:		2008	Year of evaluation: 2008

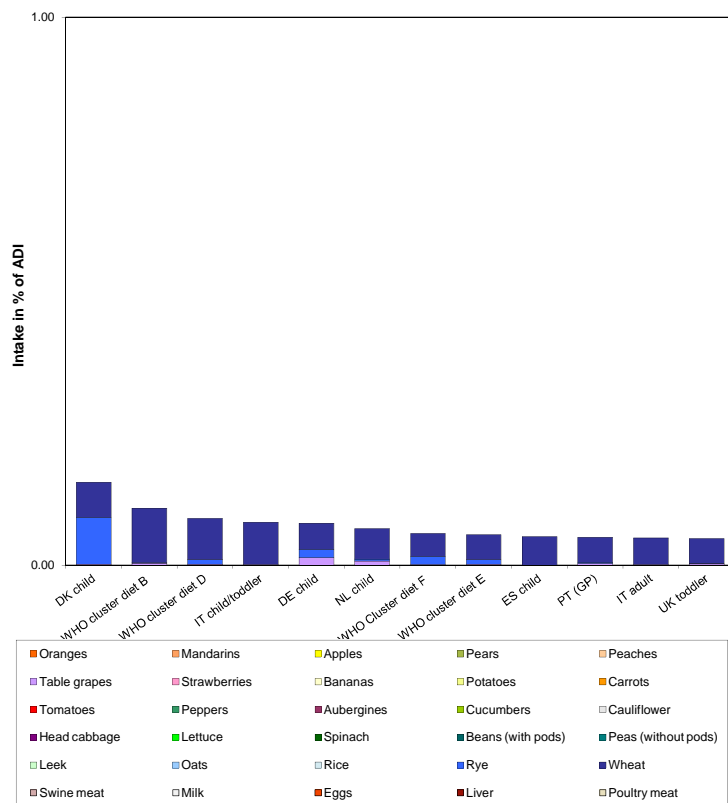
The toxicological reference values derived from those of mepiquat chloride (ADI: 0.2 mg/kg bw per day; ARfD: 0.3 mg/kg bw) were recalculated to mepiquat to match with the residue definition. Mandatory only in cereals (excluding rice) and pears.

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.15	DK child	0.09	Rye	0.06	Wheat	0.00	Table grapes
	0.10	WHO cluster diet B	0.10	Wheat	0.00	Table grapes	0.00	Rye
	0.09	WHO cluster diet D	0.08	Wheat	0.01	Rye	0.00	Table grapes
	0.08	IT child/toddler	0.08	Wheat	0.00	Table grapes	0.00	FRUIT (FRESH OR FROZEN)
	0.08	DE child	0.05	Wheat	0.02	Rye	0.01	Table grapes
	0.07	NL child	0.06	Wheat	0.01	Table grapes	0.00	Rye
	0.06	WHO Cluster diet F	0.04	Wheat	0.01	Rye	0.00	Table grapes
	0.06	WHO cluster diet E	0.05	Wheat	0.01	Rye	0.00	Table grapes
	0.05	ES child	0.05	Wheat	0.00	Table grapes	0.00	FRUIT (FRESH OR FROZEN)
	0.05	PT (GP)	0.05	Wheat	0.00	Table grapes	0.00	Rye
	0.05	IT adult	0.05	Wheat	0.00	Table grapes	0.00	FRUIT (FRESH OR FROZEN)
	0.05	UK toddler	0.05	Wheat	0.00	Table grapes	0.00	Rye

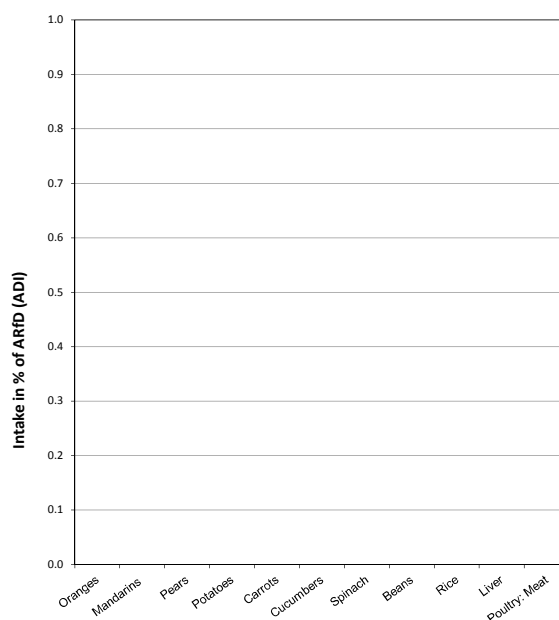
Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARfD) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.05	679							
2011	Mandarins									
2011	Pears									
2011	Potatoes									
2011	Carrots									
2011	Cucumbers									
2011	Spinach									
2011	Beans (with pods)									
2011	Rice									
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.  
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.  
<sup>c)</sup> MRL in place on 01/01/2011.  
<sup>d)</sup> TRL: toxicological threshold level  
<sup>e)</sup> For liver, only the MRL for bovine liver is reported  
<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Mepiquat



Acute risk assessment: Mepiquat



Metalaxyl (RD)			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.08	ARfD (mg/kg bw):	0.5
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2002	Year of evaluation:	2002

Full residue definition: Metalaxyl and metalaxyl-M (metalaxyl including other mixtures of constituent isomers including metalaxyl-M (sum of isomers))

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
Top 12 diets								
0.43	DE child		0.20	Apples	0.06	Oranges	0.05	Potatoes
0.36	NL child		0.11	Apples	0.10	Potatoes	0.05	Oranges
0.29	FR toddler		0.09	Potatoes	0.04	Carrots	0.04	Apples
0.22	FR infant		0.07	Potatoes	0.05	Carrots	0.02	Apples
0.21	WHO cluster diet B		0.06	Tomatoes	0.05	Potatoes	0.02	Apples
0.18	SE (GP)		0.07	Potatoes	0.02	Apples	0.02	Carrots
0.17	PT (GP)		0.09	Potatoes	0.02	Tomatoes	0.02	Apples
0.17	DK child		0.04	Potatoes	0.04	Apples	0.03	Cucumbers
0.17	UK toddler		0.06	Potatoes	0.03	Oranges	0.03	Apples
0.16	WHO regional diet		0.07	Potatoes	0.02	Tomatoes	0.01	Apples
0.15	UK infant		0.06	Potatoes	0.03	Apples	0.02	Carrots
0.14	PL (GP)		0.06	Potatoes	0.03	Apples	0.02	Tomatoes

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.5	1616	0.56		0.03		0.69	UK infant	
2011	Mandarins	0.5	1359	0.88		0.03		0.33	UK toddler	
2011	Pears	1	1536							
2011	Potatoes	0.05	1707	1.11	0.06	0.06		1.85	UK infant	
2011	Carrots	0.1	1314	0.23		0.01		0.16	UK infant	
2011	Cucumbers	0.5	1392	7.83		0.17		1.99	NL child	
2011	Spinach	0.05	909	0.22	0.11	0.82		3.71	BE child	
2011	Beans (with pods)	0.05	1060	0.38		0.04		0.10	NL child	
2011	Rice	0.05	798							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

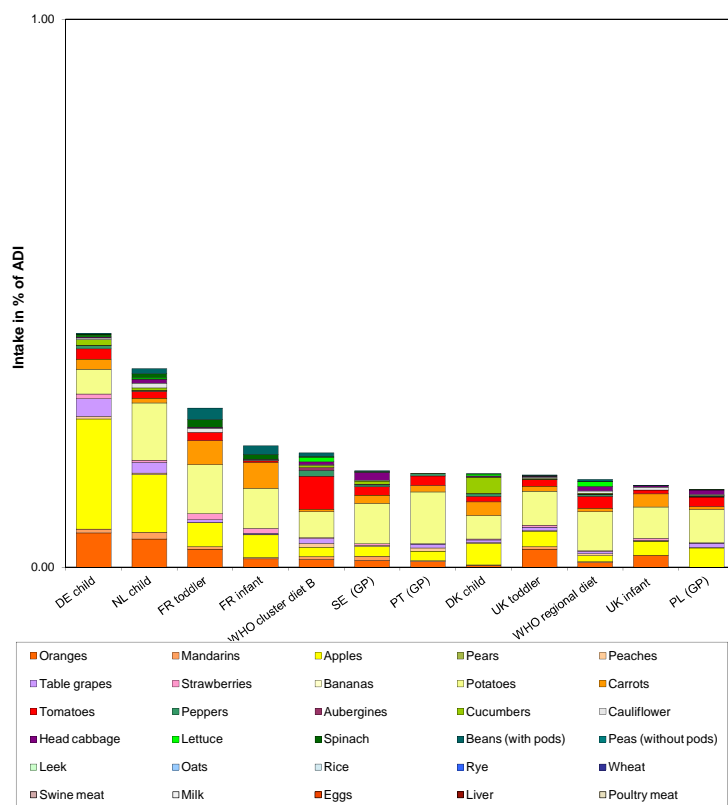
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

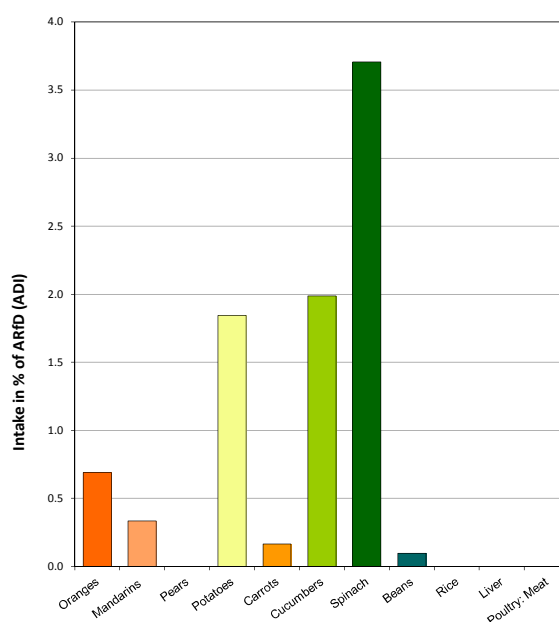
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Metalaxyl (RD)



Acute risk assessment: Metalaxyl (RD)



Metconazole			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARfD (mg/kg bw):	0.01
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2006	Year of evaluation:	2006

Chronic risk assessment														
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
	1.25	DE child		1.25		Apples				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)
	0.66	NL child		0.66		Apples				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)
	0.27	FR toddler		0.27		Apples				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)
	0.26	FR infant		0.26		Apples				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)
	0.24	DK child		0.24		Apples				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)
	0.21	PL (GP)		0.21		Apples				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)
	0.19	LT adult		0.19		Apples				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)
	0.18	UK toddler		0.18		Apples				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)
	0.16	UK infant		0.16		Apples				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)
	0.12	NL (GP)		0.12		Apples				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)
	0.12	ES child		0.12		Apples				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)
	0.11	PT (GP)		0.11		Apples				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1301							
2011	Mandarins	0.02	1041							
2011	Pears	0.02	1315							
2011	Potatoes	0.02	1619							
2011	Carrots	0.02	1157							
2011	Cucumbers	0.02	1144							
2011	Spinach	0.02	733							
2011	Beans (with pods)	0.02	856							
2011	Rice	0.1	765							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

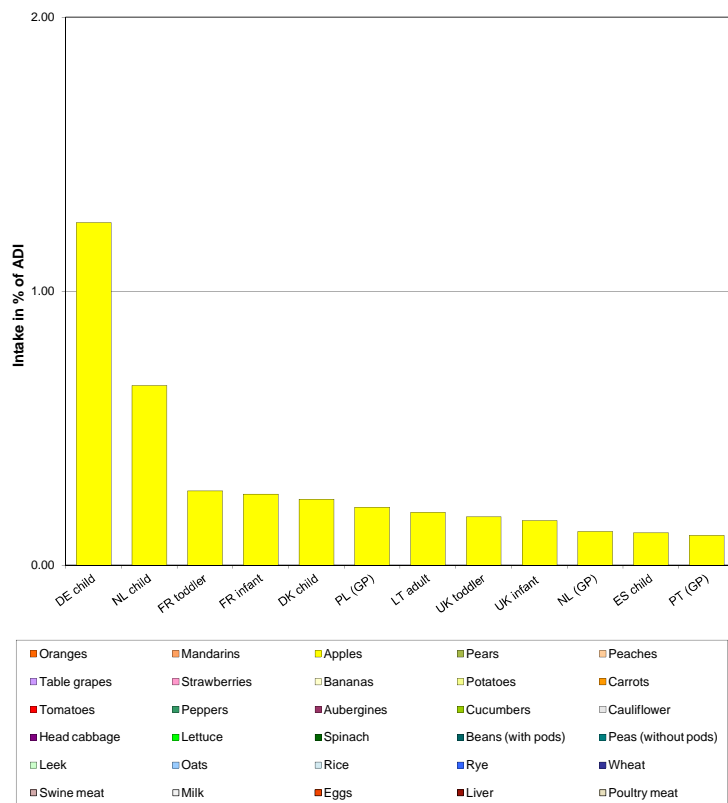
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

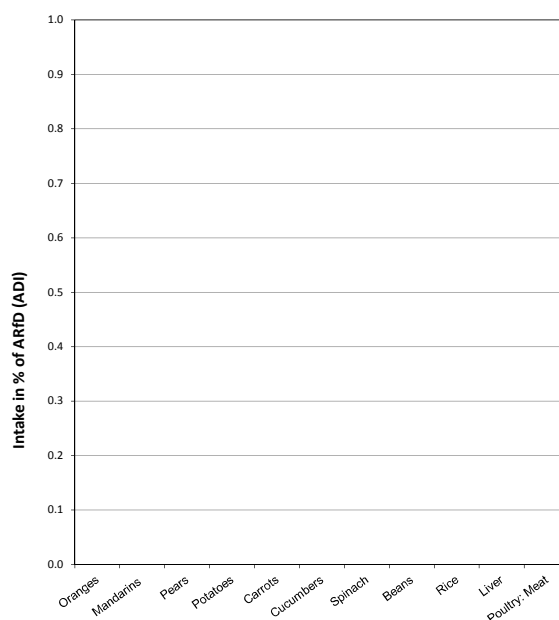
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Metconazole



Acute risk assessment: Metconazole





Methamidophos											
Status of the active substance:				Not approved		Monitoring year:		2011			
To be analysed in plant (P) or animal (A) products				P		Analysis on voluntary basis?		N			
Toxicological end points											
ADI (mg/kg bw/day):				0.001		ARfD (mg/kg bw):		0.003			
Source of ADI:				COM		Source of ARfD:		COM			
Year of evaluation:				2007		Year of evaluation:		2007			

Chronic risk assessment															
Highest calculated exposure in % of ADI				Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
Top 12 diets				2.33		Carrots		0.59		Strawberries		0.20		Table grapes	
3.11 FR toddler				2.52		Carrots		0.46		Strawberries		0.08		Table grapes	
3.08 FR infant				1.21		Table grapes		0.98		Carrots		0.46		Strawberries	
2.94 DE child				1.31		Carrots		0.21		Peppers		0.17		Table grapes	
1.80 DK child				1.26		Carrots		0.21		Strawberries		0.02		Table grapes	
1.49 UK infant				0.72		Table grapes		0.48		Carrots		0.21		Strawberries	
1.49 NL child				0.48		Peppers		0.33		Table grapes		0.29		Aubergines (egg plants)	
1.41 WHO cluster diet B				0.81		Carrots		0.18		Peppers		0.16		Strawberries	
1.21 SE (GP)				0.31		Carrots		0.27		Aubergines (egg plants)		0.25		Table grapes	
1.19 IE adult				0.64		Carrots		0.26		Table grapes		0.19		Peppers	
1.12 PT (GP)				0.50		Carrots		0.23		Table grapes		0.19		Strawberries	
0.95 UK toddler				0.35		Carrots		0.17		Peppers		0.15		Table grapes	
0.78 WHO regional diet															

Acute risk assessment											
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment	
2011	Oranges	0.01	1778								
2011	Mandarins	0.01	1503								
2011	Pears	0.01	1873								
2011	Potatoes	0.01	2061								
2011	Carrots	0.01	1507		0.07	0.06	1	135.26	UK infant		
2011	Cucumbers	0.01	1600								
2011	Spinach	0.01	1061								
2011	Beans (with pods)	0.01	1251		0.24	0.03		11.35	NL child		
2011	Rice	0.01	899								
2011	Liver										
2011	Poultry: Meat										

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

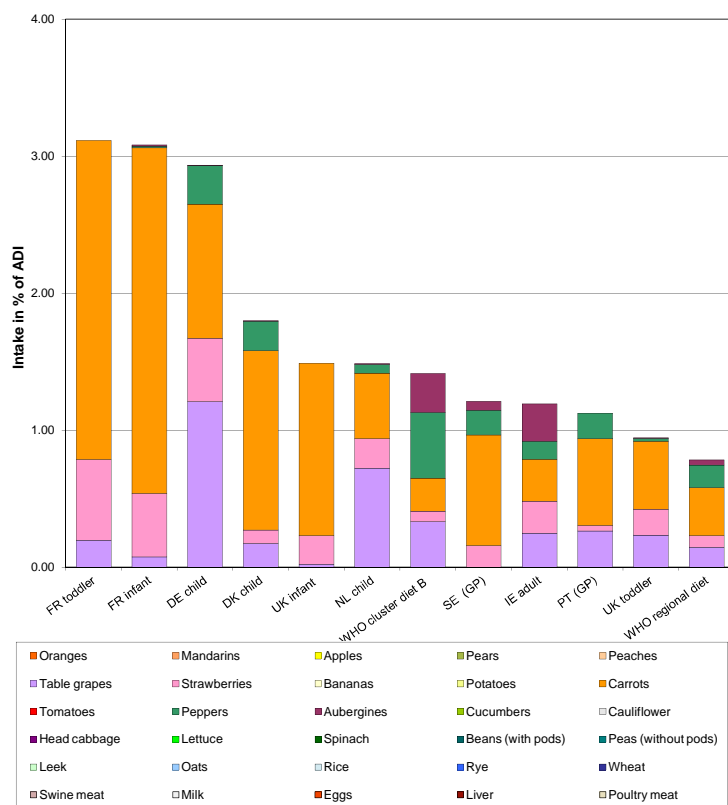
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

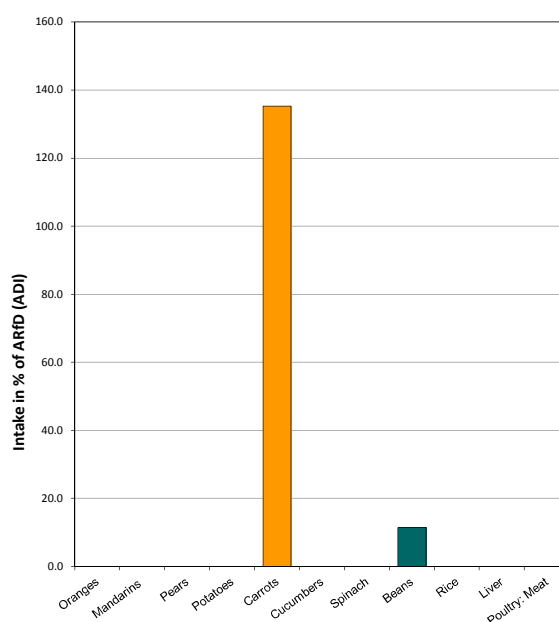
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Methamidophos



Acute risk assessment: Methamidophos



Methidathion			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P, A	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.001	ARfD (mg/kg bw):	0.01
Source of ADI:	JMPR	Source of ARfD:	JMPR
Year of evaluation:	1997	Year of evaluation:	1997

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
6.63	DE child		5.25	Oranges	0.55	Strawberries	0.51	Mandarins
5.54	NL child		4.29	Oranges	0.92	Mandarins	0.25	Strawberries
3.78	FR toddler		2.76	Oranges	0.69	Strawberries	0.33	Mandarins
3.40	ES child		2.99	Oranges	0.21	Mandarins	0.13	Peppers
3.32	UK toddler		2.73	Oranges	0.35	Mandarins	0.22	Strawberries
2.58	IE adult		1.44	Oranges	0.71	Mandarins	0.28	Strawberries
2.47	NL (GP)		2.05	Oranges	0.26	Mandarins	0.08	Strawberries
2.23	WHO cluster diet B		1.18	Oranges	0.57	Peppers	0.39	Mandarins
2.20	ES adult		1.78	Oranges	0.18	Peppers	0.17	Mandarins
2.03	UK infant		1.79	Oranges	0.24	Strawberries		FRUIT (FRESH OR FROZEN)
1.98	FR infant		1.25	Oranges	0.54	Strawberries	0.17	Mandarins
1.97	SE (GP)		1.03	Oranges	0.55	Mandarins	0.22	Peppers

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges		1802	2.00	0.11	1.30		51.72	UK infant	PF 0.03
2011	Mandarins		1440	0.69		0.20		3.34	UK toddler	PF 0.03
2011	Pears		2017	0.05		0.00		1.82	DE child	
2011	Potatoes	0.02	2245							
2011	Carrots	0.02	1616							
2011	Cucumbers		1751							
2011	Spinach	0.02	1124							
2011	Beans (with pods)	0.02	1312	0.08		0.02		1.70	NL child	
2011	Rice	0.02	1000							
2011	Liver	0.02	579							Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.02	582							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

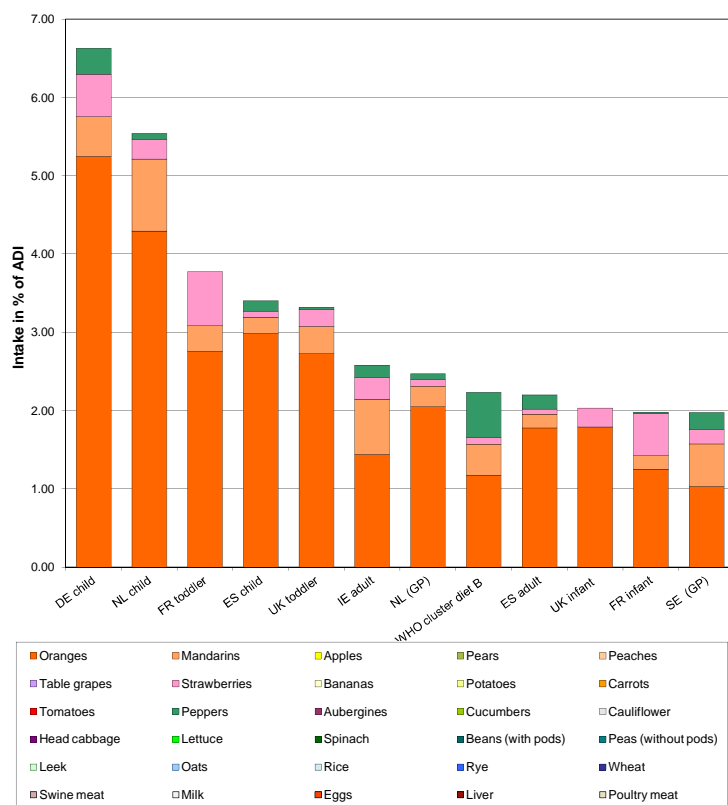
b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

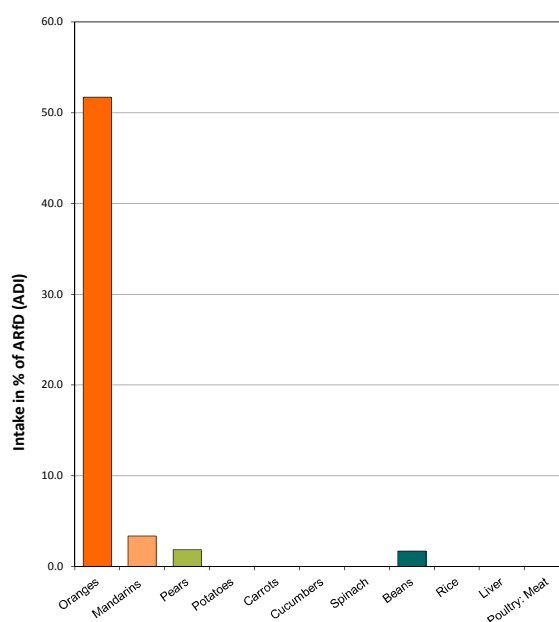
d) TTL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Methidathion



Acute risk assessment: Methidathion



Methiocarb (RD)											
Status of the active substance:				Approved	Monitoring year:		2011				
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N				
Toxicological end points											
ADI (mg/kg bw/day):				0.013	ARfD (mg/kg bw):		0.013				
Source of ADI:				COM	Source of ARfD:		COM				
Year of evaluation:				2007	Year of evaluation:		2007				

Full residue definition: Methiocarb (sum of methiocarb and methiocarb sulfoxide and sulfone, expressed as methiocarb)											
Chronic risk assessment											
Highest calculated exposure in % of ADI				Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
Top 12 diets				0.29		Oranges		0.10		Table grapes	
0.64 DE child				0.24		Oranges		0.06		Table grapes	
0.50 NL child				0.15		Oranges		0.09		Beans (with pods)	
0.48 FR toddler				0.22		Tomatoes		0.06		Oranges	
0.46 WHO cluster diet B				0.16		Oranges		0.07		Tomatoes	
0.31 ES child				0.08		Oranges		0.05		Pears	
0.28 IE adult				0.07		Oranges		0.07		Beans (with pods)	
0.28 FR infant				0.13		Cucumbers		0.05		Pears	
0.27 DK child				0.15		Oranges		0.04		Tomatoes	
0.26 UK toddler				0.11		Oranges		0.03		Tomatoes	
0.24 NL (GP)				0.10		Oranges		0.06		Tomatoes	
0.23 ES adult				0.06		Oranges		0.05		Tomatoes	
0.21 SE (GP)											

Acute risk assessment											
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment	
2011	Oranges	0.1	1590	0.06		0.02		18.36	UK infant		
2011	Mandarins	0.2	1317								
2011	Pears	0.1	1519	0.07		0.02		14.71	DE child		
2011	Potatoes	0.1	1668								
2011	Carrots	0.1	1321								
2011	Cucumbers	0.2	1314	0.53		0.10		44.98	NL child		
2011	Spinach	0.1	899	0.33		0.10		17.21	BE child		
2011	Beans (with pods)	0.2	1112	0.27		0.11		9.62	NL child		
2011	Rice	0.1	762								
2011	Liver										
2011	Poultry: Meat										

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

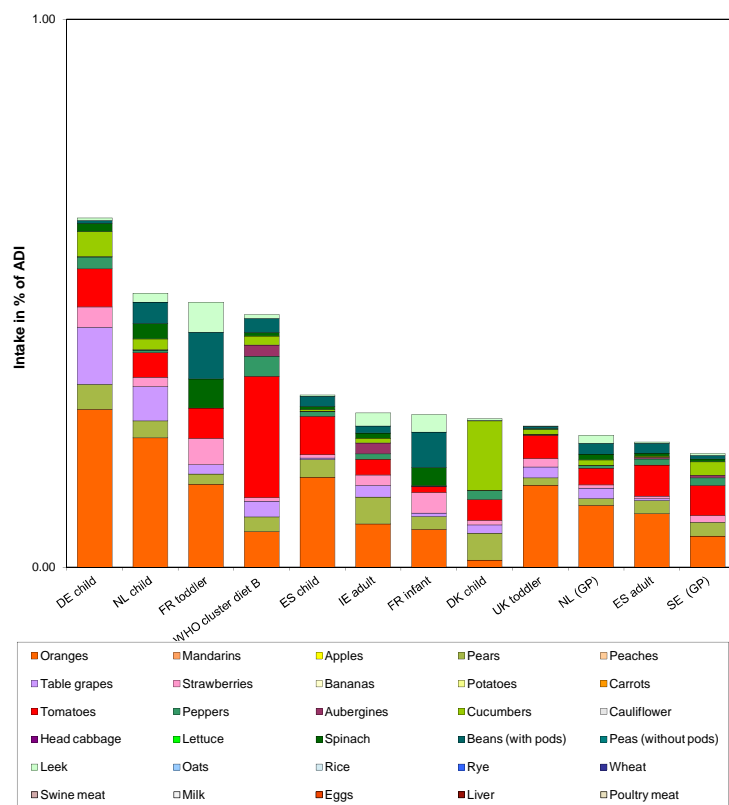
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

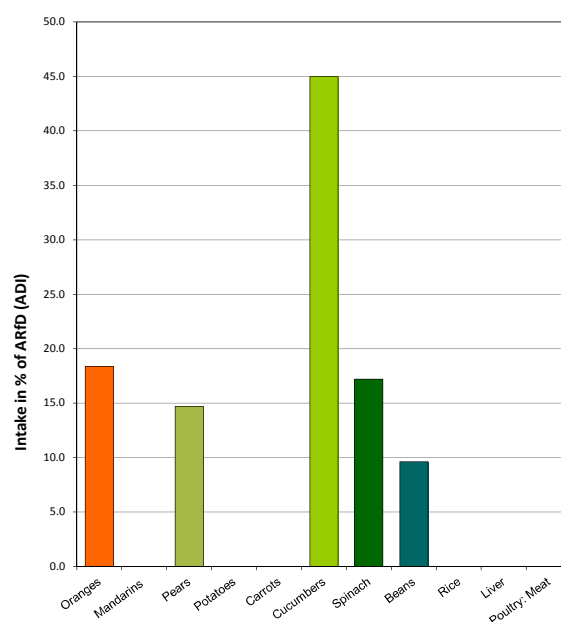
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Methiocarb (RD)



Acute risk assessment: Methiocarb (RD)



Methomyl (RD)					
Status of the active substance:		Approved	Monitoring year:		2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?		N
Toxicological end points					
ADI (mg/kg bw/day):		0.0025	ARfD (mg/kg bw):		0.0025
Source of ADI:		COM	Source of ARfD:		COM
Year of evaluation:		2009	Year of evaluation:		2009

The risk assessment is performed with the toxicological reference values for methomyl. (The toxicological reference values for thiodicarb: ADI: 0.01 mg/kg bw per day; ARfD: 0.01 mg/kg bw).

Full residue definition: Methomyl (sum of methomyl and thiodicarb expressed as methomyl)

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
Top 12 diets								
7.24	DE child	5.07	Apples		0.50	Table grapes	0.39	Tomatoes
4.43	NL child	2.66	Apples		0.43	Spinach	0.30	Table grapes
3.20	FR toddler	1.10	Apples		0.83	Spinach	0.53	Beans (with pods)
2.93	WHO cluster diet B	1.24	Tomatoes		0.42	Apples	0.21	Peppers
2.60	DK child	0.98	Apples		0.79	Cucumbers	0.29	Pears
2.42	FR infant	1.05	Apples		0.52	Spinach	0.41	Beans (with pods)
1.68	ES child	0.48	Apples		0.40	Tomatoes	0.22	Lettuce
1.63	IT child/toddler	0.57	Tomatoes		0.37	Apples	0.15	Lettuce
1.61	IE adult	0.34	Apples		0.29	Pears	0.24	Peaches
1.57	PL (GP)	0.86	Apples		0.36	Tomatoes	0.13	Table grapes
1.55	IT adult	0.47	Tomatoes		0.33	Apples	0.19	Lettuce
1.47	ES adult	0.32	Apples		0.32	Tomatoes	0.28	Lettuce

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1548							
2011	Mandarins	0.02	1263							
2011	Pears	0.02	1460							
2011	Potatoes	0.02	1688							
2011	Carrots	0.02	1290							
2011	Cucumbers	0.1	1357	0.44	0.15	0.35	4	818.71	NL child	
2011	Spinach	0.05	907		0.11	11.60	1	10486.92	BE child	
2011	Beans (with pods)	0.02	1016	0.30	0.98	0.96	3	435.65	NL child	
2011	Rice	0.02	766	0.13		0.01		5.04	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

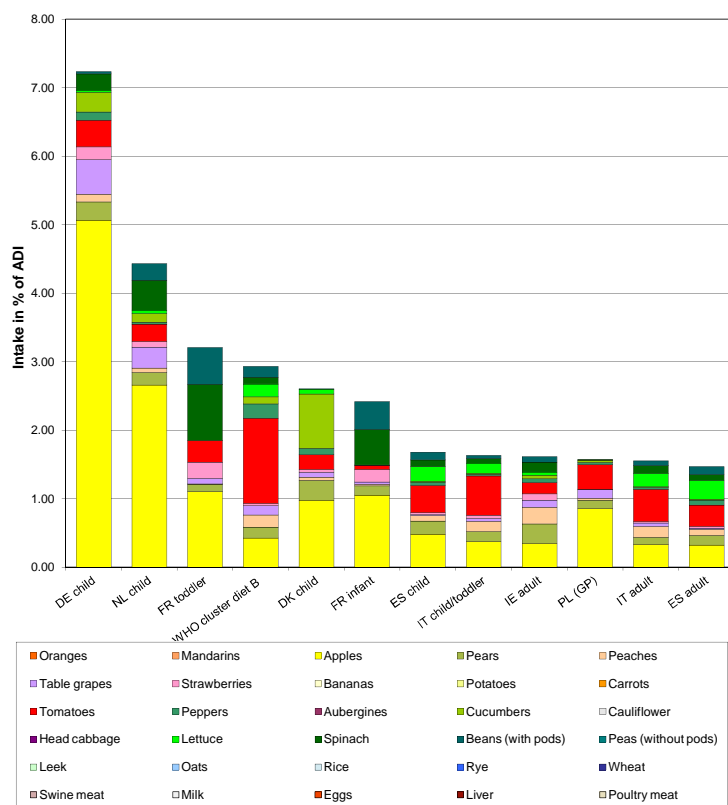
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

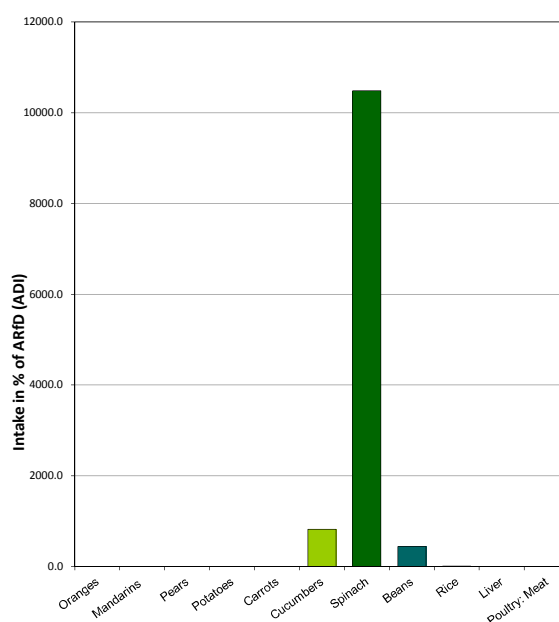
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Methomyl (RD)



Acute risk assessment: Methomyl (RD)



Methoxychlor										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				A		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):				0.1		ARfD (mg/kg bw):				
Source of ADI:				JMPR		Source of ARfD:				
Year of evaluation:				1977		Year of evaluation:				

Active substance not assessed regarding the setting of an ARfD setting. The acute RA is performed with the ADI value.

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
						FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
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<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

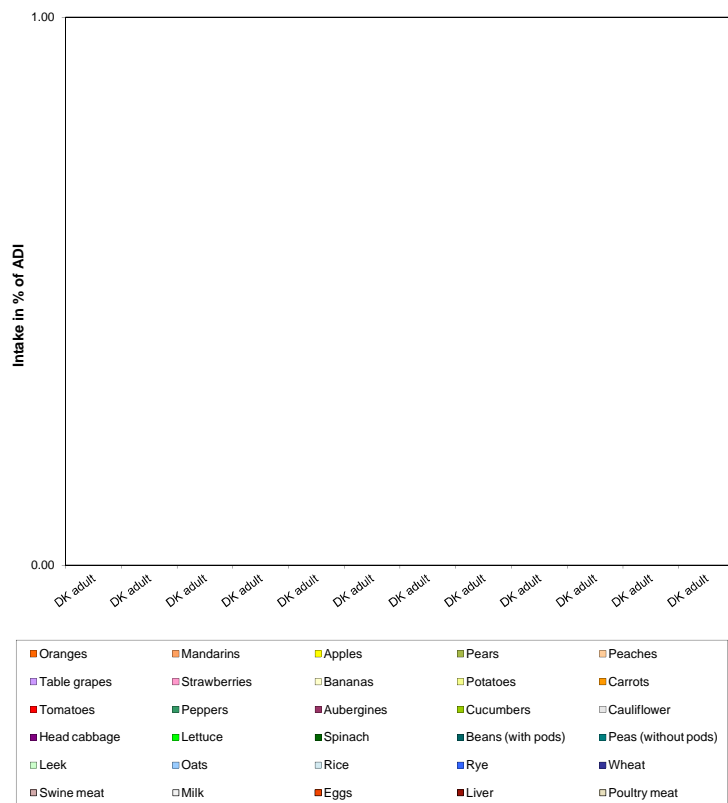
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

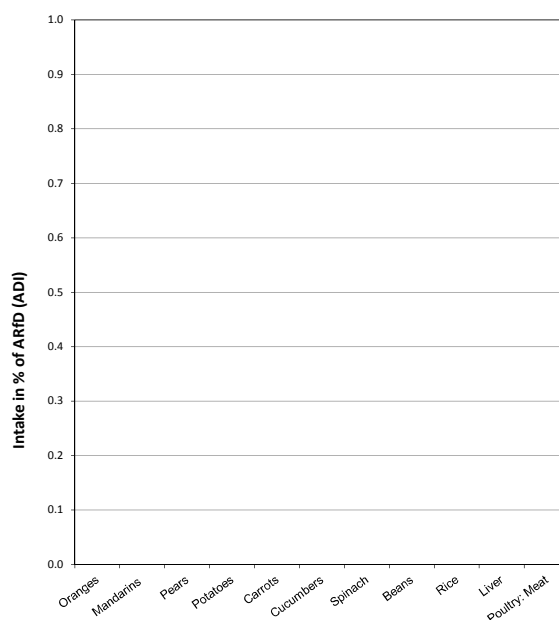
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Methoxychlor



Acute risk assessment: Methoxychlor



Methoxyfenozide			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.1	ARfD (mg/kg bw):	0.2
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2005	Year of evaluation:	2005

Chronic risk assessment														
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
	0.18	DE child		0.14	Apples		0.02	Table grapes		0.01	Tomatoes		0.01	Tomatoes
	0.10	NL child		0.07	Apples		0.01	Table grapes		0.01	Table grapes		0.01	Table grapes
	0.07	WHO cluster diet B		0.03	Tomatoes		0.01	Apples		0.01	Tomatoes		0.00	Tomatoes
	0.05	DK child		0.03	Apples		0.01	Pears		0.01	Table grapes		0.01	Table grapes
	0.04	FR toddler		0.03	Apples		0.01	Tomatoes		0.01	Table grapes		0.01	Pears
	0.04	PL (GP)		0.02	Apples		0.01	Apples		0.01	Pears		0.00	Tomatoes
	0.04	IT child/toddler		0.01	Tomatoes		0.01	Pears		0.01	Table grapes		0.01	Peaches
	0.04	IE adult		0.01	Apples		0.01	Pears		0.00	Tomatoes		0.01	Pears
	0.04	FR infant		0.03	Apples		0.00	Tomatoes		0.01	Table grapes		0.00	Table grapes
	0.04	ES child		0.01	Apples		0.01	Apples		0.01	Peaches		0.00	Peaches
	0.04	PT (GP)		0.01	Apples		0.01	Tomatoes		0.01	Table grapes		0.00	Table grapes
	0.04	IT adult		0.01	Tomatoes		0.01	Apples		0.01	Peaches		0.00	Peaches

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>e)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	1	1551	0.06		0.03		1.92	UK infant	
2011	Mandarins	1	1285							
2011	Pears	2	1535	8.01		0.40		18.21	DE child	
2011	Potatoes	0.02	1576							
2011	Carrots		1272							
2011	Cucumbers	0.02	1288							
2011	Spinach	0.02	826							
2011	Beans (with pods)		1043							
2011	Rice	0.05	721							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

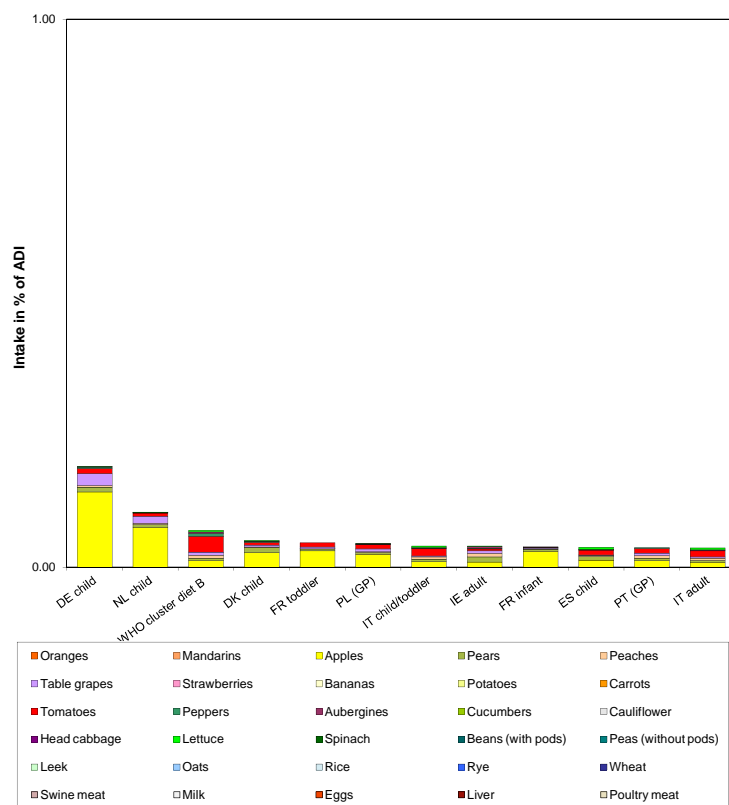
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

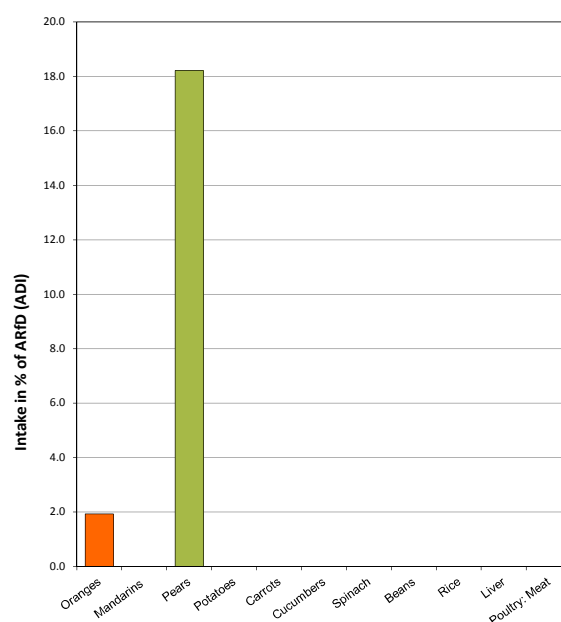
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Methoxyfenozide



Acute risk assessment: Methoxyfenozide



Monocrotophos			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.0006	ARfD (mg/kg bw):	0.002
Source of ADI:	JMPR	Source of ARfD:	JMPR
Year of evaluation:	1995	Year of evaluation:	1995

