

## SCIENTIFIC REPORT OF EFSA

# The 2009 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 of pesticide residues in food commodities sampled during the calendar year 2009 in the 27 EU Member States and two EFTA countries (Iceland and Norway). The report also comprises the outcome of the consumer risk assessment of pesticide residues. Finally, the report provides some recommendations aiming to improve future monitoring programmes and enforcement of the European pesticide residue legislation. In total, more than 67,000 samples of nearly 300 different types of food were analysed for pesticide residues by national competent authorities. The total number of analytical determinations reported among all the participating countries amounted to more than 14,000,000. 97.4% of the samples complied with the legal maximum residue levels (MRLs) of pesticides. EFSA concluded that the long-term exposure of consumers did not raise health concerns. The short-term exposure assessment revealed that for 77 food samples analysed the acute reference dose (ARfD) might have been exceeded if the pertinent food was consumed in high amounts.

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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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<sup>4</sup> In the *Summary* on page 2 and in the *Overall results for MRL exceedances* on page 62, the MRL exceedance rate for the overall results of the 2009 EU-coordinated programme was replaced by 1.2% where wrongly reported as 1.4%  
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## SUMMARY

The report gives an overview of the control activities performed in 2009 by the 27 EU Member States and two EFTA countries (Iceland and Norway) in order to ensure compliance of food with the standards defined in European legislation on pesticide residues.

Typically, in each European reporting country two control programmes are in place: a national control/monitoring programme (designed by each country) and a coordinated European programme for which clear guidance is given on which specific control activities should be performed by the Member States.

According to the **EU-coordinated programme** 138 pesticides had to be analysed in 2009, 120 of which were to be analysed in food samples of plant origin while 32 pesticides were to be analysed in samples of animal origin. In addition, the European programme defined the 10 different food commodities to be analysed in 2009. A total number of 10,553 samples were analysed.

The analysis of the results of the 2009 EU-coordinated programme has shown that 1.2% of the 10,553 samples exceeded the MRL, while 37.4% of samples had measurable residues above the analytical reporting level but below or at the MRL. 61.4% of the samples were free of measurable pesticide residues.

Out of the 138 pesticides tested, measurable residues were found for 111 different substances.

The pesticide/crop combinations where residue values were measured most frequently were imazalil/bananas (49.5%), chlormequat/wheat (42.3%) and fenhexamid/table grapes (23.8%).

In order to analyse the change of the MRL exceedance rate over the time, the results of the 2009 monitoring year were compared with 2006, where the same food commodities of plant origin were analysed, but the number of pesticides to be controlled increased from 55 in 2006 to 120 in 2009.

A decrease in the overall MRL exceedance rate from 4.4% in 2006 to 1.2% in 2009 was observed. This finding can be partially ascribed to the new EU legislation on pesticide MRLs which entered into force in September 2008. The harmonisation has simplified the MRL system in Europe and therefore improved the clarity about which MRLs are applicable. Other factors have influenced the difference in the MRL exceedance rate between 2006 and 2009, e.g. the change in the pesticide authorisation status and use patterns, the improvement in the data reporting system and the efficient implementation of the general provisions of the European food law.

The comparison of the results obtained in 2006 and 2009 also revealed an increase of the percentage of samples free of measurable residues (53.9% in 2006 to 61.4% in 2009).

The highest percentage of samples exceeding the MRL was identified for table grapes (2.8%), followed by peppers (1.8%), aubergines (1.7%), peas (1.0%), wheat (0.8%), butter (0.6%), cauliflower (0.5%), bananas (0.4%) and chicken eggs (0.2%). No orange juice samples were found to exceed the legal limits. The percentage of samples exceeding the MRLs has decreased from 2006 to 2009 for all commodities, except for wheat. In 2009, table grapes had the highest percentage of samples with measurable pesticide residues below or at MRLs (70.6%), followed by 56.9% of the banana samples and 32.5% of the peppers. Compared to the results of the 2006 EU-coordinated control programme, where the same food commodities were analysed, the highest decrease of samples without detectable residues was found for orange juice (90% in 2006 to 75% in 2009), the highest increase was observed for peppers (55% in 2006 to 66% in 2009).

In the EU-coordinated programme residues exceeding the MRL were found for 47 different pesticides. The most frequent MRL exceedances were detected for residues of HCH alpha (0.26% of the samples) and dimethoate (0.22% of the samples). The highest percentages of MRL exceedances were found for dimethoate in aubergines, where the MRL was exceeded in 0.87% of all samples.

The official controls carried out at national level in the framework of the **national monitoring programmes** are complementary to the controls performed in the context of the EU-coordinated programme and are performed to ensure compliance with the provisions established in food legislation regarding the pesticide residues. Member States and EFTA countries are free to decide on the design of the national monitoring programmes for pesticide residues in food. The total number of samples taken in the context of the national programmes in 2009 was 67,978<sup>4</sup>. Compared with the previous year, this is a decrease of 3.1%.

In 2009, the majority of the samples taken are classified as surveillance samples<sup>5</sup> (66,550 samples, 97.9% of the total number of samples). The total number of enforcement samples<sup>6</sup> taken by all reporting countries was 1,428 (2.1% of the total number of samples).

The number of distinct pesticides sought in 2009 was 834. Countries made considerable progress in expanding their analytical capacities which is an important element in guaranteeing food safety. Approximately 300 different food commodities were analysed for pesticide residues by all reporting countries.

In total, residues of 338 different pesticides were found in measurable quantities in vegetables, 319 in fruit and nuts, while in cereals residues of 93 different pesticides were observed. As in previous years, the number of different pesticide residues found in 2009 in fruits, nuts and vegetables was higher than the number of pesticides found in cereals, which also reflects the diversity of crops included in these food categories and the larger number of plant protection products used in the fruit and vegetables category.

The majority of food of animal origin was free of detectable residues (99.7%). In total, 34 different pesticides were found in animal products; most of the pesticides found in product of animal origin were rather due to environmental contaminations with persistent pesticides that have been banned at EU level than actual uses of pesticides on feed crops.

97.4% of the surveillance samples analysed (all food categories) were below or at the legal MRLs. In 2.6% of the samples the legal limits were exceeded for one or more pesticides. The overall reported MRL exceedance rate (2.6%) is lower than in the previous year where 3.5% of the samples were found to exceed the MRLs.

The pesticide/crop combinations which were most frequently exceeding the MRLs were ethephon in figs, tetramethrin in wild fungi, dithiocarbamates in passion fruit, nicotine in wild fungi and amitraz in pears.

Regarding **baby food**, a general default MRL of 0.01 mg/kg is applicable for all pesticides, unless specific MRLs - lower than 0.01 mg/kg - are established under the specific EU legislation. Overall, 1,888 samples of baby food/infant formulae were analysed in 2009. Residues above the reporting level were found in 110 samples, while the MRL was exceeded in 15 samples (0.8%). 7 of the MRL

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<sup>4</sup> This figure also comprises the number of samples taken for the EU-coordinated programme since these samples in many countries were analysed for a wider range of active substances than defined in the coordinated programme and are therefore belonging to both programmes, the national and the EU-coordinated programme.

<sup>5</sup> Surveillance samples are collected without any particular suspicion towards a particular producer, consignment, etc.

<sup>6</sup> Enforcement samples are taken if there is suspicion about the safety or non-compliance with the legal limits of a product and/or as a follow-up of violations found previously. Therefore, enforcement samples cannot be considered representative of the food available on the European market.

exceedances concerned samples of infant formulae with residue levels of captan exceeding the legal limits. Other MRL exceedances in baby food/infant formulae were reported for pirimiphos-methyl, imazalil, chlorpropham, thiabendazole and diazinon.

At EU level, no specific MRLs for **organic products** are in place; thus, the MRLs established for conventionally produced products apply also to this food category. In 2009, a total of 3,090 samples of organic origin were taken by a total of 25 countries, which corresponds to 5% of all surveillance samples taken in the reporting countries. For fruit and nuts grown organically, a lower rate of MRL exceedances (0.4%) was found in comparison to conventionally grown fruit and nuts (2.7%), for vegetables the MRL exceedances of the samples were 0.5% and 3.4% respectively for organically and conventionally grown crops. The following substances were found in organic samples, even if their use was not allowed in organic production: chlormequat, fenbutatin oxide, MCPA and MCPB, mepiquat, methabenzthiazuron and propamocarb. Also residues of CS<sub>2</sub> - which is an indicator for the presence of pesticides belonging to the group of the dithiocarbamates - were found. However, since some crops contain natural compounds which also release CS<sub>2</sub> during the chemical analysis the results cannot prove beyond doubt that dithiocarbamate pesticides were used.