Chronic risk assessment														
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
Top 12 diets														
DK adult					FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
DK adult					FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
DK adult					FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
DK adult					FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
DK adult					FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
DK adult					FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
DK adult					FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
DK adult					FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
DK adult					FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
DK adult					FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
DK adult					FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
DK adult					FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
DK adult					FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
DK adult					FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
DK adult					FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.01	1836							
2011	Mandarins	0.01	1455							
2011	Pears	0.01	1722							
2011	Potatoes	0.01	2000							
2011	Carrots	0.01	1470							
2011	Cucumbers	0.01	1569							
2011	Spinach	0.01	1030							
2011	Beans (with pods)	0.01	1220							
2011	Rice	0.01	931							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

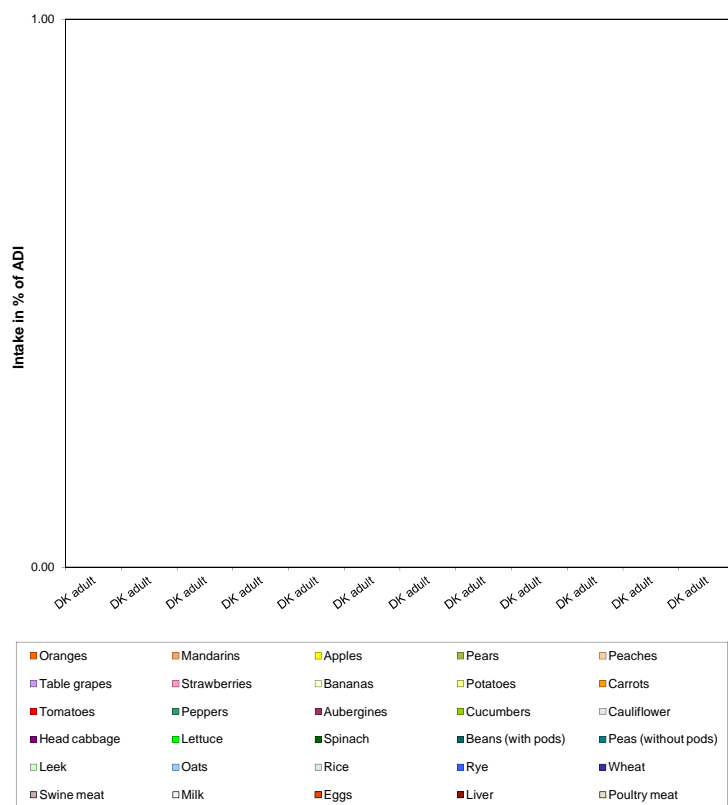
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

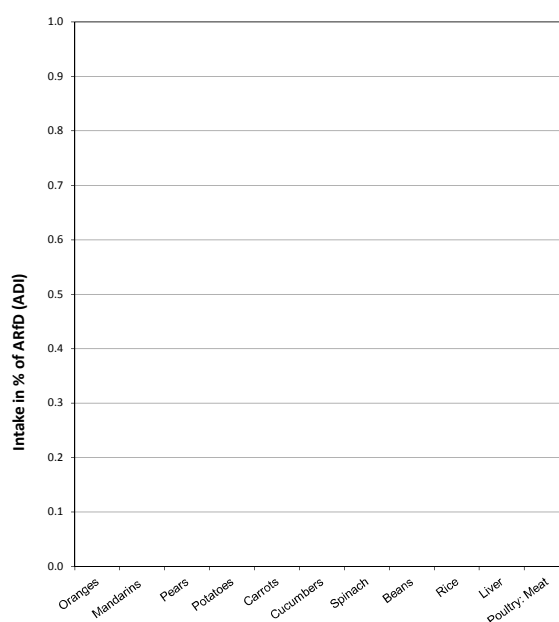
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Monocrotophos



Acute risk assessment: Monocrotophos



Myclobutanil				
Status of the active substance:		Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	N
Toxicological end points				
ADI (mg/kg bw/day):		0.025	ARfD (mg/kg bw):	0.31
Source of ADI:		COM	Source of ARfD:	COM
Year of evaluation:		2010	Year of evaluation:	2010

Chronic risk assessment										
Highest calculated exposure in % of ADI				Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)		
Top 12 diets				Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities		
1.61	DE child			0.63	Apples	0.21	Wheat	0.20	Oranges	
1.37	NL child			0.33	Apples	0.29	Potatoes	0.25	Wheat	
1.03	WHO cluster diet B			0.45	Wheat	0.17	Tomatoes	0.13	Potatoes	
0.99	FR toddler			0.25	Potatoes	0.14	Apples	0.14	Wheat	
0.87	DK child			0.29	Wheat	0.12	Apples	0.12	Potatoes	
0.76	UK toddler			0.20	Wheat	0.17	Potatoes	0.10	Oranges	
0.75	SE (GP)			0.20	Potatoes	0.17	Wheat	0.11	Bananas	
0.73	PT (GP)			0.26	Potatoes	0.20	Wheat	0.06	Apples	
0.70	ES child			0.23	Wheat	0.11	Oranges	0.09	Potatoes	
0.70	WHO cluster diet D			0.34	Wheat	0.20	Potatoes	0.06	Tomatoes	
0.70	FR infant			0.20	Potatoes	0.13	Apples	0.13	Carrots	
0.67	IT child/toddler			0.35	Wheat	0.08	Tomatoes	0.05	Apples	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	3	1934	1.60		1.00		42.78	UK infant	
2011	Mandarins	3	1582	0.38		0.96		17.23	UK toddler	
2011	Pears	0.5	1978	0.40		0.22		6.46	DE child	
2011	Potatoes	0.02	2229	0.09		0.02		0.99	UK infant	
2011	Carrots	0.2	1609	0.56		0.20		4.09	UK infant	
2011	Cucumbers	0.1	1720	2.15		0.07		1.32	NL child	
2011	Spinach	0.02	1096							
2011	Beans (with pods)	0.3	1292	0.08		0.01		0.04	NL child	
2011	Rice	0.02	1028							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

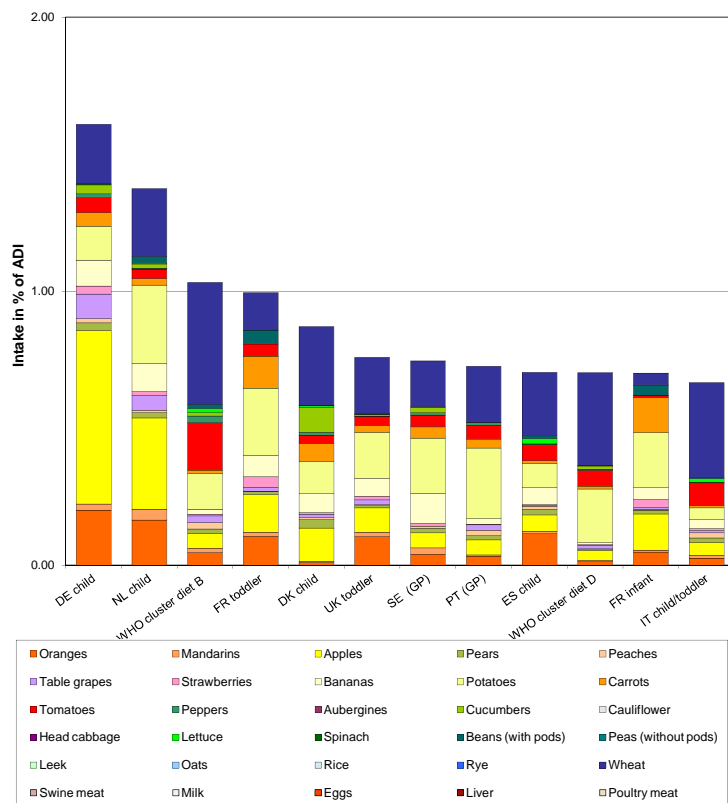
b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

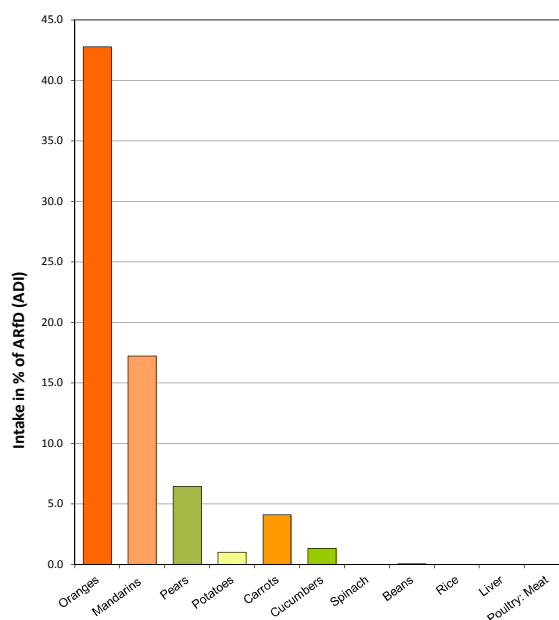
d) TTL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported. f) The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Myclobutanil



Acute risk assessment: Myclobutanil





Nitenpyram			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	Y
Toxicological end points			
ADI (mg/kg bw/day):		ARfD (mg/kg bw):	
Source of ADI:		Source of ARfD:	
Year of evaluation:		Year of evaluation:	

No ADI and no ARfD allocated. Mandatory only in beans.

Chronic risk assessment				
	Highest calculated exposure in % of ADI Top 12 diets	Highest contributor to MS diet (in % of ADI) Commodity / group of commodities	2nd contributor to MS diet (in % of ADI) Commodity / group of commodities	3rd contributor to MS diet (in % of ADI) Commodity / group of commodities

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges									
2011	Mandarins									
2011	Pears									
2011	Potatoes									
2011	Carrots									
2011	Cucumbers									
2011	Spinach									
2011	Beans (with pods)	0.01	661							
2011	Rice									
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

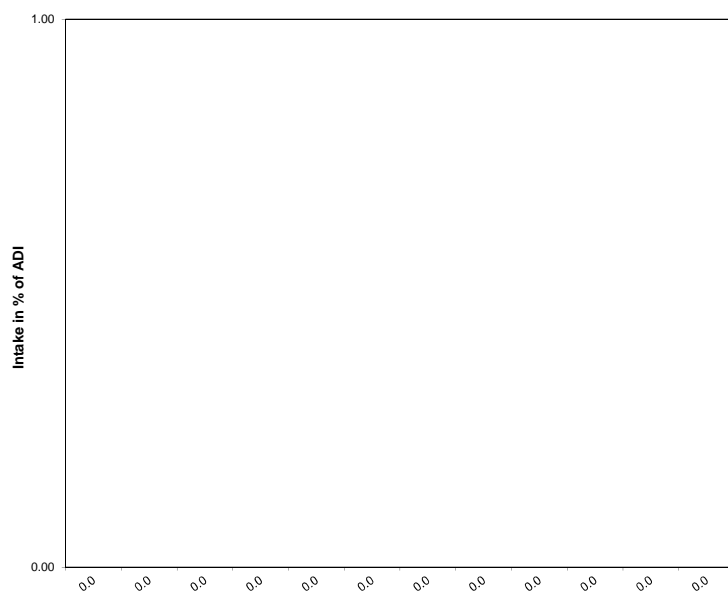
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

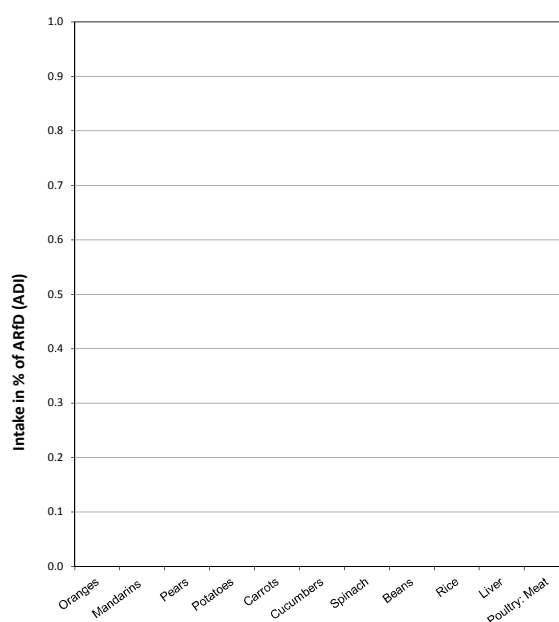
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Nitenpyram



Acute risk assessment: Nitenpyram



Oranges	Mandarins	Apples	Pears	Peaches
Table grapes	Strawberries	Bananas	Potatoes	Carrots
Tomatoes	Peppers	Aubergines	Cucumbers	Cauliflower
Head cabbage	Lettuce	Spinach	Beans (with pods)	Peas (without pods)
Leek	Oats	Rice	Rye	Wheat
Swine meat	Milk	Eggs	Liver	Poultry meat

Oxadixyl									
Status of the active substance:				Not approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N		
Toxicological end points									
ADI (mg/kg bw/day):				0.01	ARfD (mg/kg bw):				
Source of ADI:				EFSA	Source of ARfD:				
Year of evaluation:				2012	Year of evaluation:				

Active substance not assessed regarding the setting of an ARfD setting. The acute RA is performed with the ADI value.

Chronic risk assessment										
Highest calculated exposure in % of ADI			Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.13		DE child		0.12	Table grapes	0.01	Lettuce		FRUIT (FRESH OR FROZEN)
	0.09		NL child		0.07	Table grapes	0.01	Lettuce		FRUIT (FRESH OR FROZEN)
	0.08		WHO cluster diet B		0.04	Lettuce	0.03	Table grapes		FRUIT (FRESH OR FROZEN)
	0.07		ES adult		0.06	Lettuce	0.00	Table grapes		FRUIT (FRESH OR FROZEN)
	0.06		WHO regional diet		0.05	Lettuce	0.01	Table grapes		FRUIT (FRESH OR FROZEN)
	0.06		IT adult		0.05	Lettuce	0.01	Table grapes		FRUIT (FRESH OR FROZEN)
	0.05		ES child		0.05	Lettuce	0.00	Table grapes		FRUIT (FRESH OR FROZEN)
	0.05		WHO Cluster diet F		0.04	Lettuce	0.01	Table grapes		FRUIT (FRESH OR FROZEN)
	0.05		IT child/toddler		0.04	Lettuce	0.01	Table grapes		FRUIT (FRESH OR FROZEN)
	0.04		NL (GP)		0.02	Table grapes	0.01	Lettuce		FRUIT (FRESH OR FROZEN)
	0.04		IE adult		0.03	Table grapes	0.01	Lettuce		FRUIT (FRESH OR FROZEN)
	0.03		DK child		0.02	Table grapes	0.02	Lettuce		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.01	1635	0.05	0.07	0.02		23.06	UK infant	
2011	Mandarins	0.01	1313							
2011	Pears	0.01	1673							
2011	Potatoes	0.05	2062							
2011	Carrots	0.05	1503							
2011	Cucumbers	0.01	1517							
2011	Spinach	0.01	997			0.03		15.79	NL child	
2011	Beans (with pods)	0.01	1191							
2011	Rice	0.01	910							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

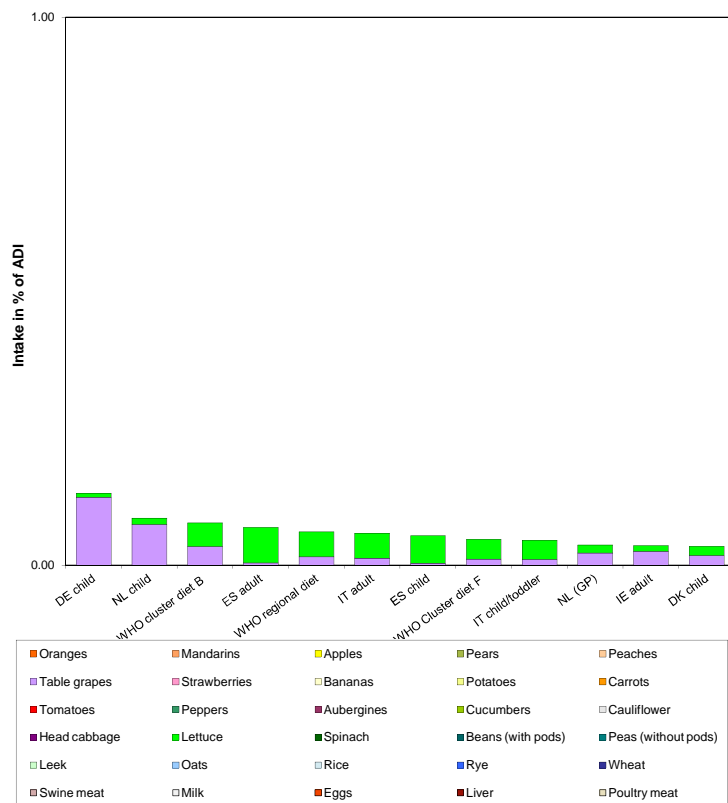
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

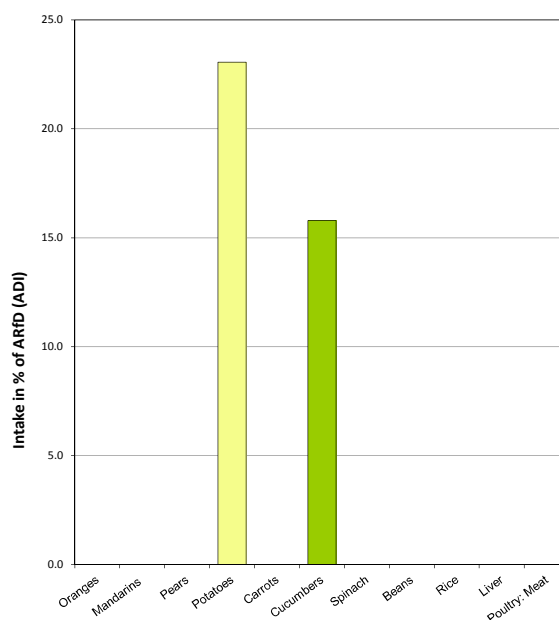
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported      <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Oxadixyl



Acute risk assessment: Oxadixyl



Oxamyl												
Status of the active substance:				Approved	Monitoring year:				2011			
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?				N			
Toxicological end points												
ADI (mg/kg bw/day):				0.001		ARfD (mg/kg bw):				0.001		
Source of ADI:				COM		Source of ARfD:				COM		
Year of evaluation:				2006		Year of evaluation:				2006		

Chronic risk assessment																	
Highest calculated exposure in % of ADI				Top 12 diets		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
5.54				FR toddler		2.22		Carrots		1.22		Bananas		1.01		Beans (with pods)	
4.63				DK child		1.56		Cucumbers		1.25		Carrots		1.08		Bananas	
4.48				WHO cluster diet B		2.91		Tomatoes		0.46		Peppers		0.31		Beans (with pods)	
4.32				DE child		1.46		Bananas		0.93		Carrots		0.91		Tomatoes	
4.10				FR infant		2.40		Carrots		0.77		Beans (with pods)		0.67		Bananas	
3.85				NL child		1.61		Bananas		0.59		Tomatoes		0.46		Beans (with pods)	
3.82				SE (GP)		1.70		Bananas		0.77		Carrots		0.72		Tomatoes	
3.19				UK infant		1.38		Bananas		1.20		Carrots		0.35		Tomatoes	
2.44				ES child		0.95		Bananas		0.93		Tomatoes		0.22		Beans (with pods)	
2.34				WHO regional diet		1.04		Tomatoes		0.36		Bananas		0.33		Carrots	
2.31				UK toddler		1.01		Bananas		0.56		Tomatoes		0.47		Carrots	
2.22				IT child/toddler		1.34		Tomatoes		0.51		Bananas		0.17		Carrots	

Acute risk assessment											
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment	
2011	Oranges	0.01	1781	0.13	0.07	0.02	1	107.78	UK infant		
2011	Mandarins	0.02	1458								
2011	Pears	0.01	1791								
2011	Potatoes	0.01	1966								
2011	Carrots	0.01	1490								
2011	Cucumbers	0.02	1501								
2011	Spinach	0.01	1023	0.24	0.53	0.42	8	2456.14	NL child		
2011	Beans (with pods)	0.01	1225								
2011	Rice	0.01	852								
2011	Liver										
2011	Poultry: Meat										

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

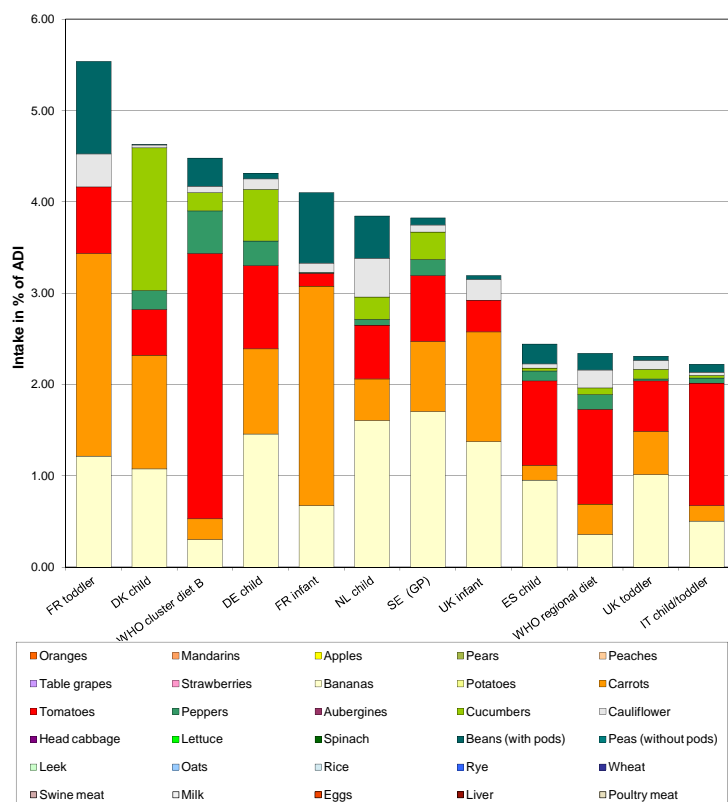
b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

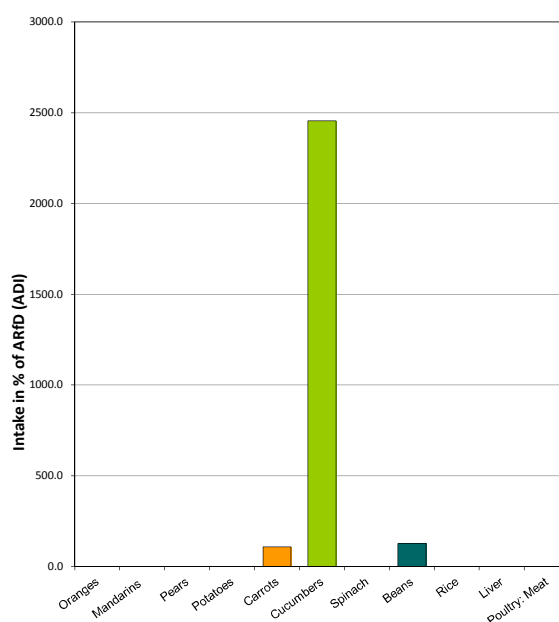
d) TTL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported. f) The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Oxamyl



Acute risk assessment: Oxamyl



Oxydemeton-methyl (RD)			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.0003	ARfD (mg/kg bw):	0.0015
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2006	Year of evaluation:	2006

Full residue definition: Oxydemeton-methyl (sum of oxydemeton-methyl and demeton-S-methylsulfone expressed as oxydemeton-methyl)											
Chronic risk assessment											
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)			2nd contributor to MS diet (in % of ADI)			3rd contributor to MS diet (in % of ADI)		
Top 12 diets			Commodity / group of commodities			Commodity / group of commodities			Commodity / group of commodities		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		
DK adult			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)			FRUIT (FRESH OR FROZEN)		

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.01	1509							
2011	Mandarins	0.01	1205							
2011	Pears	0.01	1419							
2011	Potatoes	0.01	1552							
2011	Carrots	0.01	1238							
2011	Cucumbers	0.01	1220							
2011	Spinach	0.01	797							
2011	Beans (with pods)	0.01	977							
2011	Rice	0.02	759							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

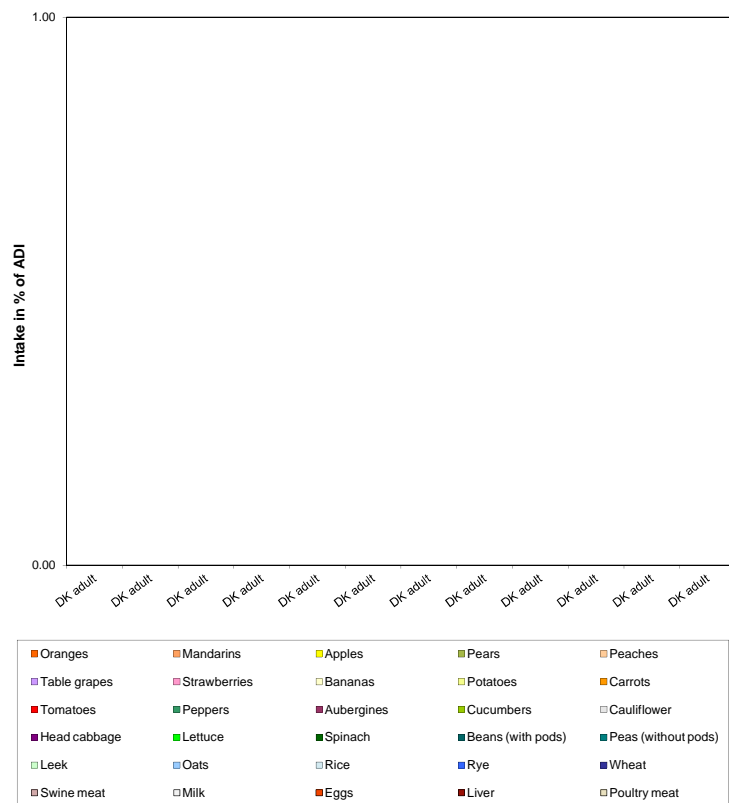
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

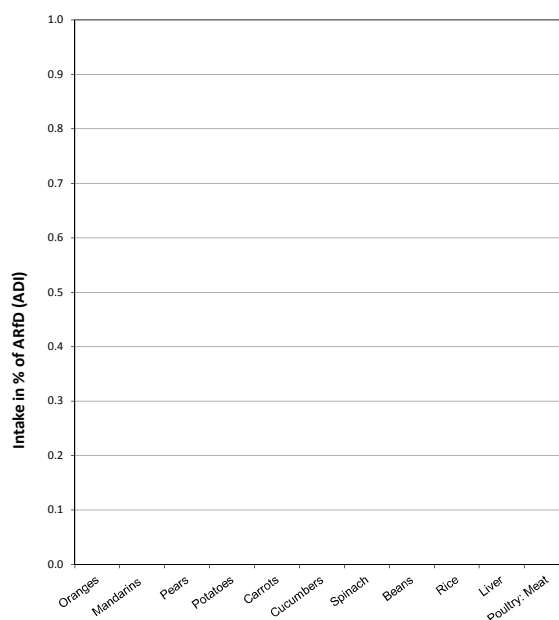
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Oxydemeton-methyl (RD)



Acute risk assessment: Oxydemeton-methyl (RD)



Paclobutrazol											
Status of the active substance:				Approved	Monitoring year:		2011				
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N				
Toxicological end points											
ADI (mg/kg bw/day):				0.022	ARfD (mg/kg bw):		0.1				
Source of ADI:				COM	Source of ARfD:		COM				
Year of evaluation:				2011	Year of evaluation:		2011				

Chronic risk assessment															
Highest calculated exposure in % of ADI				Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
Top 12 diets				0.62		Apples		0.03		Pears		0.02		Strawberries	
0.68				DE child		0.33		0.02		Pears		0.01		Strawberries	
0.36				NL child		0.14		0.03		Strawberries		0.01		Pears	
0.18				FR toddler		0.13		0.02		Strawberries		0.02		Pears	
0.17				FR infant		0.12		0.03		Pears		0.01		Strawberries	
0.16				DK child		0.11		0.01		Pears		0.00		Strawberries	
0.12				PL (GP)		0.09		0.01		Strawberries		0.01		Pears	
0.11				UK toddler		0.10		0.01		Pears		0.00		Strawberries	
0.11				LT adult		0.08		0.01		Pears		0.01		Strawberries	
0.10				UK infant		0.04		0.03		Pears		0.01		Strawberries	
0.09				IE adult		0.06		0.02		Pears		0.00		Strawberries	
0.08				ES child		0.05		0.02		Pears		0.01		Strawberries	
0.08				SE (GP)											

Acute risk assessment											
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment	
2011	Oranges	0.5	1461	0.47		0.13		11.84	DE child		
2011	Mandarins	0.5	1229								
2011	Pears	0.5	1493								
2011	Potatoes	0.02	1667								
2011	Carrots	0.02	1232								
2011	Cucumbers	0.02	1184								
2011	Spinach	0.02	783								
2011	Beans (with pods)	0.02	971								
2011	Rice	0.02	814								
2011	Liver										
2011	Poultry: Meat										

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

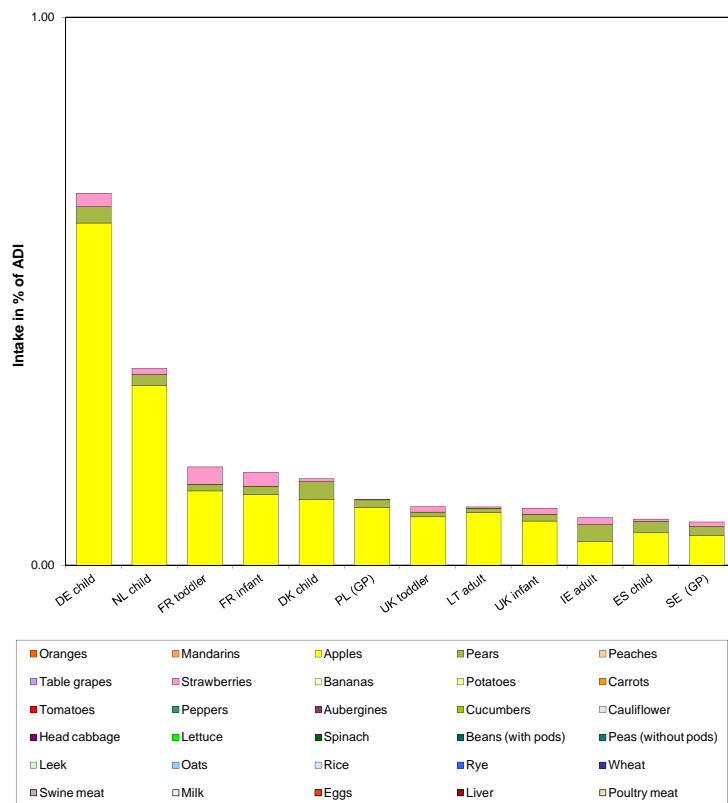
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

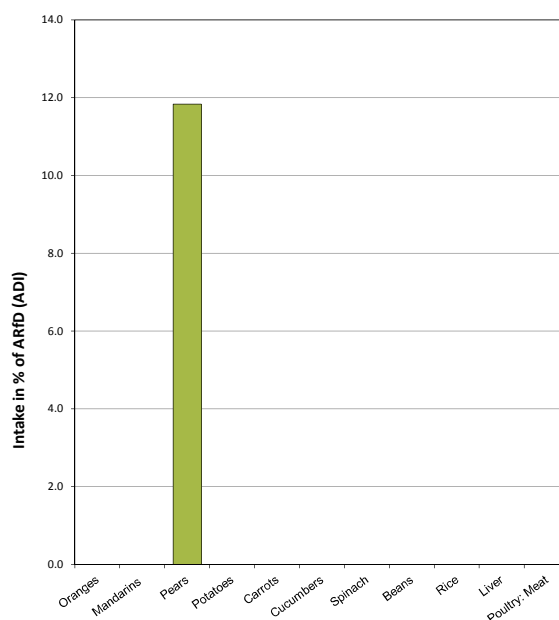
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Paclobutrazol



Acute risk assessment: Paclobutrazol



Parathion										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P, A		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):				0.0006		ARfD (mg/kg bw):		0.005		
Source of ADI:				ECCO 100		Source of ARfD:		ECCO 100		
Year of evaluation:				2001		Year of evaluation:		2001		

Chronic risk assessment														
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
1.05 WHO cluster diet B			1.05		Peppers		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.61 DE child			0.61		Peppers		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.47 DK child			0.47		Peppers		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.41 PT (GP)			0.41		Peppers		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.40 SE (GP)			0.40		Peppers		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.36 WHO regional diet			0.36		Peppers		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.33 ES adult			0.33		Peppers		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.29 IE adult			0.29		Peppers		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.24 ES child			0.24		Peppers		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.22 DK adult			0.22		Peppers		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.22 WHO cluster diet D			0.22		Peppers		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.22 WHO cluster diet E			0.22		Peppers		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.05	1888	0.05		0.03		82.22	UK infant	
2011	Mandarins	0.05	1498							
2011	Pears	0.05	1878							
2011	Potatoes	0.05	2161							
2011	Carrots	0.05	1586							
2011	Cucumbers	0.05	1684							
2011	Spinach	0.05	1078							
2011	Beans (with pods)	0.05	1227							
2011	Rice	0.05	1087							
2011	Liver	0.05	563							Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.05	571							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

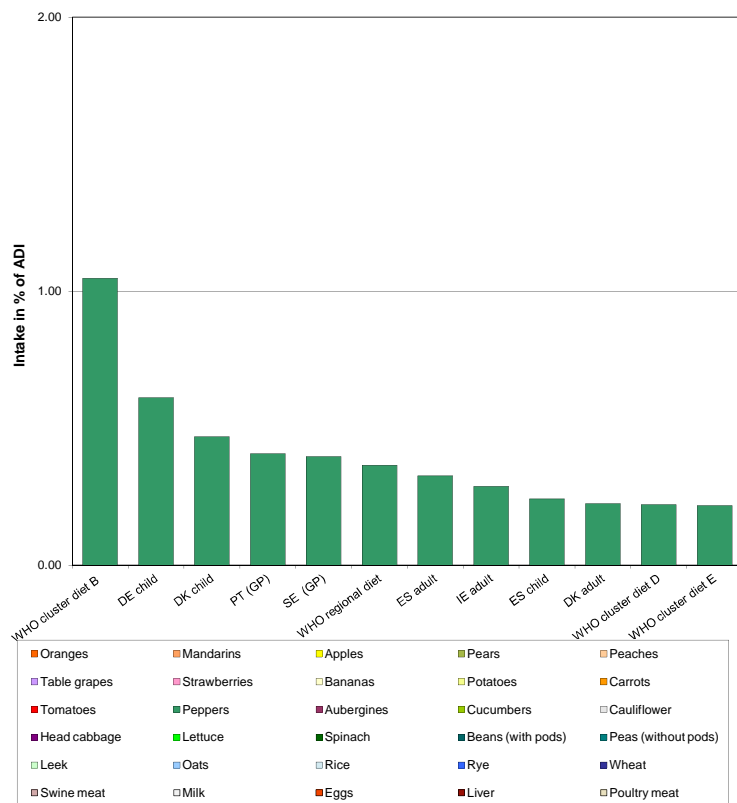
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

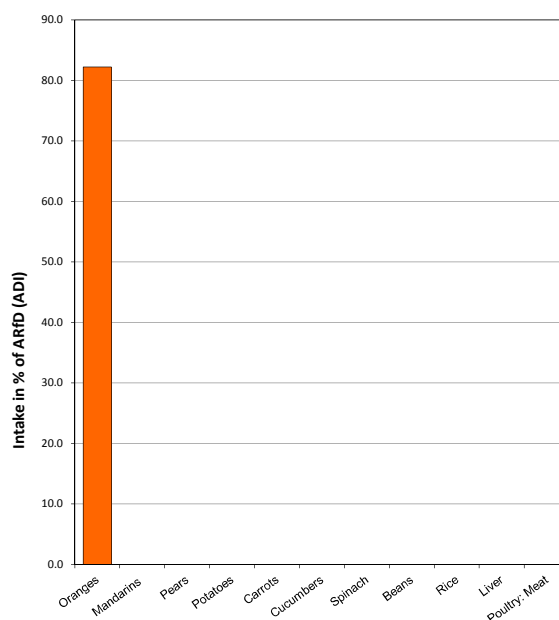
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Parathion



Acute risk assessment: Parathion



Parathion-methyl (RD)			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P, A	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.003	ARfD (mg/kg bw):	0.03
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2002	Year of evaluation:	2001

Full residue definition: Parathion-methyl (sum of parathion-methyl and paraoxon-methyl expressed as parathion-methyl)

Chronic risk assessment							
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets		Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1609							
2011	Mandarins	0.02	1322							
2011	Pears	0.02	1594							
2011	Potatoes	0.02	1831							
2011	Carrots	0.02	1322							
2011	Cucumbers	0.02	1503							
2011	Spinach	0.02	932							
2011	Beans (with pods)	0.02	1078							
2011	Rice	0.02	739							
2011	Liver	0.02	534							Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.02	491							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

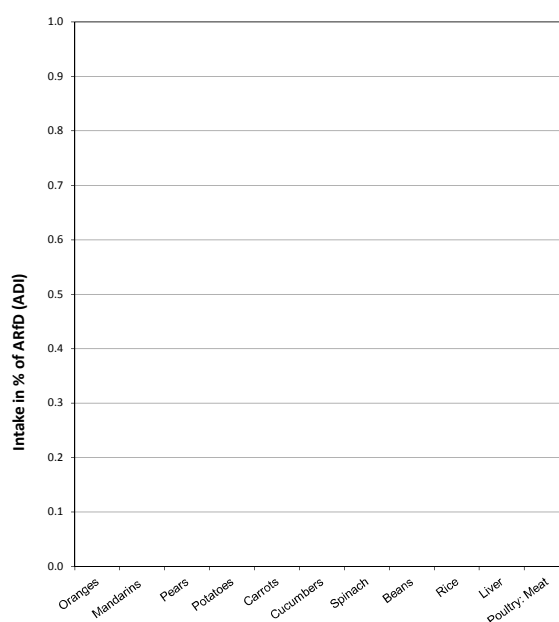
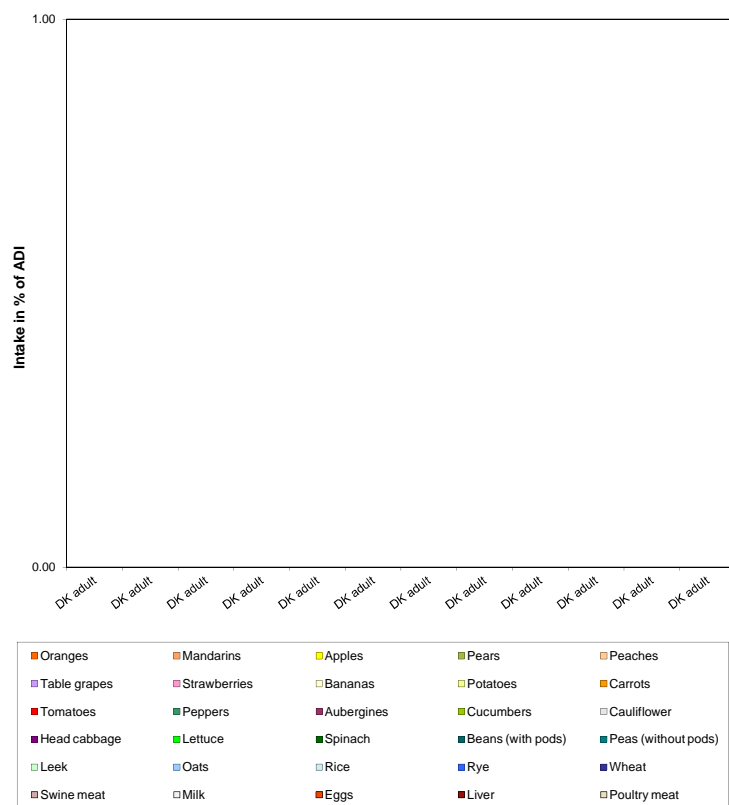
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Parathion-methyl (RD)

Acute risk assessment: Parathion-methyl (RD)



Penconazole											
Status of the active substance:				Approved	Monitoring year:			2011			
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?			N			
Toxicological end points											
ADI (mg/kg bw/day):				0.03	ARfD (mg/kg bw):			0.5			
Source of ADI:				COM	Source of ARfD:			COM			
Year of evaluation:				2009	Year of evaluation:			2009			

Chronic risk assessment											
	Highest calculated exposure in % of ADI		Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	
	0.97	DE child		0.51	Apples		0.16	Oranges	0.07	Bananas	
	0.65	NL child		0.27	Apples		0.13	Oranges	0.07	Bananas	
	0.50	FR toddler		0.11	Apples		0.11	Carrots	0.09	Oranges	
	0.38	FR infant		0.11	Carrots		0.11	Apples	0.04	Oranges	
	0.33	DK child		0.10	Apples		0.06	Cucumbers	0.06	Carrots	
	0.33	WHO cluster diet B		0.13	Tomatoes		0.04	Apples	0.04	Oranges	
	0.32	UK infant		0.07	Apples		0.06	Bananas	0.06	Carrots	
	0.31	UK toddler		0.08	Oranges		0.07	Apples	0.05	Bananas	
	0.29	ES child		0.09	Oranges		0.05	Apples	0.04	Bananas	
	0.27	SE (GP)		0.08	Bananas		0.04	Apples	0.04	Carrots	
	0.23	IE adult		0.04	Oranges		0.03	Apples	0.03	Bananas	
	0.21	NL (GP)		0.06	Oranges		0.05	Apples	0.02	Tomatoes	

Acute risk assessment											
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment	
2011	Oranges	0.05	1940	0.05	0.05	0.56		14.85	UK infant		
2011	Mandarins	0.05	1570								
2011	Pears	0.2	2009	0.05		0.01		0.18	DE child		
2011	Potatoes	0.05	2237								
2011	Carrots	0.05	1632	0.06		0.02		0.19	UK infant		
2011	Cucumbers	0.1	1707	1.41		0.05		0.58	NL child		
2011	Spinach	0.05	1125								
2011	Beans (with pods)	0.05	1317	0.30		0.03		0.07	NL child		
2011	Rice	0.05	1118								
2011	Liver										
2011	Poultry: Meat										

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis to the consumption of bovine liver.