In 2009, **multiple residues** of two or more pesticides in the same sample were found in 25.1% of the analysed surveillance samples. Important commodities with high frequencies of multiple residues were citrus fruit (56.6%), table and wine grapes (55.5%) and strawberries (53.8%). 299 unprocessed surveillance samples were found to exceed two or more MRLs. The commodity with the highest number of samples with multiple MRL exceedances was peppers (46 out of 1704 samples exceeded the MRL for two or more pesticides).

The results of the EU-coordinated monitoring programme were used to perform **dietary exposure assessments**. In 2009, the results of the control activities were reported with a new reporting format which allowed improving the accuracy of the consumer exposure calculations in comparison to the previous year, in particular for the calculation of the long-term consumer exposure.

The **chronic (long-term) exposure assessment** was based on the residue findings for the food commodities which are the major constituents of the human diet. EFSA concluded that residues found on these food commodities do not raise health concerns if consumed over a long period.

The assessment of the **acute (short-term) consumer exposure** was performed for the ten food commodities which were analysed under the 2009 EU co-ordinated monitoring programme. The assessment was based on worst-case scenarios, supposing the consumption of a large portion of the food item under consideration containing the highest residue measured in the coordinated programme. In order to accommodate for a possible non-homogeneous distribution of residues in an analysed food lot<sup>7</sup> an additional variability factor was introduced in the calculation. Assuming a coincidence of these events (high food consumption, high residue concentration and inhomogeneous residue distribution in a lot), out of 10,553 samples a potential consumer risk could not be excluded for a total of 77 samples concerning 32 pesticide/commodity combinations. Taking into account the frequency of the occurrence of the critical residues (in less than 0.1% of the samples tested for the given pesticide/crop combinations) and the frequency of extreme consumption events, the events leading to a potential risk were considered very unlikely. The highest potential exceedances of the toxicological reference value were calculated for carbofuran residues in peppers (14,275% of the ARfD), oxamyl residues in peppers (9,510% of the ARfD), monocrotophos residues in peppers (7,557% of the ARfD),

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<sup>7</sup> According to the European legislation on the official control of pesticide residues an analytical sample is composed by at least five food units, e.g. five cucumbers, ten apples.

methomyl/thiodicarb<sup>8</sup> residues in peppers (1,889% of the ARfD) and dimethoate/omethoate<sup>9</sup> residues in table grapes (1,342% of the ARfD).

For 11 of the 32 pesticide/commodity combinations for which a critical short-term intake situation could not be excluded, risk management actions have been taken in the meantime, e.g. withdrawal of pesticide authorisations and/or lowering of the MRLs.

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<sup>8</sup> The analytical methods used do not allow to identify the nature of the residue unequivocally. The risk assessment was performed under the assumption that the measured residue referred to the more toxic compound (i.e. methomyl and omethoate, respectively).

<sup>9</sup> See previous footnote.



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## LEGAL BASIS

According to the EU legislation in place in 2009, EU Member States and two EFTA countries (Iceland and Norway)<sup>10</sup> have to carry out national control programmes on pesticide residues in food commodities and to report the results to the European Commission and EFSA.

General legal provisions for food inspections and monitoring were established by Regulation (EC) No 882/2004<sup>11</sup> on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare.

The legal basis for the preparation of this Annual Report on the pesticide residues is laid down in Regulation (EC) No 396/2005<sup>12</sup> on Maximum Residues Levels (MRLs) for pesticide residues. This regulation requires Member States to establish national control programmes and to carry out regular official controls on pesticide residues in food commodities in order to check compliance with the MRLs for pesticide residues and to assess the consumer's exposure. According to Article 31 of Regulation (EC) No 396/2005 Member States have to submit the results of official controls and other relevant information to the European Commission, to EFSA and to other Member States. On the basis of these results an Annual Report on pesticide residues shall be prepared each year. With Article 32 of this regulation the responsibility for preparing the Annual Report on pesticide residues is assigned to EFSA. The MRL regulation also contains general provisions regarding the content of the Annual Report.

In addition to the general provisions on national monitoring programmes as defined in Article 30 of the pesticide MRL Regulation, the Commission has set up a specific EU-coordinated monitoring programme. Starting from the calendar year 2009, the participation of the EU Member States in the EU-coordinated control programme has become mandatory. The details of the coordinated multiannual Community control programme for 2009 have been established in Commission Regulation (EC) No 1213/2008<sup>13</sup>.

According to Decision of the EEA Joint Committee No 127/2009<sup>14</sup> the EFTA countries Iceland and Norway were requested to participate in the EU-coordinated control programme. Thus, the provision of Regulation (EC) No 1213/2008 is applicable also in those EFTA countries.

The results of the analysis of food samples taken in 2009 under the national and coordinated Community control programmes had to be submitted to the European Commission and to EFSA by the end of August 2010. All 27 EU Member States and two EFTA States submitted validated results of the 2009 monitoring programmes to EFSA between 14 July and 21 October 2010.

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<sup>10</sup> Liechtenstein, an European Free Trade Association (EFTA) State previously reporting its results on the monitoring of pesticide residues to the Commission, has been exempted from reporting obligations from 2007 due to a change in the European Economic Area (EEA) agreement concerning agricultural issues.

<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. Official Journal L 165, 30.4.2004, p. 1-141.

<sup>12</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 (Text with EEA relevance). Official Journal L 70, 16.3.2005, p 1-16.

<sup>13</sup> Commission Regulation (EC) No 1213/2008 of 5 December 2008 concerning a coordinated multiannual Community control programme for 2009, 2010 and 2011 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 (Text with EEA relevance). Official Journal L 328, 6.12.2008, p. 9–17.

<sup>14</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. Official Journal L 62, 11.3.2010, p. 14–15.



## 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 control activities carried out in 2009 to the Commission.

The Annual Report shall at least include the following information:

- an analysis of the results of the controls on pesticide residues provided by EU Member States and two EFTA 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<sup>15</sup>.

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

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<sup>15</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. Official Journal L 125, 23.5.1996, p. 10–32.

## ASSESSMENT

### 1. Introduction

The report presents the results of the control programmes of pesticide residues in food commodities sampled during the calendar year 2009 in the 27 EU Member States and the two EFTA countries (Norway and Iceland).

The objective of this report is to give an overview of the official control activities performed by EU Member States and EFTA countries (in the following referred to as EU or reporting countries) in order to ensure compliance of food with the standards defined by Regulation (EC) No 396/2005, to summarise the results provided by the reporting countries, to identify critical areas of concern regarding sample compliance with MRLs, to assess the actual consumer exposure to pesticide residues and to perform an analysis of the chronic and acute risks to consumer health. Furthermore, this report provides some recommendations for future monitoring plans and activities related to the enforcement of the pesticide legislation.

2009 was the first year with fully harmonised pesticide MRL legislation at European Union level. Regulation (EC) No 396/2005 laid down MRLs for all active substances used in plant protection products that have the potential to enter the food chain. The same legal limits are applicable in the EFTA countries; however, the values normally enter into force later than in the EU Member States.

2009 was also the year where a new format for submitting the results of monitoring activities was implemented (EFSA, 2010). In contrast to previous years, Member States have provided all relevant details related to the samples analysed, whereas in previous years aggregated results were submitted. In total, 42 fields are defined to characterise an analysed sample, 22 of the fields are mandatory. The detailed information available to EFSA allows the performance of more detailed analysis of the results, including a more accurate assessment of consumer exposure.

Due to the changed legal situation and the introduction of the new reporting format, the results of previous monitoring reports published by EFSA and the European Commission are not directly comparable with the results reported in this report. Therefore, trends observed in 2009 compared with previous years have to be analysed with caution. It is important to highlight that the comparability of results reported by individual reporting countries is also limited due to differences in the scope of the national control programmes, proficiencies of analytical laboratories providing results, the data validation and recoding<sup>16</sup>.

**Chapter 2** of the report describes the design of the monitoring programmes in place in Europe. In particular, the *EU-coordinated multiannual Community control programme* and the *national control programmes* are explained.

The results of the *EU-coordinated multiannual Community control programme*, as established in Commission Regulation (EC) No 1213/2008, are reported in **chapter 3** of this report.