Pencycuron					
Status of the active substance:		Approved	Monitoring year:		2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?		N
Toxicological end points					
ADI (mg/kg bw/day):		0.2	ARfD (mg/kg bw):		n.n.
Source of ADI:		COM	Source of ARfD:		COM
Year of evaluation:		2011	Year of evaluation:		2011

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.04	NL child	0.03	Potatoes	0.00	Spinach	0.00	Strawberries
	0.04	DK child	0.02	Rye	0.01	Potatoes	0.00	Peppers
	0.04	FR toddler	0.03	Potatoes	0.00	Spinach	0.00	Strawberries
	0.03	PT (GP)	0.03	Potatoes	0.00	Peppers	0.00	Rye
	0.03	FR infant	0.02	Potatoes	0.00	Spinach	0.00	Strawberries
	0.03	WHO regional diet	0.02	Potatoes	0.00	Lettuce	0.00	Peppers
	0.03	SE (GP)	0.02	Potatoes	0.00	Rye	0.00	Peppers
	0.03	WHO Cluster diet F	0.02	Potatoes	0.00	Rye	0.00	Lettuce
	0.03	WHO cluster diet E	0.02	Potatoes	0.00	Rye	0.00	Lettuce
	0.03	WHO cluster diet D	0.02	Potatoes	0.00	Rye	0.00	Peppers
	0.02	LT adult	0.02	Potatoes	0.01	Rye	0.00	Lettuce
	0.02	DE child	0.02	Potatoes	0.00	Rye	0.00	Strawberries

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>e)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.05	1613					not assessed		
2011	Mandarins	0.05	1282					not assessed		
2011	Pears	0.05	1494					not assessed		
2011	Potatoes	0.1	1762	1.93	0.06	0.20		not assessed		
2011	Carrots	0.05	1321					not assessed		
2011	Cucumbers	0.05	1296					not assessed		
2011	Spinach	0.05	856	0.12	0.23	1.00		not assessed		
2011	Beans (with pods)	0.05	1072					not assessed		
2011	Rice	0.05	797					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported

The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

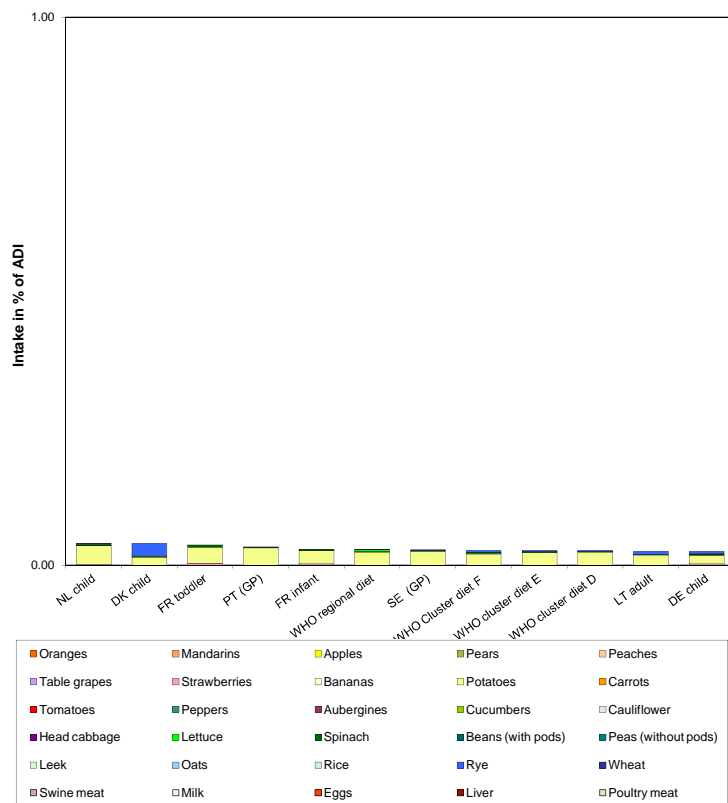
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

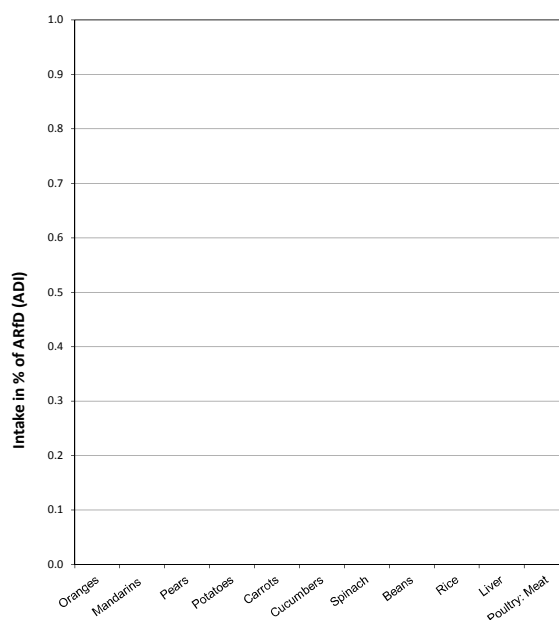
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Pencycuron



Acute risk assessment: Pencycuron



Pendimethalin			
Status of the active substance:		Approved	Monitoring year:
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?
			2011
			N
Toxicological end points			
ADI (mg/kg bw/day):		0.125	ARfD (mg/kg bw):
Source of ADI:		COM	Source of ARfD:
Year of evaluation:		2003	Year of evaluation:
			n.n.
			COM
			2003

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets			Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
0.18	DE child	0.12	Apples	0.04	Oranges	0.01	Carrots	
0.12	NL child	0.06	Apples	0.03	Oranges	0.01	Carrots	
0.09	FR toddler	0.03	Apples	0.03	Carrots	0.02	Oranges	
0.07	FR infant	0.03	Carrots	0.02	Apples	0.01	Oranges	
0.06	DK child	0.02	Apples	0.02	Cucumbers	0.01	Carrots	
0.05	UK infant	0.02	Apples	0.01	Carrots	0.01	Oranges	
0.05	UK toddler	0.02	Oranges	0.02	Apples	0.01	Carrots	
0.04	ES child	0.02	Oranges	0.01	Apples	0.00	Lettuce	
0.04	SE (GP)	0.01	Apples	0.01	Carrots	0.01	Oranges	
0.04	NL (GP)	0.01	Oranges	0.01	Apples	0.00	Peas (without pods)	
0.04	IE adult	0.01	Oranges	0.01	Apples	0.01	Peaches	
0.03	WHO cluster diet B	0.01	Apples	0.01	Oranges	0.00	Peaches	

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>e)</sup>	Maximum acute exposure (expressed in % of the ARfD) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.05	1849	0.11		0.02		not assessed		
2011	Mandarins	0.05	1502					not assessed		
2011	Pears	0.05	1862					not assessed		
2011	Potatoes	0.05	2107					not assessed		
2011	Carrots	0.2	1512	3.31		0.10		not assessed		
2011	Cucumbers	0.05	1601	0.06		0.03		not assessed		
2011	Spinach	0.05	1029	0.39		0.01		not assessed		
2011	Beans (with pods)	0.2	1217	0.08		0.01		not assessed		
2011	Rice	0.05	1064					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

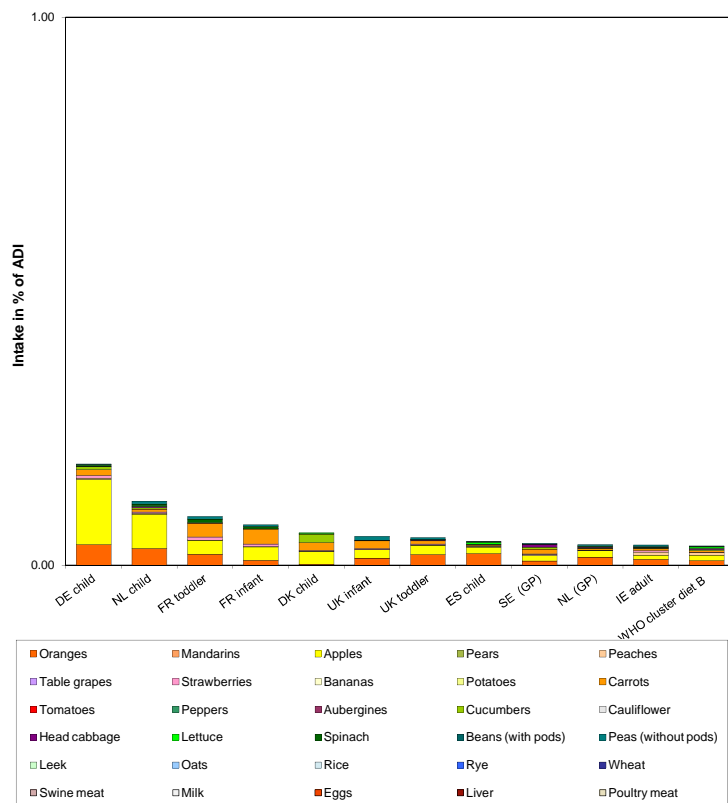
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

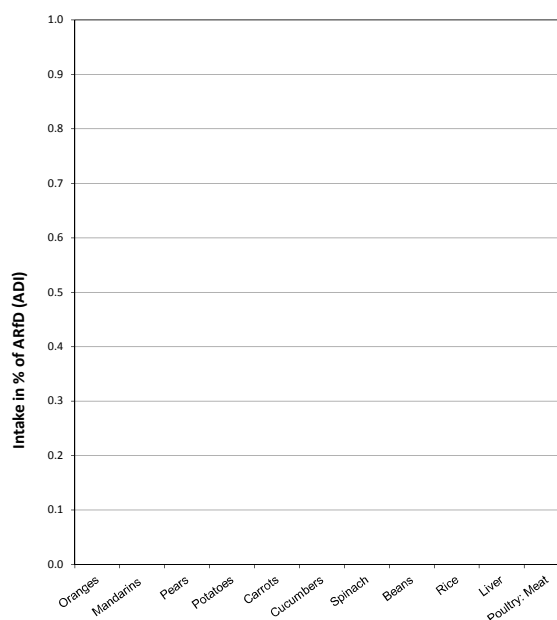
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Pendimethalin



Acute risk assessment: Pendimethalin



Permethrin (RD)					
Status of the active substance:		Not approved	Monitoring year:		2011
To be analysed in plant (P) or animal (A) products		A	Analysis on voluntary basis?		N
Toxicological end points					
ADI (mg/kg bw/day):		0.05	ARfD (mg/kg bw):		1.5
Source of ADI:		COM	Source of ARfD:		COM
Year of evaluation:		2000	Year of evaluation:		2000

Full residue definition: Permethrin (sum of cis- and trans-permethrin)									
Chronic risk assessment									
Highest calculated exposure in % of ADI		Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.84		DE child		0.49	Apples	0.19	Wheat	0.05	Table grapes
0.65		WHO cluster diet B		0.39	Wheat	0.13	Tomatoes	0.04	Apples
0.59		NL child		0.26	Apples	0.22	Wheat	0.03	Table grapes
0.47		DK child		0.25	Wheat	0.09	Apples	0.06	Cucumbers
0.43		IT child/toddler		0.30	Wheat	0.06	Tomatoes	0.04	Apples
0.41		WHO cluster diet D		0.29	Wheat	0.04	Tomatoes	0.03	Apples
0.34		ES child		0.20	Wheat	0.05	Apples	0.04	Tomatoes
0.33		FR toddler		0.12	Wheat	0.11	Apples	0.04	Beans (with pods)
0.32		PT (GP)		0.18	Wheat	0.04	Apples	0.04	Tomatoes
0.32		UK toddler		0.18	Wheat	0.07	Apples	0.03	Tomatoes
0.30		IT adult		0.19	Wheat	0.05	Tomatoes	0.03	Apples
0.28		WHO cluster diet E		0.18	Wheat	0.03	Apples	0.02	Tomatoes

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges									
2011	Mandarins									
2011	Pears									
2011	Potatoes									
2011	Carrots									
2011	Cucumbers									
2011	Spinach									
2011	Beans (with pods)									
2011	Rice									
2011	Liver	0.05	614							Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.05	662							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

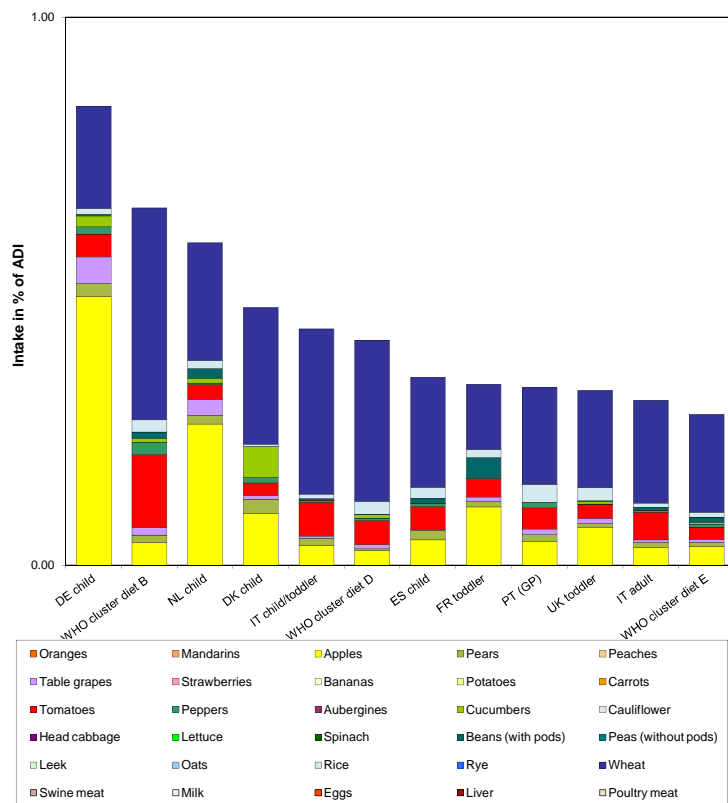
b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

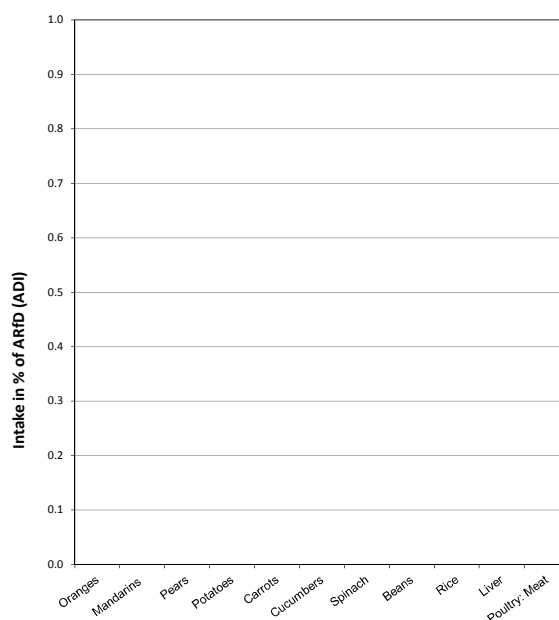
d) TTL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Permethrin (RD)



Acute risk assessment: Permethrin (RD)



Phenthoate										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):				0.003		ARfD (mg/kg bw):				
Source of ADI:				JMPR		Source of ARfD:				
Year of evaluation:				1984		Year of evaluation:				

Active substance not assessed regarding the setting of an ARfD setting. The acute RA is performed with the ADI value.

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.16	WHO cluster diet B		0.16	Peppers	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
	0.09	DE child		0.09	Peppers	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
	0.07	DK child		0.07	Peppers	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
	0.06	PT (GP)		0.06	Peppers	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
	0.06	SE (GP)		0.06	Peppers	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
	0.06	WHO regional diet		0.06	Peppers	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
	0.05	ES adult		0.05	Peppers	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
	0.04	IE adult		0.04	Peppers	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
	0.04	ES child		0.04	Peppers	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
	0.03	DK adult		0.03	Peppers	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
	0.03	WHO cluster diet D		0.03	Peppers	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
	0.03	WHO cluster diet E		0.03	Peppers	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARfD) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	0.01	1557							
2011	Mandarins	0.01	1286							
2011	Pears	0.01	1425							
2011	Potatoes	0.01	1771							
2011	Carrots	0.01	1343							
2011	Cucumbers	0.01	1322							
2011	Spinach	0.01	882							
2011	Beans (with pods)	0.01	1057							
2011	Rice	0.01	858							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

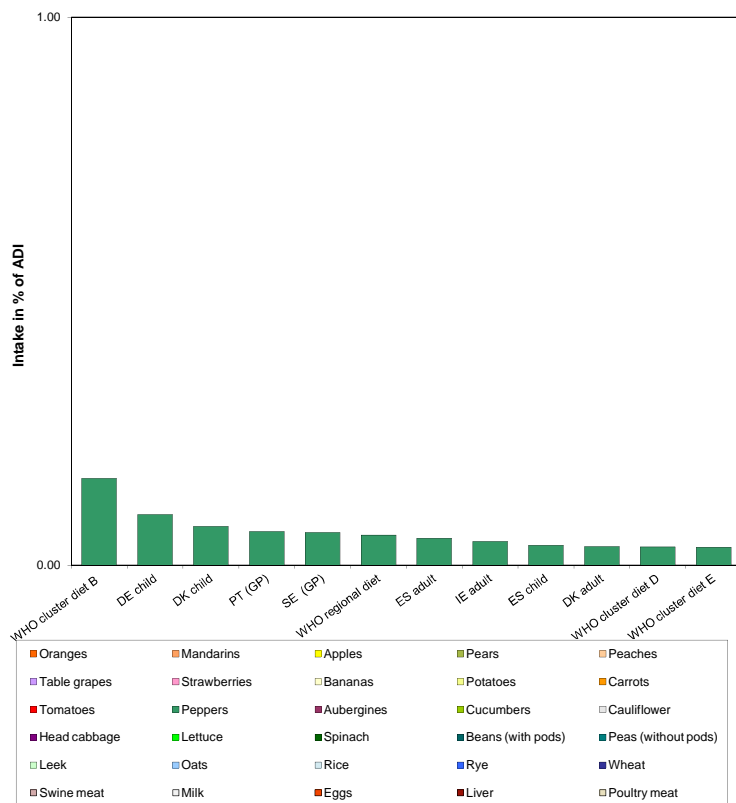
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

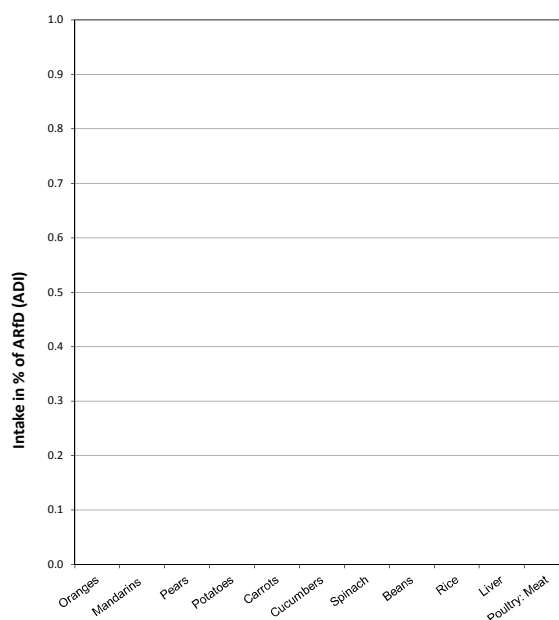
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Phenthoate



Acute risk assessment: Phenthoate



Phosalone			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARfD (mg/kg bw):	0.1
Source of ADI:	EFSA	Source of ARfD:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

Chronic risk assessment									
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)		
Top 12 diets			Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities		
2.85	DE child	1.75	Apples	0.52	Oranges	0.24	Bananas		
1.93	NL child	0.92	Apples	0.42	Oranges	0.26	Bananas		
1.21	FR toddler	0.38	Apples	0.27	Oranges	0.20	Bananas		
0.84	FR infant	0.36	Apples	0.12	Oranges	0.12	Beans (with pods)		
0.79	UK toddler	0.27	Oranges	0.25	Apples	0.16	Bananas		
0.74	UK infant	0.23	Apples	0.22	Bananas	0.18	Oranges		
0.73	ES child	0.30	Oranges	0.17	Apples	0.15	Bananas		
0.67	DK child	0.34	Apples	0.17	Bananas	0.09	Pears		
0.62	SE (GP)	0.27	Bananas	0.15	Apples	0.10	Oranges		
0.59	IE adult	0.14	Oranges	0.12	Apples	0.12	Bananas		
0.56	NL (GP)	0.20	Oranges	0.17	Apples	0.05	Bananas		
0.48	WHO cluster diet B	0.15	Apples	0.12	Oranges	0.05	Pears		

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05	1951	0.21		0.04		5.94	UK infant	
2011	Mandarins	0.05	1595	0.06		0.03		1.39	UK toddler	
2011	Pears	0.05	2008	0.05		0.01		0.91	DE child	
2011	Potatoes	0.05	2266							
2011	Carrots	0.05	1647							
2011	Cucumbers	0.05	1707							
2011	Spinach	0.05	1109							
2011	Beans (with pods)	0.05	1313	0.08		0.01		0.15	NL child	
2011	Rice	0.05	1049							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

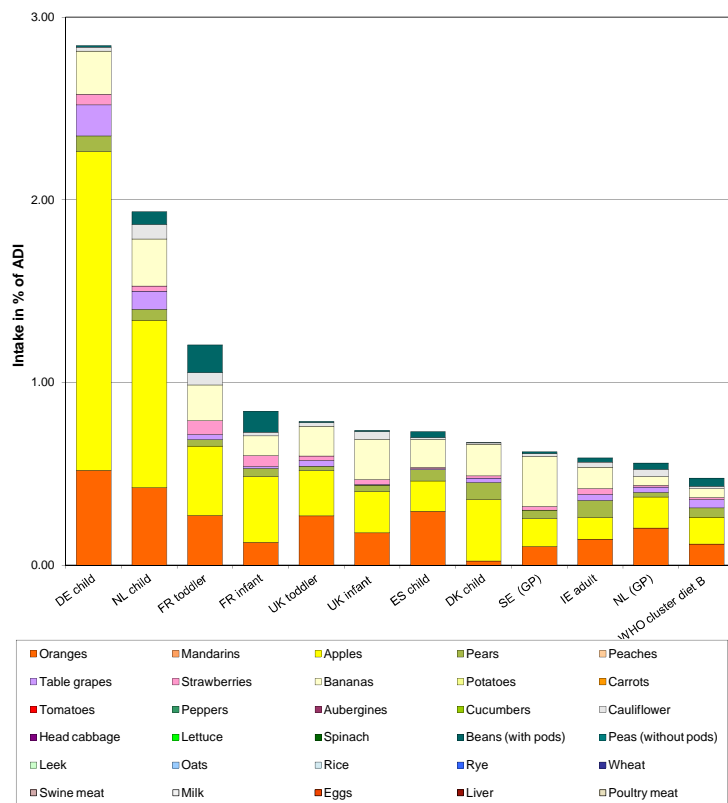
b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

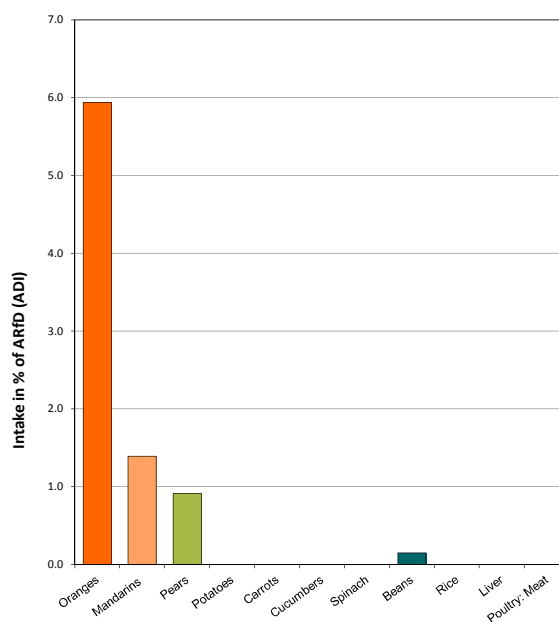
d) TTL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported. <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Phosalone



Acute risk assessment: Phosalone



Phosmet (RD)											
Status of the active substance:				Approved	Monitoring year:		2011				
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N				
Toxicological end points											
ADI (mg/kg bw/day):				0.01	ARfD (mg/kg bw):		0.045				
Source of ADI:				COM	Source of ARfD:		COM				
Year of evaluation:				2007	Year of evaluation:		2007				

Full residue definition: Phosmet (phosmet and phosmet oxon expressed as phosmet). For products of animal origin-terrestrial animal, except honey: phosmet

Chronic risk assessment											
Highest calculated exposure in % of ADI				Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
Top 12 diets										3rd contributor to MS diet (in % of ADI)	
2.29 DE child				1.45 Apples				0.49 Oranges		0.15 Table grapes	
1.48 NL child				0.76 Apples				0.40 Oranges		0.09 Mandarins	
0.79 FR toddler				0.31 Apples				0.26 Oranges		0.14 Beans (with pods)	
0.59 FR infant				0.30 Apples				0.12 Oranges		0.10 Beans (with pods)	
0.56 UK toddler				0.25 Oranges				0.20 Apples		0.04 Mandarins	
0.56 ES child				0.28 Oranges				0.14 Apples		0.05 Pears	
0.52 WHO cluster diet B				0.12 Apples				0.11 Oranges		0.08 Peppers	
0.51 IE adult				0.13 Oranges				0.10 Apples		0.07 Mandarins	
0.45 NL (GP)				0.19 Oranges				0.14 Apples		0.03 Beans (with pods)	
0.45 DK child				0.28 Apples				0.07 Pears		0.03 Peppers	
0.39 UK infant				0.19 Apples				0.17 Oranges		0.03 Pears	
0.39 ES adult				0.17 Oranges				0.09 Apples		0.03 Pears	

Acute risk assessment											
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment	
2011	Oranges	0.2	1514	1.45		0.20		58.94	UK infant		
2011	Mandarins	0.2	1289	0.70	0.08	0.27		33.39	UK toddler		
2011	Pears	0.2	1504	2.19		0.19		38.45	DE child		
2011	Potatoes	0.05	1591								
2011	Carrots	0.05	1233								
2011	Cucumbers	0.05	1340								
2011	Spinach	0.05	738								
2011	Beans (with pods)	0.05	896								
2011	Rice	0.05	674								
2011	Liver										
2011	Poultry: Meat										

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

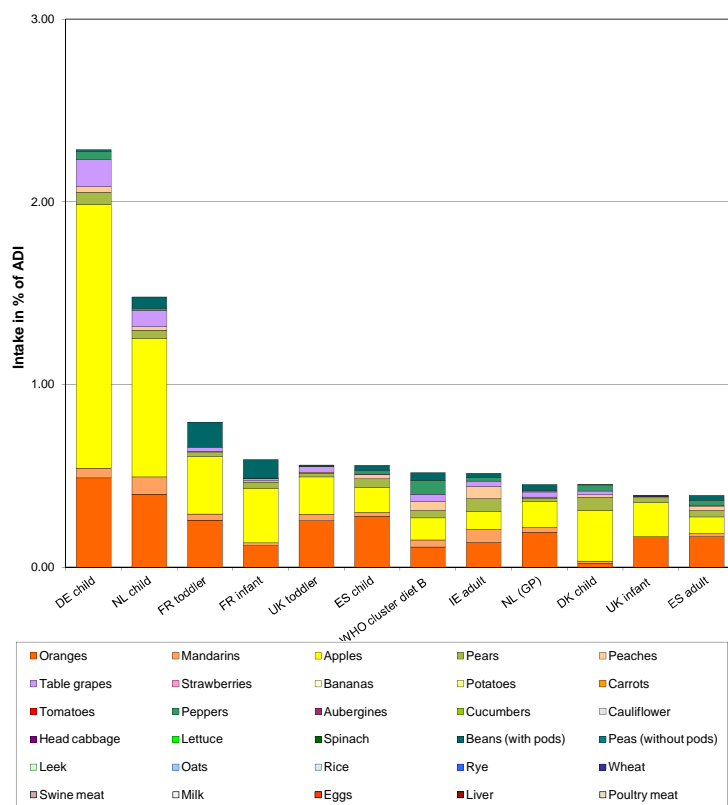
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

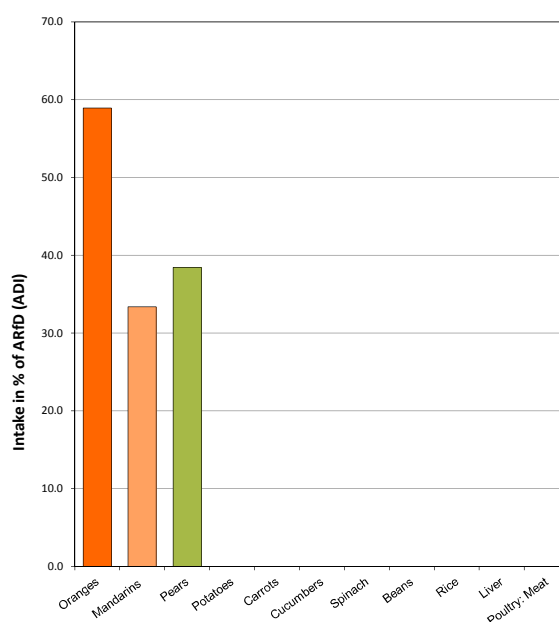
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported      <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Phosmet (RD)



Acute risk assessment: Phosmet (RD)



Phoxim				
Status of the active substance:	Not approved	Monitoring year:	2011	
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N	
Toxicological end points				
ADI (mg/kg bw/day):	0.00375	ARfD (mg/kg bw):		
Source of ADI:	EMEA	Source of ARfD:		
Year of evaluation:	2000	Year of evaluation:		

Active substance not assessed regarding the setting of an ARfD setting. The acute RA is performed with the ADI value.

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	Top 12 diets							
1.56	NL child		1.47	Potatoes	0.09	Eggs		FRUIT (FRESH OR FROZEN)
1.42	FR toddler		1.26	Potatoes	0.16	Eggs		FRUIT (FRESH OR FROZEN)
1.33	PT (GP)		1.33	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
1.17	SE (GP)		1.04	Potatoes	0.13	Eggs		FRUIT (FRESH OR FROZEN)
1.10	FR infant		1.03	Potatoes	0.07	Eggs		FRUIT (FRESH OR FROZEN)
1.10	WHO regional diet		1.00	Potatoes	0.10	Eggs		FRUIT (FRESH OR FROZEN)
1.07	WHO cluster diet D		1.01	Potatoes	0.06	Eggs		FRUIT (FRESH OR FROZEN)
1.05	WHO cluster diet E		0.96	Potatoes	0.10	Eggs		FRUIT (FRESH OR FROZEN)
1.02	UK infant		0.81	Potatoes	0.20	Eggs		FRUIT (FRESH OR FROZEN)
1.01	UK toddler		0.87	Potatoes	0.14	Eggs		FRUIT (FRESH OR FROZEN)
0.92	WHO Cluster diet F		0.85	Potatoes	0.07	Eggs		FRUIT (FRESH OR FROZEN)
0.86	PL (GP)		0.86	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.01	1024							
2011	Mandarins	0.01	829							
2011	Pears	0.01	1274	0.08		0.00		2.43	DE child	
2011	Potatoes	0.01	1459	0.07		0.01		41.00	UK infant	
2011	Carrots	0.01	1067							
2011	Cucumbers	0.01	1042							
2011	Spinach	0.01	703							
2011	Beans (with pods)	0.01	782							
2011	Rice	0.01	609							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

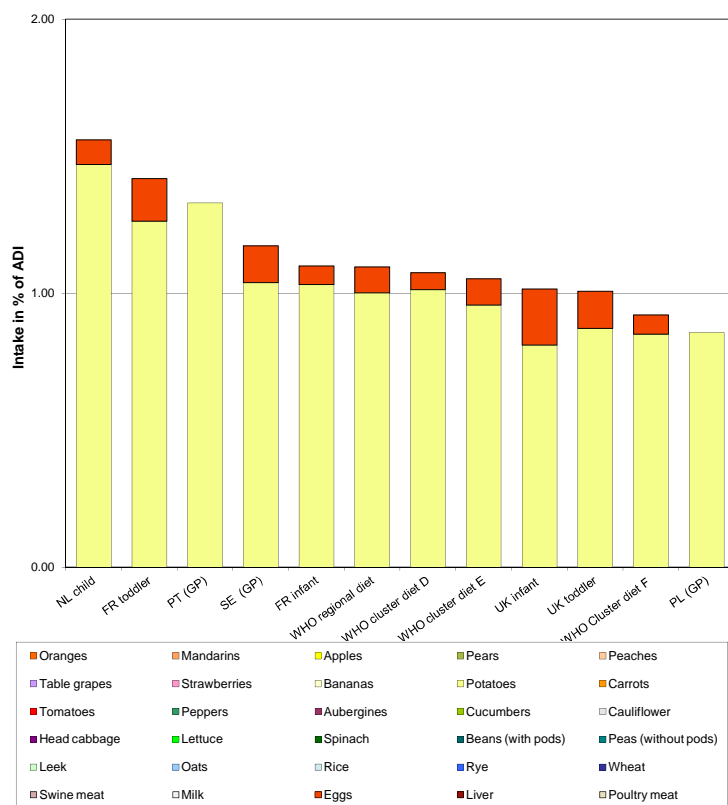
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

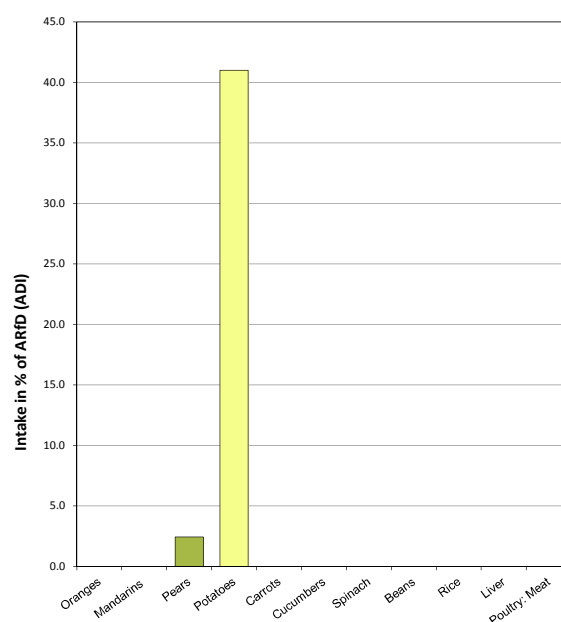
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Phoxim



Acute risk assessment: Phoxim



Pirimicarb (RD)				
Status of the active substance:		Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	N
Toxicological end points				
ADI (mg/kg bw/day):		0.035	ARfD (mg/kg bw):	0.1
Source of ADI:		COM	Source of ARfD:	COM
Year of evaluation:		2006	Year of evaluation:	2006

Full residue definition: Pirimicarb (sum of pirimicarb and desmethyl pirimicarb expressed as pirimicarb)								
Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.81	DE child	0.54	Apples	0.12	Oranges	0.03	Tomatoes
	0.52	NL child	0.29	Apples	0.10	Oranges	0.03	Mandarins
	0.32	FR toddler	0.12	Apples	0.06	Oranges	0.03	Beans (with pods)
	0.30	WHO cluster diet B	0.11	Tomatoes	0.05	Apples	0.03	Oranges
	0.23	FR infant	0.11	Apples	0.03	Oranges	0.02	Beans (with pods)
	0.22	DK child	0.10	Apples	0.05	Cucumbers	0.02	Pears
	0.22	ES child	0.07	Oranges	0.05	Apples	0.04	Tomatoes
	0.20	UK toddler	0.08	Apples	0.06	Oranges	0.02	Tomatoes
	0.19	IE adult	0.04	Apples	0.03	Oranges	0.02	Pears
	0.18	SE (GP)	0.05	Apples	0.03	Tomatoes	0.02	Oranges
	0.17	ES adult	0.04	Oranges	0.03	Apples	0.03	Tomatoes
	0.17	IT child/toddler	0.05	Tomatoes	0.04	Apples	0.02	Oranges

Acute risk assessment											
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment	
2011	Oranges	3	1730	0.12	0.11	0.22		29.18	UK infant UK toddler DE child		
2011	Mandarins	3	1447	0.21		0.03		1.78			
2011	Pears	2	1701	0.71		0.18		16.67			
2011	Potatoes	0.2	1780	0.14		0.01		0.70	NL child BE child NL child		
2011	Carrots	0.5	1423								70.06
2011	Cucumbers	1	1442								3.40
2011	Spinach	2	906			3.10					
2011	Beans (with pods)	1	1134	1.32		0.30					
2011	Rice	0.2	950								
2011	Liver										
2011	Poultry: Meat										

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

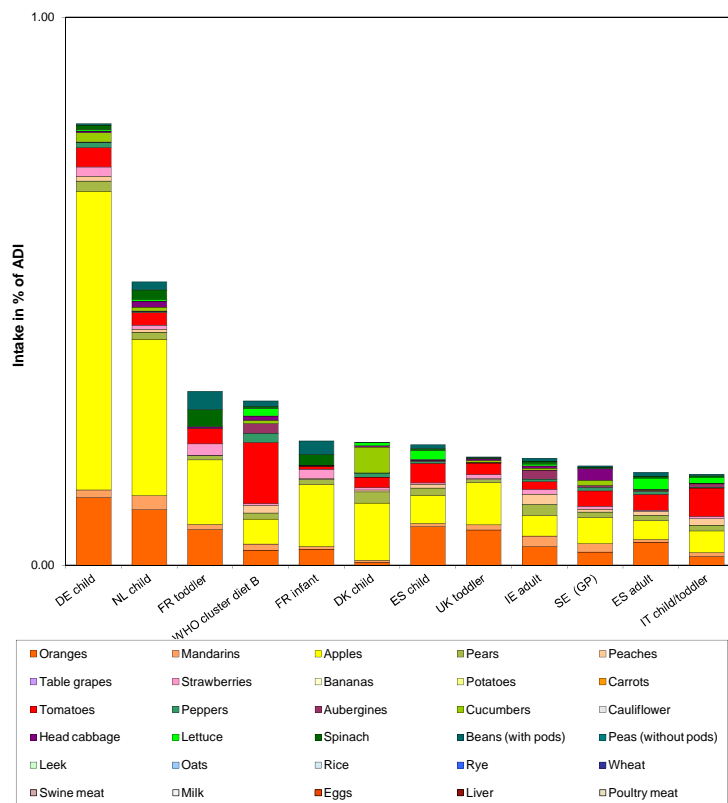
b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

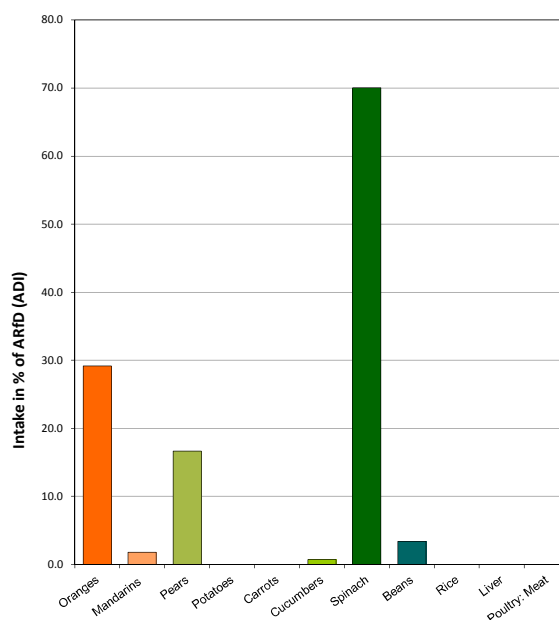
d) TTL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Pirimicarb (RD)



Acute risk assessment: Pirimicarb (RD)





**Pirimiphos-methyl**

Status of the active substance:

**Approved**

Monitoring year:

**2011**

To be analysed in plant (P) or animal (A) products

**P, A**

Analysis on voluntary basis?

**N****Toxicological end points**

ADI (mg/kg bw/day):

**0.004**

ARfD (mg/kg bw):

**0.15**

Source of ADI:

**COM**

Source of ARfD:

**COM**

Year of evaluation:

**2007**

Year of evaluation:

**2007****Chronic risk assessment**

Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
16.21	DK child	7.76	Rye	6.32	Wheat	1.05	Oats
12.36	WHO cluster diet B	9.79	Wheat	0.98	Tomatoes	0.82	Potatoes
10.48	WHO cluster diet D	7.46	Wheat	1.25	Potatoes	0.71	Rye
8.56	IT child/toddler	7.63	Wheat	0.45	Tomatoes	0.28	Potatoes
8.40	NL child	5.44	Wheat	1.81	Potatoes	0.34	Rice
8.08	DE child	4.72	Wheat	1.39	Rye	0.79	Potatoes
7.54	PT (GP)	4.50	Wheat	1.64	Potatoes	0.75	Rice
7.35	WHO Cluster diet F	4.13	Wheat	1.34	Rye	1.05	Potatoes
7.11	WHO cluster diet E	4.53	Wheat	1.18	Potatoes	0.76	Rye
6.46	ES child	5.09	Wheat	0.57	Potatoes	0.46	Rice
6.45	UK toddler	4.50	Wheat	1.07	Potatoes	0.55	Rice
6.15	SE (GP)	3.67	Wheat	1.28	Potatoes	0.52	Rye

**Acute risk assessment**

Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	1	1913							
2011	Mandarins	2	1525							
2011	Pears	0.05	1962							
2011	Potatoes	0.05	2198		0.09	0.18		18.76	UK infant	
2011	Carrots	1	1624							
2011	Cucumbers	0.1	1734							
2011	Spinach	0.05	1117							
2011	Beans (with pods)	0.05	1294							
2011	Rice	5	1114	9.52		4.10		34.46	UK toddler	Liver (swine, bovine, sheep, goat, poultry)
2011	Liver	0.05	741							
2011	Poultry: Meat	0.05	622							

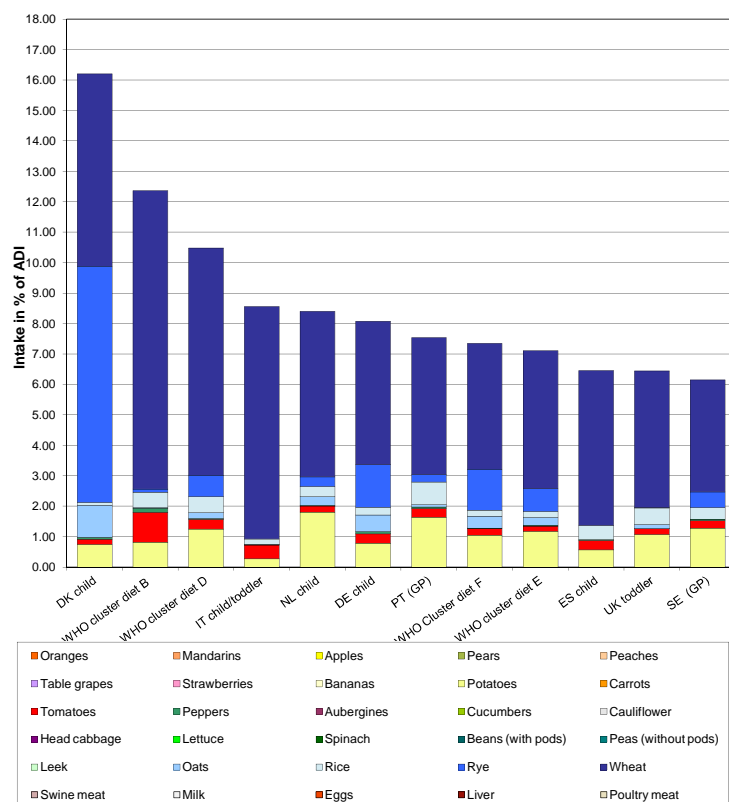
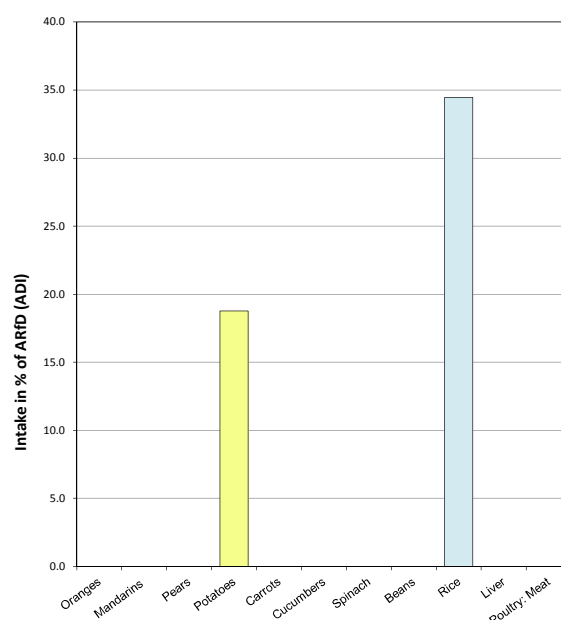
a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

d) TTL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported. f) The exposure is calculated on the basis of the consumption of bovine liver.