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<sup>16</sup> More detailed information about 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. If there were inconsistencies in data from different countries, they were asked for corrections. Therefore, small differences in the data published separately by the national authorities or in the “two summary reports” of Appendix II respectively and the data reported in the present report may occur.

Key figures and results of the *national control programmes* are summarised in **chapter 4**. In this section, the results of *surveillance* samples (non-targeted samples) and the results of the national *enforcement sampling* taken under the *national control programmes* are reported.

In the last section of the report (**chapter 5**), EFSA assessed the *dietary exposure* of European consumers, based mainly on the results of the EU-coordinated multiannual Community control programme.

The reader not familiar with terms and concepts frequently used in the present report (e.g. MRL and sampling strategy) is invited to consult the *background information - glossary* section below.

## BACKGROUND INFORMATION - GLOSSARY

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

### Authorisation of pesticides/plant protection products

The quality and yield of agricultural and horticultural crops is jeopardised by plant diseases and infestation by pests. In order to protect crops before and after harvest, pesticides<sup>17</sup> are used. 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 (Directive 91/414/EEC<sup>18</sup> and Regulation (EC) No 1107/2009<sup>19</sup>). In the framework of the authorisation procedure, companies asking for the authorisation of plant protection products have to demonstrate that food treated with these products will not pose a risk to consumer health.

### 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.

### Pesticide use

The national authorised or registered use of a plant protection product reflects the *safe* use of a pesticide under *actual* agricultural conditions and implies the use of the minimum quantity of pesticides which allows the desired effect to be obtained (referred to as Good Agricultural Practice - GAP). Authorisations are granted on national level, taking into account the local and environmental conditions and the occurrence of pests. MRLs are set for the most critical authorised GAPs, provided that a consumer health risk can be excluded for these uses.

### 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, 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 [...]"

### Food commodities

Annex I of Regulation (EC) No 396/2005 defines the food commodities for which the MRLs are applicable. The description of the commodities and the parts of the products 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>20, 21</sup>.

In principle, most of the raw commodities of plant and animal origin are listed in Annex I, subdivided into 12 subgroups. In total, *ca.* 400 different food commodities are covered by the Regulation.

<sup>17</sup> In the report the term "pesticide" is used as a synonym of "plant protection product".

<sup>18</sup> Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market. Official Journal L 230, 19.8.1991, p. 1–32

<sup>19</sup> Regulation (EC) No 1107/2009 has repealed Directive 91/414/EEC. This regulation entered into force on 15.12.2009, but applies from 14 June 2011 on.

<sup>20</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. Official Journal L 29, 2.2.2006, p. 3-25

<sup>21</sup> The list of food commodities was revised by Regulation (EU) No 600/2010 which entered into force 30 July 2010.

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, herb infusions and cocoa
7. Hops
8. Spices
9. Sugar plants
10. Products of animal origin - terrestrial animals
11. Fish, fish products, molluscs and other marine and freshwater products<sup>22</sup>
12. Crops or parts of crops exclusively used for animal feed<sup>23</sup>

With a few exemptions, processed foods are not listed in Annex I of Regulation (EC) No 396/2005. In this report, “processed food” refers to products derived from commodities as specified in Annex I of Regulation (EC) No 396/2005 by food processing technologies. Typical examples are juices from fruit and vegetables, other beverages (wine, beer) or flour from cereals.

In some sections of this report the results for individual crops are aggregated and reported for the following categories:

- Fruits and nuts (covering classification group 1, including processed food derived thereof)
- Vegetables (covering classification group 2, including processed food derived thereof)
- Cereals (covering group 5, including processed food derived thereof)
- Other plant products (covering classification groups 7, 8 and 9)
- Animal products (containing classification group 10)
- Fish products (covering classification group 11)
- Baby food (as defined in baby food legislation, see “MRL”)
- Other products (products which could not be assigned to a certain raw commodity or a specific processed food are summarised under this subcategory)

### **Residue definition**

Active substances applied on a crop are often not stable, but the applied molecule undergoes to a certain extent a degradation induced by plant enzymes, light, humidity and/or other environmental factors. Thus, on the harvested food commodity, other chemical substances (usually referred to as metabolites) than the active substances originally applied may be present. Since not all of these degradation products are harmless, they have to be taken into account in the consumer risk assessment. In certain cases, the parent compound (i.e. the substance originally applied on the crop) is

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<sup>22</sup> For this category the detailed food classification is not yet established. Thus, currently MRLs are not yet applicable.

<sup>23</sup> For this category the detailed food classification is not yet established. Thus, currently MRLs are not yet applicable.

not found at all in the harvested crops, but only one or several typical metabolites, which are an indicator of the use of this parent compound. The concept of residue definition is used to define the active substance used in plant protection products and its metabolites, degradates and other transformation products relevant for consumer exposure<sup>24</sup>. For each pesticide, two residue definitions are set:

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

The *residue definition for MRL setting* (also referred as residue definition for MRL enforcement purposes, or briefly enforcement residue definition) comprises those compounds which are indicators for the use of the pesticide and which can be analysed in routine monitoring, ideally by a multi-residue method.

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

## MRL

Maximum Residue Levels (MRLs) for pesticides are defined as the upper legal levels of a concentration for a pesticide residue (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 cannot be placed on the market. MRLs are derived by statistical calculation methods from supervised field trials which reflect the intended GAPs. The MRLs are set at a level which should ensure that normally the harvested crop does not exceed the legal limit if the crop was produced according to GAP<sup>25</sup>.

Before an MRL is established, a risk assessment has to prove that the limit is safe for consumer health. In the past, responsibility for risk assessment in the MRL setting procedure was shared between Member States and the European Commission. Since Regulation (EC) No 396/2005 became fully applicable on 1 September 2008, EFSA is involved as independent body responsible for the risk assessment of new or revised MRLs.

MRLs are fixed by the European Commission. The MRL applicable in Europe can be consulted on the database developed and maintained by the European Commission<sup>26</sup>.

<sup>24</sup> In cases of 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 labeled with the name of the pesticide and the term “sum”. For example, when “endosulfan (sum)” is reported, this refers to the following complex residue definition: sum of alpha- and beta-isomers and endosulfane-sulfate expressed as endosulfane.

<sup>25</sup> The statistical concept for MRL setting implies that a minor percentage of the crops treated according to the GAP will nevertheless exceed the MRL.

<sup>26</sup> The MRL database of the European Commission is available at:  
[http://ec.europa.eu/food/plant/protection/pesticides/database\\_pesticide\\_en.htm](http://ec.europa.eu/food/plant/protection/pesticides/database_pesticide_en.htm)

MRLs are not primarily toxicological safety limits, but reflect the use of minimum quantities of pesticides to achieve effective plant protection, applied in such a manner that the amount of residue is the smallest practicable and are set at levels where a consumer health risk is not expected. In most cases the MRLs are well below the toxicologically acceptable residue levels.

If a pesticide residue is found on a given crop at or below the MRL, then the crop can be considered safe for consumer health.<sup>27</sup> On the other hand, if a residue exceeds the MRL, it is not necessarily true that the consumer is at risk. A specific assessment has to 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 risk is identified.

MRLs are established for Raw Agricultural Commodities (RAC) 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 not only to the edible parts of the plant, but also comprise inedible parts (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 provides a harmonised system for the setting of the MRL, which applies to all food commodities available in all EU Member States. This regulation covers about 500 pesticides. For pesticides not explicitly mentioned in Annexes II, III or IV<sup>28</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 commodities, the MRLs established in the MRL legislation for raw commodities are applied by taking into account changes in the levels of pesticide residues caused by processing or mixing (processing factors).

It should also be mentioned that no specific MRLs for organic products have been established at EU level. For these products the same MRLs as for conventional products apply, but additional production and labelling rules have to be respected (Regulation (EC) No 834/2007<sup>29</sup>, Regulation (EC) No 889/2008<sup>30</sup>).

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<sup>31</sup> and 2006/141/EC<sup>32</sup>.

Food business operators as defined in the Regulation (EC) No 178/2002<sup>33</sup> (“European food law”) have to ensure at all stages of production, processing and distribution that food or feed satisfies the requirements of the food law which are relevant to their activities and shall verify that such

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<sup>27</sup> In exceptional cases toxicological reference values have been lowered after the MRL has been established. In order to guarantee consumer safety, the revision of MRLs may be triggered in these specific circumstances.

<sup>28</sup> Annex IV of Regulation (EC) No 396/2005 contains those pesticides which are exempted from the setting of MRLs because of their low risk profile.