**Chronic risk assessment: Pirimiphos-methyl****Acute risk assessment: Pirimiphos-methyl**

Prochloraz (RD)											
Status of the active substance:				Approved	Monitoring year:		2011				
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		Y				
Toxicological end points											
ADI (mg/kg bw/day):				0.01	ARfD (mg/kg bw):		0.025				
Source of ADI:				COM	Source of ARfD:		COM				
Year of evaluation:				2011	Year of evaluation:		2011				

Pesticide to be analysed on a voluntary basis only.

Full residue definition: Prochloraz (sum of prochloraz and its metabolites containing the 2,4,6-Trichlorophenol moiety expressed as prochloraz)

Chronic risk assessment											
	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities		
	3.31		DE child	1.86	Apples	1.27	Oranges	0.14	Mandarins		
	2.27		NL child	1.04	Oranges	0.97	Apples	0.25	Mandarins		
	1.16		FR toddler	0.66	Oranges	0.40	Apples	0.09	Mandarins		
	1.02		UK toddler	0.66	Oranges	0.26	Apples	0.10	Mandarins		
	0.97		ES child	0.72	Oranges	0.18	Apples	0.06	Mandarins		
	0.76		NL (GP)	0.49	Oranges	0.18	Apples	0.07	Mandarins		
	0.73		FR infant	0.38	Apples	0.30	Oranges	0.05	Mandarins		
	0.69		IE adult	0.35	Oranges	0.19	Mandarins	0.13	Apples		
	0.67		UK infant	0.43	Oranges	0.24	Apples		FRUIT (FRESH OR FROZEN)		
	0.62		WHO cluster diet B	0.28	Oranges	0.16	Apples	0.11	Mandarins		
	0.62		ES adult	0.43	Oranges	0.12	Apples	0.05	Mandarins		
	0.59		SE (GP)	0.25	Oranges	0.16	Apples	0.15	Mandarins		

Acute risk assessment											
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment	
2011	Oranges	10	1113	3.77		2.20	2	128.38	UK infant	PF 0.11	
2011	Mandarins	10	954	6.50		2.15		4.79	UK toddler	PF 0.01	
2011	Pears	0.05	936								
2011	Potatoes	0.05	951								
2011	Carrots	0.05	786								
2011	Cucumbers	0.05	892								
2011	Spinach	0.05	499								
2011	Beans (with pods)	0.05	611								
2011	Rice	1	544								
2011	Liver										
2011	Poultry: Meat										

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

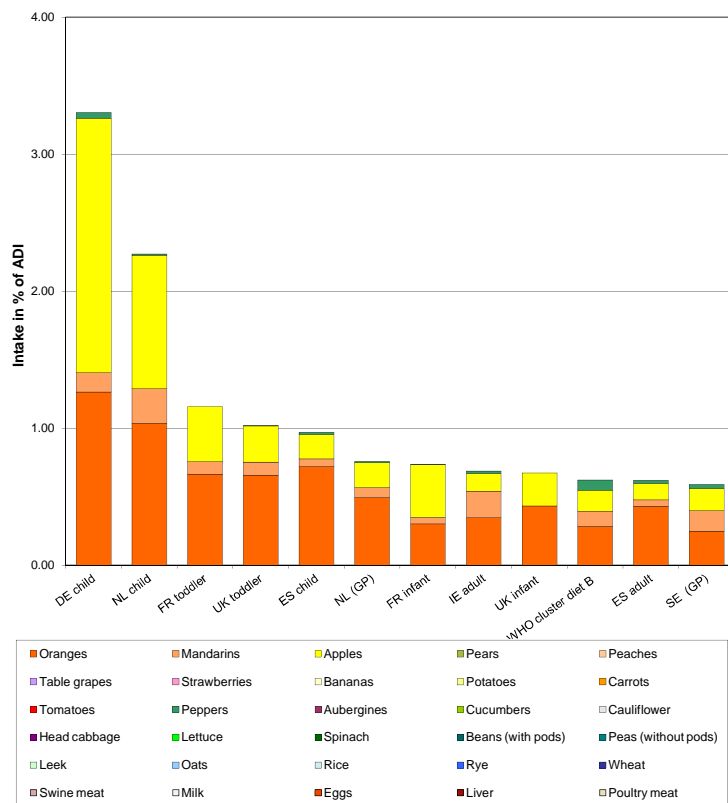
b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

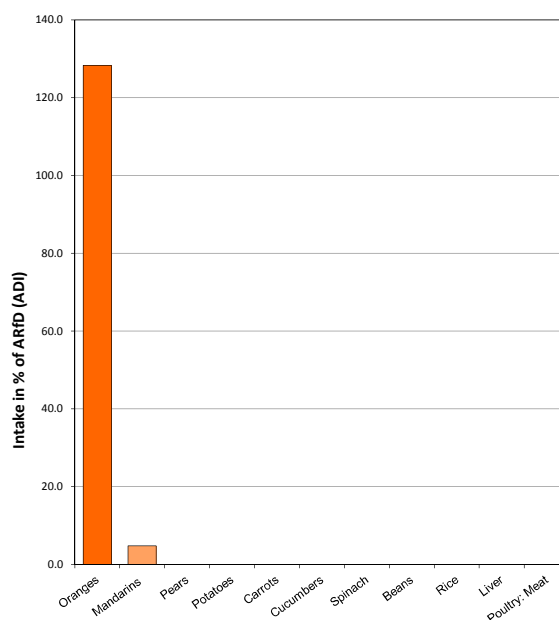
d) TTL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported. <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Prochloraz (RD)



Acute risk assessment: Prochloraz (RD)



Procymidone										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):				0.0028		ARfD (mg/kg bw):		0.012		
Source of ADI:				DAR FR		Source of ARfD:		DAR FR		
Year of evaluation:				2007		Year of evaluation:		2007		

Chronic risk assessment															
Highest calculated exposure in % of ADI				Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
Top 12 diets															
2.71 WHO cluster diet B				1.44		Tomatoes		0.22		Peppers		0.18		Peaches	
2.62 FR toddler				1.01		Carrots		0.57		Beans (with pods)		0.36		Tomatoes	
2.53 DE child				0.55		Table grapes		0.45		Tomatoes		0.43		Carrots	
2.16 FR infant				1.10		Carrots		0.43		Beans (with pods)		0.20		Strawberries	
2.14 DK child				0.71		Cucumbers		0.57		Carrots		0.29		Pears	
1.88 NL child				0.33		Table grapes		0.29		Tomatoes		0.27		Peas (without pods)	
1.43 IE adult				0.28		Pears		0.24		Peaches		0.19		Tomatoes	
1.41 WHO regional diet				0.51		Tomatoes		0.16		Lettuce		0.15		Carrots	
1.40 IT child/toddler				0.66		Tomatoes		0.15		Peaches		0.15		Pears	
1.34 PT (GP)				0.42		Tomatoes		0.28		Carrots		0.15		Peaches	
1.33 UK infant				0.55		Carrots		0.36		Peas (without pods)		0.17		Tomatoes	
1.30 SE (GP)				0.36		Tomatoes		0.35		Carrots		0.15		Pears	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1918							
2011	Mandarins	0.02	1582							
2011	Pears	0.02	1992	0.05	0.05	0.04		27.32	DE child	
2011	Potatoes	0.02	2223							
2011	Carrots	0.02	1631	0.25	0.06	0.03		13.74	UK infant	
2011	Cucumbers	0.02	1739	0.06	0.40	0.37	1	179.82	NL child	
2011	Spinach	0.02	1126							
2011	Beans (with pods)	1	1297	0.77		0.16		15.13	NL child	
2011	Rice	0.02	1103							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

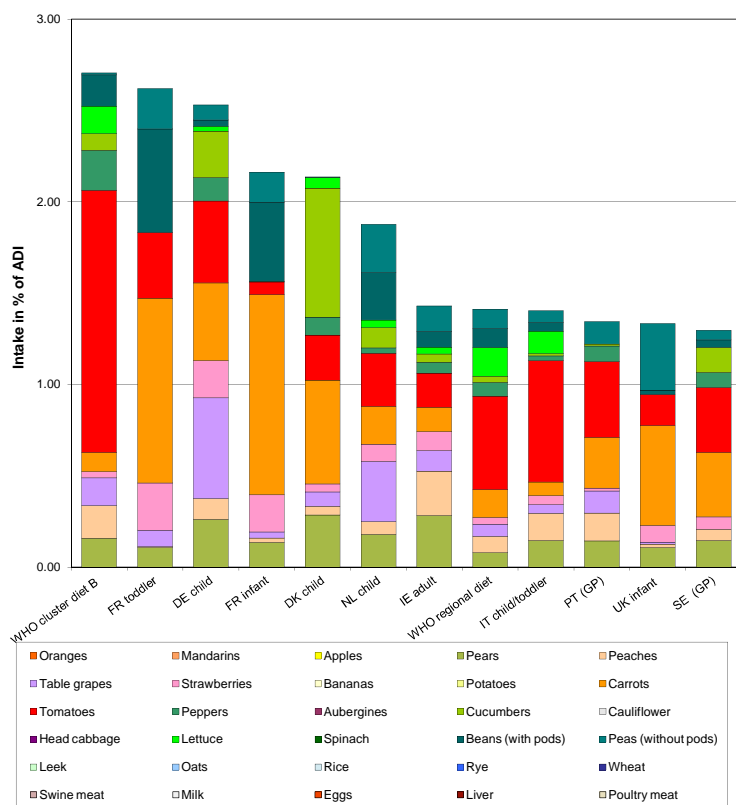
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

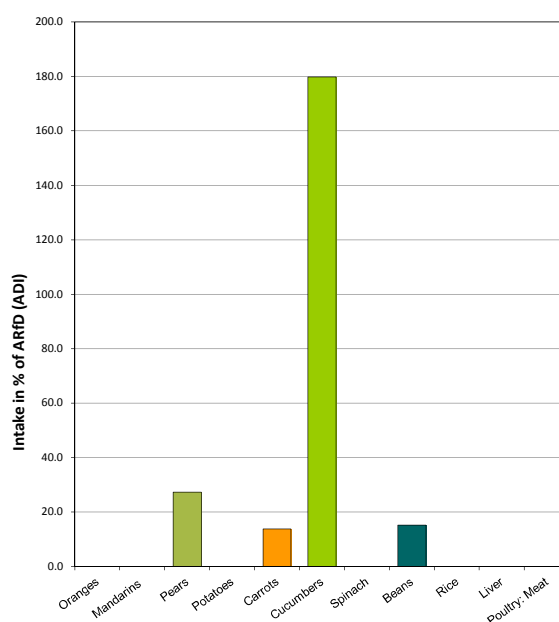
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Procymidone



Acute risk assessment: Procymidone



Profenofos										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P, A		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):				0.03		ARfD (mg/kg bw):		1		
Source of ADI:				JMPR		Source of ARfD:		JMPR		
Year of evaluation:				2007		Year of evaluation:		2007		

Chronic risk assessment															
Highest calculated exposure in % of ADI				Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
Top 12 diets															
0.79 DE child				0.52 Apples				0.15 Oranges				0.05 Table grapes			
0.48 NL child				0.27 Apples				0.13 Oranges				0.03 Table grapes			
0.28 FR toddler				0.11 Apples				0.08 Oranges				0.04 Beans (with pods)			
0.28 WHO cluster diet B				0.14 Tomatoes				0.04 Apples				0.03 Oranges			
0.20 ES child				0.09 Oranges				0.05 Apples				0.04 Tomatoes			
0.19 UK toddler				0.08 Oranges				0.07 Apples				0.03 Tomatoes			
0.19 FR infant				0.11 Apples				0.04 Oranges				0.03 Beans (with pods)			
0.15 NL (GP)				0.06 Oranges				0.05 Apples				0.02 Tomatoes			
0.15 DK child				0.10 Apples				0.02 Tomatoes				0.01 Peppers			
0.15 PL (GP)				0.09 Apples				0.04 Tomatoes				0.01 Table grapes			
0.14 ES adult				0.05 Oranges				0.03 Tomatoes				0.03 Apples			
0.14 UK infant				0.07 Apples				0.05 Oranges				0.02 Tomatoes			

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.05	1812	0.39	0.06	0.07		0.97	UK infant	
2011	Mandarins	0.05	1467							
2011	Pears	0.05	1785							
2011	Potatoes	0.05	2098							
2011	Carrots	0.05	1545							
2011	Cucumbers	0.05	1572							
2011	Spinach	0.05	1042							
2011	Beans (with pods)	0.05	1227	0.33	0.16	0.20		0.23	NL child	
2011	Rice	0.05	1012							
2011	Liver	0.05	552							Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.05	548							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

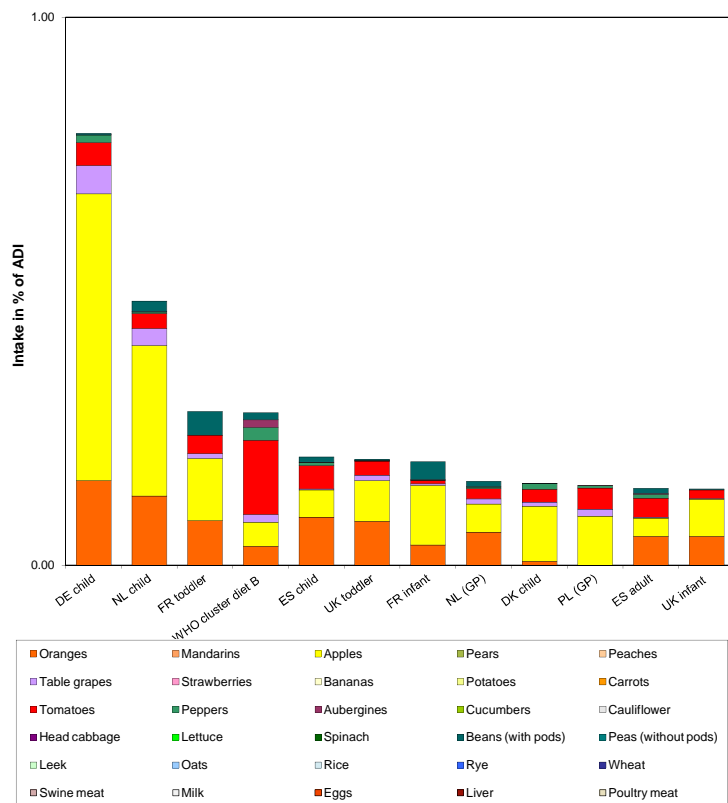
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

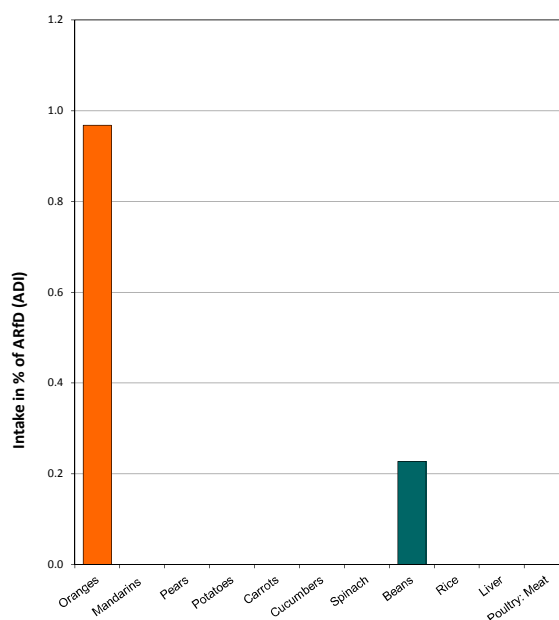
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Profenofos



Acute risk assessment: Profenofos



Propamocarb (RD)					
Status of the active substance:		Approved	Monitoring year:	2011	
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	Y	
Toxicological end points					
ADI (mg/kg bw/day):		0.244	ARfD (mg/kg bw):	0.84	
Source of ADI:		COM	Source of ARfD:	COM	
Year of evaluation:		2007	Year of evaluation:	2007	

The tox. values were derived for propamocarb hydrochloride (ADI: 0.29 mg/kg bw per day; ARfD: 1 mg/kg bw) were recalculated to propamocarb to match with the residue definition. Pesticide to be analysed on a voluntary basis only.  
Full residue definition: Propamocarb (sum of propamocarb and its salt expressed as propamocarb)

Chronic risk assessment														
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
	0.10	WHO cluster diet B	0.03	0.03	Tomatoes	0.03	0.03	Lettuce	0.01	0.01	0.01	0.01	Potatoes	
	0.09	NL child	0.02	0.02	Potatoes	0.02	0.02	Oranges	0.01	0.01	0.01	0.01	Lettuce	
	0.08	DE child	0.02	0.02	Oranges	0.01	0.01	Cucumbers	0.01	0.01	0.01	0.01	Potatoes	
	0.08	FR toddler	0.02	0.02	Potatoes	0.01	0.01	Spinach	0.01	0.01	0.01	0.01	Carrots	
	0.08	DK child	0.04	0.04	Cucumbers	0.01	0.01	Lettuce	0.02	0.01	0.01	0.01	Potatoes	
	0.07	WHO regional diet	0.03	0.03	Lettuce	0.02	0.02	Potatoes	0.01	0.01	0.01	0.01	Tomatoes	
	0.07	ES child	0.03	0.03	Lettuce	0.01	0.01	Oranges	0.01	0.01	0.01	0.01	Tomatoes	
	0.07	ES adult	0.04	0.04	Lettuce	0.01	0.01	Tomatoes	0.01	0.01	0.01	0.01	Oranges	
	0.06	WHO Cluster diet F	0.03	0.03	Lettuce	0.01	0.01	Potatoes	0.01	0.01	0.01	0.01	Tomatoes	
	0.05	IT adult	0.03	0.03	Lettuce	0.01	0.01	Tomatoes	0.01	0.01	0.00	0.00	Potatoes	
	0.05	FR infant	0.02	0.02	Potatoes	0.01	0.01	Carrots	0.01	0.01	0.01	0.01	Spinach	
	0.05	IT child/toddler	0.02	0.02	Lettuce	0.01	0.01	Tomatoes	0.01	0.01	0.00	0.00	Potatoes	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.1	1359	0.07		0.02		0.24	UK infant	
2011	Mandarins	10	1168							
2011	Pears	10	1264							
2011	Potatoes	0.5	1323	5.29		0.17		3.11	UK infant	
2011	Carrots	10	1106	0.90		0.15		1.13	UK infant	
2011	Cucumbers	10	1118	33.09		1.80		12.53	NL child	
2011	Spinach	30	732	2.46	0.34	10.30		27.71	BE child	
2011	Beans (with pods)	0.1	880	0.91		0.67		0.90	NL child	
2011	Rice	0.1	500	0.20		0.01		0.02	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

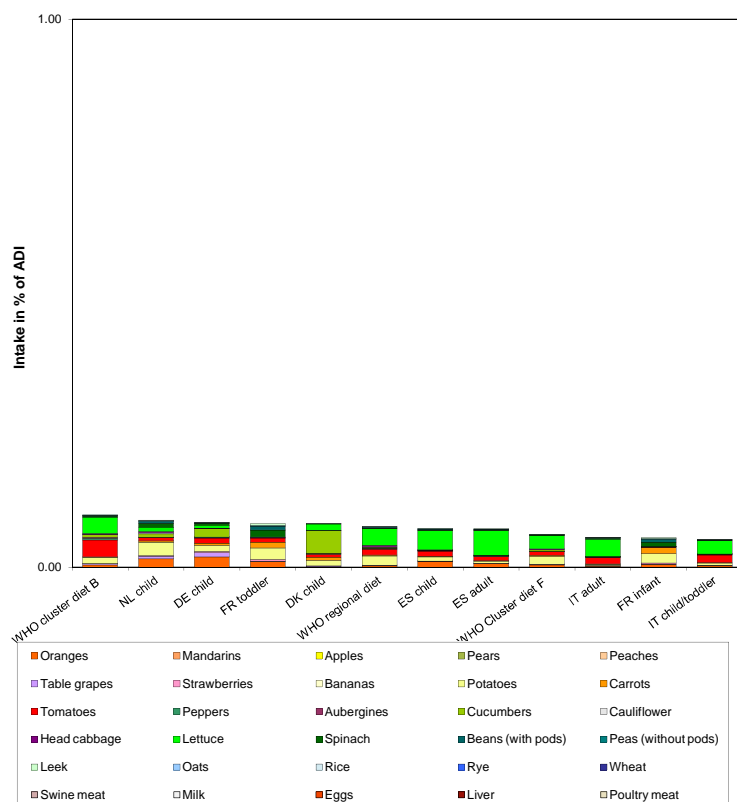
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

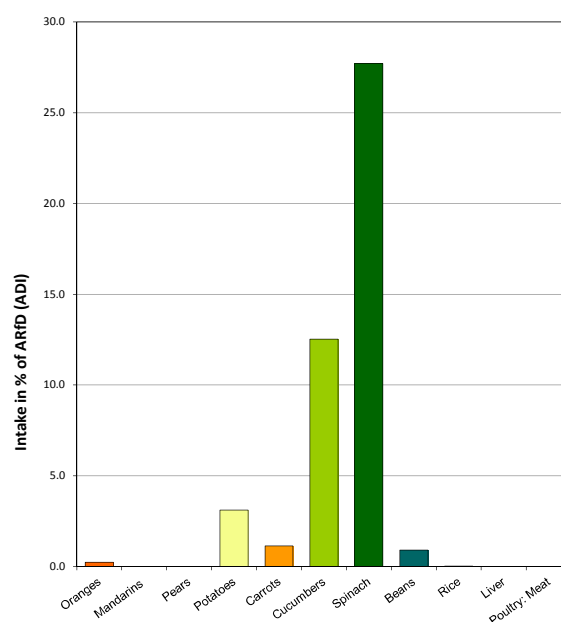
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported. <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Propamocarb (RD)



Acute risk assessment: Propamocarb (RD)



Propargite										
Status of the active substance:				Not approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):				EFSA		ARfD (mg/kg bw):				
Source of ADI:				EFSA		Source of ARfD:				
Year of evaluation:				2011		Year of evaluation:				

No ADI and no ARfD allocated.

Chronic risk assessment										
	Highest calculated exposure in % of ADI Top 12 diets			Highest contributor to MS diet (in % of ADI) Commodity / group of commodities		2nd contributor to MS diet (in % of ADI) Commodity / group of commodities		3rd contributor to MS diet (in % of ADI) Commodity / group of commodities		

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARfD) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	3	1771	1.64		1.10				
2011	Mandarins	3	1441	2.08		0.31				
2011	Pears	3	1630	0.31		0.12				
2011	Potatoes	0.01	1941	0.05		0.01				
2011	Carrots	0.01	1417							
2011	Cucumbers	0.01	1436		0.07	0.01				
2011	Spinach	0.01	931							
2011	Beans (with pods)	0.01	1187	0.08	0.17	0.34				
2011	Rice	0.01	839							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

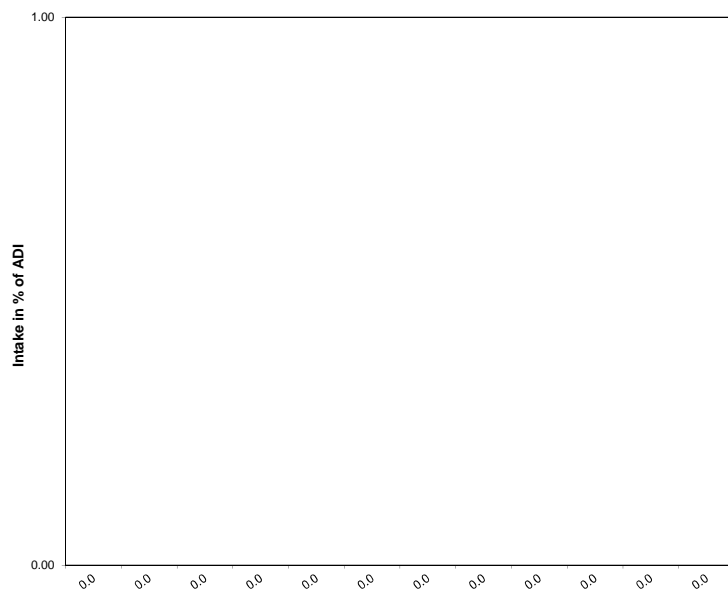
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

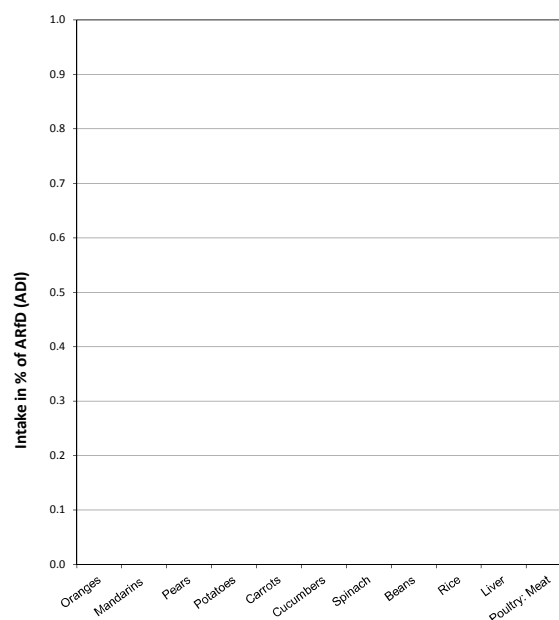
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Propargite



Acute risk assessment: Propargite



Oranges	Mandarins	Apples	Pears	Peaches
Table grapes	Strawberries	Bananas	Potatoes	Carrots
Tomatoes	Peppers	Aubergines	Cucumbers	Cauliflower
Head cabbage	Lettuce	Spinach	Beans (with pods)	Peas (without pods)
Leek	Oats	Rice	Rye	Wheat
Swine meat	Milk	Eggs	Liver	Poultry meat

Propiconazole				
Status of the active substance:		Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	N
Toxicological end points				
ADI (mg/kg bw/day):		0.04	ARfD (mg/kg bw):	0.3
Source of ADI:		COM	Source of ARfD:	COM
Year of evaluation:		2003	Year of evaluation:	2003

Chronic risk assessment									
Year	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.19	WHO cluster diet B		0.10	Tomatoes	0.02	Peaches	0.02	Rice
	0.16	DE child		0.04	Table grapes	0.03	Tomatoes	0.03	Carrots
	0.13	FR toddler		0.08	Carrots	0.03	Tomatoes	0.01	Rice
	0.12	PT (GP)		0.03	Tomatoes	0.02	Rice	0.02	Carrots
	0.11	NL child		0.02	Table grapes	0.02	Mandarins	0.02	Tomatoes
	0.11	FR infant		0.08	Carrots	0.01	Pears	0.00	Tomatoes
	0.10	DK child		0.04	Carrots	0.02	Pears	0.02	Tomatoes
	0.10	IE adult		0.02	Peaches	0.02	Pears	0.02	Mandarins
	0.10	SE (GP)		0.03	Carrots	0.03	Tomatoes	0.01	Mandarins
	0.09	IT child/toddler		0.05	Tomatoes	0.01	Peaches	0.01	Pears
	0.08	ES child		0.03	Tomatoes	0.01	Rice	0.01	Pears
	0.08	UK infant		0.04	Carrots	0.02	Rice	0.01	Tomatoes

Acute risk assessment										
Year	Commodity <small>a), b)</small>	MRL <small>c), d)</small>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <small>d)</small>	Maximum acute exposure (expressed in % of the ARfD) <small>e)</small>	Most critical diet	Comment
2011	Oranges	0.05	1717	0.06		0.01		0.27	UK infant	
2011	Mandarins	0.05	1454	0.21		0.03		0.59	UK toddler	
2011	Pears	0.05	1889	0.16		0.02		0.61	DE child	
2011	Potatoes	0.05	2148							
2011	Carrots	0.05	1561	0.13		0.02		0.42	UK infant	
2011	Cucumbers	0.05	1654	0.06		0.01		0.23	NL child	
2011	Spinach	0.05	1048							
2011	Beans (with pods)	0.05	1254							
2011	Rice	0.05	1048	2.48	0.10	0.08		0.34	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

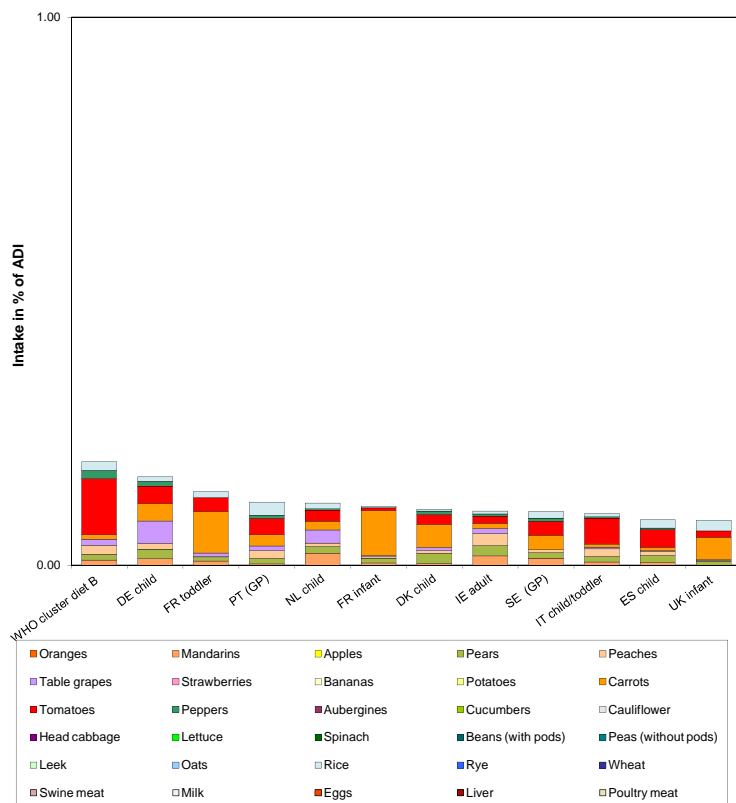
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

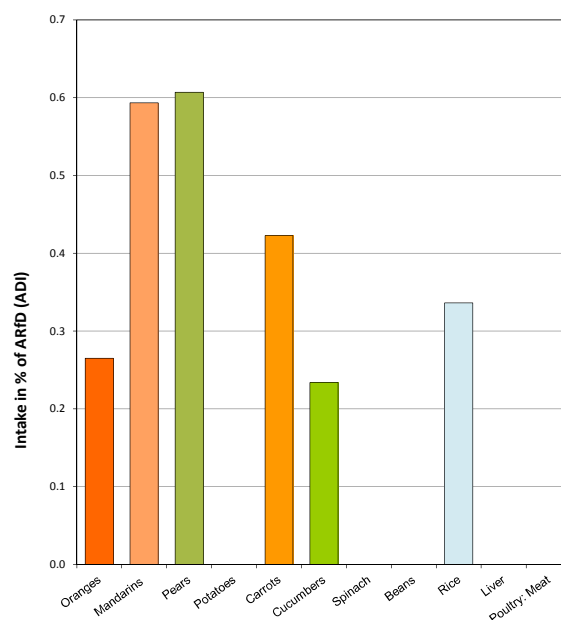
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Propiconazole



Acute risk assessment: Propiconazole



Propyzamide (RD)											
Status of the active substance:				Approved	Monitoring year:		2011				
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N				
Toxicological end points											
ADI (mg/kg bw/day):				0.02	ARfD (mg/kg bw):		n.n.				
Source of ADI:				COM	Source of ARfD:		COM				
Year of evaluation:				2003	Year of evaluation:		2003				

Full residue definition: Propyzamide expressed as propyzamide. For products of animal origin-terrestrial animal: sum of propyzamide and all metabolites containing the 3,5-dichlorobenzoic acid fraction expressed as propyzamide																	
Chronic risk assessment																	
	Highest calculated exposure in % of ADI			Top 12 diets		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
		0.14		DE child		0.07		Table grapes		0.03		Strawberries		0.02		Mandarins	
		0.12		NL child		0.04		Table grapes		0.04		Mandarins		0.02		Spinach	
		0.10		FR toddler		0.04		Spinach		0.03		Strawberries		0.01		Mandarins	
		0.07		IE adult		0.03		Mandarins		0.01		Table grapes		0.01		Strawberries	
		0.07		WHO cluster diet B		0.02		Lettuce		0.02		Table grapes		0.02		Mandarins	
		0.06		FR infant		0.03		Strawberries		0.03		Spinach		0.01		Mandarins	
		0.05		ES adult		0.03		Lettuce		0.01		Mandarins		0.00		Spinach	
		0.05		IT adult		0.02		Lettuce		0.01		Mandarins		0.01		Table grapes	
		0.05		ES child		0.03		Lettuce		0.01		Mandarins		0.00		Spinach	
		0.05		IT child/toddler		0.02		Lettuce		0.01		Mandarins		0.01		Strawberries	
		0.05		WHO regional diet		0.02		Lettuce		0.01		Table grapes		0.01		Mandarins	
		0.04		NL (GP)		0.01		Table grapes		0.01		Mandarins		0.01		Spinach	

Acute risk assessment											
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARfD) <sup>e)</sup>	Most critical diet	Comment	
2011	Oranges	0.02	1860	0.13		0.01		not assessed			
2011	Mandarins	0.02	1517								
2011	Pears	0.02	1901								
2011	Potatoes	0.02	2133								
2011	Carrots	0.02	1528	0.19		0.02		not assessed			
2011	Cucumbers	0.02	1622								
2011	Spinach	0.02	1073								
2011	Beans (with pods)	0.02	1220								
2011	Rice	0.02	1021								
2011	Liver										
2011	Poultry: Meat										

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

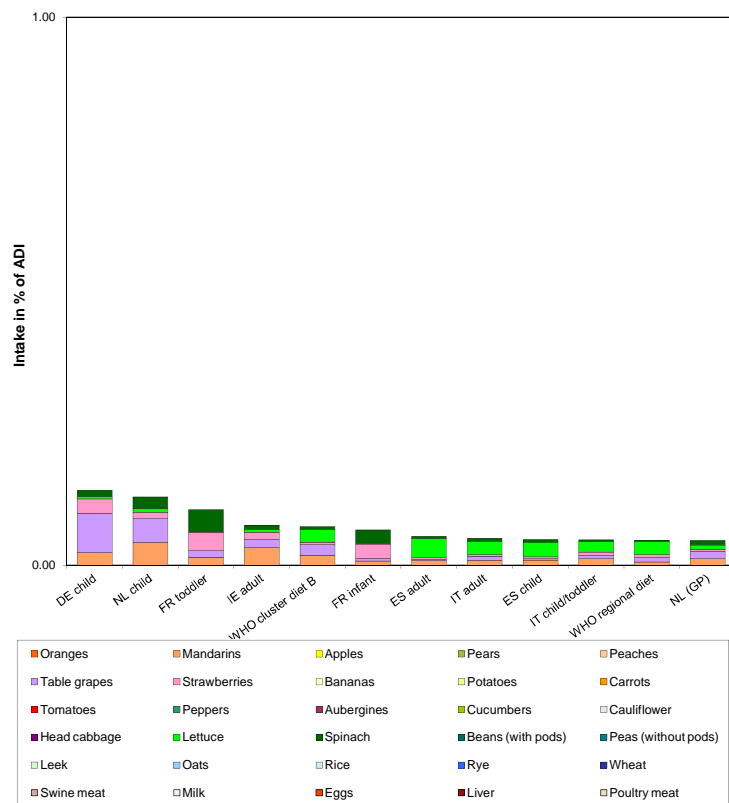
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

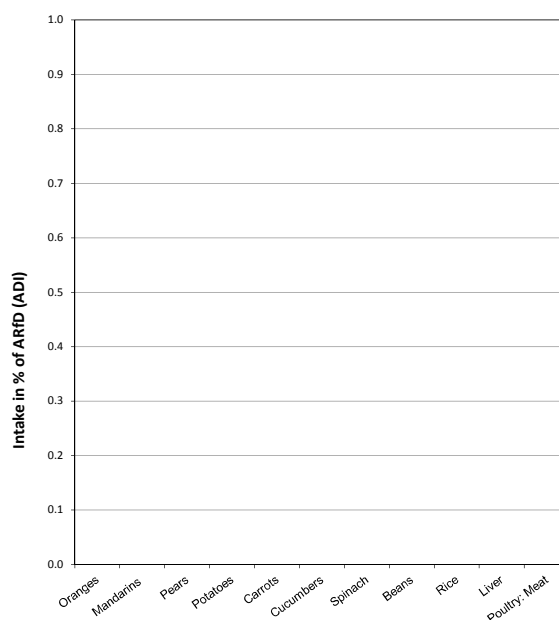
<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Propyzamide (RD)



Acute risk assessment: Propyzamide (RD)





Prothioconazole (RD)				
Status of the active substance:	Approved	Monitoring year:	2011	
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	Y	
Toxicological end points				
ADI (mg/kg bw/day):	0.01	ARfD (mg/kg bw):	0.01	
Source of ADI:	COM	Source of ARfD:	COM	
Year of evaluation:	2008	Year of evaluation:	2008	

Pesticide to be analysed on a voluntary basis only.

Full residue definition: Prothioconazole (prothioconazole-desthio). For products of animal origin-terrestrial animal, except honey: sum of prothioconazole-desthio and its glucuronide conjugate, expressed as prothioconazole desthio

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.13	FR toddler	0.13	Leek		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	0.08	FR infant	0.08	Leek		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	0.06	IE adult	0.06	Leek		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	0.04	NL child	0.04	Leek		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	0.04	NL (GP)	0.04	Leek		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	0.03	FR (GP)	0.03	Leek		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	0.02	WHO cluster diet B	0.02	Leek		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	0.01	WHO cluster diet E	0.01	Leek		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	0.01	DE child	0.01	Leek		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	0.01	SE (GP)	0.01	Leek		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	0.01	DK child	0.01	Leek		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	0.01	PL (GP)	0.01	Leek		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges		595							
2011	Mandarins		434							
2011	Pears		488							
2011	Potatoes		547							
2011	Carrots		501							
2011	Cucumbers		477							
2011	Spinach		321							
2011	Beans (with pods)		331							
2011	Rice		399							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

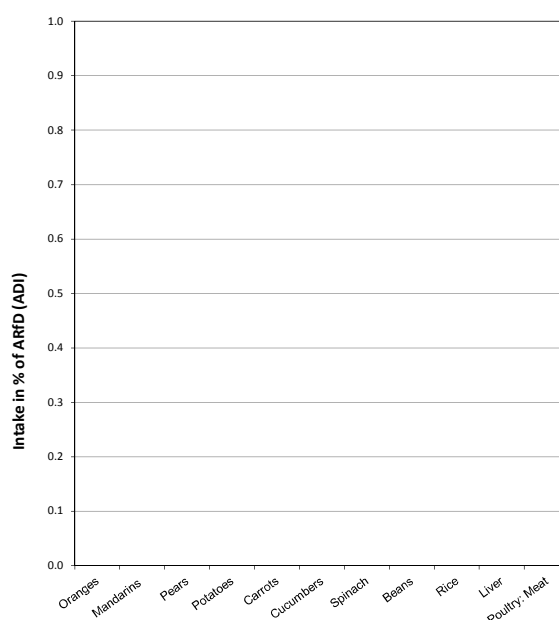
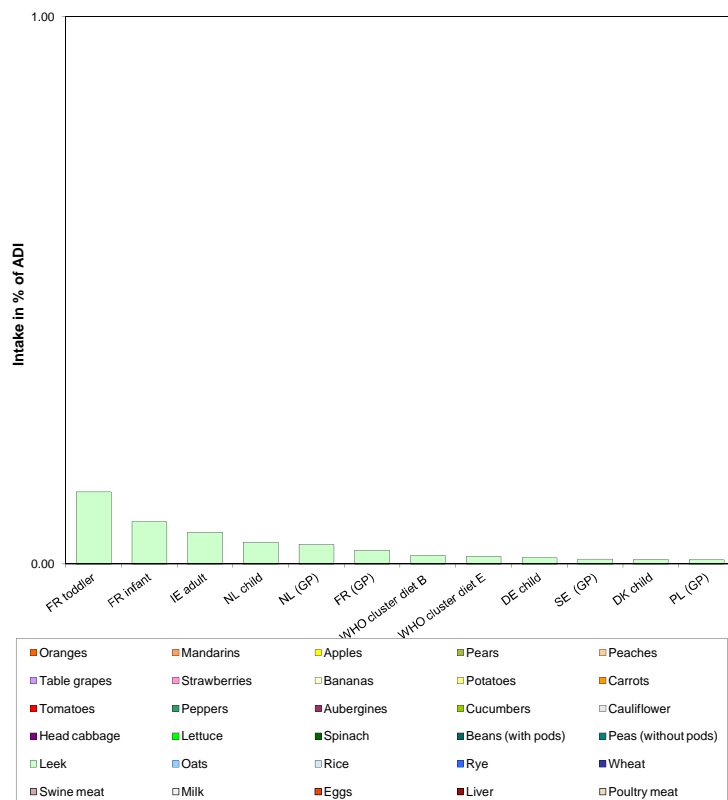
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Prothioconazole (RD)

Acute risk assessment: Prothioconazole (RD)



Pyraclostrobin									
Status of the active substance:				Approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N		
Toxicological end points									
ADI (mg/kg bw/day):				0.03	ARfD (mg/kg bw):		0.03		
Source of ADI:				COM	Source of ARfD:		COM		
Year of evaluation:				2004	Year of evaluation:		2004		

Chronic risk assessment														
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
0.93 DE child			0.55 Apples		0.13 Oranges		0.13 Oranges		0.05 Table grapes		0.05 Table grapes		0.03 Table grapes	
0.61 NL child			0.29 Apples		0.11 Oranges		0.11 Oranges		0.03 Oranges		0.03 Oranges		0.07 Oranges	
0.47 FR toddler			0.12 Apples		0.07 Carrots		0.07 Carrots		0.03 Oranges		0.03 Oranges		0.03 Oranges	
0.36 FR infant			0.11 Apples		0.08 Carrots		0.08 Carrots		0.03 Oranges		0.03 Oranges		0.03 Oranges	
0.32 WHO cluster diet B			0.10 Tomatoes		0.05 Apples		0.05 Apples		0.04 Pears		0.04 Pears		0.03 Tomatoes	
0.26 DK child			0.11 Apples		0.04 Carrots		0.04 Carrots		0.04 Pears		0.04 Pears		0.04 Oranges	
0.25 ES child			0.08 Oranges		0.05 Apples		0.05 Apples		0.04 Oranges		0.04 Oranges		0.04 Oranges	
0.25 IE adult			0.04 Apples		0.04 Pears		0.04 Pears		0.02 Tomatoes		0.02 Tomatoes		0.04 Carrots	
0.25 UK toddler			0.08 Apples		0.07 Oranges		0.07 Oranges		0.03 Carrots		0.03 Carrots		0.03 Oranges	
0.23 UK infant			0.07 Apples		0.05 Oranges		0.05 Oranges		0.01 Tomatoes		0.01 Tomatoes			
0.21 SE (GP)			0.05 Apples		0.03 Carrots		0.03 Carrots							
0.20 NL (GP)			0.05 Apples		0.05 Oranges		0.05 Oranges							

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges		1666	3.96		0.18		79.57	UK infant	
2011	Mandarins	1	1396	1.65		0.07		12.24	UK toddler	
2011	Pears	0.3	1674	16.07	0.06	0.50	1	151.79	DE child	
2011	Potatoes	0.02	1754							
2011	Carrots	0.1	1387	2.16		0.08		17.33	UK infant	
2011	Cucumbers	0.3	1398	0.14		0.02		3.90	NL child	
2011	Spinach	0.5	906	0.55	0.22	2.00	1	150.67	BE child	
2011	Beans (with pods)	0.02	1118	0.18	0.36	0.22		8.32	NL child	
2011	Rice	0.02	885							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

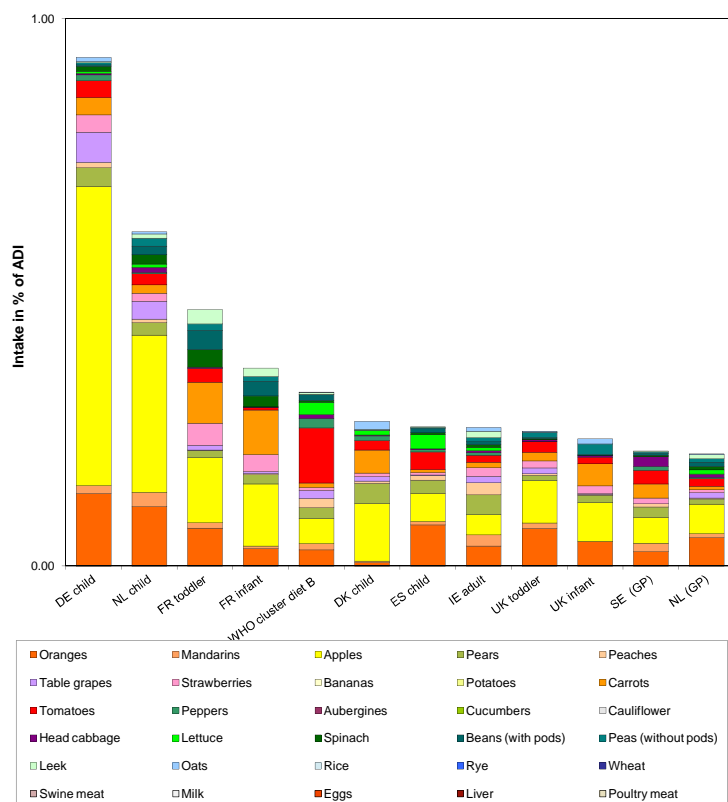
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

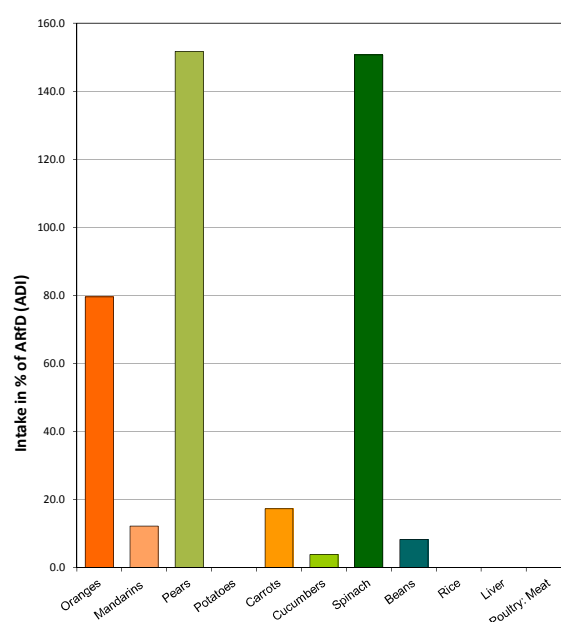
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Pyraclostrobin



Acute risk assessment: Pyraclostrobin



Pyrazophos			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	A	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.004	ARfD (mg/kg bw):	
Source of ADI:	JMPR	Source of ARfD:	
Year of evaluation:	1992	Year of evaluation:	

Active substance not assessed regarding the setting of an ARfD setting. The acute RA is performed with the ADI value.

Chronic risk assessment													
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
0.66	DK child	0.66	Cucumbers	FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.24	DE child	0.24	Cucumbers	FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.16	LT adult	0.16	Cucumbers	FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.13	SE (GP)	0.13	Cucumbers	FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.11	FI adult	0.11	Cucumbers	FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.11	DK adult	0.11	Cucumbers	FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.10	NL child	0.10	Cucumbers	FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.09	WHO cluster diet B	0.09	Cucumbers	FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.08	WHO cluster diet D	0.08	Cucumbers	FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.05	NL (GP)	0.05	Cucumbers	FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.05	WHO Cluster diet F	0.05	Cucumbers	FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	
0.04	UK toddler	0.04	Cucumbers	FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)				FRUIT (FRESH OR FROZEN)	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges									
2011	Mandarins									
2011	Pears									
2011	Potatoes									
2011	Carrots									
2011	Cucumbers									
2011	Spinach									
2011	Beans (with pods)									
2011	Rice									
2011	Liver	0.02	527							Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.02	523							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

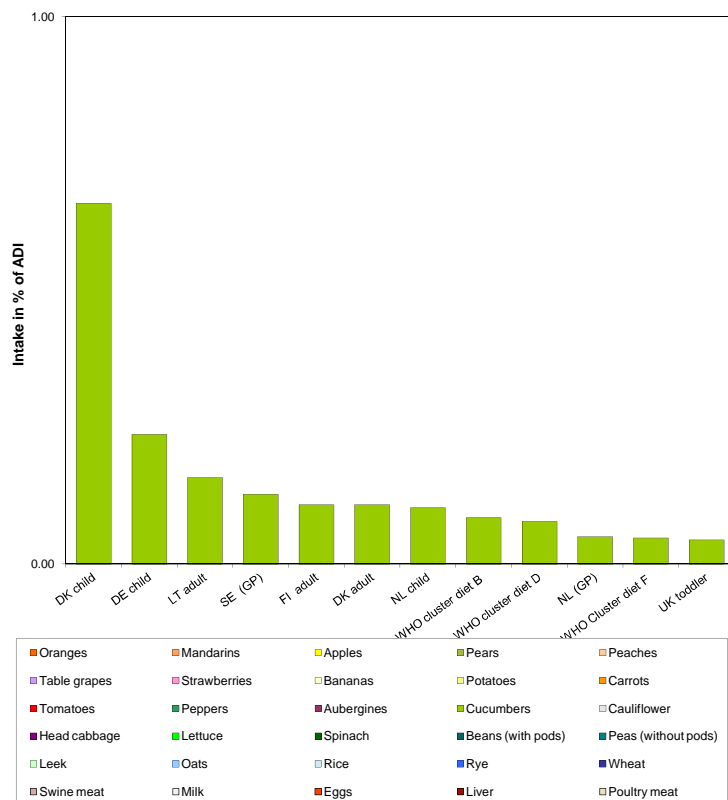
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

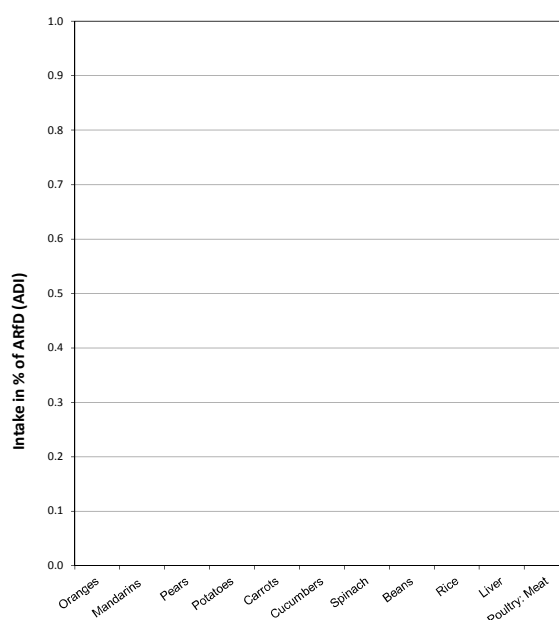
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Pyrazophos



Acute risk assessment: Pyrazophos



Pyrethrins			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.04	ARfD (mg/kg bw):	0.2
Source of ADI:	EFSA	Source of ARfD:	EFSA
Year of evaluation:	2013	Year of evaluation:	2013

The tox. values referred to the mixture of the 6 pyrethrins.

Chronic risk assessment							
Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
4.53	DE child	3.86	Apples	0.46	Tomatoes	0.16	Peppers
2.43	NL child	2.03	Apples	0.30	Tomatoes	0.07	Rice
2.16	WHO cluster diet B	1.46	Tomatoes	0.32	Apples	0.28	Peppers
1.27	FR toddler	0.84	Apples	0.37	Tomatoes	0.07	Rice
1.14	DK child	0.74	Apples	0.25	Tomatoes	0.12	Peppers
1.11	PL (GP)	0.65	Apples	0.42	Tomatoes	0.04	Peppers
1.03	IT child/toddler	0.67	Tomatoes	0.28	Apples	0.04	Rice
1.01	PT (GP)	0.42	Tomatoes	0.34	Apples	0.15	Rice
0.98	ES child	0.46	Tomatoes	0.37	Apples	0.09	Rice
0.94	UK toddler	0.55	Apples	0.28	Tomatoes	0.11	Rice
0.94	LT adult	0.60	Apples	0.29	Tomatoes	0.04	Rice
0.89	FR infant	0.80	Apples	0.07	Tomatoes	0.02	Rice

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	1	811							
2011	Mandarins	1	734							
2011	Pears	1	822							
2011	Potatoes	1	902							
2011	Carrots	1	808							
2011	Cucumbers	1	730							
2011	Spinach	1	508	0.20		0.34		3.84	BE child	
2011	Beans (with pods)	1	685							
2011	Rice	3	368	0.27		0.48		3.03	UK toddler	
2011	Liver									
2011	Poultry: Meat									

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

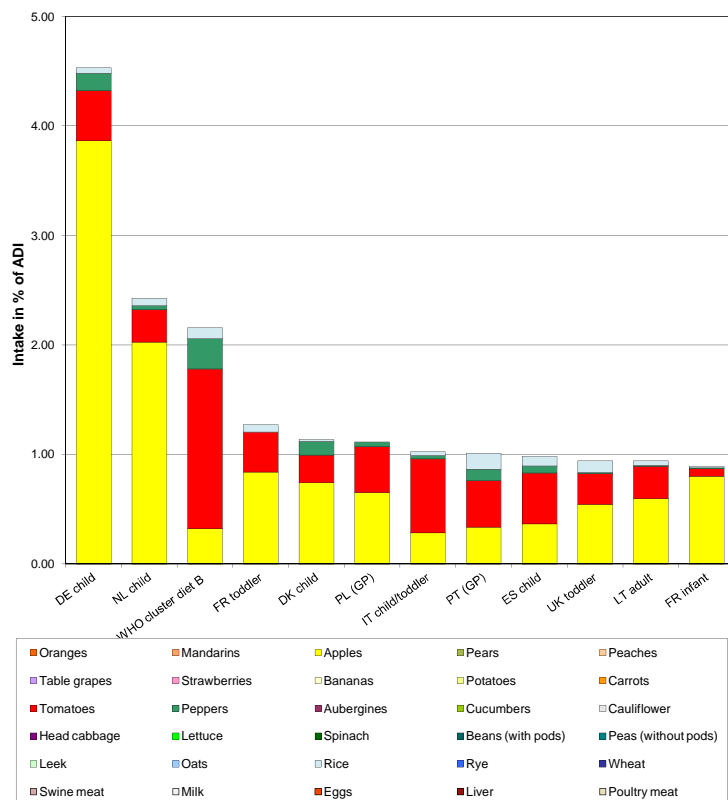
b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

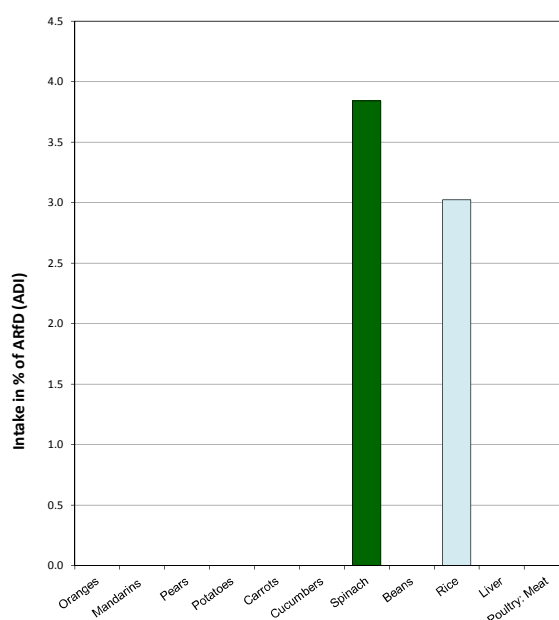
d) TTL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported. <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Pyrethrins



Acute risk assessment: Pyrethrins



Pyridaben					
Status of the active substance:		Approved	Monitoring year:	2011	
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	N	
Toxicological end points					
ADI (mg/kg bw/day):		0.01	ARfD (mg/kg bw):	0.05	
Source of ADI:		COM	Source of ARfD:	COM	
Year of evaluation:		2010	Year of evaluation:	2010	

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets			Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
2.53	DE child		1.50	Apples	0.48	Oranges	0.14	Table grapes
1.62	NL child		0.79	Apples	0.39	Oranges	0.09	Mandarins
0.97	FR toddler		0.33	Apples	0.25	Oranges	0.14	Beans (with pods)
0.94	WHO cluster diet B		0.38	Tomatoes	0.13	Apples	0.11	Oranges
0.73	DK child		0.29	Apples	0.19	Cucumbers	0.08	Pears
0.72	ES child		0.27	Oranges	0.14	Apples	0.12	Tomatoes
0.67	FR infant		0.31	Apples	0.12	Oranges	0.11	Beans (with pods)
0.66	UK toddler		0.25	Oranges	0.21	Apples	0.07	Tomatoes
0.59	IE adult		0.13	Oranges	0.10	Apples	0.08	Pears
0.54	ES adult		0.16	Oranges	0.10	Apples	0.10	Tomatoes
0.54	NL (GP)		0.19	Oranges	0.15	Apples	0.05	Tomatoes
0.51	SE (GP)		0.13	Apples	0.09	Oranges	0.09	Tomatoes

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.5	1742	0.52		0.10		26.52	UK infant	
2011	Mandarins	0.5	1428	2.24		0.07		8.01	UK toddler	
2011	Pears	0.5	1696	0.12		0.04		6.74	DE child	
2011	Potatoes	0.05	1877	0.11		0.05		15.38	UK infant	
2011	Carrots	0.05	1448							
2011	Cucumbers	0.1	1474	0.20		0.03		3.27	NL child	
2011	Spinach	0.05	962							
2011	Beans (with pods)	0.5	1165	0.60		0.41		9.30	NL child	
2011	Rice	0.05	856							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

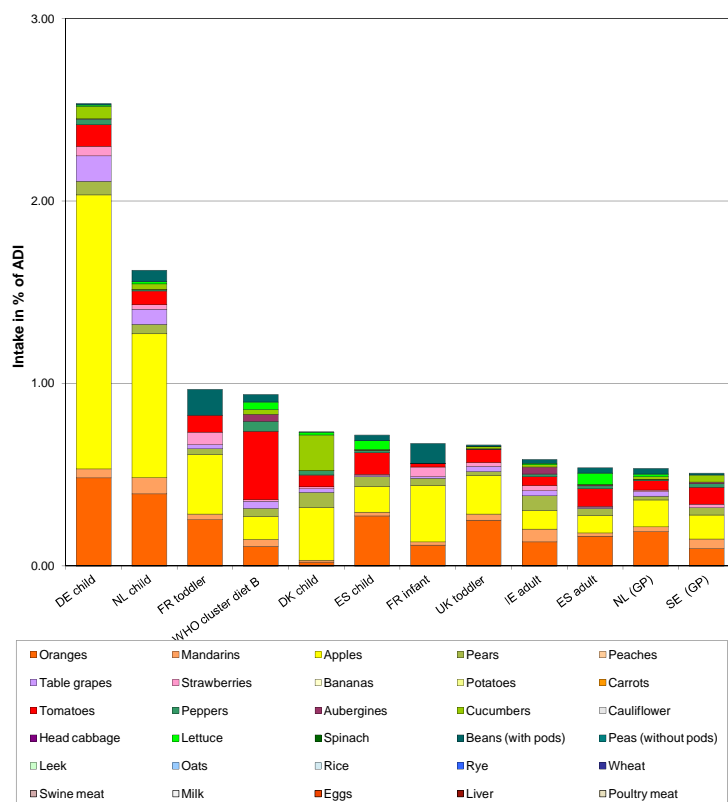
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

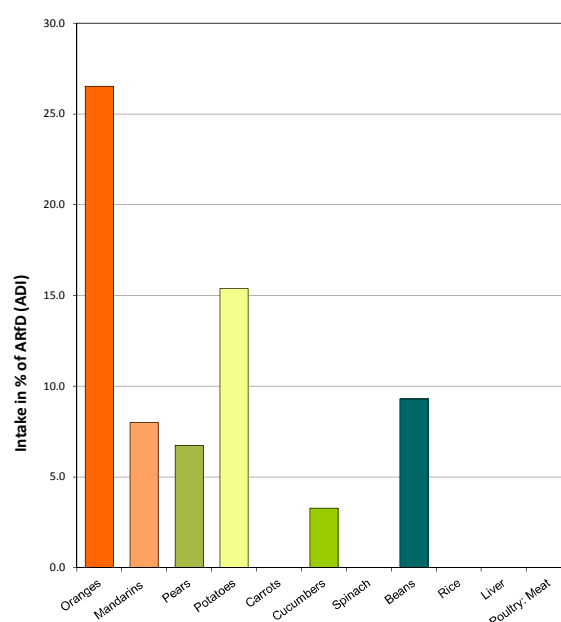
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Pyridaben



Acute risk assessment: Pyridaben



Pyrimethanil									
Status of the active substance:				Approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N		
Toxicological end points									
ADI (mg/kg bw/day):				0.17	ARfD (mg/kg bw):		n.n.		
Source of ADI:				COM	Source of ARfD:		EFSA		
Year of evaluation:				2006	Year of evaluation:		2006		

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets	Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.47		DE child	0.20		Apples	0.11		0.04	Table grapes
	0.38		NL child	0.11		Apples	0.09		0.05	Potatoes
	0.25		FR toddler	0.06		Oranges	0.05		0.04	Apples
	0.18		UK toddler	0.06		Oranges	0.03		0.03	Apples
	0.18		FR infant	0.04		Apples	0.04		0.03	Oranges
	0.16		IE adult	0.04		Mandarins	0.03		0.02	Potatoes
	0.16		WHO cluster diet B	0.03		Tomatoes	0.02		0.02	Potatoes
	0.16		SE (GP)	0.04		Potatoes	0.03		0.02	Oranges
	0.15		ES child	0.06		Oranges	0.02		0.02	Potatoes
	0.14		UK infant	0.04		Oranges	0.03		0.03	Apples
	0.14		DK child	0.04		Apples	0.02		0.02	Pears
	0.13		NL (GP)	0.04		Oranges	0.02		0.02	Apples

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	10	1869	7.01		3.05		not assessed		
2011	Mandarins	10	1515	13.07		4.05		not assessed		
2011	Pears	5	1900	6.26		2.50		not assessed		
2011	Potatoes	0.05	2187	0.09		0.03		not assessed		
2011	Carrots	1	1574	0.44		0.05		not assessed		
2011	Cucumbers	1	1619	2.90		0.68		not assessed		
2011	Spinach	0.05	1078	0.19		0.02		not assessed		
2011	Beans (with pods)	2	1264	0.32		0.04		not assessed		
2011	Rice	0.05	1030					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

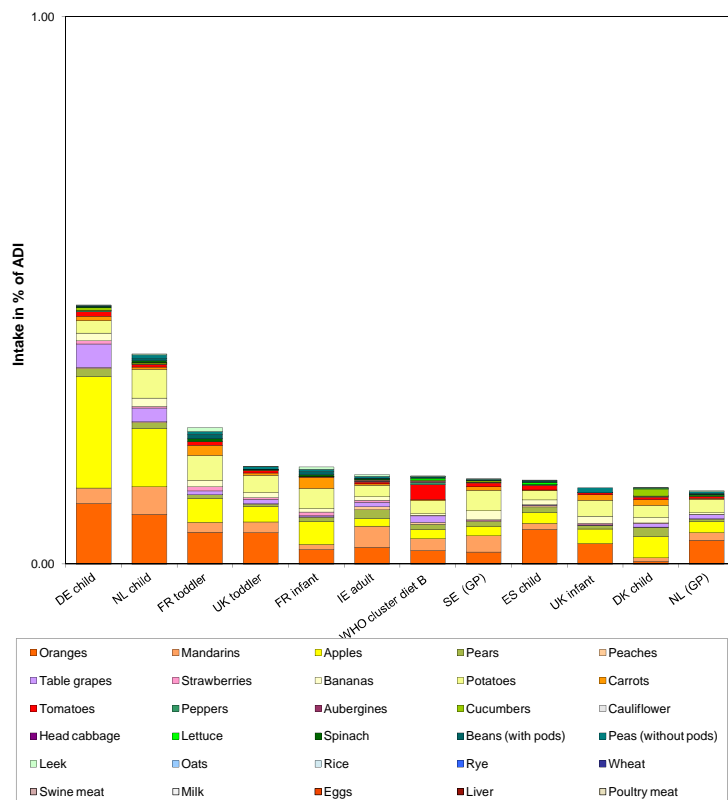
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

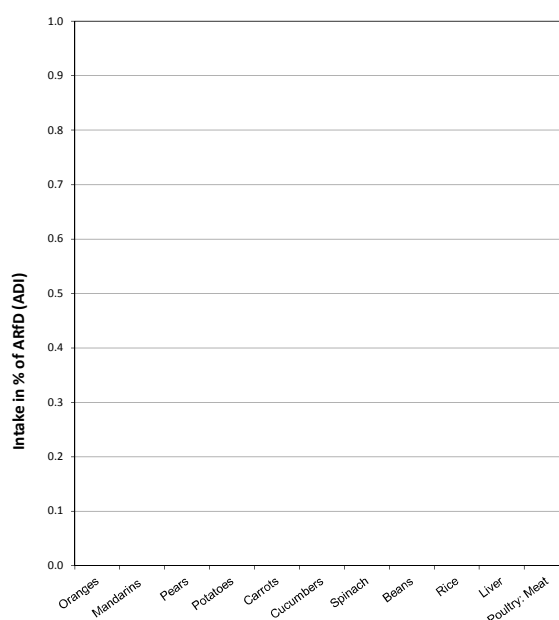
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Pyrimethanil



Acute risk assessment: Pyrimethanil



Pyriproxyfen									
Status of the active substance:				Approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N		
Toxicological end points									
ADI (mg/kg bw/day):				0.1	ARfD (mg/kg bw):		10		
Source of ADI:				COM	Source of ARfD:		COM		
Year of evaluation:				2008	Year of evaluation:		2008		

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.23		DE child		0.15	Apples	0.05	Oranges	0.01	Tomatoes
	0.15		NL child		0.08	Apples	0.04	Oranges	0.01	Mandarins
	0.09		WHO cluster diet B		0.04	Tomatoes	0.01	Apples	0.01	Oranges
	0.09		FR toddler		0.03	Apples	0.03	Oranges	0.01	Leek
	0.07		ES child		0.03	Oranges	0.01	Apples	0.01	Tomatoes
	0.06		UK toddler		0.03	Oranges	0.02	Apples	0.01	Tomatoes
	0.06		FR infant		0.03	Apples	0.01	Oranges	0.01	Leek
	0.05		IE adult		0.01	Oranges	0.01	Apples	0.01	Mandarins
	0.05		NL (GP)		0.02	Oranges	0.02	Apples	0.01	Tomatoes
	0.05		ES adult		0.02	Oranges	0.01	Tomatoes	0.01	Apples
	0.05		IT child/toddler		0.02	Tomatoes	0.01	Apples	0.01	Oranges
	0.05		DK child		0.03	Apples	0.01	Tomatoes	0.00	Peppers

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.6	1690	12.37		0.60		0.80	UK infant	
2011	Mandarins	0.6	1382	14.11		0.14		0.08	UK toddler	
2011	Pears	0.2	1683	0.30		0.01		0.01	DE child	
2011	Potatoes	0.05	1858							
2011	Carrots	0.05	1391							
2011	Cucumbers	0.1	1441							
2011	Spinach	0.05	959							
2011	Beans (with pods)	0.05	1161							
2011	Rice	0.05	911							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

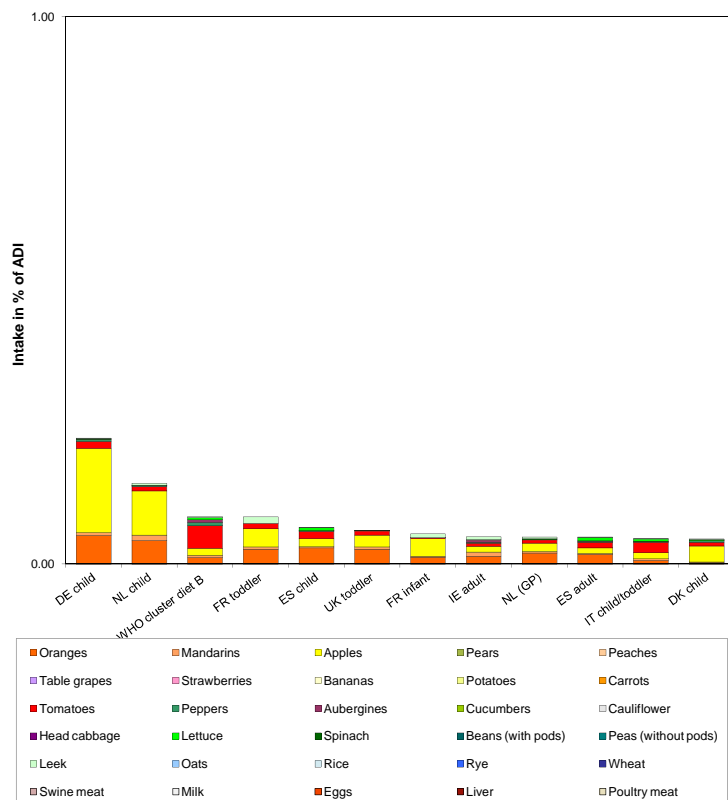
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

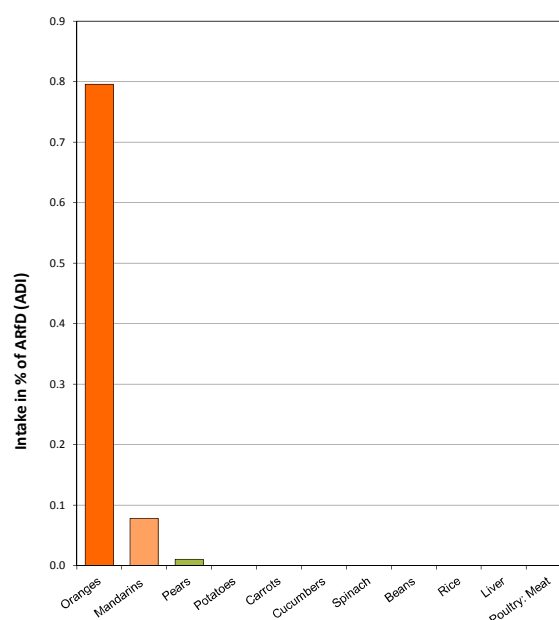
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Pyriproxyfen



Acute risk assessment: Pyriproxyfen



Quinoxifen				
Status of the active substance:	Approved	Monitoring year:	2011	
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N	
Toxicological end points				
ADI (mg/kg bw/day):	0.2	ARfD (mg/kg bw):	n.n.	
Source of ADI:	COM	Source of ARfD:	COM	
Year of evaluation:	2004	Year of evaluation:	2003	

Chronic risk assessment														
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
	0.01	DE child		0.01	Table grapes		0.00	Strawberries		0.00	Peaches		0.00	Peaches
	0.01	WHO cluster diet B		0.00	Peaches		0.00	Peppers		0.00	Table grapes		0.00	Table grapes
	0.01	NL child		0.01	Table grapes		0.00	Strawberries		0.00	Peaches		0.00	Peaches
	0.01	IE adult		0.00	Peaches		0.00	Table grapes		0.00	Strawberries		0.00	Strawberries
	0.01	FR toddler		0.00	Strawberries		0.00	Table grapes		0.00	Peaches		0.00	Peaches
	0.01	PT (GP)		0.00	Peaches		0.00	Table grapes		0.00	Peppers		0.00	Peppers
	0.00	FR infant		0.00	Strawberries		0.00	Table grapes		0.00	Peaches		0.00	Peaches
	0.00	IT child/toddler		0.00	Peaches		0.00	Strawberries		0.00	Table grapes		0.00	Table grapes
	0.00	IT adult		0.00	Peaches		0.00	Table grapes		0.00	Peppers		0.00	Peppers
	0.00	WHO regional diet		0.00	Peaches		0.00	Table grapes		0.00	Peppers		0.00	Peppers
	0.00	DK child		0.00	Table grapes		0.00	Peppers		0.00	Peaches		0.00	Peaches
	0.00	UK toddler		0.00	Table grapes		0.00	Strawberries		0.00	Peaches		0.00	Peaches

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1753					not assessed		
2011	Mandarins	0.02	1394					not assessed		
2011	Pears	0.02	1736					not assessed		
2011	Potatoes	0.02	2016					not assessed		
2011	Carrots	0.02	1462					not assessed		
2011	Cucumbers	0.02	1515					not assessed		
2011	Spinach	0.02	1023					not assessed		
2011	Beans (with pods)	0.02	1189					not assessed		
2011	Rice	0.02	945					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

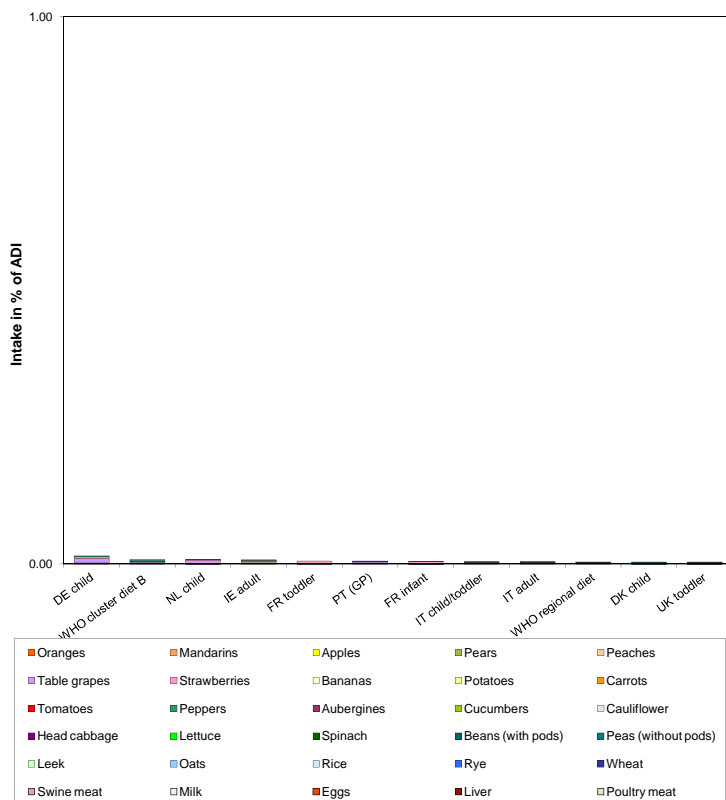
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

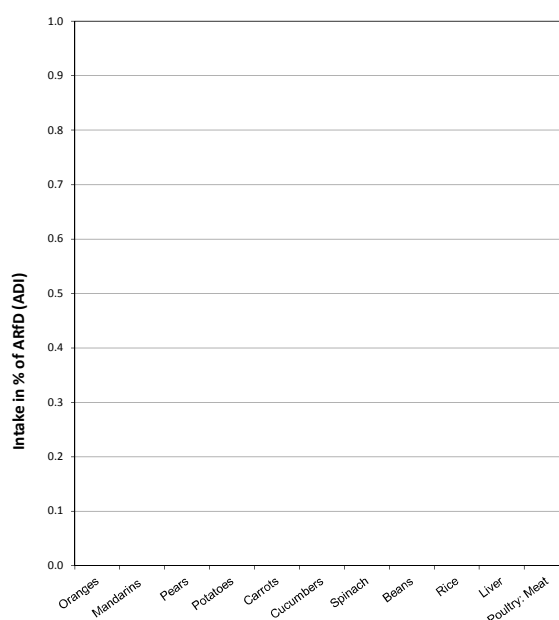
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Quinoxifen



Acute risk assessment: Quinoxifen





Quintozene (RD)					
Status of the active substance:		Not approved	Monitoring year:	2011	
To be analysed in plant (P) or animal (A) products		A	Analysis on voluntary basis?	N	
Toxicological end points					
ADI (mg/kg bw/day):		0.01	ARfD (mg/kg bw):	n.n.	
Source of ADI:		COM	Source of ARfD:	COM	
Year of evaluation:		2000	Year of evaluation:	2000	

Full residue definition: Quintozene (sum of quintozene and pentachloro-aniline expressed as quintozene)								
Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets			Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
0.28	FR infant	0.28	Carrots	0.00	Peppers		FRUIT (FRESH OR FROZEN)	
0.25	FR toddler	0.25	Carrots		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.18	DK child	0.14	Carrots	0.02	Peppers	0.01	Lettuce	
0.14	DE child	0.11	Carrots	0.03	Peppers	0.01	Lettuce	
0.14	UK infant	0.14	Carrots		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)	
0.11	WHO cluster diet B	0.05	Peppers	0.04	Lettuce	0.03	Carrots	
0.11	SE (GP)	0.09	Carrots	0.02	Peppers		FRUIT (FRESH OR FROZEN)	
0.09	WHO regional diet	0.04	Lettuce	0.04	Carrots	0.02	Peppers	
0.09	PT (GP)	0.07	Carrots	0.02	Peppers		FRUIT (FRESH OR FROZEN)	
0.09	WHO Cluster diet F	0.05	Carrots	0.03	Lettuce	0.01	Peppers	
0.09	ES adult	0.06	Lettuce	0.02	Peppers	0.01	Carrots	
0.07	ES child	0.04	Lettuce	0.02	Carrots	0.01	Peppers	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARfD) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges							not assessed		
2011	Mandarins							not assessed		
2011	Pears							not assessed		
2011	Potatoes							not assessed		
2011	Carrots							not assessed		
2011	Cucumbers							not assessed		
2011	Spinach							not assessed		
2011	Beans (with pods)							not assessed		
2011	Rice	0.01	443					not assessed		
2011	Liver	0.01	460					not assessed		Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARfD) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges							not assessed		
2011	Mandarins							not assessed		
2011	Pears							not assessed		
2011	Potatoes							not assessed		
2011	Carrots							not assessed		
2011	Cucumbers							not assessed		
2011	Spinach							not assessed		
2011	Beans (with pods)							not assessed		
2011	Rice							not assessed		
2011	Liver	0.01	443					not assessed		Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.01	460					not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

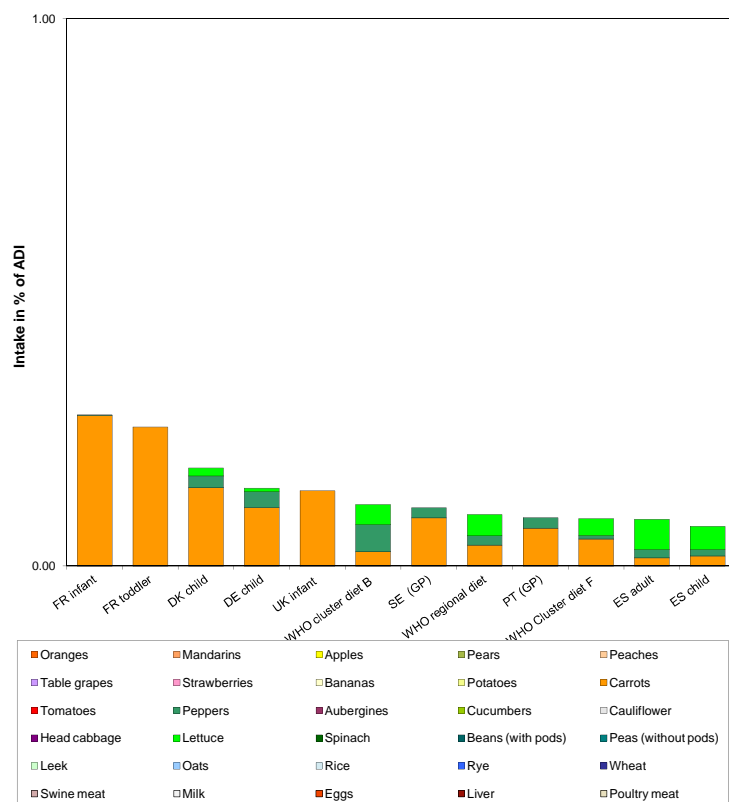
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

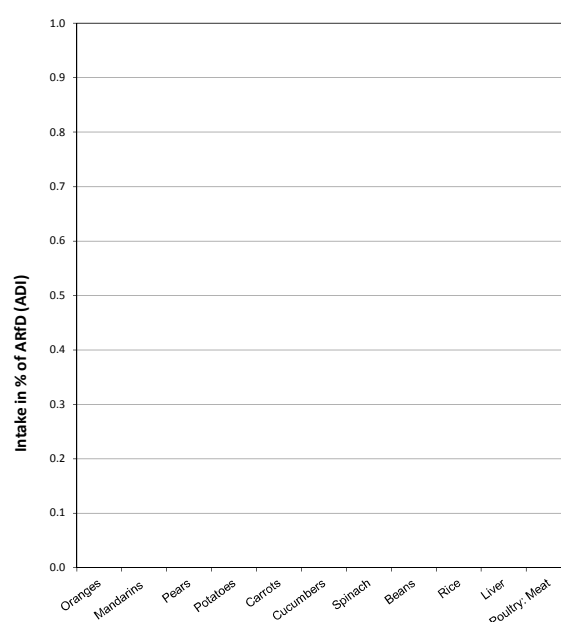
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

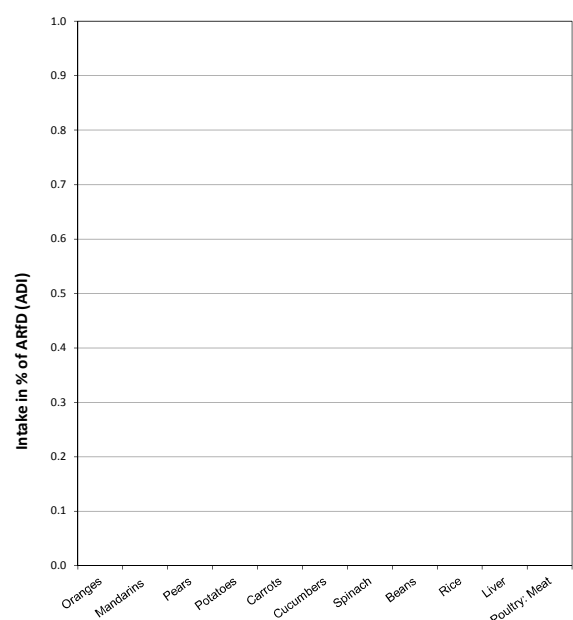
Chronic risk assessment: Quintozene (RD)



Acute risk assessment: Quintozene (RD)



**Acute risk assessment: Resmethrin (RD)**



Spinosad (RD)					
Status of the active substance:		Approved	Monitoring year:	2011	
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	N	
Toxicological end points					
ADI (mg/kg bw/day):		0.024	ARfD (mg/kg bw):	n.n.	
Source of ADI:		COM	Source of ARfD:	COM	
Year of evaluation:		2007	Year of evaluation:	2006	

Full residue definition: Spinosad (sum of spinosyn A and spinosyn D, expressed as spinosad)

Chronic risk assessment											
	Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities
		Top 12 diets									
	1.02	DE child	0.51	Apples		0.17	Oranges		0.11	Potatoes	
	0.85	NL child	0.27	Apples		0.25	Potatoes		0.14	Oranges	
	0.64	FR toddler	0.22	Potatoes		0.11	Apples		0.09	Oranges	
	0.48	WHO cluster diet B	0.13	Tomatoes		0.12	Potatoes		0.04	Apples	
	0.46	FR infant	0.18	Potatoes		0.11	Apples		0.04	Oranges	
	0.40	PT (GP)	0.23	Potatoes		0.04	Apples		0.04	Tomatoes	
	0.39	UK toddler	0.15	Potatoes		0.09	Oranges		0.07	Apples	
	0.38	DK child	0.10	Potatoes		0.10	Apples		0.07	Cucumbers	
	0.36	SE (GP)	0.18	Potatoes		0.04	Apples		0.03	Tomatoes	
	0.36	WHO regional diet	0.17	Potatoes		0.05	Tomatoes		0.03	Apples	
	0.35	ES child	0.10	Oranges		0.08	Potatoes		0.05	Apples	
	0.34	IE adult	0.10	Potatoes		0.05	Oranges		0.03	Apples	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.3	1511	0.07		0.00		not assessed		
2011	Mandarins	0.3	1219					not assessed		
2011	Pears	1	1387	2.09		0.57		not assessed		
2011	Potatoes	0.02	1517		0.07	0.40		not assessed		
2011	Carrots	0.02	1185					not assessed		
2011	Cucumbers	1	1144	1.14		0.40		not assessed		
2011	Spinach	10	779	1.28		1.34		not assessed		
2011	Beans (with pods)	0.5	978	1.12	0.10	0.66		not assessed		
2011	Rice	1	740					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

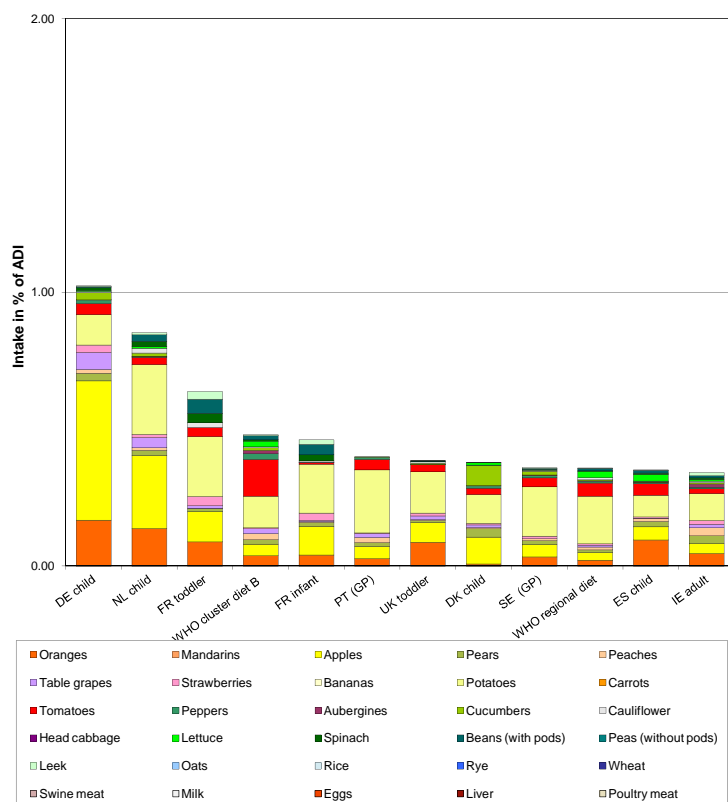
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