<sup>29</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. Official Journal L 189, 20.7.2007, p. 1 - 23

<sup>30</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. Official Journal L 250, 18.9.2008, p. 1 - 82

<sup>31</sup> Commission Directive 2006/125/EC of 5 December 2006 on processed cereal-based foods and baby foods for infants and young children. Official Journal L 339, 6.12.2006, p. 16 - 35

<sup>32</sup> Commission Directive 2006/141/EC of 22 December 2006 on infant formulae and follow-on formulae and amending Directive 1999/21/EC. Official Journal L 401, 20.12.2006, p. 1 - 33

<sup>33</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. Official Journal L 31, 1.2.2002, P. 1 - 21

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 only one element of control activities striving to ensure food safety at European level.

### **MRL exceedance**

Since the MRLs are closely linked to Good Agricultural Practices (GAP), MRLs might be exceeded in cases where GAP was not respected, such as

- the use of unauthorised pesticides;
- the use of pesticides not authorised for a specific crop;
- the use of an authorised pesticide on a crop for which an authorisation was granted, but not in compliance with the authorised GAP (e.g. higher application rate or shorter pre-harvest intervals).

In exceptional cases, MRL exceedances have been observed for other reasons, such as:

- spray drift from neighbouring treated fields;
- contamination of crops at storage or packaging level;
- unfavourable weather conditions resulting in a reduced residue decline rate;
- presence of naturally occurring substances which mimics the occurrence of pesticides or metabolites on food (e.g. CS<sub>2</sub> in brassica vegetables).

The lack of knowledge or correct interpretation of the EU pesticide legislation is also known to lead to situations that food imported from third countries does not comply with the legal limits.

Usually, MRLs are derived from a limited number of supervised field trials representative of the intended GAP by using statistical calculation methods. On rare occasions the use of pesticides at the critical GAP may lead to residue concentrations above the MRL because the residue trials were not sufficiently representative for the use of the pesticide under practical agricultural conditions. Careful analysis of the control data should make it possible to decide if certain MRLs need to be revised because they were set at inappropriate levels.

In the context of this report the term “MRL exceedance” refers to a situation where the legal limit is exceeded numerically, without considering measurement uncertainty. Thus, this term should not be understood as MRL non-compliance that triggers legal consequences.

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

If the residue level measured in a sample taking into account the 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. A sample is compliant with the MRL if the measured value does not exceed the MRL taking into account the measurement uncertainty.

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

As explained, the MRL is not a toxicological limit, but it is based on GAP. For the purpose of the risk assessment, EFSA introduced two new concepts: the “threshold residue level” and the “threshold MRL”.



A *threshold residue level (edible portion)* ( $TRL_{ep}$ ) is the theoretical, calculated maximum residue in the edible part of the crop which 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 unit 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 MRL or threshold residue level (raw agricultural commodity)* ( $TRL_{rac}$ ) is the threshold residue level that refers to the whole commodity, e.g. the unpeeled orange, and which 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.

### **Import Tolerance**

In Commission Regulation (EC) No 396/2008 “import tolerance” is defined as follows:

“Import tolerance” means an MRL set for imported products to meet the needs of international trade where:

- the use of the active substance in a plant protection product on a given product is not authorised in the Community for reasons other than public health reasons for the specific product and specific use; or
- a different level is appropriate because the existing Community MRL was set for reasons other than public health reasons for the specific product and specific use.

### **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 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” below). A consumer exposure is of concern if the estimated dietary exposure to a pesticide exceeds the ADI and/or the ARfD.

#### **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 on the basis of all known facts at the time of evaluation, taking into account sensitive groups within the population (e.g. children). New scientific findings may lead to a revision of an ADI.

#### **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, which can be ingested over a short period of time, usually during one day, without appreciable risk to the consumer. The ARfD is set on the basis of the data produced by appropriate toxicological studies and taking into account sensitive groups within the population (e.g. children). An ARfD is set only for active substances which have a potential acute toxicity. New scientific findings may lead to a revision of an ARfD.

### **Analytical methods**

The results of monitoring analyses are strongly influenced by the analytical methods used to analyse the samples. The analytical methods used in pesticide residue analyses have to fulfil certain criteria regarding specificity, sensitivity, precision accuracy, robustness and linearity which are defined in

guidance documents<sup>34</sup>. The sensitivity of the analytical methods and the number of different pesticides that can be detected with the analytical methods used has an impact on the number of positive findings in samples analysed. If the analytical method applied is not capable of detecting a certain pesticide active substance applied to the crop – or its toxicologically relevant metabolites or break-down products – 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 in cases where the residue occurs at a low concentration. Therefore, the results reported by reporting countries have to be considered in connection with the analytical methods used.

The analytical methods used to detect and quantify pesticide residues in food commodities 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. 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 have to be applied.

*Single-residue methods* allow 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 which cannot be detected with multi-residue methods, also single-residue methods have to be used.

#### European Reference Laboratory (EURL)

The European Reference Laboratories (EURLs), formerly called “Community Reference Laboratories” (CRLs), 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 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, which have the same liability on national level.

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

Danmarks Fødevareforskning (DFVF) Denmark	Cereals and feeding stuffs
Chemisches und Veterinäruntersuchungsamt (CVUA) Freiburg Germany	Food of animal origin and commodities with high fat content
Laboratorio Agrario de la Generalitat Valenciana (LAGV) Grupo de Residuos de Plaguicidas de la Universidad de Almería (PRRG) Spain	Fruits and vegetables, including commodities with high water and high acid content
Chemisches und Veterinäruntersuchungsamt (CVUA) Stuttgart	Single residue methods

<sup>34</sup> Method validation and quality control procedures for pesticide residues analysis in food and feed. In 2009 the valid revision of the guidance document was Document No. SANCO/3131/2007 .

Germany	
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### Limit of Quantification (LOQ)

The Limit of Quantification (LOQ) is the lowest residue concentration, which 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 or to contain very low concentrations at a level that cannot be quantified with acceptable certainty. In the present report, the term Reporting Level (see “Reporting Level” below) is also used as a synonym of the LOQ<sup>35</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, for reasons of limiting the cost of the analysis, it may be above that level, but it has to 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 chemical element) is set the RL may be set at the highest LOQ used for those components in the residue definition.

### Confidence interval (CI)

Several tables show information on the percentage of samples with residues above the MRL. The precision of the value is dependent on the sample size. To express the uncertainty of the estimation, 95% confidence intervals were calculated. The true proportion of samples lies with 95% confidence between the upper and lower confidence limits (UCL and LCL).

### Control programme

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 of “control programme”.

Typically, two control programmes are in place:

*Coordinated Community control programme (EUCP):* The European Commission prepares a specific control programme describing the pesticide/crop combinations that have to be analysed. The programme takes into account food items which are of relevance for human consumption and pesticides which are of relevance for dietary exposure because of their toxicological profile or the 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 commodities and/or pesticides which are considered 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.

### Reporting countries

All 27 Member States of the European Union have to 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. Therefore, 29 reporting countries are

<sup>35</sup> In the EU MRL legislation, the term LOD (Limit of Determination) is used instead of the term of LOQ. However, EFSA prefers using the term LOQ in order to avoid possible confusion with the term LOD that is used to indicate the Limit of Detection.

contributing to the current report. Throughout the report, these countries are referred to as EU or reporting countries.

### **Sampling methodology**

To ensure that a sample is representative of a given food lot/consignment, the sampling has to be performed according to the sampling methodology for the official control of pesticide residues as established by Commission Directive 2002/63/EC<sup>36</sup>. For most plant products the minimum size of a laboratory sample lies between one and two kilograms of the food item which have to be selected randomly from the lot or consignment subject to the sampling.

### **Sampling strategy**

The sampling strategy is the approach used to select the units of the target population subject to control. 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 was used to distinguish between more or less targeted sampling.

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

*Enforcement sampling:* samples are taken if there is 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 Appendix II to the present report, more details on the general sampling strategies applied at national level are reported.

### **Import control**

Article 15 of Regulation (EC) No 882/2004 lays down 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 multi-annual national control plan. These controls shall be carried out at appropriate places, including the point of entry of the goods into one of the territories.

In addition, for some specific commodities imported from third countries, Commission Regulation (EC) No 669/2009<sup>37</sup>, which entered into force on 15 January 2010, lays down rules concerning the increased level of official controls to be carried out at the points of entry into the territories on imports of the food of non-animal origin. In Annex I of the mentioned Regulation, the pesticide/commodity combinations and the frequencies of controls at the point of entry are listed. In 2009, no specific provisions for import control were in place yet.