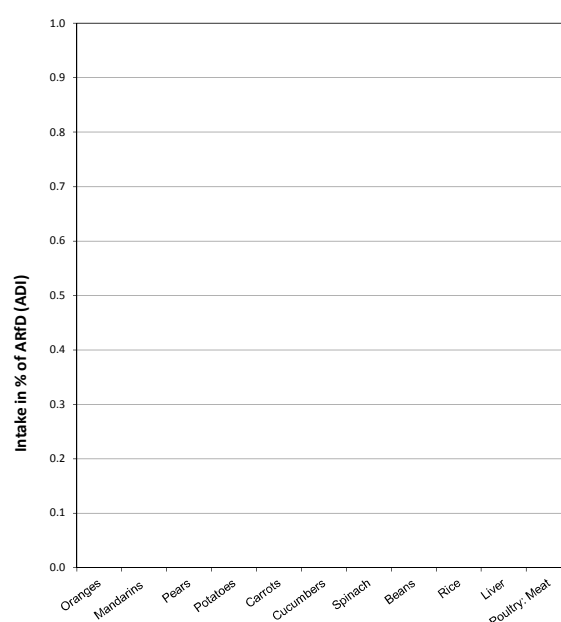
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Spinosad (RD)



Acute risk assessment: Spinosad (RD)



Spiroxamine										
Status of the active substance:				Approved	Monitoring year:		2011			
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N			
Toxicological end points										
ADI (mg/kg bw/day):				0.025	ARfD (mg/kg bw):		0.1			
Source of ADI:				COM	Source of ARfD:		COM			
Year of evaluation:				1999	Year of evaluation:		2011			

Chronic risk assessment													
	Highest calculated exposure in % of ADI		Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	
	1.07		DE child		0.57	Apples		0.24	Wheat		0.09	Bananas	
	0.77		WHO cluster diet B		0.49	Wheat		0.13	Tomatoes		0.05	Apples	
	0.76		NL child		0.30	Apples		0.27	Wheat		0.09	Bananas	
	0.75		DK child		0.32	Wheat		0.20	Rye		0.11	Apples	
	0.55		IT child/toddler		0.38	Wheat		0.06	Tomatoes		0.04	Apples	
	0.49		WHO cluster diet D		0.38	Wheat		0.04	Tomatoes		0.03	Apples	
	0.44		ES child		0.26	Wheat		0.06	Bananas		0.05	Apples	
	0.41		UK toddler		0.23	Wheat		0.08	Apples		0.06	Bananas	
	0.40		SE (GP)		0.18	Wheat		0.10	Bananas		0.05	Apples	
	0.39		FR toddler		0.15	Wheat		0.12	Apples		0.07	Bananas	
	0.38		IT adult		0.24	Wheat		0.05	Tomatoes		0.04	Apples	
	0.38		PT (GP)		0.23	Wheat		0.05	Apples		0.04	Tomatoes	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05	1716	0.06		0.00		0.39	DE child	
2011	Mandarins	0.05	1385							
2011	Pears	0.05	1585							
2011	Potatoes	0.05	1777							
2011	Carrots	0.05	1405							
2011	Cucumbers	0.05	1353	0.11		0.01		0.15	UK toddler	
2011	Spinach	0.05	916							
2011	Beans (with pods)	0.05	1124							
2011	Rice	0.05	952							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

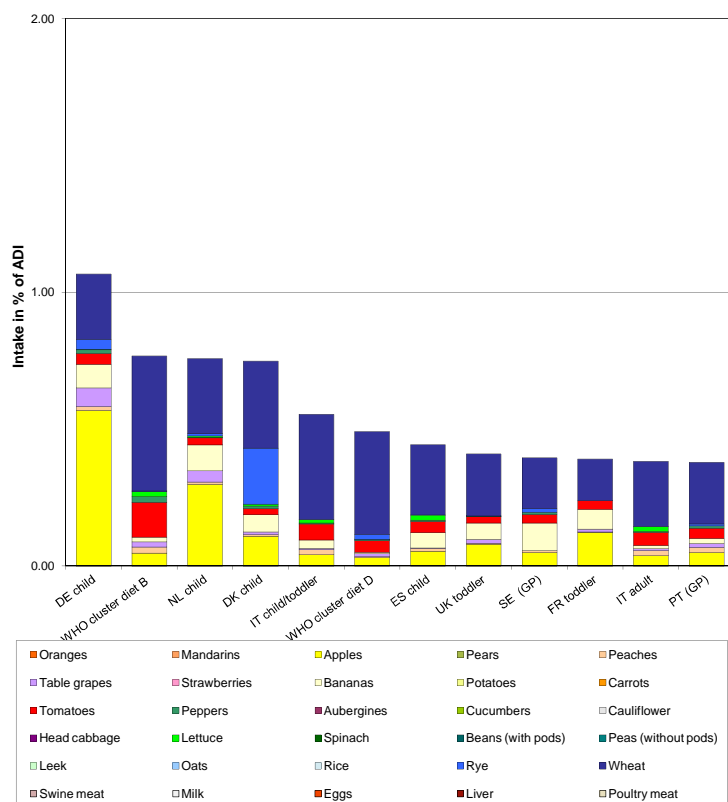
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

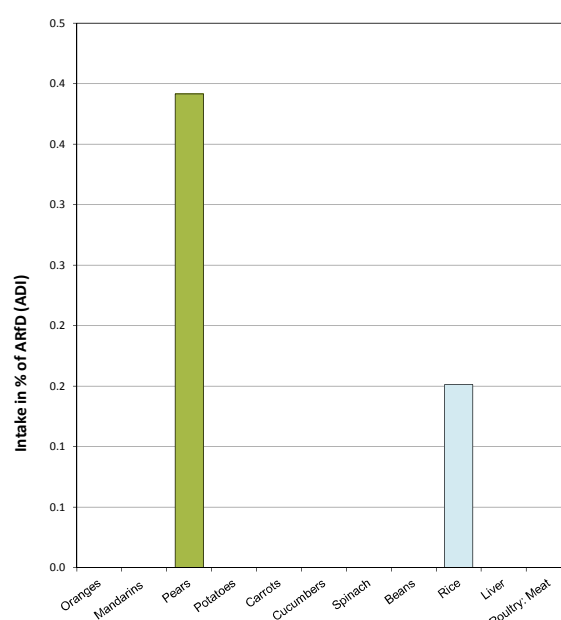
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Spiroxamine



Acute risk assessment: Spiroxamine



tau-Fluvalinate			
Status of the active substance:		Approved	Monitoring year: 2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis? N
Toxicological end points			
ADI (mg/kg bw/day):		0.005	ARfD (mg/kg bw): 0.05
Source of ADI:		COM	Source of ARfD: COM
Year of evaluation:		2010	Year of evaluation: 2010

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
		DK adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.1	1278	0.16		0.06		16.18	UK infant	
2011	Mandarins	0.1	1015	0.99		0.07		8.12	UK toddler	
2011	Pears	0.1	1416							
2011	Potatoes	0.01	1466							
2011	Carrots	0.02	1153							
2011	Cucumbers	0.05	1198							
2011	Spinach	0.01	747							
2011	Beans (with pods)	0.1	954	0.10	0.21	0.13		2.95	NL child	
2011	Rice	0.01	735							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis fo the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

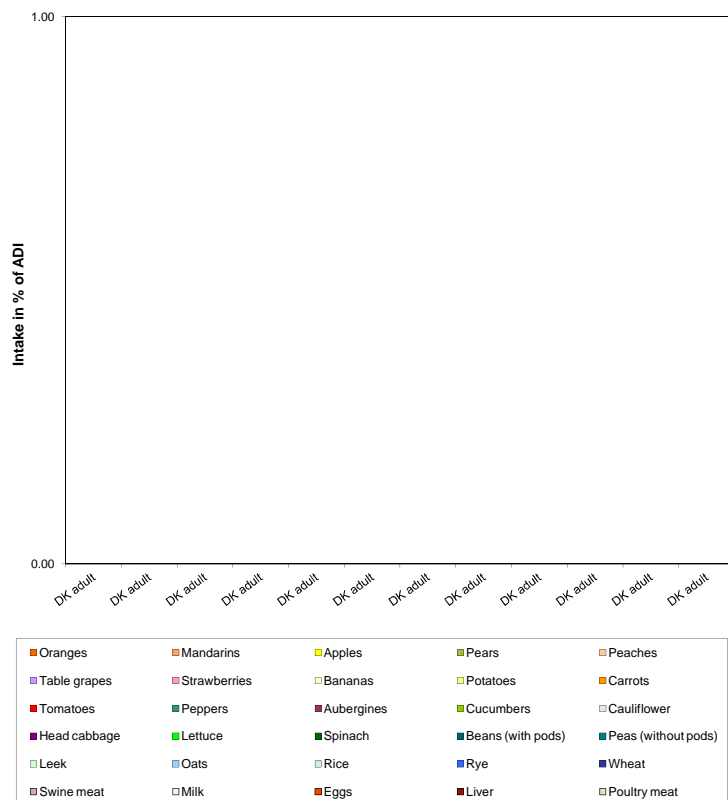
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

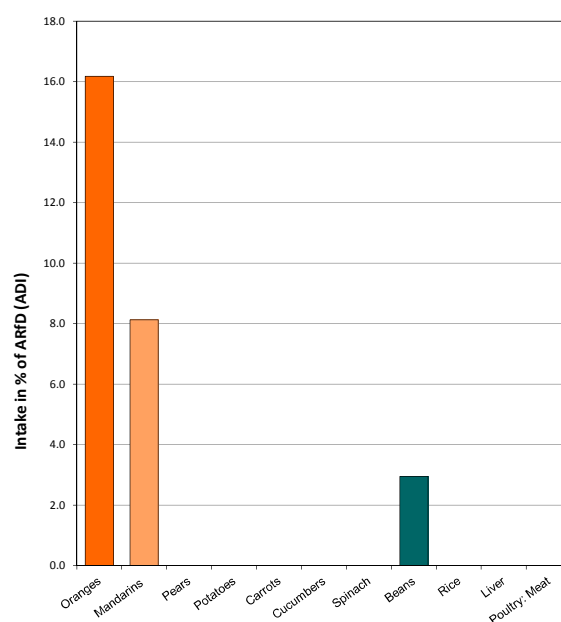
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: tau-Fluvalinate



Acute risk assessment: tau-Fluvalinate



Tebuconazole										
Status of the active substance:				Approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):				0.03		ARfD (mg/kg bw):		0.03		
Source of ADI:				COM		Source of ARfD:		COM		
Year of evaluation:				2008		Year of evaluation:		2008		

Chronic risk assessment															
Highest calculated exposure in % of ADI				Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
Top 12 diets															
1.37 DE child				0.55 Apples				0.24 Wheat				0.17 Oranges			
1.04 DK child				0.33 Rye				0.32 Wheat				0.11 Apples			
1.04 NL child				0.29 Apples				0.27 Wheat				0.14 Oranges			
0.97 WHO cluster diet B				0.49 Wheat				0.15 Tomatoes				0.05 Apples			
0.76 FR toddler				0.15 Wheat				0.12 Carrots				0.12 Apples			
0.64 IT child/toddler				0.38 Wheat				0.07 Tomatoes				0.04 Apples			
0.60 WHO cluster diet D				0.37 Wheat				0.05 Tomatoes				0.04 Rice			
0.59 ES child				0.26 Wheat				0.10 Oranges				0.05 Apples			
0.57 UK toddler				0.23 Wheat				0.09 Oranges				0.08 Apples			
0.53 PT (GP)				0.23 Wheat				0.05 Rice				0.05 Apples			
0.52 SE (GP)				0.18 Wheat				0.05 Apples				0.04 Carrots			
0.50 FR infant				0.13 Carrots				0.11 Apples				0.05 Wheat			

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05/0.9	1873	0.43		0.07		30.94	UK infant	MRL modified in 2011
2011	Mandarins	3	1510	0.26		0.11		20.40	UK toddler	
2011	Pears	1	1924	5.51		0.36	1	109.29	DE child	
2011	Potatoes	0.2	2181	0.05		0.01		5.13	UK infant	
2011	Carrots	0.5	1550	5.94		0.09		18.39	UK infant	
2011	Cucumbers	0.5	1648	0.24		0.24		47.17	NL child	
2011	Spinach	0.05	1094	0.18		0.02		1.58	BE child	
2011	Beans (with pods)	2	1282	0.23		0.26		9.79	NL child	
2011	Rice	2	1123	6.06		0.28		11.77	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis to the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

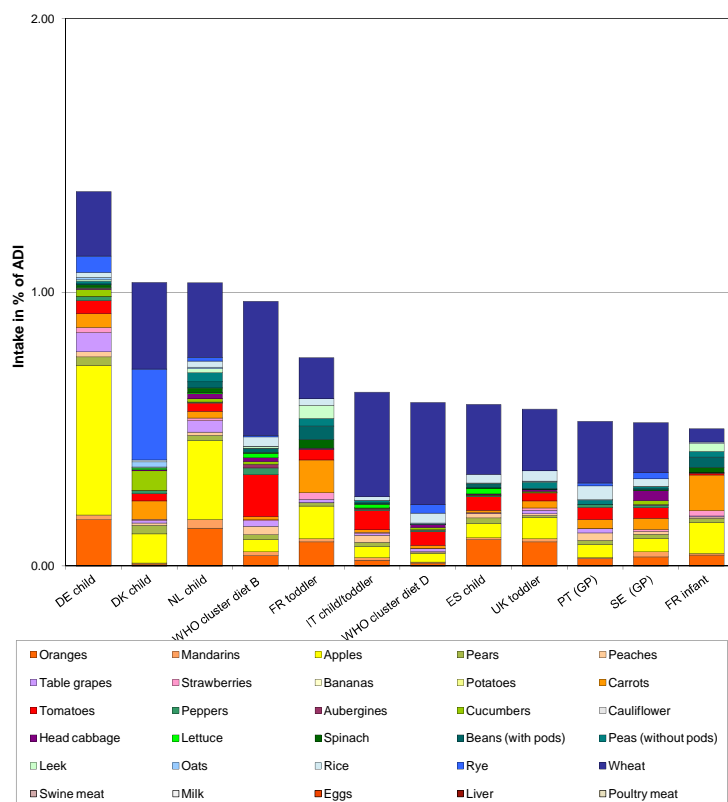
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

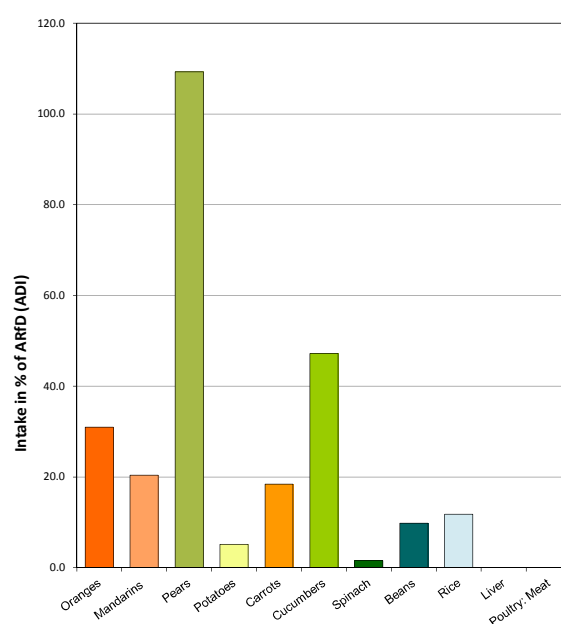
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Tebuconazole



Acute risk assessment: Tebuconazole



Tebufenozide					
Status of the active substance:		Approved	Monitoring year:	2011	
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	N	
Toxicological end points					
ADI (mg/kg bw/day):		0.02	ARfD (mg/kg bw):	n.n.	
Source of ADI:		COM	Source of ARfD:	COM	
Year of evaluation:		2011	Year of evaluation:	2011	

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets			Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
1.21	DE child	0.70	Apples	0.23	Oranges	0.07	Table grapes	
0.78	NL child	0.36	Apples	0.19	Oranges	0.05	Mandarins	
0.47	WHO cluster diet B	0.16	Tomatoes	0.06	Apples	0.05	Oranges	
0.42	FR toddler	0.15	Apples	0.12	Oranges	0.04	Tomatoes	
0.37	ES child	0.13	Oranges	0.07	Apples	0.05	Tomatoes	
0.35	DK child	0.13	Apples	0.09	Cucumbers	0.04	Pears	
0.34	UK toddler	0.12	Oranges	0.10	Apples	0.04	Rice	
0.31	IE adult	0.06	Oranges	0.05	Apples	0.04	Pears	
0.27	FR infant	0.14	Apples	0.06	Oranges	0.02	Spinach	
0.27	ES adult	0.08	Oranges	0.04	Apples	0.04	Tomatoes	
0.27	PT (GP)	0.06	Apples	0.05	Rice	0.05	Tomatoes	
0.26	SE (GP)	0.06	Apples	0.05	Oranges	0.04	Tomatoes	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	2	1755	0.06		0.05		not assessed		
2011	Mandarins	2	1423	0.21		0.16		not assessed		
2011	Pears	1	1761	0.91		0.18		not assessed		
2011	Potatoes	0.05	1893					not assessed		
2011	Carrots	0.05	1444					not assessed		
2011	Cucumbers	0.05	1471	0.07		0.03		not assessed		
2011	Spinach	10	987	0.10		0.04		not assessed		
2011	Beans (with pods)	0.05	1201					not assessed		
2011	Rice	3	913	1.42		0.09		not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

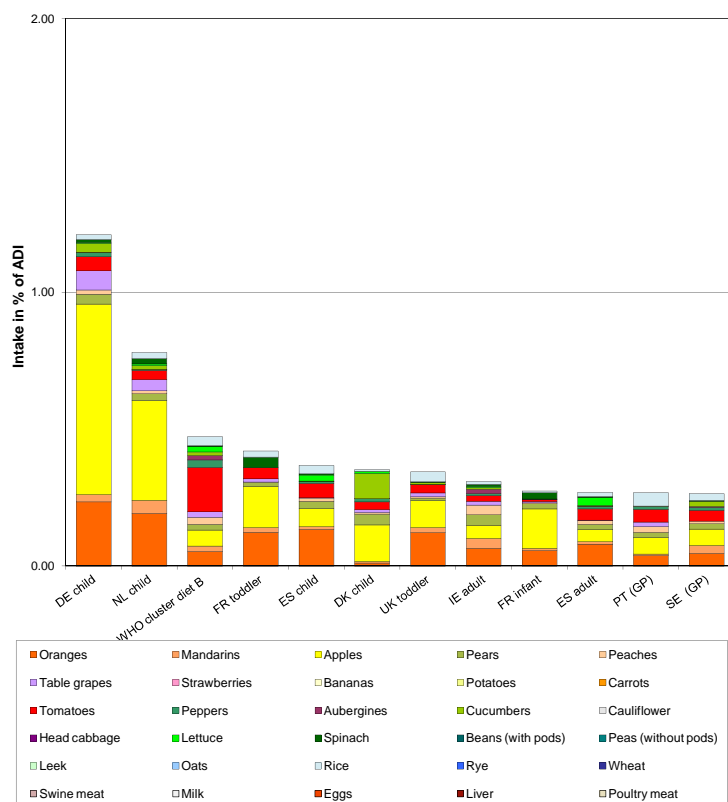
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

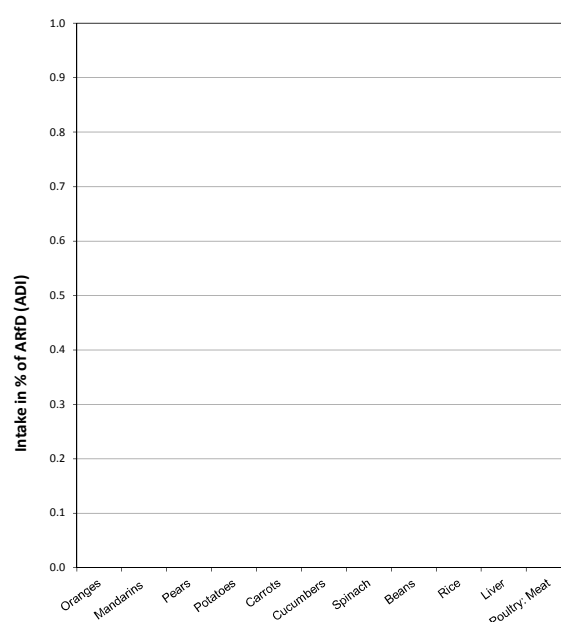
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Tebufenozide



Acute risk assessment: Tebufenozide



Tebufenpyrad					
Status of the active substance:		Approved	Monitoring year:	2011	
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	N	
Toxicological end points					
ADI (mg/kg bw/day):		0.01	ARfD (mg/kg bw):		0.02
Source of ADI:		COM	Source of ARfD:		COM
Year of evaluation:		2009	Year of evaluation:		2009

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets			Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
2.59	DE child		1.56	Apples	0.46	Oranges	0.16	Table grapes
1.64	NL child		0.82	Apples	0.37	Oranges	0.10	Mandarins
1.03	WHO cluster diet B		0.42	Tomatoes	0.13	Apples	0.10	Oranges
0.86	FR toddler		0.34	Apples	0.24	Oranges	0.10	Tomatoes
0.73	ES child		0.26	Oranges	0.15	Apples	0.13	Tomatoes
0.68	UK toddler		0.24	Oranges	0.22	Apples	0.08	Tomatoes
0.66	IE adult		0.13	Oranges	0.11	Apples	0.08	Peaches
0.60	SE (GP)		0.14	Apples	0.10	Tomatoes	0.10	Head cabbage
0.59	FR infant		0.32	Apples	0.11	Oranges	0.06	Strawberries
0.59	DK child		0.30	Apples	0.07	Pears	0.07	Tomatoes
0.56	IT child/toddler		0.19	Tomatoes	0.11	Apples	0.06	Oranges
0.55	ES adult		0.15	Oranges	0.11	Tomatoes	0.10	Apples

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.5	1788	1.68		0.10		65.65	UK infant	
2011	Mandarins	0.5	1483	3.17		0.22		61.21	UK toddler	
2011	Pears	0.2	1724	0.23		0.04		18.21	DE child	
2011	Potatoes	0.05	1841							
2011	Carrots	0.05	1458							
2011	Cucumbers	0.1	1410							
2011	Spinach	0.05	956							
2011	Beans (with pods)	1	1168							
2011	Rice	0.05	912							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

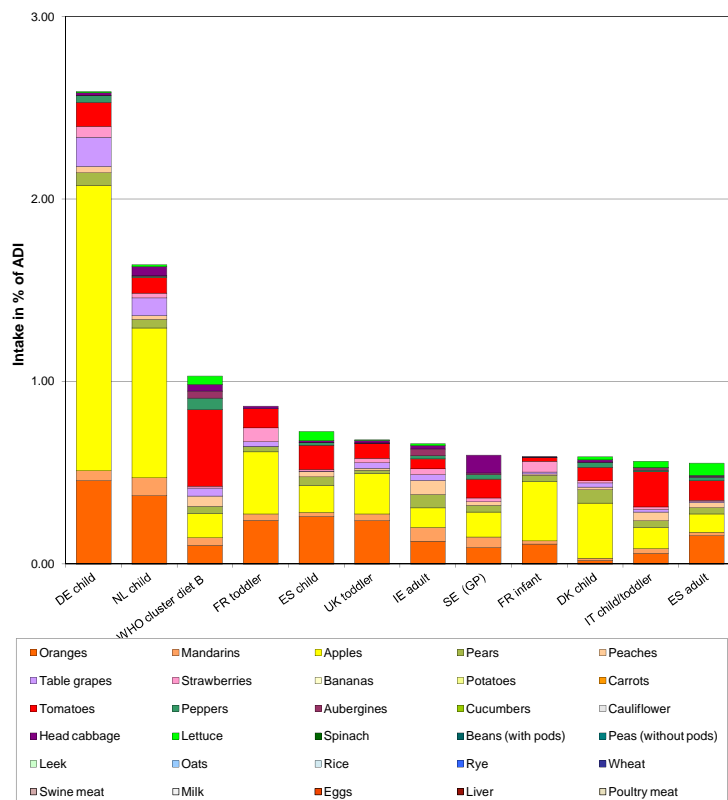
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

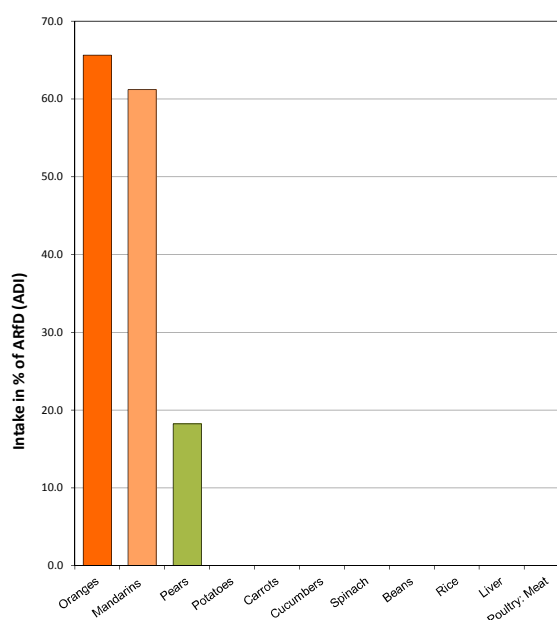
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Tebufenpyrad

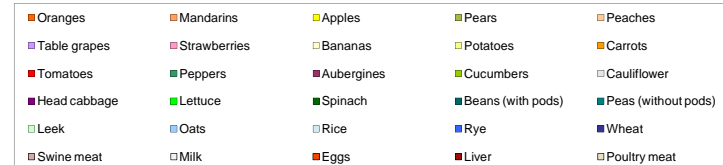


Acute risk assessment: Tebufenpyrad





<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.



Teflubenzuron			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARfD (mg/kg bw):	n.n.
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2008	Year of evaluation:	2008

Chronic risk assessment											
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)			2nd contributor to MS diet (in % of ADI)			3rd contributor to MS diet (in % of ADI)		
Top 12 diets			Commodity / group of commodities			Commodity / group of commodities			Commodity / group of commodities		
	2.42	DE child		1.83	Apples		0.19	Tomatoes		0.09	Strawberries
	1.38	NL child		0.96	Apples		0.12	Tomatoes		0.06	Beans (with pods)
	1.08	WHO cluster diet B		0.61	Tomatoes		0.15	Apples		0.10	Peppers
	0.95	FR toddler		0.40	Apples		0.15	Tomatoes		0.14	Beans (with pods)
	0.86	DK child		0.35	Apples		0.23	Cucumbers		0.10	Tomatoes
	0.73	FR infant		0.38	Apples		0.11	Beans (with pods)		0.09	Strawberries
	0.58	IT child/toddler		0.28	Tomatoes		0.13	Apples		0.06	Peaches
	0.56	PL (GP)		0.31	Apples		0.17	Tomatoes		0.04	Pears
	0.54	ES child		0.19	Tomatoes		0.17	Apples		0.06	Pears
	0.51	IE adult		0.12	Apples		0.09	Pears		0.09	Peaches
	0.51	SE (GP)		0.16	Apples		0.15	Tomatoes		0.05	Pears
	0.50	IT adult		0.23	Tomatoes		0.12	Apples		0.06	Peaches

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05	1506					not assessed		
2011	Mandarins	0.05	1245					not assessed		
2011	Pears	1	1491	1.27		0.25		not assessed		
2011	Potatoes	0.1	1488					not assessed		
2011	Carrots	0.05	1271					not assessed		
2011	Cucumbers	0.5	1181	0.34		0.05		not assessed		
2011	Spinach	0.05	783		0.38	1.20		not assessed		
2011	Beans (with pods)	0.05	1037	0.10		0.01		not assessed		
2011	Rice	0.05	786					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

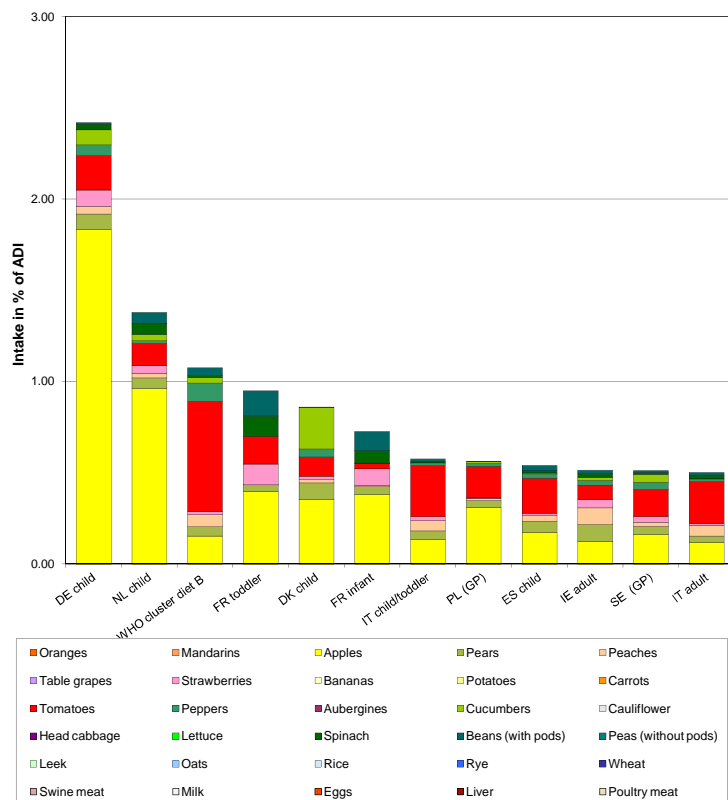
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

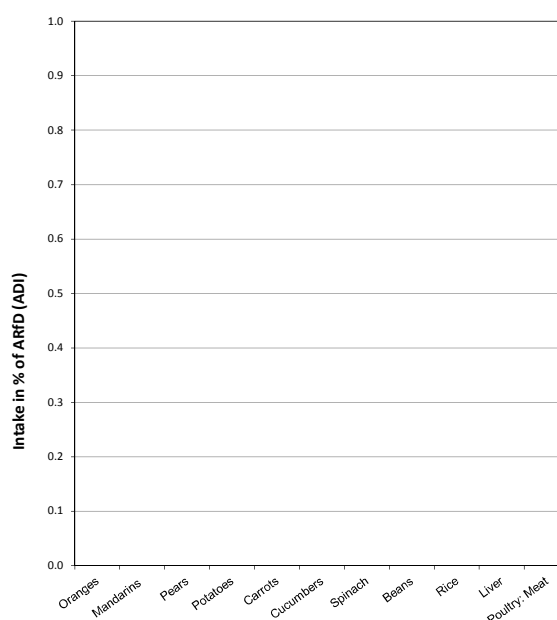
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Teflubenzuron



Acute risk assessment: Teflubenzuron



Tefluthrin					
Status of the active substance:		Approved	Monitoring year:	2011	
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	N	
Toxicological end points					
ADI (mg/kg bw/day):		0.005	ARfD (mg/kg bw):		0.005
Source of ADI:		COM	Source of ARfD:		COM
Year of evaluation:		2010	Year of evaluation:		2010

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets			Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
3.72	DE child	2.71	Apples	0.66	Oranges	0.24	Carrots	
2.15	NL child	1.42	Apples	0.54	Oranges	0.12	Carrots	
1.64	FR toddler	0.59	Apples	0.57	Carrots	0.35	Oranges	
1.44	FR infant	0.62	Carrots	0.56	Apples	0.16	Oranges	
0.93	UK infant	0.35	Apples	0.31	Carrots	0.22	Oranges	
0.92	DK child	0.52	Apples	0.32	Carrots	0.03	Lettuce	
0.89	UK toddler	0.38	Apples	0.34	Oranges	0.12	Carrots	
0.78	ES child	0.37	Oranges	0.26	Apples	0.09	Lettuce	
0.61	NL (GP)	0.27	Apples	0.26	Oranges	0.05	Carrots	
0.60	SE (GP)	0.24	Apples	0.20	Carrots	0.13	Oranges	
0.56	ES adult	0.22	Oranges	0.17	Apples	0.11	Lettuce	
0.54	PL (GP)	0.46	Apples	0.07	Carrots	0.00	Strawberries	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.01	1366		0.07	0.01		34.48	UK infant	
2011	Mandarins	0.05	1111							
2011	Pears	0.05	1467							
2011	Potatoes	0.01	1692							
2011	Carrots	0.05	1280	0.86		0.04		46.92	UK infant	
2011	Cucumbers	0.05	1273	0.08		0.01		11.70	NL child	
2011	Spinach	0.05	814							
2011	Beans (with pods)	0.05	979							
2011	Rice	0.05	719							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

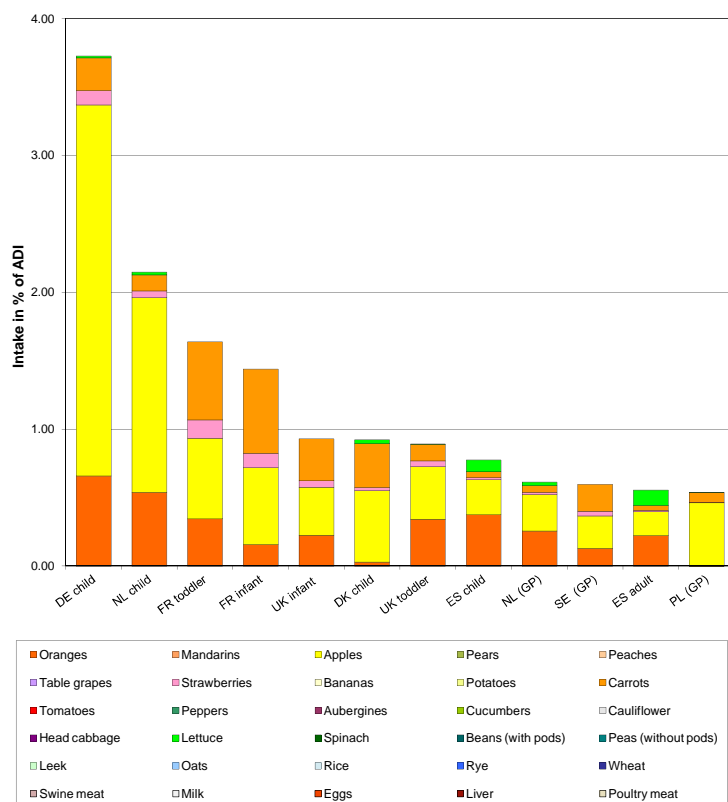
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

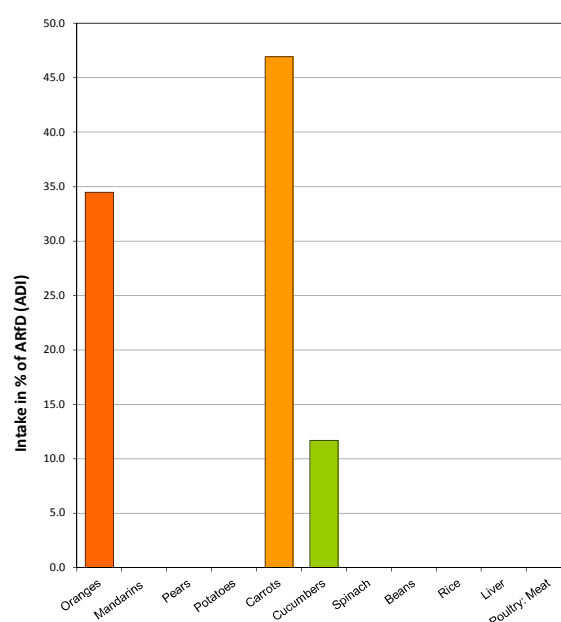
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported. <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Tefluthrin



Acute risk assessment: Tefluthrin



Tetraconazole									
Status of the active substance:				Approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N		
Toxicological end points									
ADI (mg/kg bw/day):				0.004	ARfD (mg/kg bw):		0.05		
Source of ADI:				COM	Source of ARfD:		COM		
Year of evaluation:				2008	Year of evaluation:		2008		

Chronic risk assessment									
Highest calculated exposure in % of ADI				Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets				Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
5.67	DE child			3.28	Apples	1.09	Wheat	0.37	Table grapes
4.24	WHO cluster diet B			2.27	Wheat	0.91	Tomatoes	0.27	Apples
3.84	NL child			1.72	Apples	1.26	Wheat	0.22	Table grapes
3.08	DK child			1.46	Wheat	0.63	Apples	0.44	Cucumbers
2.83	IT child/toddler			1.77	Wheat	0.42	Tomatoes	0.24	Apples
2.40	WHO cluster diet D			1.73	Wheat	0.30	Tomatoes	0.18	Apples
2.20	FR toddler			0.71	Apples	0.70	Wheat	0.27	Beans (with pods)
2.19	ES child			1.18	Wheat	0.31	Apples	0.29	Tomatoes
2.07	IT adult			1.10	Wheat	0.34	Tomatoes	0.22	Apples
1.94	PT (GP)			1.04	Wheat	0.29	Apples	0.27	Tomatoes
1.92	UK toddler			1.04	Wheat	0.46	Apples	0.17	Tomatoes
1.74	WHO cluster diet E			1.05	Wheat	0.23	Apples	0.16	Tomatoes

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1756							
2011	Mandarins	0.02	1449							
2011	Pears	0.3	1754	0.29		0.07		12.75	DE child	
2011	Potatoes	0.02	1937							
2011	Carrots	0.02	1483							
2011	Cucumbers	0.2	1502	0.13		0.02		2.34	NL child	
2011	Spinach	0.02	993							
2011	Beans (with pods)	0.02	1212	0.08		0.01		0.23	NL child	
2011	Rice	0.05	864							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

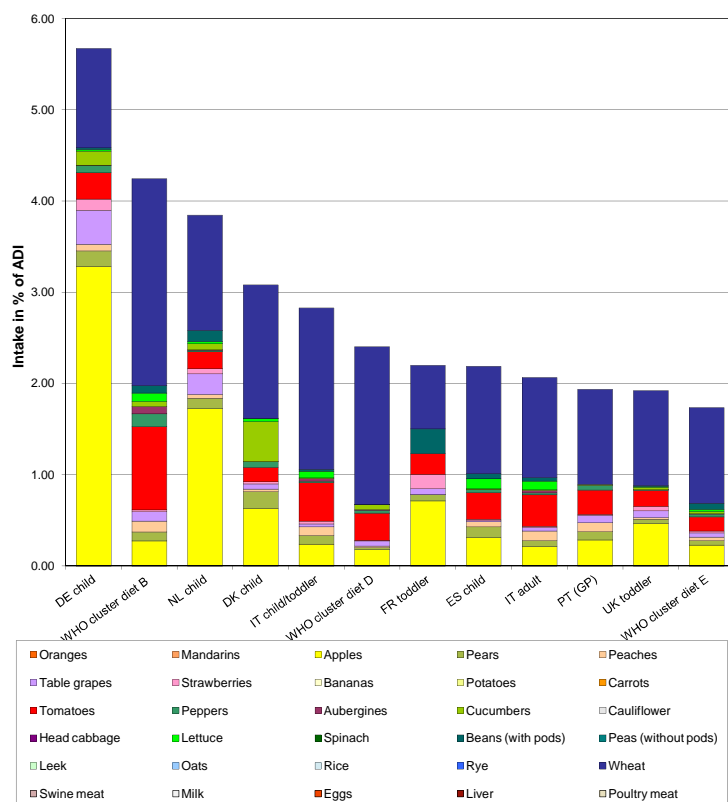
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

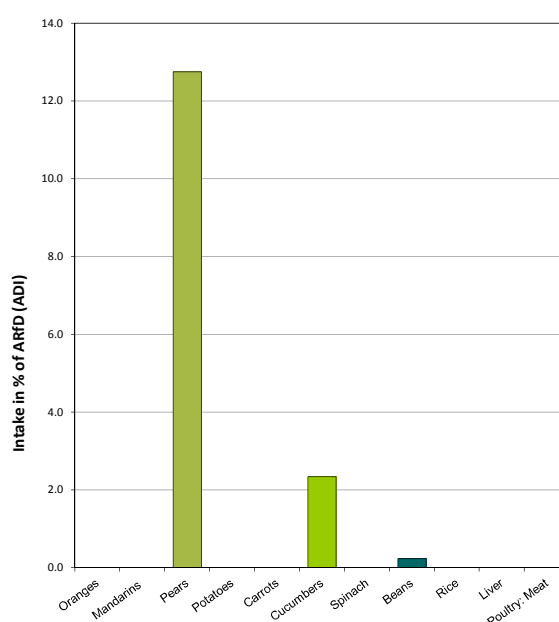
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Tetraconazole



Acute risk assessment: Tetraconazole



Tetradifon					
Status of the active substance:		Not approved	Monitoring year:	2011	
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	N	
Toxicological end points					
ADI (mg/kg bw/day):		0.015	ARfD (mg/kg bw):	n.n.	
Source of ADI:		DE	Source of ARfD:	DE	
Year of evaluation:		2001	Year of evaluation:	2002	

No EU toxicological reference values available.