### **Quality assurance**

All laboratories performing analysis of pesticide residues in food have to be accredited to certain standards (Regulation (EC) No 882/2004). However, until 31 December 2009, these analyses could

<sup>36</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. Official Journal L 187, 16.7.2002, p. 30 - 43

<sup>37</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. Official Journal L 194, 25.7.2009, p. 11 - 21

also be carried out by non-accredited laboratories, provided that the laboratories had initiated the accreditation procedures, and that quality control schemes were in place (Commission Regulation (EC) No 2076/2005<sup>38</sup>).

Commission Regulation (EC) No 1213/2008 requires Member States to provide information about the details of accreditation 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 contributing to the control programme to provide the accreditation certificates.

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

If control activities identify samples with pesticide concentrations which are of concern for consumer health (e.g. the estimated short-term intake is higher than the acute reference dose (ARfD) for the substance found), Member States have to inform the other Member States and the European Commission via the Rapid Alert System for Food and Feed (RASFF).

Thus, the RASFF ensures that relevant information is shared among all members of the RASFF (EU Member States, Commission, EFSA and Norway, Liechtenstein and Iceland) without delays. The European Commission has provided the RASFF portal database as a search tool, where information of RASFF-notifications is published<sup>39</sup>.

### **Third countries**

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

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<sup>38</sup> Commission Regulation (EC) No 2076/2005 of 5 December 2005, laying down transitional arrangements for the implementation of Regulations (EC) No 853/2004, (EC) No 854/2004 and (EC) No 882/2004 of the European Parliament and of the Council and amending Regulations (EC) No 853/2004 and (EC) No 854/2004. Official Journal L 338, 22.12.2005, p. 83 - 88

<sup>39</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)

## 2. Design and background of the control programmes

To fulfil the requirements of Regulation (EC) No 882/2004 and Regulation (EC) No 396/2005, EU Member States perform official controls to ensure the compliance of feed and food samples with regard to the pesticide MRL legislation.

Typically, in each European reporting country, two control programmes are in place: a national control/monitoring programme (designed by each country individually) and a coordinated multiannual Community control programme which gives clear guidance which specific control activities should be performed by the Member States (see “Background information - glossary”).

### 2.1. EU-coordinated programme (EUCP)

The **EU-coordinated programme** aims to provide statistically representative data regarding pesticide residues in food available to European consumers. The lots sampled should be 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 compliance 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 establishment of a coordinated community programme was initiated in 1996. Since then, the number of participating reporting countries has increased; in 1996, 15 EU Member States and one EFTA State (Norway) reported their control results, whereas in 2009 the number of participating countries was 29: 27 EU Member States and two EFTA countries (Norway and Iceland) who have signed the Agreement on the European Economic Area (EEA agreement). Over time, the programme was also extended with regard to the number of samples, the food commodities and the active substances to be analysed each monitoring year.

The coordinated control programme for 2009 is laid down in Commission Regulation (EC) No 1213/2008.

#### 2.1.1. Food commodities analysed

The major components of the European diet (food of plant origin) are represented by 20 to 30 food products. Monitoring the pesticide residues in these commodities should provide a representative basis for the estimation of the exposure to pesticide residues in food of European consumers. In view of the resources available at national level, participating countries focus on the sampling and analysis of eight to nine products each year, which are tested in a three-year cycle, covering in total the major food items. Food commodities (see “Background information - glossary”) to be analysed in 2009, 2010 and 2011 in the framework of the EU-coordinated programme are shown in Table 2-1. For the first time food of animal origin (butter, chicken eggs) was included into the coordinated control programme in 2009.

Figure 2-1 shows the consumption of food commodities included in the EU-coordinated residue control programme for 2009, 2010 and 2011 in comparison to the total food consumption<sup>40</sup>. The food consumption data were retrieved from national food consumption surveys either for the whole population, adults, children or selected consumer groups (e.g. vegetarians) or other sources of

<sup>40</sup> The total food consumption for the different diets is expressed as unprocessed food and contains only food of plant origin. Food of animal origin was not included in the calculation of the total consumption, because the level of details reported are not comparable.

information suitable to conclude on the food habits of the European population such as food balance sheets (e.g. WHO diets). The data regarding the national food consumption were submitted to EFSA in the framework of the development of the EFSA PRIMo (Pesticide Residue Intake Model) and the details of the diet in each Member State can be found in the EFSA report on temporary MRLs (EFSA, 2007). It should be noted that not all participating countries had submitted food consumption data to EFSA at that time and therefore are not represented in the graph.

**Table 2-1:** EUCP - Food commodities to be monitored in the calendar years 2009, 2010 and 2011.

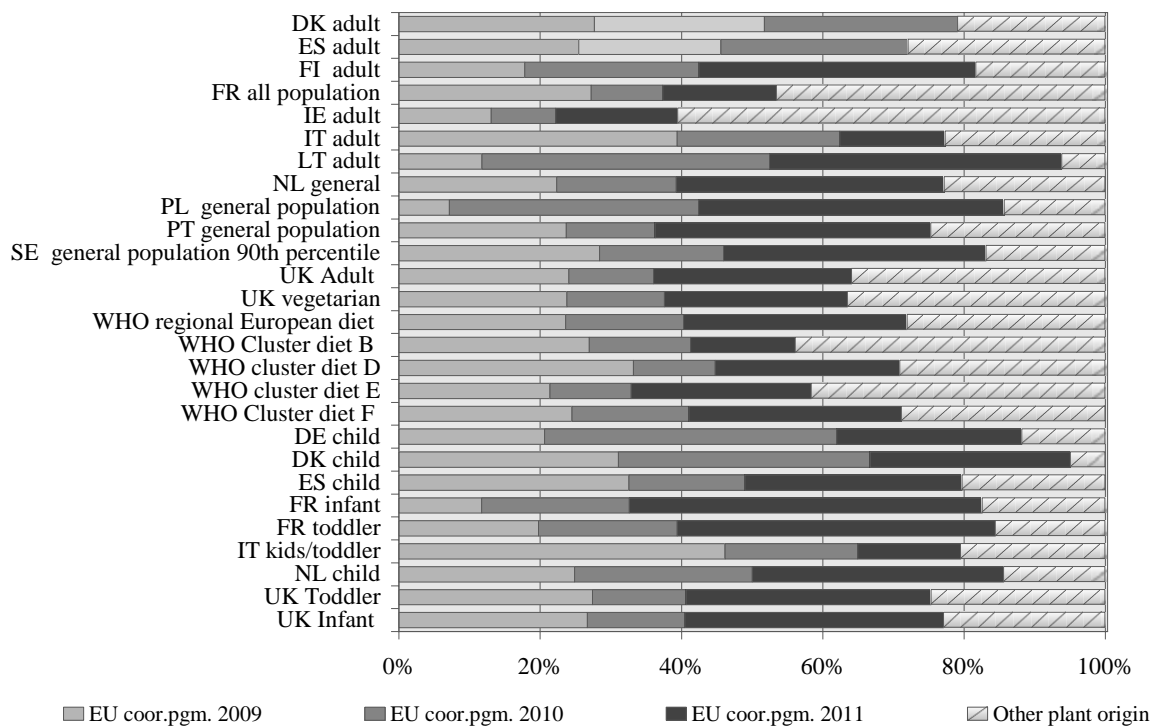
2009	2010	2011
Aubergines	Apples	Beans with pods <sup>(a)</sup>
Bananas	Head cabbage	Carrots
Butter	Leek	Cucumbers
Cauliflower	Lettuce	Poultry meat
Egg	Milk	Liver <sup>(d)</sup>
Orange juice <sup>(b)</sup>	Peaches <sup>(c)</sup>	Oranges or mandarins
Peas without pods <sup>(a)</sup>	Rye or oats	Pears
Peppers (sweet)	Strawberries	Rice
Table grapes	Swine meat	Potatoes
Wheat	Tomatoes	Spinach <sup>(a)</sup>