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	1.14	DE child	0.97	Apples	0.08	Tomatoes	0.03	Mandarins
	0.66	NL child	0.51	Apples	0.06	Mandarins	0.05	Tomatoes
	0.46	WHO cluster diet B	0.26	Tomatoes	0.08	Apples	0.05	Rice
	0.33	FR toddler	0.21	Apples	0.06	Tomatoes	0.04	Rice
	0.27	UK toddler	0.14	Apples	0.06	Rice	0.05	Tomatoes
	0.27	DK child	0.19	Apples	0.04	Tomatoes	0.02	Peppers
	0.26	PT (GP)	0.08	Apples	0.08	Rice	0.07	Tomatoes
	0.25	PL (GP)	0.16	Apples	0.07	Tomatoes	0.01	Peppers
	0.25	ES child	0.09	Apples	0.08	Tomatoes	0.05	Rice
	0.24	SE (GP)	0.08	Apples	0.06	Tomatoes	0.04	Rice
	0.23	FR infant	0.20	Apples	0.01	Tomatoes	0.01	Mandarins
	0.23	IT child/toddler	0.12	Tomatoes	0.07	Apples	0.02	Rice

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges		1768	0.11		0.01		not assessed		
2011	Mandarins		1461	0.14		0.10		not assessed		
2011	Pears		1797					not assessed		
2011	Potatoes		2003					not assessed		
2011	Carrots		1546					not assessed		
2011	Cucumbers		1612					not assessed		
2011	Spinach		1038					not assessed		
2011	Beans (with pods)		1217	0.08		0.02		not assessed		
2011	Rice		950	0.11		0.00		not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

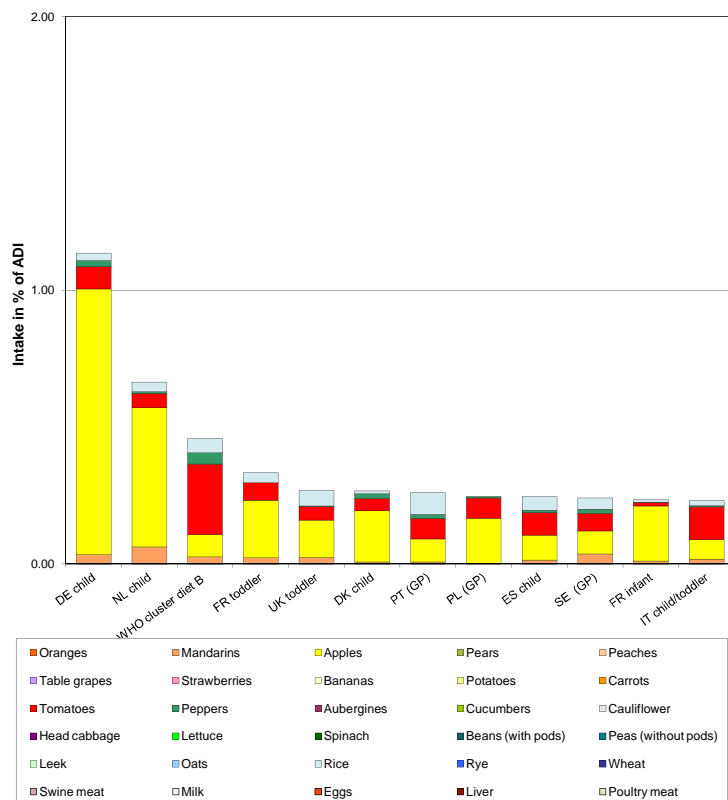
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

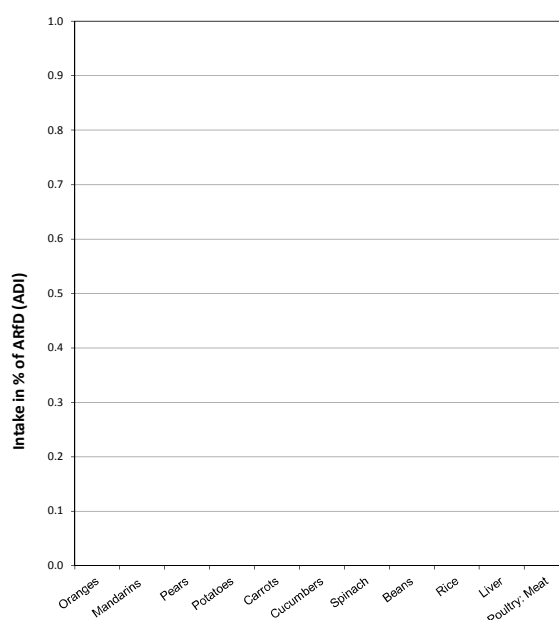
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Tetradifon



Acute risk assessment: Tetradifon



Thiabendazole (RD)				
Status of the active substance:		Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	N
Toxicological end points				
ADI (mg/kg bw/day):		0.1	ARfD (mg/kg bw):	n.n.
Source of ADI:		COM	Source of ARfD:	COM
Year of evaluation:		2001	Year of evaluation:	2001

Full residue definition: Thiabendazole expressed as thiabendazole. For products of animal origin-terrestrial animal: sum of thiabendazole and 5-hydroxythiabendazole

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	1.80	DE child	0.75	Oranges	0.57	Apples	0.15	Bananas
	1.54	NL child	0.61	Oranges	0.30	Apples	0.20	Mandarins
	0.94	FR toddler	0.39	Oranges	0.12	Bananas	0.12	Apples
	0.82	UK toddler	0.39	Oranges	0.10	Bananas	0.08	Apples
	0.79	ES child	0.43	Oranges	0.10	Bananas	0.09	Wheat
	0.67	SE (GP)	0.17	Bananas	0.15	Oranges	0.12	Mandarins
	0.64	WHO cluster diet B	0.17	Oranges	0.17	Wheat	0.09	Mandarins
	0.62	IE adult	0.21	Oranges	0.16	Mandarins	0.07	Bananas
	0.61	UK infant	0.26	Oranges	0.14	Bananas	0.07	Apples
	0.56	FR infant	0.18	Oranges	0.12	Apples	0.07	Potatoes
	0.55	NL (GP)	0.29	Oranges	0.06	Mandarins	0.06	Apples
	0.51	DK child	0.11	Bananas	0.11	Apples	0.11	Wheat

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	5	1853	28.98	0.11	7.70		not assessed		
2011	Mandarins	5	1483	27.44	0.13	5.20		not assessed		
2011	Pears	5	1845	6.88		4.52		not assessed		
2011	Potatoes	15	2066	0.15		1.60		not assessed		
2011	Carrots	0.05	1512	0.13		0.02		not assessed		
2011	Cucumbers	0.05	1513	0.26		0.01		not assessed		
2011	Spinach	0.05	1037	0.19		0.03		not assessed		
2011	Beans (with pods)	0.05	1254	0.24		0.03		not assessed		
2011	Rice	0.05	1018					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

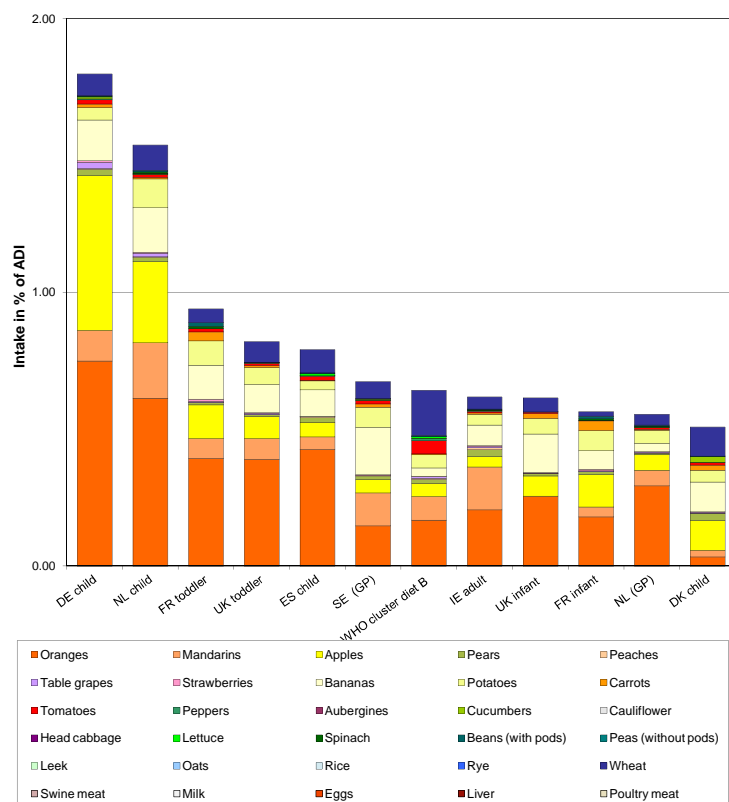
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

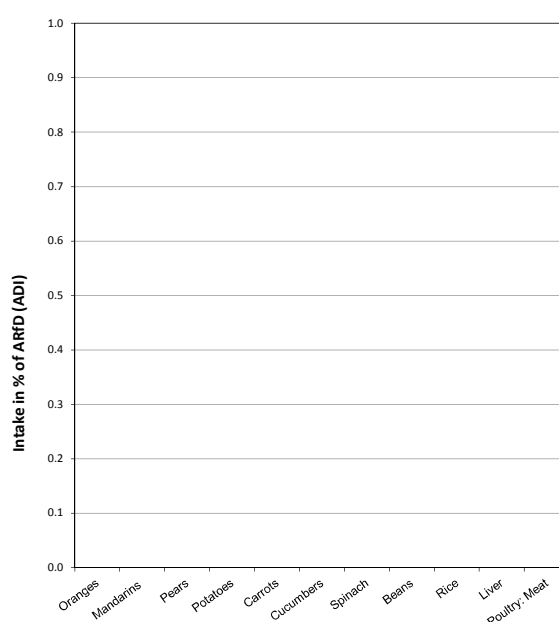
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Thiabendazole (RD)



Acute risk assessment: Thiabendazole (RD)



Thiacloprid										
Status of the active substance:				Approved	Monitoring year:		2011			
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N			
Toxicological end points										
ADI (mg/kg bw/day):				0.01	ARfD (mg/kg bw):		0.03			
Source of ADI:				COM	Source of ARfD:		COM			
Year of evaluation:				2004	Year of evaluation:		2004			

Chronic risk assessment															
Highest calculated exposure in % of ADI				Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
Top 12 diets															
2.01 DE child				1.43 Apples				0.13 Table grapes				0.10 Tomatoes			
1.21 NL child				0.75 Apples				0.08 Table grapes				0.07 Tomatoes			
0.84 WHO cluster diet B				0.33 Tomatoes				0.12 Apples				0.06 Pears			
0.82 FR toddler				0.31 Apples				0.11 Beans (with pods)				0.09 Strawberries			
0.73 DK child				0.27 Apples				0.19 Cucumbers				0.10 Pears			
0.63 FR infant				0.30 Apples				0.09 Beans (with pods)				0.07 Strawberries			
0.52 IE adult				0.10 Pears				0.10 Apples				0.07 Peaches			
0.48 PL (GP)				0.24 Apples				0.09 Tomatoes				0.04 Pears			
0.46 ES child				0.14 Apples				0.10 Tomatoes				0.07 Pears			
0.45 IT child/toddler				0.15 Tomatoes				0.10 Apples				0.05 Pears			
0.45 SE (GP)				0.12 Apples				0.08 Tomatoes				0.07 Head cabbage			
0.42 WHO regional diet				0.12 Tomatoes				0.08 Apples				0.05 Lettuce			

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1664							
2011	Mandarins	0.02	1354							
2011	Pears	0.3	1673	15.54	0.06	0.71	1	215.54	DE child	
2011	Potatoes	0.02	1733							
2011	Carrots	0.05	1374							
2011	Cucumbers	0.3	1396	1.93	0.14	0.39		76.02	NL child	
2011	Spinach	0.02	924		0.43	0.21		15.82	BE child	
2011	Beans (with pods)	1	1141	0.44		0.06		2.27	NL child	
2011	Rice	0.05	885							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

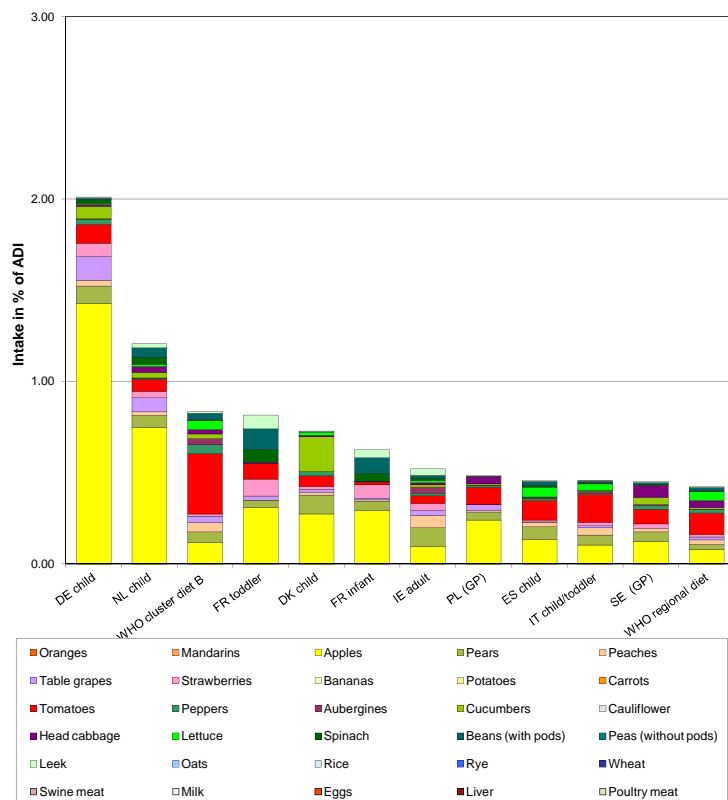
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

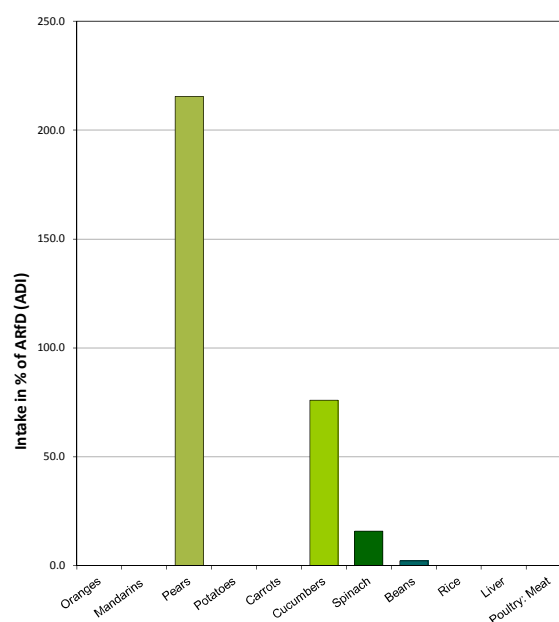
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Thiacloprid



Acute risk assessment: Thiacloprid



Thiamethoxam (RD)			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.026	ARfD (mg/kg bw):	0.5
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2007	Year of evaluation:	2007

Full residue definition: Thiamethoxam (sum of thiamethoxam and clothianidin expressed as thiamethoxam)

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets			Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
0.91	DE child	0.51	Apples	0.10	Potatoes	0.06	Bananas	
0.75	NL child	0.27	Apples	0.23	Potatoes	0.07	Bananas	
0.54	FR toddler	0.20	Potatoes	0.11	Apples	0.05	Bananas	
0.46	WHO cluster diet B	0.14	Tomatoes	0.11	Potatoes	0.04	Apples	
0.42	DK child	0.10	Apples	0.10	Potatoes	0.07	Cucumbers	
0.41	FR infant	0.16	Potatoes	0.11	Apples	0.04	Beans (with pods)	
0.40	PT (GP)	0.21	Potatoes	0.04	Apples	0.04	Tomatoes	
0.39	SE (GP)	0.17	Potatoes	0.07	Bananas	0.04	Apples	
0.35	UK toddler	0.14	Potatoes	0.07	Apples	0.04	Bananas	
0.33	UK infant	0.13	Potatoes	0.07	Apples	0.06	Bananas	
0.33	WHO regional diet	0.16	Potatoes	0.05	Tomatoes	0.03	Apples	
0.31	PL (GP)	0.14	Potatoes	0.09	Apples	0.04	Tomatoes	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges		1454							
2011	Mandarins		1196							
2011	Pears		1398	0.50		0.06		1.06	DE child	
2011	Potatoes		1508	0.33		0.05		1.45	UK infant	
2011	Carrots		1158							
2011	Cucumbers		1181	1.27		0.19		2.20	NL child	
2011	Spinach		763	0.52	0.39	0.19		0.86	BE child	
2011	Beans (with pods)		910	0.33		0.10		0.22	NL child	
2011	Rice		700	0.29	0.14	0.10		0.25	UK toddler	
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

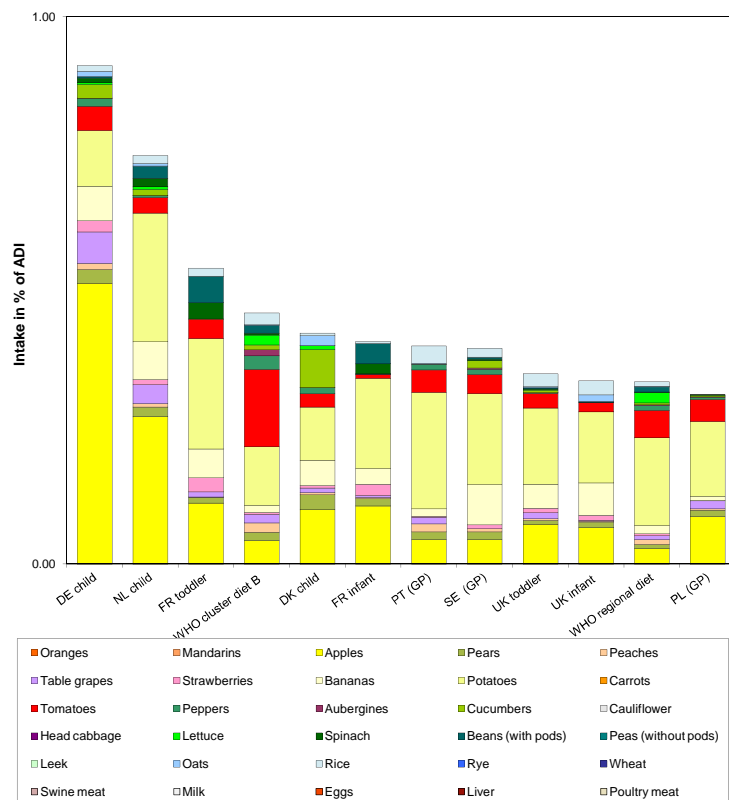
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

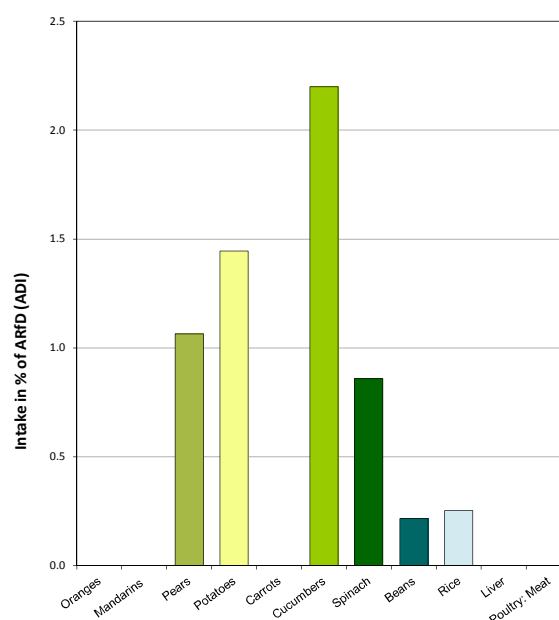
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Thiamethoxam (RD)



Acute risk assessment: Thiamethoxam (RD)





Thiophanate-methyl					
Status of the active substance:		Approved	Monitoring year:	2011	
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	N	
Toxicological end points					
ADI (mg/kg bw/day):		0.08	ARfD (mg/kg bw):	0.2	
Source of ADI:		COM	Source of ARfD:	COM	
Year of evaluation:		2005	Year of evaluation:	2005	

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets			Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
0.35	DE child		0.22	Apples	0.05	Oranges	0.02	Table grapes
0.23	NL child		0.11	Apples	0.04	Oranges	0.01	Peas (without pods)
0.13	FR toddler		0.05	Apples	0.03	Oranges	0.02	Beans (with pods)
0.13	WHO cluster diet B		0.05	Tomatoes	0.02	Apples	0.01	Oranges
0.10	DK child		0.04	Apples	0.02	Cucumbers	0.01	Pears
0.10	FR infant		0.05	Apples	0.01	Beans (with pods)	0.01	Oranges
0.09	ES child		0.03	Oranges	0.02	Apples	0.01	Tomatoes
0.09	UK toddler		0.03	Apples	0.03	Oranges	0.01	Peas (without pods)
0.09	IE adult		0.01	Apples	0.01	Oranges	0.01	Peaches
0.08	UK infant		0.03	Apples	0.02	Peas (without pods)	0.02	Oranges
0.07	IT child/toddler		0.02	Tomatoes	0.02	Apples	0.01	Peaches
0.07	NL (GP)		0.02	Apples	0.02	Oranges	0.01	Tomatoes

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	6	1557	0.32		0.30		19.89	UK infant	
2011	Mandarins	6	1242	0.16		0.04		1.11	UK toddler	
2011	Pears	0.5	1578	1.39		0.11		5.01	DE child	
2011	Potatoes	0.1	1761							
2011	Carrots	0.1	1345							
2011	Cucumbers	0.1	1370	0.73		0.08		2.34	NL child	
2011	Spinach	0.1	940							
2011	Beans (with pods)	0.1	1116	0.72	0.18	0.18		1.02	NL child	
2011	Rice	0.01	802							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

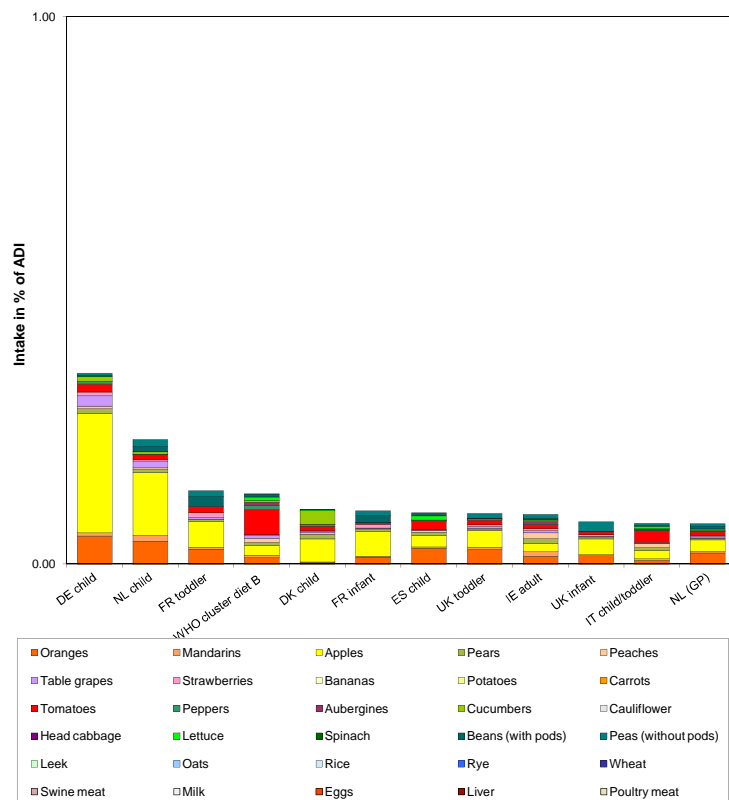
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

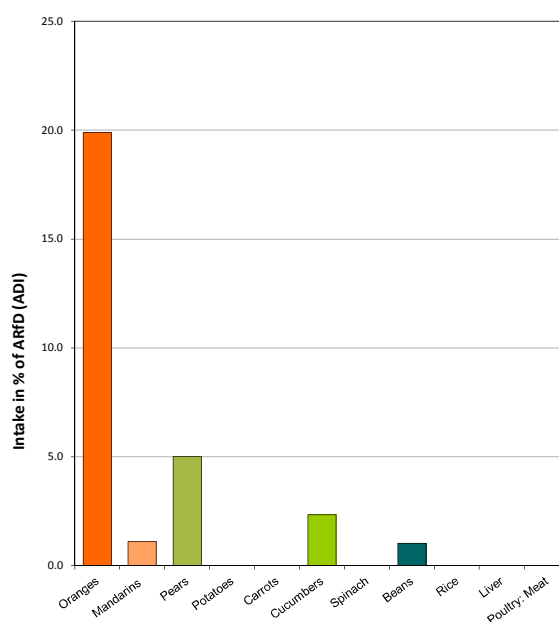
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Thiophanate-methyl



Acute risk assessment: Thiophanate-methyl



Tolclofos-methyl									
Status of the active substance:				Approved	Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P	Analysis on voluntary basis?		N		
Toxicological end points									
ADI (mg/kg bw/day):				0.064	ARfD (mg/kg bw):		n.n.		
Source of ADI:				COM	Source of ARfD:		COM		
Year of evaluation:				2006	Year of evaluation:		2006		

Chronic risk assessment										
	Highest calculated exposure in % of ADI		Top 12 diets		Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.11		DE child		0.08	Oranges	0.02	Carrots	0.01	Peppers
	0.11		FR toddler		0.05	Carrots	0.04	Oranges	0.01	Cauliflower
	0.09		NL child		0.06	Oranges	0.01	Cauliflower	0.01	Carrots
	0.08		FR infant		0.06	Carrots	0.02	Oranges	0.00	Cauliflower
	0.07		ES child		0.04	Oranges	0.01	Lettuce	0.00	Carrots
	0.06		UK infant		0.03	Carrots	0.03	Oranges	0.01	Cauliflower
	0.06		UK toddler		0.04	Oranges	0.01	Carrots	0.00	Cauliflower
	0.05		ES adult		0.03	Oranges	0.02	Lettuce	0.00	Carrots
	0.05		NL (GP)		0.03	Oranges	0.01	Cauliflower	0.00	Carrots
	0.05		WHO cluster diet B		0.02	Oranges	0.01	Lettuce	0.01	Peppers
	0.04		DK child		0.03	Carrots	0.00	Lettuce	0.00	Peppers
	0.04		SE (GP)		0.02	Carrots	0.02	Oranges	0.00	Peppers

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05	1916	0.05		0.03		not assessed		
2011	Mandarins	0.05	1561					not assessed		
2011	Pears	0.05	1961					not assessed		
2011	Potatoes	0.2	2214					not assessed		
2011	Carrots	0.5	1632	0.25		0.09		not assessed		
2011	Cucumbers	0.05	1668					not assessed		
2011	Spinach	0.05	1111					not assessed		
2011	Beans (with pods)	0.1	1306					not assessed		
2011	Rice	0.05	1000					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

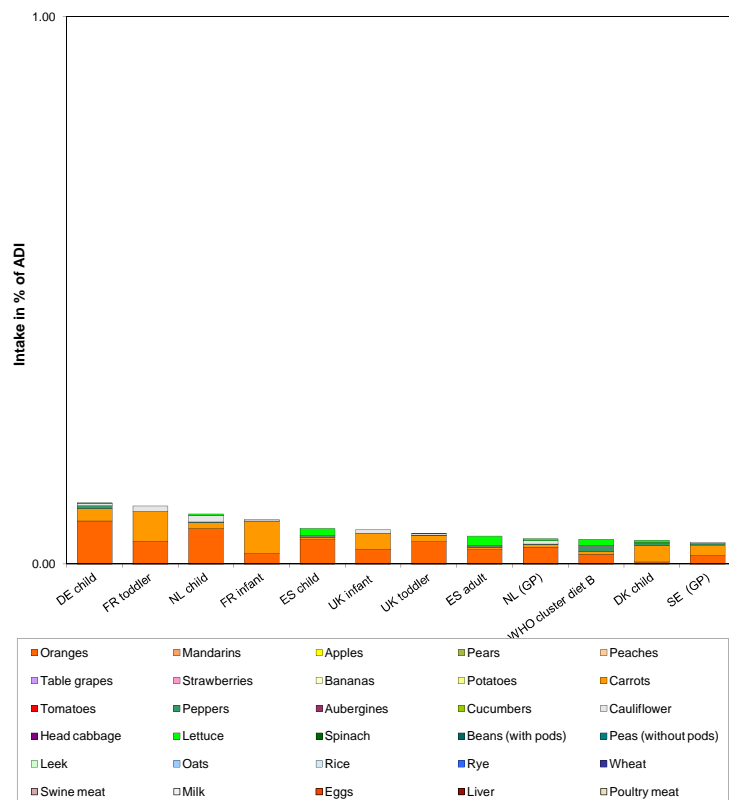
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

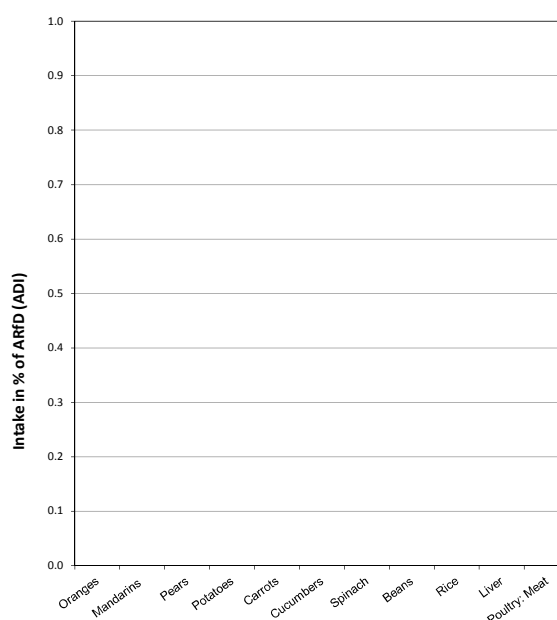
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Tolclofos-methyl



Acute risk assessment: Tolclofos-methyl



Tolyfluanid (RD)			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.1	ARfD (mg/kg bw):	0.25
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2006	Year of evaluation:	2006

Full residue definition: Tolyfluanid (sum of tolyfluanid and dimethylaminosulfotoluidide expressed as tolyfluanid). For products of animal origin-terrestrial animal: dimethylaminosulfotoluidide expressed as tolyfluanid																																																																																																									
Chronic risk assessment																																																																																																									
<table><tr><th>Highest calculated exposure in % of ADI</th><th>Top 12 diets</th></tr><tr><td>0.09</td><td>FR toddler</td></tr><tr><td>0.07</td><td>WHO cluster diet B</td></tr><tr><td>0.06</td><td>NL child</td></tr><tr><td>0.06</td><td>DE child</td></tr><tr><td>0.06</td><td>SE (GP)</td></tr><tr><td>0.05</td><td>FR infant</td></tr><tr><td>0.05</td><td>UK infant</td></tr><tr><td>0.05</td><td>ES child</td></tr><tr><td>0.04</td><td>UK toddler</td></tr><tr><td>0.04</td><td>IE adult</td></tr><tr><td>0.04</td><td>IT child/toddler</td></tr><tr><td>0.03</td><td>PT (GP)</td></tr></table>	Highest calculated exposure in % of ADI	Top 12 diets	0.09	FR toddler	0.07	WHO cluster diet B	0.06	NL child	0.06	DE child	0.06	SE (GP)	0.05	FR infant	0.05	UK infant	0.05	ES child	0.04	UK toddler	0.04	IE adult	0.04	IT child/toddler	0.03	PT (GP)	<table><tr><th>Highest contributor to MS diet (in % of ADI)</th><th>Commodity / group of commodities</th></tr><tr><td>0.02</td><td>Bananas</td></tr><tr><td>0.04</td><td>Tomatoes</td></tr><tr><td>0.03</td><td>Bananas</td></tr><tr><td>0.03</td><td>Bananas</td></tr><tr><td>0.03</td><td>Bananas</td></tr><tr><td>0.01</td><td>Beans (with pods)</td></tr><tr><td>0.03</td><td>Bananas</td></tr><tr><td>0.02</td><td>Bananas</td></tr><tr><td>0.02</td><td>Bananas</td></tr><tr><td>0.01</td><td>Bananas</td></tr><tr><td>0.02</td><td>Tomatoes</td></tr><tr><td>0.01</td><td>Rice</td></tr></table>	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	0.02	Bananas	0.04	Tomatoes	0.03	Bananas	0.03	Bananas	0.03	Bananas	0.01	Beans (with pods)	0.03	Bananas	0.02	Bananas	0.02	Bananas	0.01	Bananas	0.02	Tomatoes	0.01	Rice	<table><tr><th>2nd contributor to MS diet (in % of ADI)</th><th>Commodity / group of commodities</th></tr><tr><td>0.02</td><td>Beans (with pods)</td></tr><tr><td>0.01</td><td>Rice</td></tr><tr><td>0.01</td><td>Tomatoes</td></tr><tr><td>0.01</td><td>Tomatoes</td></tr><tr><td>0.01</td><td>Bananas</td></tr><tr><td>0.01</td><td>Rice</td></tr><tr><td>0.01</td><td>Tomatoes</td></tr><tr><td>0.01</td><td>Rice</td></tr><tr><td>0.01</td><td>Leek</td></tr><tr><td>0.01</td><td>Bananas</td></tr><tr><td>0.01</td><td>Tomatoes</td></tr></table>	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	0.02	Beans (with pods)	0.01	Rice	0.01	Tomatoes	0.01	Tomatoes	0.01	Bananas	0.01	Rice	0.01	Tomatoes	0.01	Rice	0.01	Leek	0.01	Bananas	0.01	Tomatoes	<table><tr><th>3rd contributor to MS diet (in % of ADI)</th><th>Commodity / group of commodities</th></tr><tr><td>0.02</td><td>Leek</td></tr><tr><td>0.01</td><td>Bananas</td></tr><tr><td>0.01</td><td>Beans (with pods)</td></tr><tr><td>0.01</td><td>Strawberries</td></tr><tr><td>0.01</td><td>Rice</td></tr><tr><td>0.01</td><td>Leek</td></tr><tr><td>0.01</td><td>Tomatoes</td></tr><tr><td>0.01</td><td>Rice</td></tr><tr><td>0.01</td><td>Tomatoes</td></tr><tr><td>0.01</td><td>Tomatoes</td></tr><tr><td>0.00</td><td>Rice</td></tr><tr><td>0.01</td><td>Bananas</td></tr></table>	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities	0.02	Leek	0.01	Bananas	0.01	Beans (with pods)	0.01	Strawberries	0.01	Rice	0.01	Leek	0.01	Tomatoes	0.01	Rice	0.01	Tomatoes	0.01	Tomatoes	0.00	Rice	0.01	Bananas
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Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05	1453	0.07		0.18		6.68	DE child	
2011	Mandarins	0.05	1251							
2011	Pears	3	1501							
2011	Potatoes	0.05	1573							
2011	Carrots	0.05	1140							
2011	Cucumbers	2	1202							
2011	Spinach	0.05	739	0.16		0.05		0.25	UK toddler	
2011	Beans (with pods)	3	889							
2011	Rice	0.05	644							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TRL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

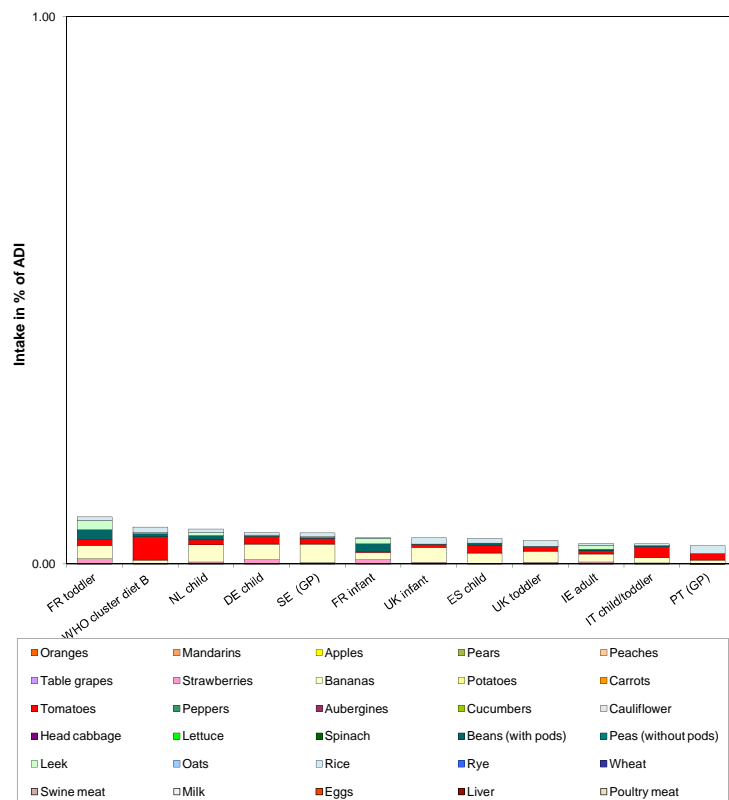
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

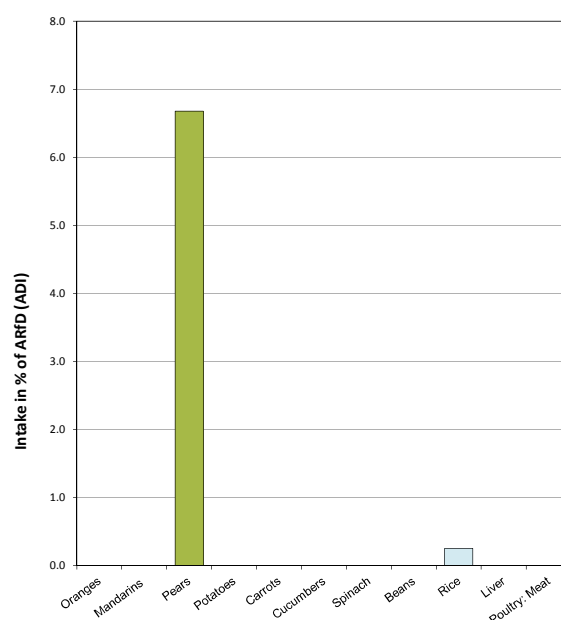
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Tolyfluanid (RD)



Acute risk assessment: Tolyfluanid (RD)



Triadimenol (RD)				
Status of the active substance:		Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	N
Toxicological end points				
ADI (mg/kg bw/day):		0.03	ARfD (mg/kg bw):	0.05
Source of ADI:		JMPR	Source of ARfD:	COM
Year of evaluation:		2004	Year of evaluation:	2008

The toxicological reference values derived for triadimenol are used for the exposure assessment.