(a): Fresh or frozen

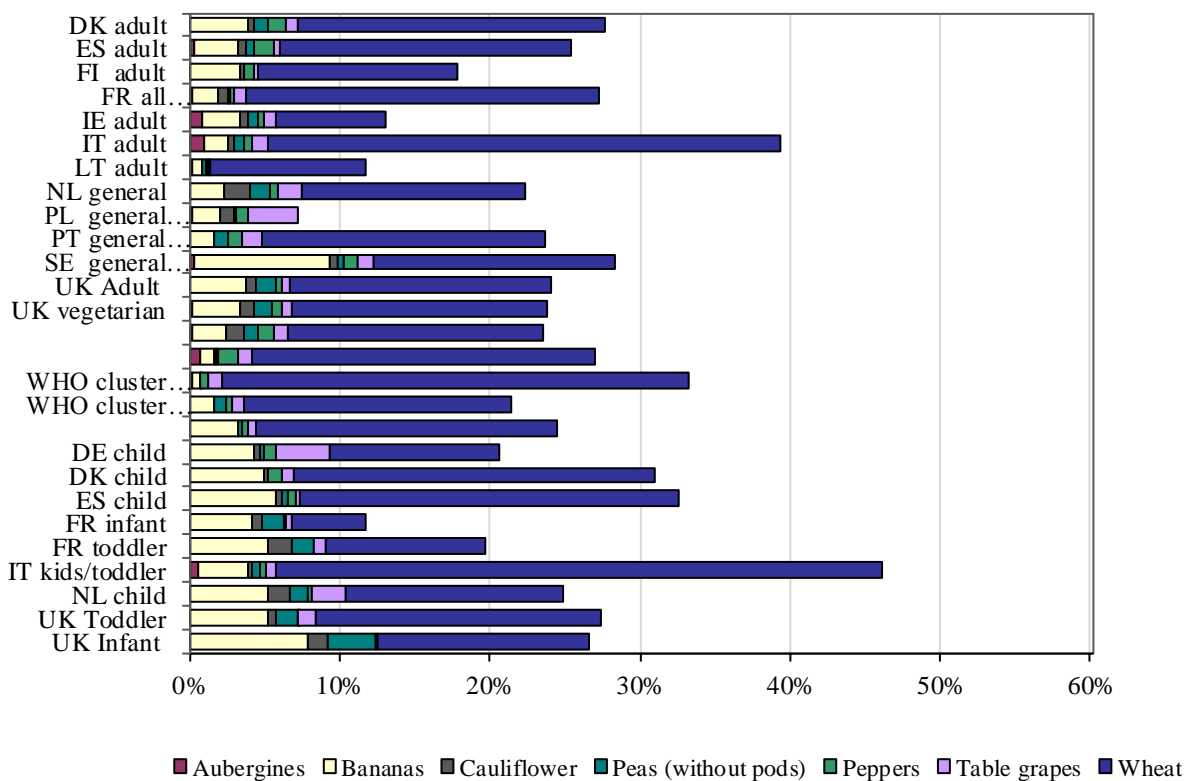
(b): For orange juice, reporting countries shall specify the source (concentrate or fresh fruits)

(c): Peaches including nectarines and similar hybrids

(d): bovine and other ruminants, swine and poultry



**Figure 2-1:** EUCP - Contribution of the commodities covered by the coordinated control programmes to the total food intake (excl. orange juice, animal products and sugar beet).



**Figure 2-2:** EUCP - Contribution of the commodities covered by the coordinated control programme 2009 to the total food intake (excl. orange juice, products of animal origin and sugar beet).



Figure 2-2 shows the individual contributions of the food items included in the 2009 programme for the above mentioned European diets.

From this analysis it can be seen that the crops (aubergines, bananas, cauliflower, peas without pods, peppers, table grapes, wheat) selected for the 2009 control programme represented 7% to 46% of the total dietary daily intake of products of plant origin, whereas the total contribution of the crops to be monitored in the three years cycle range from 39% to 95% of the diets. These data demonstrate that the food items selected are representative of the total food consumption of European consumers and can therefore be used for the assessment of dietary exposure to pesticide residues via food.

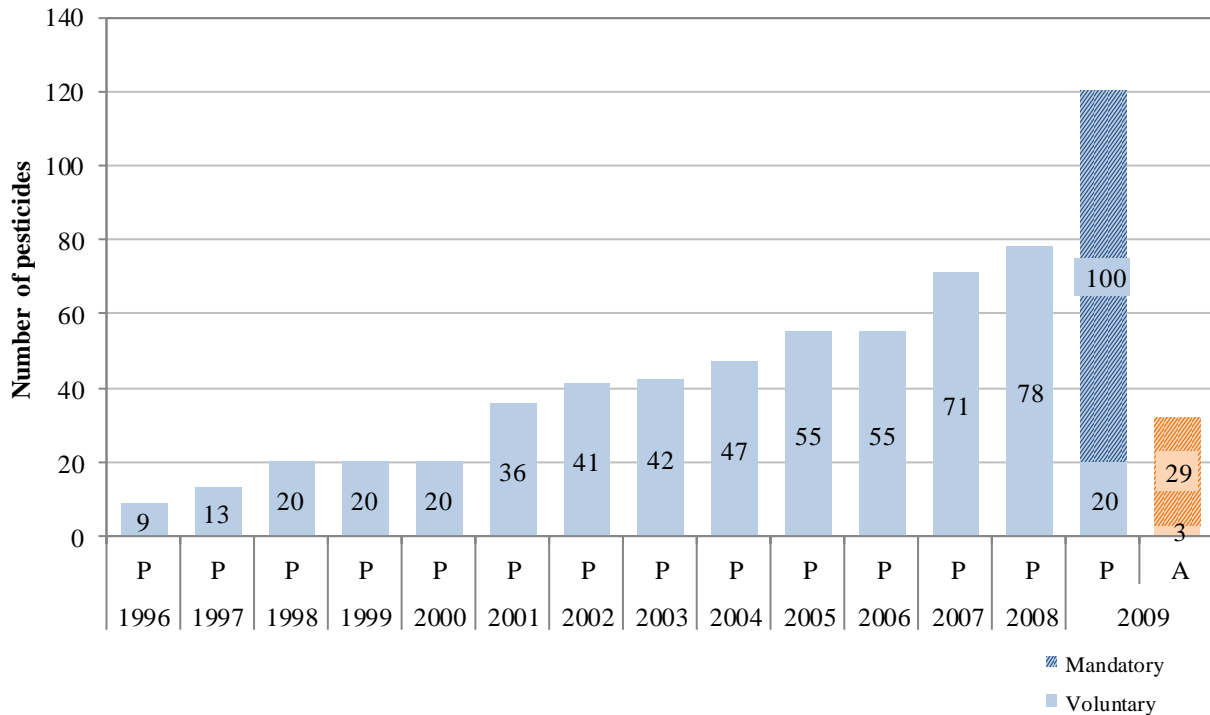
### 2.1.2. Pesticides analysed

Pesticides (including the relevant metabolites as specified in the enforcement residue definition (see “Background information – glossary”)) which were included in the 2009 EU-coordinated programme for food of plant origin (120 pesticides, 100 of them were mandatory) and for food of animal origin (in total 32 pesticides, 29 thereof mandatory) are listed in Table 2-2<sup>41</sup>. The pesticide list has been extended substantially since the start of the coordinated control programme in 1996, where only 9 pesticides were included in the programme (Figure 2-3). For the monitoring years 1996 to 2008 the Member States were invited to take samples and analyse for the product/pesticide residue combinations set out in Commission recommendations. As a result, the analysis of the pesticides listed in these combinations is considered as voluntary. Starting from the monitoring year 2009, the Member States participation to the EU-coordinated programme became compulsory. However, the analysis of certain pesticides was to be carried out on a voluntary basis.

It should be noted that for all pesticides analysed in 2009 fully harmonised EU MRLs were in place on 1 January 2009. For two pesticides (cadusafos, dichlofluanid) the default MRL of 0.01 mg/kg, as laid down in Article 18(1) (b) of Regulation (EC) No 396/2005, is applicable<sup>42</sup>.

<sup>41</sup> Due to the EEA Decision 127/2009 Iceland may continue during 2009, 2010 and 2011 to analyse for the same 61 pesticides as monitored in food on its market in 2008.

<sup>42</sup> EFTA 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 Iceland and Norway is delayed in comparison to the application data in the Member States.



**Figure 2-3:** EUCP - Number of pesticides (residue definitions) included in the coordinated control programmes 1996-2009 (P = pesticides to analysed in products of **plant origin**, A = pesticides to analysed in products of **animal origin**).

**Table 2-2:** EUCP - List of pesticides included in the 2009 EU-coordinated programme

Pesticide	Residue definition according to Regulation (EC) No 396/2005 on EU MRLs <sup>(a)</sup>	Sample matrix <sup>(b)</sup>	not mandatory 2009 <sup>(c)</sup>
Abamectin	sum of avermectin B1a, avermectin B1b and delta-8,9 isomer of avermectin B1a	P, A	
Acephate		P	
Acetamiprid		P	
Aldicarb	sum of aldicarb, its sulfoxide and its sulfone, expressed as aldicarb	P	
Aldrin and Dieldrin	aldrin and dieldrin combined expressed as dieldrin	A	
Amitrole		P	X
Azinphos-ethyl		A	X
Azinphos-methyl		P	
Azoxystrobin		P	
Benfuracarb		P	X
Bifenthrin		P, A	
Boscalid		P	
Bromopropylate		P	
Bromuconazole	sum of diastereoisomers	P	X
Bupirimate		P	
Buprofezin		P	
Cadusafos		P	X
Camphechlor	sum of parlar No 26, 50 and 62 <sup>(d)</sup>	A	X
Captan <sup>(e)</sup>		P	
Carbaryl		P	
Carbendazim and Benomyl	sum of benomyl and carbendazim expressed as carbendazim	P	

Pesticide	Residue definition according to Regulation (EC) No 396/2005 on EU MRLs <sup>(a)</sup>	Sample matrix <sup>(b)</sup>	not mandatory 2009 <sup>(c)</sup>
Carbofuran	sum of carbofuran and 3-hydroxycarbofuran expressed as carbofuran	P	
Carbosulfan		P	X
Chlordane	sum of cis- and trans-isomers and oxychlordane expressed as chlordane	A	
Chlorfenvinphos		P	
Chlormequat		P	X* <sup>(f)</sup>
Chlorobenzilate		A	X
Chlorothalonil		P	
Chlorpropham <sup>(g)</sup>	chlorpropham and 3-chloroaniline expressed as chlorpropham	P	
Chlorpyrifos		P, A	
Chlorpyrifos-methyl		P, A	
Clofentezin <sup>(h)</sup>	sum of all compounds containing the 2-Chlorbenzoyl-moiety expressed as clofentezin	P	
Cyfluthrin	cyfluthrin incl. other mixtures of constituent isomers (sum of isomers)	P, A	
Cypermethrin	cypermethrin incl. other mixtures of constituent isomers (sum of isomers)	P, A	
Cyproconazole		P	X
Cyprodinil		P	
DDT	sum of p,p'-DDT, o,p'-DDT, p-p'-DDE and p,p'-DDD (TDE) expressed as DDT	A	
Deltamethrin (cis-deltamethrin)		P, A	
Diazinon		P	
Dichlofluanid		P	
Dichlorvos		P	
Dicofol	sum of p,p' and o,p' isomers	P	
Difenoconazole		P	
Dimethoate	sum of dimethoate and omethoate expressed as dimethoate	P	
Dimethomorph		P	
Diphenylamine		P	
Dithiocarbamates	dithiocarbamates expressed as CS <sub>2</sub> , including maneb, mancozeb, metiram, propineb, thiram and ziram	P	
Endosulfan	sum of alpha- and beta-isomers and endosulfan-sulphate expressed as endosulfan	P, A	
Endrin		A	
Ethion		P	
Ethoprophos		P	X
Fenamiphos	sum of fenamiphos and its sulphoxide and sulphone expressed as fenamiphos	P	X
Fenarimol		P	
Fenbuconazole		P	X
Fenhexamid		P	
Fenitrothion		P	
Fenoxycarb		P	
Fenpropathrin		P	X
Fenthion	sum of fenthion and its oxigen analogue, their sulfoxides and sulfone expressed as parent	A	
Fenvalerate and Esfenvalerate	sum of RS/SR and RR/SS isomers	A	
Fipronil	sum of fipronil and sulfone metabolite (MB46136)	P	

Pesticide	Residue definition according to Regulation (EC) No 396/2005 on EU MRLs <sup>(a)</sup>	Sample matrix <sup>(b)</sup>	not mandatory 2009 <sup>(c)</sup>
	expressed as fipronil		
Fludioxonil		P	
Flufenoxuron		P	
Fluquinconazole		P	X
Flusilazole		P	
Flutriafol		P	X
Folpet <sup>(e)</sup>		P	
Formetanate	sum of formetanate and its salts expressed as formetanate(hydrochloride)	P	
Fosthiazate		P	X
Heptachlor	sum of heptachlor and heptachlor epoxide expressed as heptachlor	A	
Hexachlorbenzene		A	
Hexachlorocyclohexane (HCH), Alpha-Isomer		A	
Hexachlorocyclohexane (HCH), Beta-Isomer		A	
Hexaconazole		P	
Hexythiazox		P	
Imazalil		P	
Imidacloprid		P	
Indoxacarb	indoxacarb as sum of the isomers S and R	P	
Iprodione		P	
Iprovalicarb		P	
Kresoxim-methyl		P	
Lambda-Cyhalothrin		P	
Lindane	Gamma-isomer of hexachlorocyclohexane (HCH)	A	
Linuron		P	
Malathion	sum of malathion and malaoxon expressed as malathion	P	
Mepanipyrim	mepanipyrim and its metabolite (2-anilino-4-(2-hydroxypropyl)-6-methylpyrimidine) expressed as mepanipyrim	P	
Mepiquat		P	X* <sup>(f)</sup>
Metalaxyl and metalaxyl-M	metalaxyl incl. mixtures of constituent isomers incl. Metalaxyl-M Sum of isomers)	P	
Metconazole		P	X
Methamidophos		P	
Methidathion		P, A	
Methiocarb	sum of methiocarb and methiocarb-sulfoxide and sulfone, expressed as methiocarb	P	
Methomyl and thiodicarb	sum of methomyl and thiodicarb expressed as methomyl	P	
Methoxychlor <sup>(i)</sup>		A	
Monocrotophos		P	
Myclobutanil		P	
Oxamyl		P	
Oxydemeton-methyl	sum of oxydemeton-methyl and demeton-S-methylsulfone expressed as oxydemeton-methyl	P	
Paclobutrazole		P	X
Parathion		P, A	
Parathion-methyl	sum of parathion-methyl and paraoxon-methyl expressed as parathion-methyl	P, A	
Penconazole		P	

Pesticide	Residue definition according to Regulation (EC) No 396/2005 on EU MRLs <sup>(a)</sup>	Sample matrix <sup>(b)</sup>	not mandatory 2009 <sup>(c)</sup>
Permethrin	Sum of isomers	A	
Phosalone		P	
Phosmet	phosmet and phosmet oxon expressed as phosmet	P	
Phoxim		P	X
Pirimicarb	sum of pirimicarb and desmethylpirimicarb expressed as pirimicarb	P	
Pirimiphos-methyl		P, A	
Prochloraz	sum of prochloraz and its metabolites containing the 2,4,6-trichlorophenol moiety expressed as prochloraz	P	
Procymidone		P	
Profenofos		P, A	
Propamocarb	sum of propamocarb and its salt expressed as propamocarb	P	
Propargite		P	
Prothioconazole	prothioconazole (prothioconazole-desthio)	P	X
Pyrazophos		A	
Pyridaben		P	
Pyrimethanil		P	
Pyriproxyfen		P	
Quinoxifen		P	
Resmethrin	resmethrin including other mixtures of constituent isomers (sum of isomers)	A	
Spiroxamine		P	
Tebuconazole		P	
Tebufenozide		P	
Tebufenpyrad		P	
Teflubenzuron		P	
Tefluthrin		P	X
Tetradifon		P	
Thiabendazole		P	
Thiacloprid		P	
Thiophanate-methyl		P	
Tolcloflos-methyl		P	
Tolyfluanid	sum of tolyfluanid and dimethylaminosulfotoluidide expressed as tolyfluanid	P	
Triadimefon and triadimenol	sum of triadimefon and triadimenol	P	
Triazophos		P, A	
Trichlorfon		P	X
Trifloxystrobin		P	
Triticonazole		P	X
Vinclozolin	sum of vinclozolin and all metabolites cont. the 3,5-dichloraniline moiety, expressed as vinclozolin	P	

- (a): If not specifically mentioned the residue definition comprises the parent compound only.
- (b): P = plant products, A = animal products
- (c): X = not mandatory, X\*= mandatory only for certain commodities
- (d): Camphechlor Sum of the three indicator compounds Parlar No 26, 50 and 62, where:
  - Parlar No 26 = 2-endo,3-exo,5-endo,6-exo,8,8,10,10-octachlorobornane
  - Parlar No 50 = 2-endo,3-exo,5-endo,6-exo,8,8,9,10,10-nonachlorobornane
  - Parlar No 62 = 2,2,5,5,8,9,9,10,10,-nonachlorobornane
- (e): Captan or Folpet: for some commodities residue definition: Sum of captan and folpet
- (f): Chloromequat and mepiquat shall be analysed in cereals (excluding rice), carrots, fruiting vegetables and pears.
- (g): Chlorpropham: residue definition for plant products with exemption of potatoes (chlorpropham only)
- (h): Clofentezine: residue definition only for cereals, otherwise parent compound only
- (i): Regulation (EC) No 1213/2008 requires the analysis of 4,4'-methoxychlor. Since 4,4'-methoxychlor is neither an active substance nor a residue definition, it is assumed that entry is misspelled and should refer to methoxychlor.