Full residue definition: sum of triadimefon and triadimenol

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	1.35	DE child	0.76	Apples	0.16	Potatoes	0.08	Table grapes
	1.10	NL child	0.40	Apples	0.37	Potatoes	0.08	Peas (without pods)
	0.92	FR toddler	0.32	Potatoes	0.17	Apples	0.14	Carrots
	0.87	DK child	0.28	Rye	0.15	Potatoes	0.15	Apples
	0.76	FR infant	0.26	Potatoes	0.16	Apples	0.15	Carrots
	0.65	WHO cluster diet B	0.21	Tomatoes	0.17	Potatoes	0.06	Apples
	0.63	PT (GP)	0.34	Potatoes	0.07	Apples	0.06	Tomatoes
	0.55	SE (GP)	0.26	Potatoes	0.07	Apples	0.05	Tomatoes
	0.54	UK infant	0.21	Potatoes	0.10	Peas (without pods)	0.10	Apples
	0.52	WHO regional diet	0.26	Potatoes	0.07	Tomatoes	0.04	Apples
	0.51	UK toddler	0.22	Potatoes	0.11	Apples	0.05	Peas (without pods)
	0.49	WHO cluster diet E	0.24	Potatoes	0.05	Apples	0.04	Tomatoes

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.1	1729							
2011	Mandarins	0.1	1461							
2011	Pears	0.1	1584							
2011	Potatoes	0.1	1897	0.05		0.06		18.45	UK infant	
2011	Carrots	0.1	1466	0.20		0.05		6.09	UK infant	
2011	Cucumbers	0.2	1549	0.13	0.13	0.31		36.26	NL child	
2011	Spinach	0.1	1007							
2011	Beans (with pods)	0.1	1185	0.59		0.06		1.34	NL child	
2011	Rice	0.1	938							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

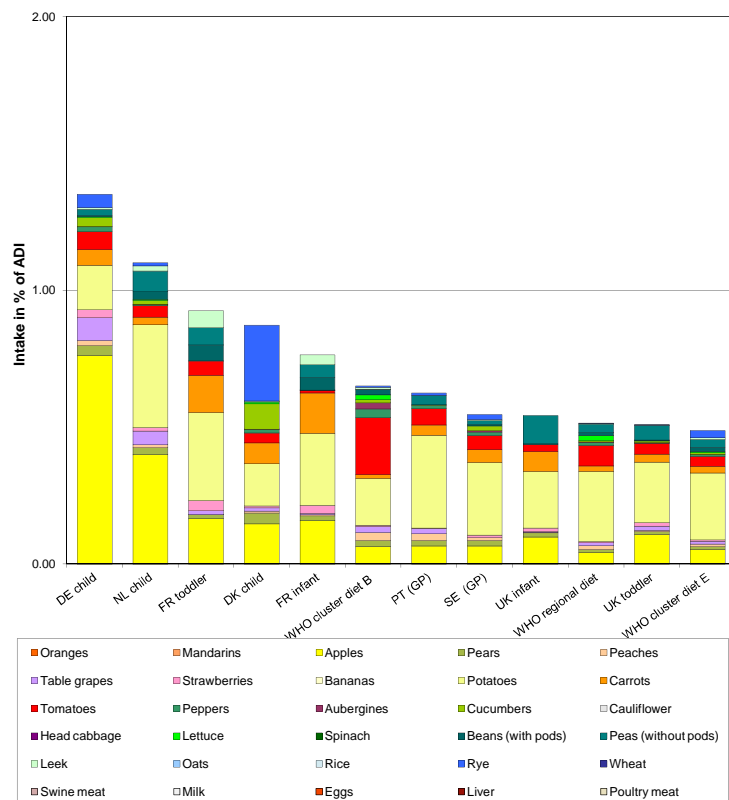
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

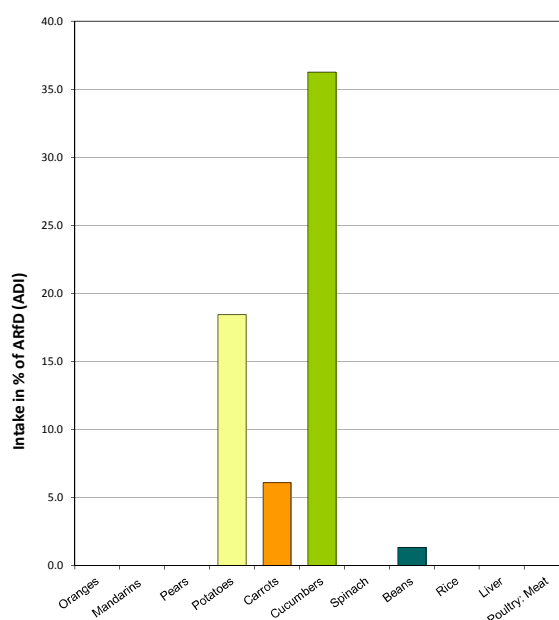
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

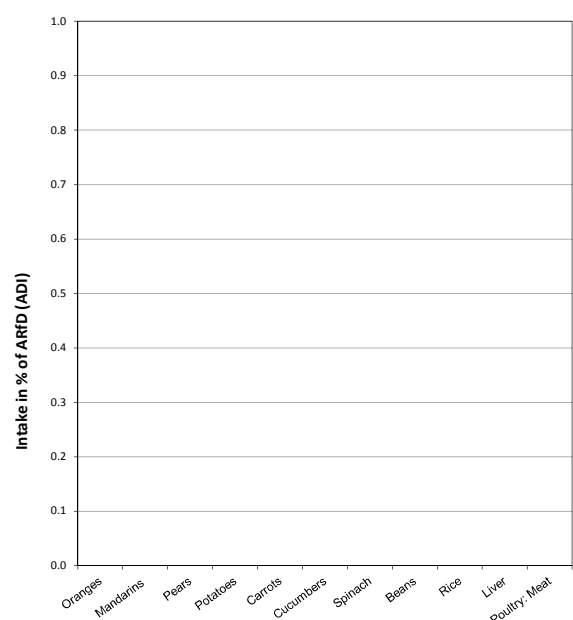
Chronic risk assessment: Triadimenol (RD)



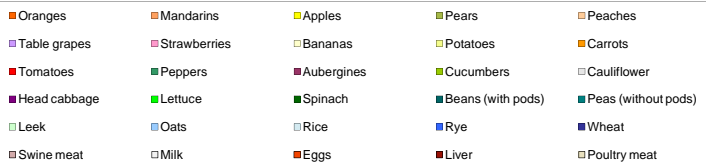
Acute risk assessment: Triadimenol (RD)



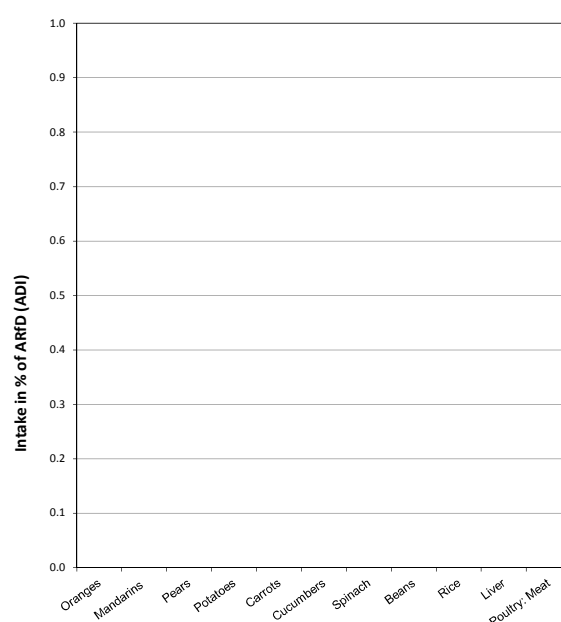
### Acute risk assessment: Triazole acetic acid



### Chronic risk assessment: Triazole alanine



#### Acute risk assessment: Triazole lactic acid



Triazophos			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P, A	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.001	ARfD (mg/kg bw):	0.001
Source of ADI:	JMPR	Source of ARfD:	JMPR
Year of evaluation:	2002	Year of evaluation:	2002

Chronic risk assessment														
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
Top 12 diets														
3.79	WHO cluster diet B		2.80	Tomatoes		0.54	Rice		0.45	Peppers				
1.80	PT (GP)		0.81	Tomatoes		0.81	Rice		0.17	Peppers				
1.58	WHO cluster diet D		0.92	Tomatoes		0.57	Rice		0.09	Peppers				
1.55	IT child/toddler		1.29	Tomatoes		0.20	Rice		0.06	Peppers				
1.49	ES child		0.89	Tomatoes		0.50	Rice		0.10	Peppers				
1.42	DE child		0.88	Tomatoes		0.27	Rice		0.26	Peppers				
1.36	WHO regional diet		1.00	Tomatoes		0.20	Rice		0.16	Peppers				
1.30	IT adult		1.06	Tomatoes		0.18	Rice		0.06	Peppers				
1.28	SE (GP)		0.69	Tomatoes		0.41	Rice		0.17	Peppers				
1.15	UK toddler		0.59	Rice		0.53	Tomatoes		0.02	Peppers				
1.10	ES adult		0.71	Tomatoes		0.25	Rice		0.14	Peppers				
1.07	FR toddler		0.70	Tomatoes		0.37	Rice			FRUIT (FRESH OR FROZEN)				

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.01	1850							
2011	Mandarins	0.01	1497							
2011	Pears	0.01	1852							
2011	Potatoes	0.01	2160							
2011	Carrots	0.01	1580							
2011	Cucumbers	0.01	1686		0.06	0.02	1	105.26	NL child	
2011	Spinach	0.01	1074							
2011	Beans (with pods)	0.01	1253							
2011	Rice	0.02	1059	0.09		0.01		10.09	UK toddler	
2011	Liver	0.01	585							Liver (swine, bovine, sheep, goat, poultry)
2011	Poultry: Meat	0.01	581							

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

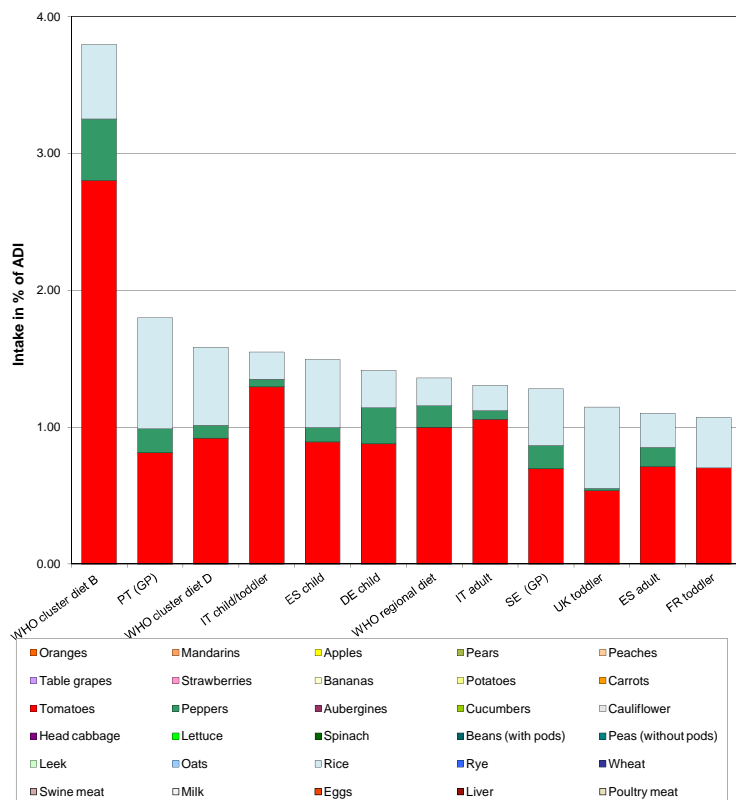
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

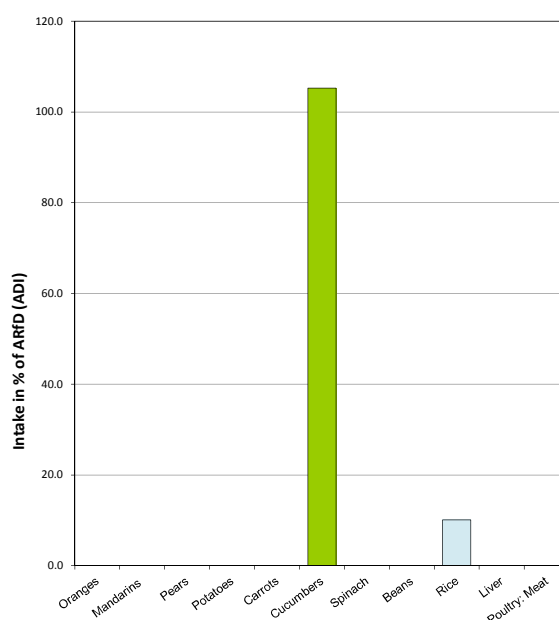
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Triazophos



Acute risk assessment: Triazophos





Trichlorfon			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.002	ARfD (mg/kg bw):	0.1
Source of ADI:	JMPR	Source of ARfD:	EFSA
Year of evaluation:	2003	Year of evaluation:	2006

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets			Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
2.63	WHO cluster diet B		2.57	Tomatoes	0.05	Strawberries	FRUIT (FRESH OR FROZEN)	
1.27	IT child/toddler		1.19	Tomatoes	0.08	Strawberries	FRUIT (FRESH OR FROZEN)	
1.12	DE child		0.81	Tomatoes	0.31	Strawberries	FRUIT (FRESH OR FROZEN)	
1.05	FR toddler		0.65	Tomatoes	0.40	Strawberries	FRUIT (FRESH OR FROZEN)	
1.01	IT adult		0.97	Tomatoes	0.03	Strawberries	FRUIT (FRESH OR FROZEN)	
0.98	WHO regional diet		0.92	Tomatoes	0.06	Strawberries	FRUIT (FRESH OR FROZEN)	
0.87	ES child		0.82	Tomatoes	0.05	Strawberries	FRUIT (FRESH OR FROZEN)	
0.86	WHO cluster diet D		0.84	Tomatoes	0.02	Strawberries	FRUIT (FRESH OR FROZEN)	
0.77	PT (GP)		0.75	Tomatoes	0.03	Strawberries	FRUIT (FRESH OR FROZEN)	
0.75	PL (GP)		0.74	Tomatoes	0.01	Strawberries	FRUIT (FRESH OR FROZEN)	
0.74	SE (GP)		0.64	Tomatoes	0.11	Strawberries	FRUIT (FRESH OR FROZEN)	
0.69	ES adult		0.65	Tomatoes	0.04	Strawberries	FRUIT (FRESH OR FROZEN)	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.5	1258							
2011	Mandarins	0.5	1053							
2011	Pears	1	1365							
2011	Potatoes	0.1	1509							
2011	Carrots	0.5	1223							
2011	Cucumbers	0.5	1189							
2011	Spinach	0.5	807							
2011	Beans (with pods)	0.5	1015							
2011	Rice	0.1	740							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

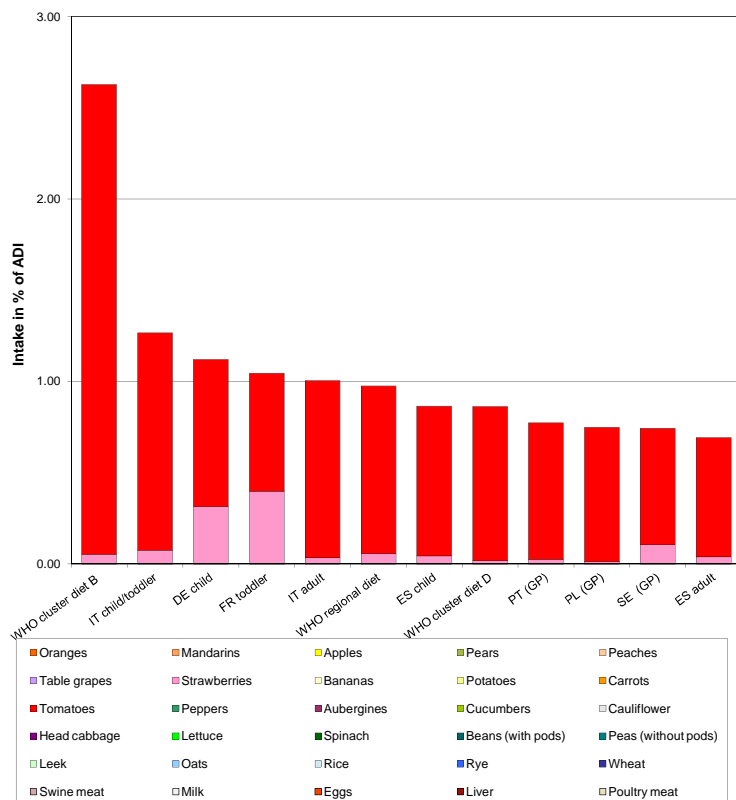
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

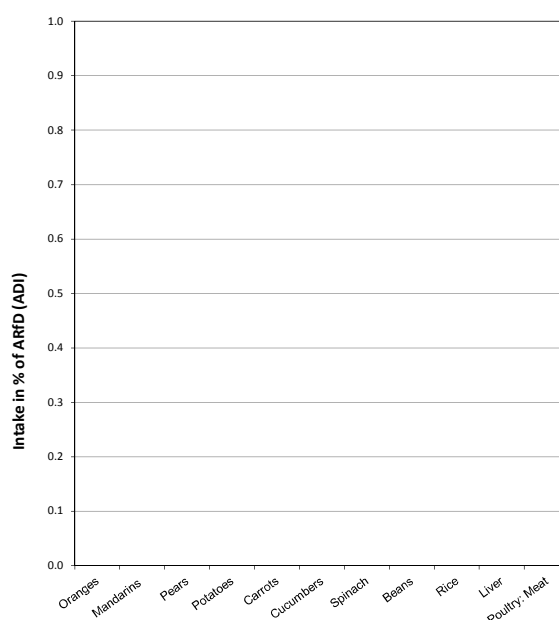
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Trichlorfon



Acute risk assessment: Trichlorfon



Trifloxystrobin										
Status of the active substance:				Approved		Monitoring year:		2011		
To be analysed in plant (P) or animal (A) products				P		Analysis on voluntary basis?		N		
Toxicological end points										
ADI (mg/kg bw/day):				0.1		ARfD (mg/kg bw):		n.n.		
Source of ADI:				COM		Source of ARfD:		COM		
Year of evaluation:				2003		Year of evaluation:		2003		

Chronic risk assessment																
Highest calculated exposure in % of ADI			Top 12 diets		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
0.27			DE child		0.16		Apples		0.04		Oranges		0.02		Table grapes	
0.17			NL child		0.08		Apples		0.03		Oranges		0.01		Table grapes	
0.13			FR toddler		0.03		Apples		0.03		Carrots		0.02		Oranges	
0.10			FR infant		0.03		Apples		0.03		Carrots		0.01		Oranges	
0.10			WHO cluster diet B		0.03		Tomatoes		0.01		Apples		0.01		Oranges	
0.09			DK child		0.03		Apples		0.02		Cucumbers		0.01		Carrots	
0.07			ES child		0.02		Oranges		0.01		Apples		0.01		Tomatoes	
0.07			UK toddler		0.02		Apples		0.02		Oranges		0.01		Tomatoes	
0.07			IE adult		0.01		Oranges		0.01		Apples		0.01		Pears	
0.06			SE (GP)		0.01		Apples		0.01		Carrots		0.01		Tomatoes	
0.06			UK infant		0.02		Apples		0.01		Carrots		0.01		Oranges	
0.06			NL (GP)		0.02		Oranges		0.02		Apples		0.00		Tomatoes	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.3	1880	0.80		0.22		not assessed		
2011	Mandarins	0.3	1509	0.13		0.00		not assessed		
2011	Pears	0.5	1932	6.26		0.19		not assessed		
2011	Potatoes	0.02	2119	0.05		0.01		not assessed		
2011	Carrots	0.05	1571	0.51		0.02		not assessed		
2011	Cucumbers	0.2	1582	0.44		0.06		not assessed		
2011	Spinach	0.02	1085					not assessed		
2011	Beans (with pods)	0.5	1268	0.08		0.02		not assessed		
2011	Rice	0.02	1076					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

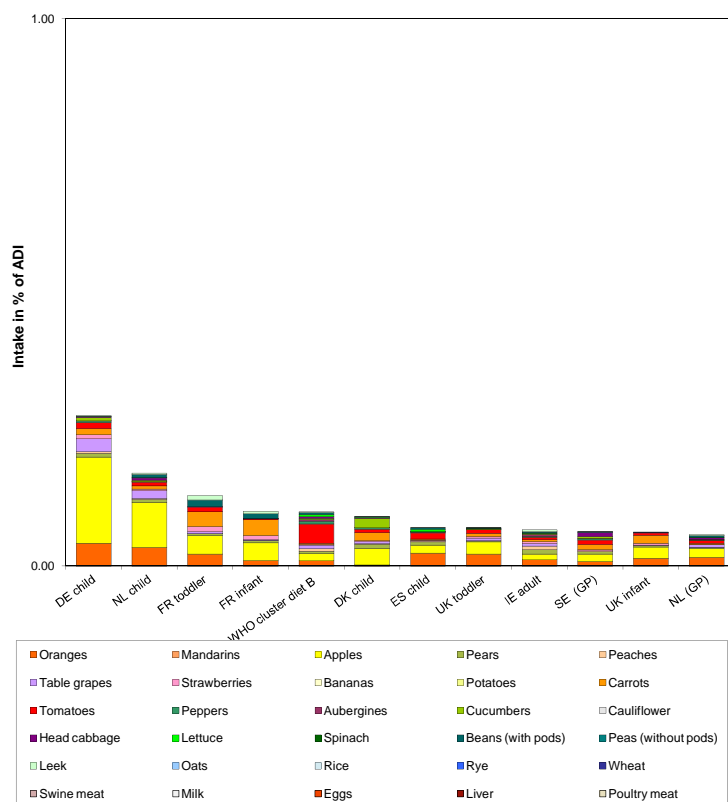
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

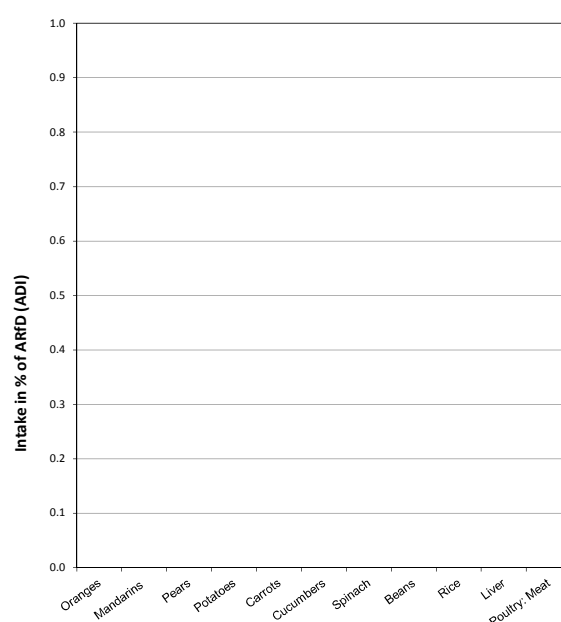
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Trifloxystrobin



Acute risk assessment: Trifloxystrobin



Triflumuron			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.014	ARfD (mg/kg bw):	n.n.
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2011	Year of evaluation:	2011

Chronic risk assessment							
Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.22	DE child	0.94	Apples	0.09	Table grapes	0.07	Tomatoes
0.74	NL child	0.50	Apples	0.07	Mandarins	0.05	Table grapes
0.45	WHO cluster diet B	0.23	Tomatoes	0.08	Apples	0.03	Peaches
0.33	FR toddler	0.21	Apples	0.06	Tomatoes	0.03	Mandarins
0.31	DK child	0.18	Apples	0.06	Pears	0.04	Tomatoes
0.31	PL (GP)	0.16	Apples	0.07	Tomatoes	0.02	Head cabbage
0.28	IE adult	0.06	Apples	0.06	Pears	0.06	Mandarins
0.27	SE (GP)	0.08	Apples	0.06	Tomatoes	0.04	Mandarins
0.26	IT child/toddler	0.11	Tomatoes	0.07	Apples	0.03	Pears
0.26	FR infant	0.20	Apples	0.03	Pears	0.01	Mandarins
0.25	UK toddler	0.13	Apples	0.04	Tomatoes	0.03	Mandarins
0.24	ES child	0.09	Apples	0.07	Tomatoes	0.04	Pears

Acute risk assessment										
Year	Commodity <sup>a), b)</sup>	MRL <sup>c), d)</sup>	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL <sup>d)</sup>	Maximum acute exposure (expressed in % of the ARfD) <sup>e)</sup>	Most critical diet	Comment
2011	Oranges	1	1237							
2011	Mandarins	1	1005	0.40		0.04		not assessed		
2011	Pears	0.5	1443	1.11		0.11		not assessed		
2011	Potatoes	0.05	1512					not assessed		
2011	Carrots	0.05	1228					not assessed		
2011	Cucumbers	0.05	1152					not assessed		
2011	Spinach	0.05	807					not assessed		
2011	Beans (with pods)	0.05	966					not assessed		
2011	Rice	0.05	697					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

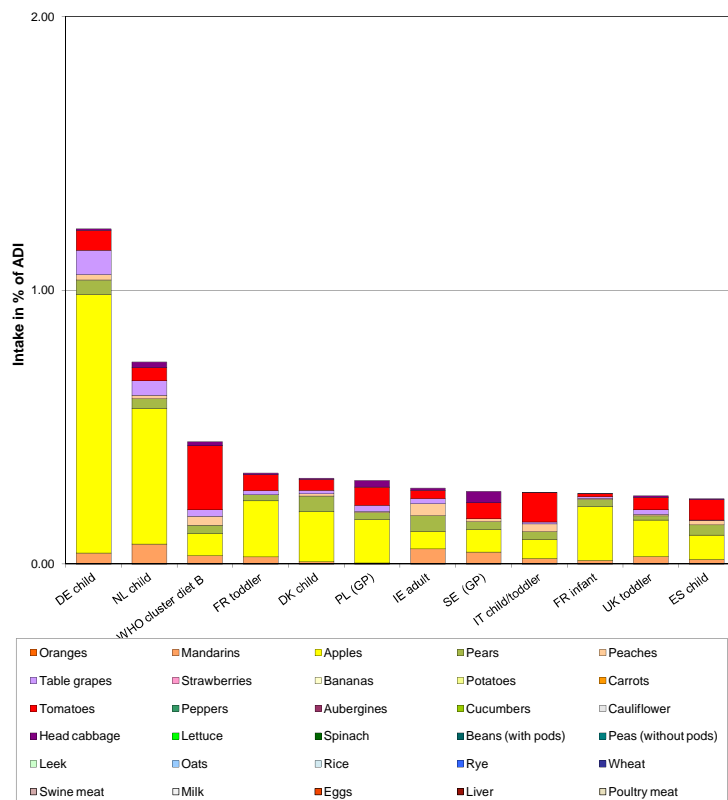
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

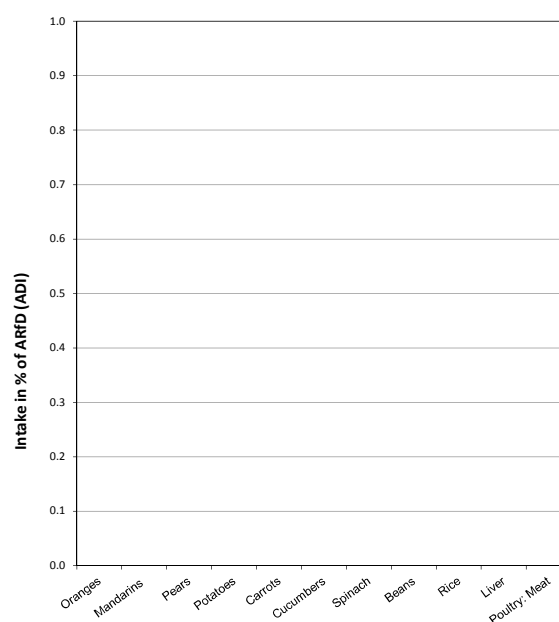
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis for the consumption of bovine liver.

Chronic risk assessment: Triflumuron



Acute risk assessment: Triflumuron



Trifluralin				
Status of the active substance:		Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	N
Toxicological end points				
ADI (mg/kg bw/day):		0.015	ARfD (mg/kg bw):	n.n.
Source of ADI:		EFSA	Source of ARfD:	EFSA
Year of evaluation:		2005	Year of evaluation:	2005

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets			Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
0.60	DE child	0.34	Oranges	0.10	Carrots	0.08	Tomatoes	
0.56	FR toddler	0.25	Carrots	0.18	Oranges	0.07	Spinach	
0.44	NL child	0.28	Oranges	0.05	Tomatoes	0.05	Carrots	
0.40	FR infant	0.27	Carrots	0.08	Oranges	0.04	Spinach	
0.40	WHO cluster diet B	0.27	Tomatoes	0.08	Oranges	0.03	Carrots	
0.34	DK child	0.14	Cucumbers	0.14	Carrots	0.05	Tomatoes	
0.31	ES child	0.19	Oranges	0.09	Tomatoes	0.02	Carrots	
0.29	UK toddler	0.18	Oranges	0.05	Carrots	0.05	Tomatoes	
0.28	UK infant	0.13	Carrots	0.12	Oranges	0.03	Tomatoes	
0.25	SE (GP)	0.09	Carrots	0.07	Oranges	0.07	Tomatoes	
0.22	NL (GP)	0.13	Oranges	0.04	Tomatoes	0.02	Carrots	
0.21	ES adult	0.12	Oranges	0.07	Tomatoes	0.01	Carrots	

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.1	1735	0.06		0.02		not assessed		
2011	Mandarins	0.1	1421					not assessed		
2011	Pears	0.1	1777					not assessed		
2011	Potatoes	0.1	2052					not assessed		
2011	Carrots	1	1470	1.09		0.21		not assessed		
2011	Cucumbers	0.5	1535	0.07		0.01		not assessed		
2011	Spinach	0.5	1008	0.10		0.04		not assessed		
2011	Beans (with pods)	0.5	1183					not assessed		
2011	Rice	0.1	969					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

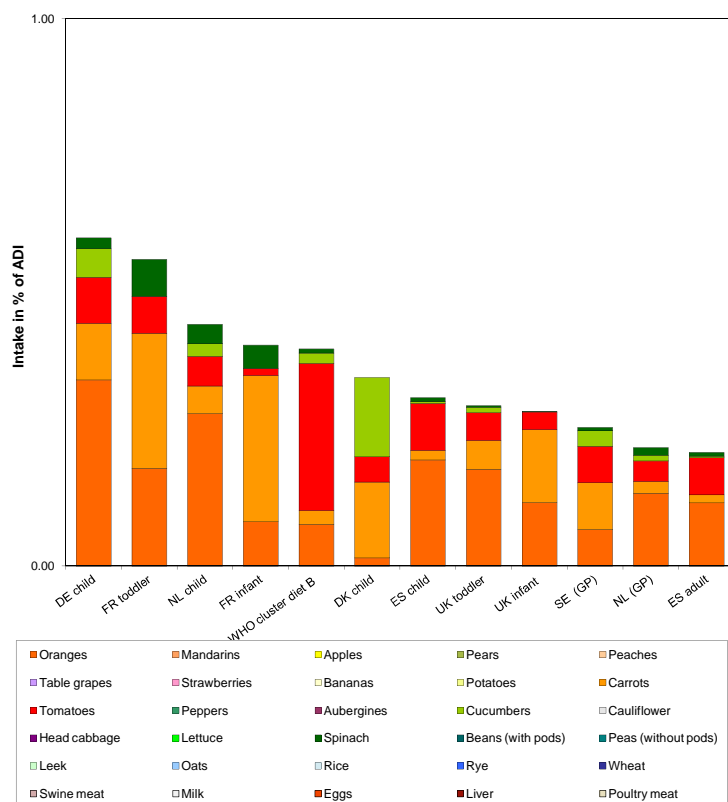
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

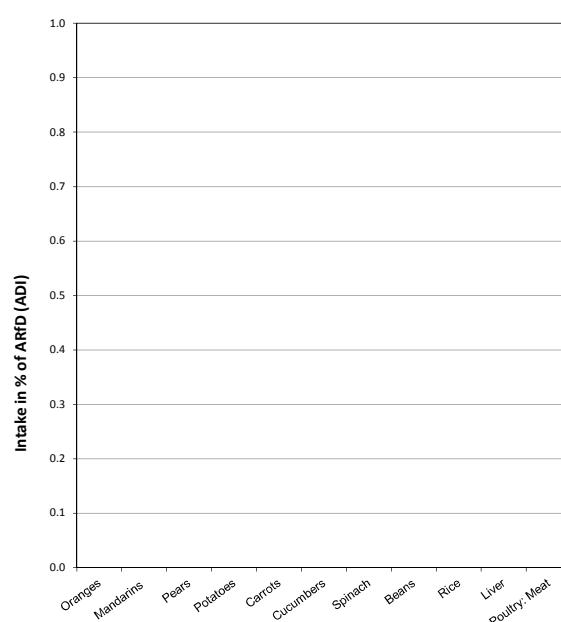
<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Trifluralin



Acute risk assessment: Trifluralin



Triticonazole			
Status of the active substance:	Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	N
Toxicological end points			
ADI (mg/kg bw/day):	0.025	ARfD (mg/kg bw):	0.05
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2006	Year of evaluation:	2006

Chronic risk assessment								
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
Top 12 diets			Commodity / group of commodities		Commodity / group of commodities		Commodity / group of commodities	
0.21	WHO cluster diet B		0.13	Tomatoes	0.02	Rice	0.02	Peppers
0.12	DK child		0.08	Cucumbers	0.02	Tomatoes	0.01	Peppers
0.11	FR toddler		0.06	Beans (with pods)	0.03	Tomatoes	0.02	Rice
0.10	DE child		0.04	Tomatoes	0.03	Cucumbers	0.01	Peppers
0.09	NL child		0.03	Tomatoes	0.03	Beans (with pods)	0.02	Rice
0.08	WHO cluster diet D		0.04	Tomatoes	0.02	Rice	0.01	Cucumbers
0.08	PT (GP)		0.04	Tomatoes	0.04	Rice	0.01	Peppers
0.08	ES child		0.04	Tomatoes	0.02	Rice	0.01	Beans (with pods)
0.08	SE (GP)		0.03	Tomatoes	0.02	Rice	0.02	Cucumbers
0.08	IT child/toddler		0.06	Tomatoes	0.01	Rice	0.00	Beans (with pods)
0.08	WHO regional diet		0.05	Tomatoes	0.01	Beans (with pods)	0.01	Rice
0.07	IT adult		0.05	Tomatoes	0.01	Rice	0.01	Beans (with pods)

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.01	1526							
2011	Mandarins	0.01	1267							
2011	Pears	0.01	1429							
2011	Potatoes	0.01	1782							
2011	Carrots	0.01	1309							
2011	Cucumbers	0.01	1314							
2011	Spinach	0.01	851							
2011	Beans (with pods)	0.01	943							
2011	Rice	0.01	826							
2011	Liver									
2011	Poultry: Meat									

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

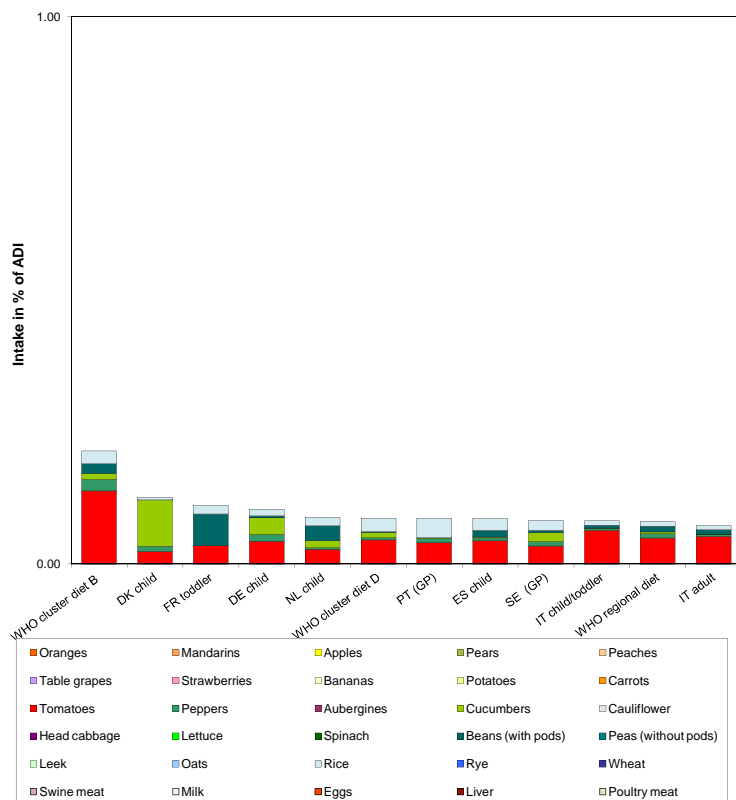
<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

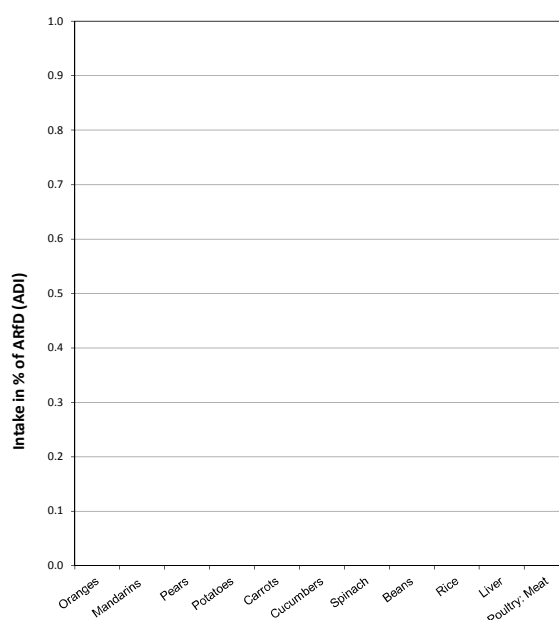
<sup>e)</sup> For liver, only the MRL for bovine liver is reported

<sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Triticonazole



Acute risk assessment: Triticonazole



Vinclozolin (RD)			
Status of the active substance:	Not approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products	P	Analysis on voluntary basis?	Y
Toxicological end points			
ADI (mg/kg bw/day):	0.005	ARfD (mg/kg bw):	0.06
Source of ADI:	COM	Source of ARfD:	COM
Year of evaluation:	2006	Year of evaluation:	2006

Metabolites to be analysed on a voluntary basis.

Full residue definition: Vinclozolin (sum of vinclozolin and all metabolites containing the 3,5-dichloroanilinemoiety, expressed as vinclozolin). For products of animal origin-terrestrial animal: sum of vinclozolin, iprodione, procymidone and all metabolites containing the 3,5-dichloroaniline moiety expressed as 3,5 dichloroaniline

Chronic risk assessment								
	Highest calculated exposure in % of ADI	Top 12 diets	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
	0.68	FR infant	0.63	Carrots	0.05	Peas (without pods)		FRUIT (FRESH OR FROZEN)
	0.65	FR toddler	0.58	Carrots	0.07	Peas (without pods)		FRUIT (FRESH OR FROZEN)
	0.42	UK infant	0.32	Carrots	0.11	Peas (without pods)		FRUIT (FRESH OR FROZEN)
	0.35	DK child	0.33	Carrots	0.03	Lettuce		FRUIT (FRESH OR FROZEN)
	0.28	DE child	0.24	Carrots	0.02	Peas (without pods)	0.01	Lettuce
	0.22	NL child	0.12	Carrots	0.08	Peas (without pods)	0.02	Lettuce
	0.22	SE (GP)	0.20	Carrots	0.02	Peas (without pods)		FRUIT (FRESH OR FROZEN)
	0.20	PT (GP)	0.16	Carrots	0.04	Peas (without pods)		FRUIT (FRESH OR FROZEN)
	0.19	WHO regional diet	0.09	Carrots	0.07	Lettuce	0.03	Peas (without pods)
	0.18	UK toddler	0.12	Carrots	0.06	Peas (without pods)	0.00	Lettuce
	0.18	WHO Cluster diet F	0.11	Carrots	0.06	Lettuce	0.01	Peas (without pods)
	0.16	WHO cluster diet E	0.11	Carrots	0.03	Peas (without pods)	0.02	Lettuce

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.05	1337							
2011	Mandarins	0.05	1126							
2011	Pears	0.05	1243							
2011	Potatoes	0.05	1386							
2011	Carrots	0.05	1047	0.10		0.01		1.27	UK infant	
2011	Cucumbers	1	1127							
2011	Spinach	0.05	691							
2011	Beans (with pods)	0.05	746	0.13		0.01		0.23	NL child	
2011	Rice	0.05	635							
2011	Liver									
2011	Poultry: Meat									

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

d) TTL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported

f) The exposure is calculated on the basis for the consumption of bovine liver.

a) For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

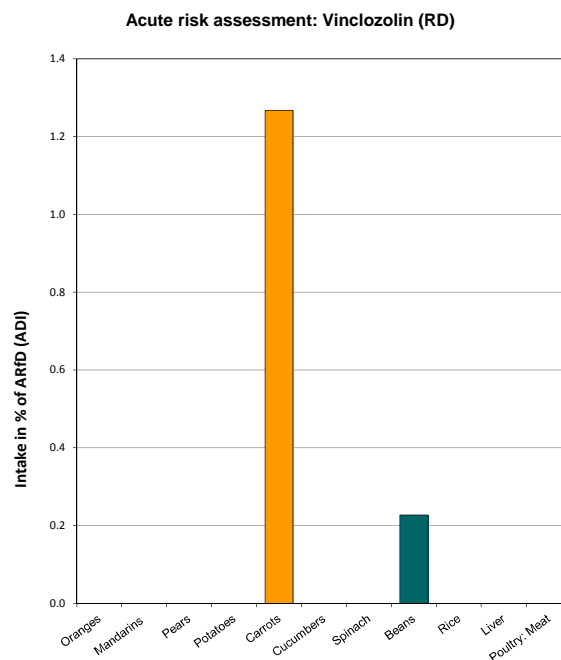
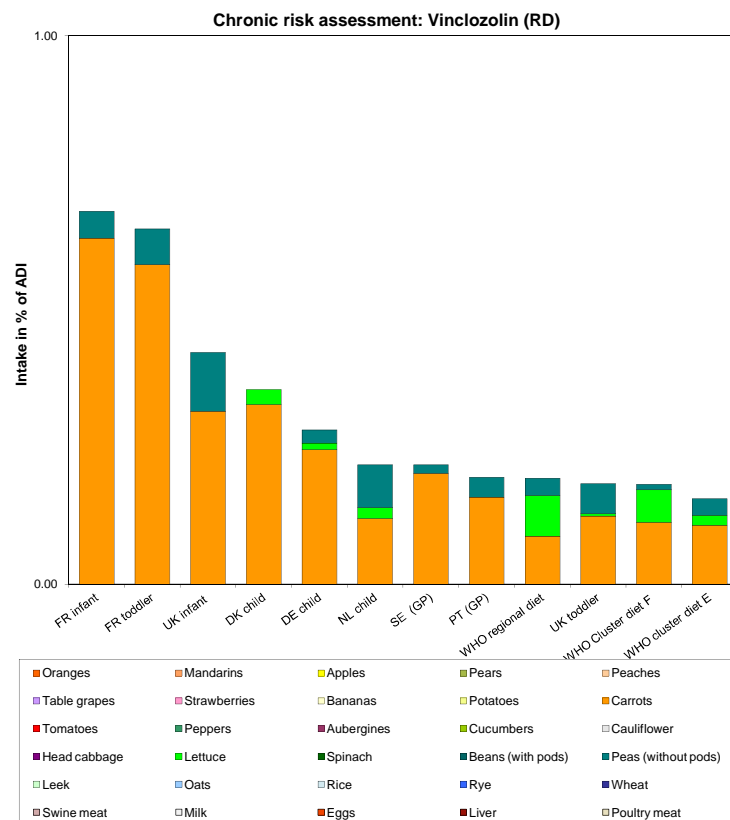
b) Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

c) MRL in place on 01/01/2011.

d) TTL: toxicological threshold level

e) For liver, only the MRL for bovine liver is reported

f) The exposure is calculated on the basis of the consumption of bovine liver.



Zoxamide				
Status of the active substance:		Approved	Monitoring year:	2011
To be analysed in plant (P) or animal (A) products		P	Analysis on voluntary basis?	
Toxicological end points				
ADI (mg/kg bw/day):		0.5	ARfD (mg/kg bw):	n.n.
Source of ADI:		COM	Source of ARfD:	COM
Year of evaluation:		2003	Year of evaluation:	2003

Chronic risk assessment														
Highest calculated exposure in % of ADI			Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
	0.01	WHO cluster diet B	0.01	Tomatoes		0.00	Table grapes		0.00	FRUIT (FRESH OR FROZEN)				
	0.00	DE child	0.00	Table grapes		0.00	Tomatoes		0.00	FRUIT (FRESH OR FROZEN)				
	0.00	IT child/toddler	0.00	Tomatoes		0.00	Table grapes		0.00	FRUIT (FRESH OR FROZEN)				
	0.00	NL child	0.00	Table grapes		0.00	Tomatoes		0.00	FRUIT (FRESH OR FROZEN)				
	0.00	IT adult	0.00	Tomatoes		0.00	Table grapes		0.00	FRUIT (FRESH OR FROZEN)				
	0.00	WHO regional diet	0.00	Tomatoes		0.00	Table grapes		0.00	FRUIT (FRESH OR FROZEN)				
	0.00	PL (GP)	0.00	Tomatoes		0.00	Table grapes		0.00	FRUIT (FRESH OR FROZEN)				
	0.00	WHO cluster diet D	0.00	Tomatoes		0.00	Table grapes		0.00	FRUIT (FRESH OR FROZEN)				
	0.00	PT (GP)	0.00	Tomatoes		0.00	Table grapes		0.00	FRUIT (FRESH OR FROZEN)				
	0.00	ES child	0.00	Tomatoes		0.00	Table grapes		0.00	FRUIT (FRESH OR FROZEN)				
	0.00	FR toddler	0.00	Tomatoes		0.00	Table grapes		0.00	FRUIT (FRESH OR FROZEN)				
	0.00	UK toddler	0.00	Tomatoes		0.00	Table grapes		0.00	FRUIT (FRESH OR FROZEN)				

Acute risk assessment										
Year	Commodity a), b)	MRL c), d)	Total number of samples analysed	% of samples with detectable residues below the MRL	% of samples exceeding the MRL	Highest residue measured (HRM) mg/kg	No. of samples exceeding the TTL d)	Maximum acute exposure (expressed in % of the ARfD) e)	Most critical diet	Comment
2011	Oranges	0.02	1627					not assessed		
2011	Mandarins	0.02	1355					not assessed		
2011	Pears	0.02	1516					not assessed		
2011	Potatoes	0.02	1806					not assessed		
2011	Carrots	0.02	1310					not assessed		
2011	Cucumbers		1293					not assessed		
2011	Spinach	0.02	840					not assessed		
2011	Beans (with pods)	0.02	1021					not assessed		
2011	Rice	0.02	824					not assessed		
2011	Liver							not assessed		
2011	Poultry: Meat							not assessed		

<sup>a)</sup> For fat soluble pesticides, the residues reported for poultry fat were recalculated to poultry meat, considering the reported fat content or default fat content of 10%.

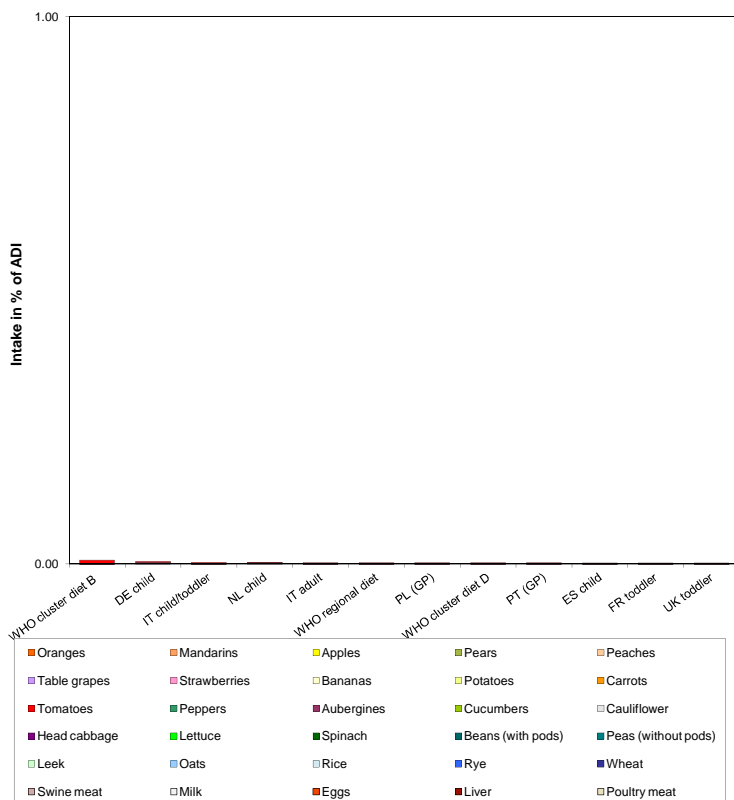
<sup>b)</sup> Liver: the results for liver of swine, bovine, sheep, goat and poultry are pooled.

<sup>c)</sup> MRL in place on 01/01/2011.

<sup>d)</sup> TTL: toxicological threshold level

<sup>e)</sup> For liver, only the MRL for bovine liver is reported <sup>f)</sup> The exposure is calculated on the basis of the consumption of bovine liver.

Chronic risk assessment: Zoxamide



Acute risk assessment: Zoxamide