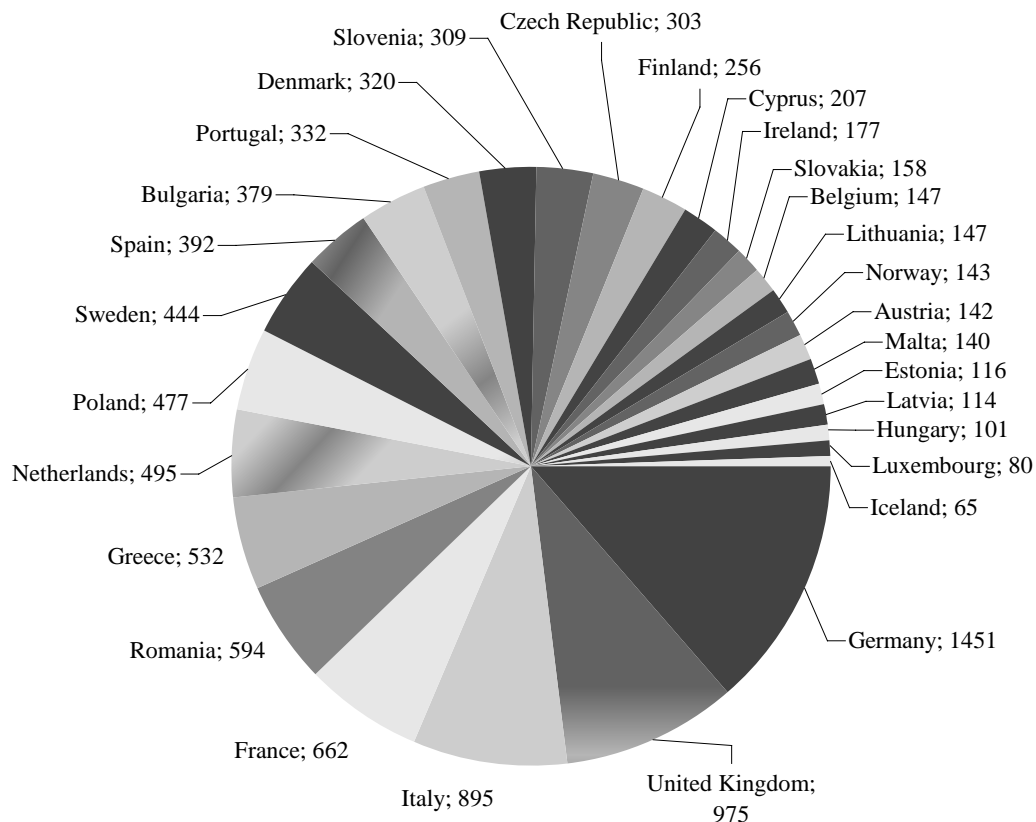
### 2.1.3. Number of samples

The control programme in Regulation (EC) No 1213/2008 defines the minimum number of samples to be analysed in the framework of the 2009 EU-coordinated programme, varying from 12 or 15 to 93 samples per product depending on the population of the Member State (see Table 2-3). The minimum total number of samples per commodity required to obtain representative results at EU level was calculated to be 642 samples<sup>43</sup>; a representative proportion of this figure was then assigned to the Member States taking into account the population per reporting country.

It should be noted that the calculation of the number of samples was based on the number of reporting countries of some years ago. Since the number of reporting countries has increased in the meantime, a recalculation of the total number of necessary samples and the sample distribution should be considered. EFSA therefore recommends re-evaluating the statistical basis for the number of samples taken by the reporting countries and developing an updated sampling plan regarding the number of samples per commodity and the assignment of a minimum sample number for each reporting country.

A total number of 10,553 samples of 10 different commodities were analysed in the 2009 EU-coordinated pesticide control programme (Figure 2-4).

<sup>43</sup> The total number of samples to be analysed was derived on the basis of a binomial probability distribution, which estimated that the examination of 642 samples allows with a certainty of more than 99%, the detection of a sample containing pesticide residues above the limit of determination (LOD), provided that no less than 1% of products of plant origin contain residues above that limit. According to Regulation (EC) No 1213/2008 the collection of these samples should be apportioned between Member States on the basis of population and consumer numbers, with a minimum of 12 samples per product and per year.



**Figure 2-4:** EUCP - Number of surveillance samples taken by reporting countries in the coordinated programme 2009 (total number of samples: 10,553).

Table 2-3 also gives an overview of the actual number of samples taken by each reporting country for each commodity.

**Table 2-3: EUCP - Number of samples taken by each reporting country for the 2009 EU programme by commodity.**

Country	Minimum number of samples per commodity	Actual number of samples taken									
		Aubergines	Bananas	Butter	Cauliflower	Chicken eggs	Orange juice	Peas (without pods)	Peppers	Table grapes	Wheat
Austria	12/15*	14	15	14	15	13	15	14	15	14	13
Belgium	12/15*	15	15	15	15	15	15	14	15	14	14
Bulgaria	12/15*	39	35	0	38	0	29	40	65	32	101
Cyprus	12/15*	27	27	4	15	29	11	27	28	27	12
Czech Republic	12/15*	19	58	15	19	15	29	17	53	32	46
Denmark	12/15*	21	56	0	4	0	12	0	64	77	86
Estonia	12/15*	15	15	15	12	8	15	0	16	15	5
Finland	12/15*	24	20	0	24	15	16	22	54	43	38
France	66	79	109	0	54	0	50	40	84	83	163
Germany	93	190	190	68	163	65	96	191	203	204	81
Greece	12/15*	75	26	16	24	21	21	20	149	156	24
Hungary	12/15*	13	19	0	14	0	0	0	16	13	26
Iceland	12/15*	8	17	0	10	0	0	0	15	15	0
Ireland	12/15*	15	16	15	15	16	18	13	17	23	29
Italy	65	102	121	5	67	9	33	55	132	195	176
Latvia	12/15*	11	12	14	13	12	12	8	9	11	12
Lithuania	12/15*	15	15	16	15	12	12	17	15	15	15
Luxembourg	12/15*	13	12	0	8	15	15	1	13	3	0
Malta	12/15*	15	15	15	17	16	15	15	16	16	0
Netherlands	17	39	48	24	43	25	0	2	145	145	24
Norway	12/15*	15	15	0	17	15	15	15	16	15	20
Poland	45	50	50	50	51	53	49	50	49	25	50
Portugal	12/15*	46	52	0	50	0	35	46	50	45	8
Romania	17	45	109	0	30	0	4	22	151	134	99
Slovakia	12/15*	30	15	15	16	11	15	10	16	15	15
Slovenia	12/15*	29	15	15	42	15	15	51	71	31	25
Spain	45	40	80	21	37	41	22	29	72	44	6
Sweden	12/15*	27	50	27	21	30	14	19	34	70	152
United Kingdom	66	72	96	109	72	108	72	72	150	152	72
<b>Total</b>		<b>1103</b>	<b>1323</b>	<b>473</b>	<b>921</b>	<b>559</b>	<b>655</b>	<b>810</b>	<b>1733</b>	<b>1664</b>	<b>1312</b>

\* A minimum of 12 samples has to be taken if a single residue method has to be applied. Otherwise (i.e. multi residue methods) 15 samples are the minimum.



It should be noted that 5 commodities (butter, chicken eggs, orange juice, peas without pods and wheat) fell short of being analysed by all reporting countries. Results on butter and eggs were not reported by 10 and 7 countries, respectively. For these two commodities the minimum number of samples required to obtain representative results at EU level (642 samples) was not reached.

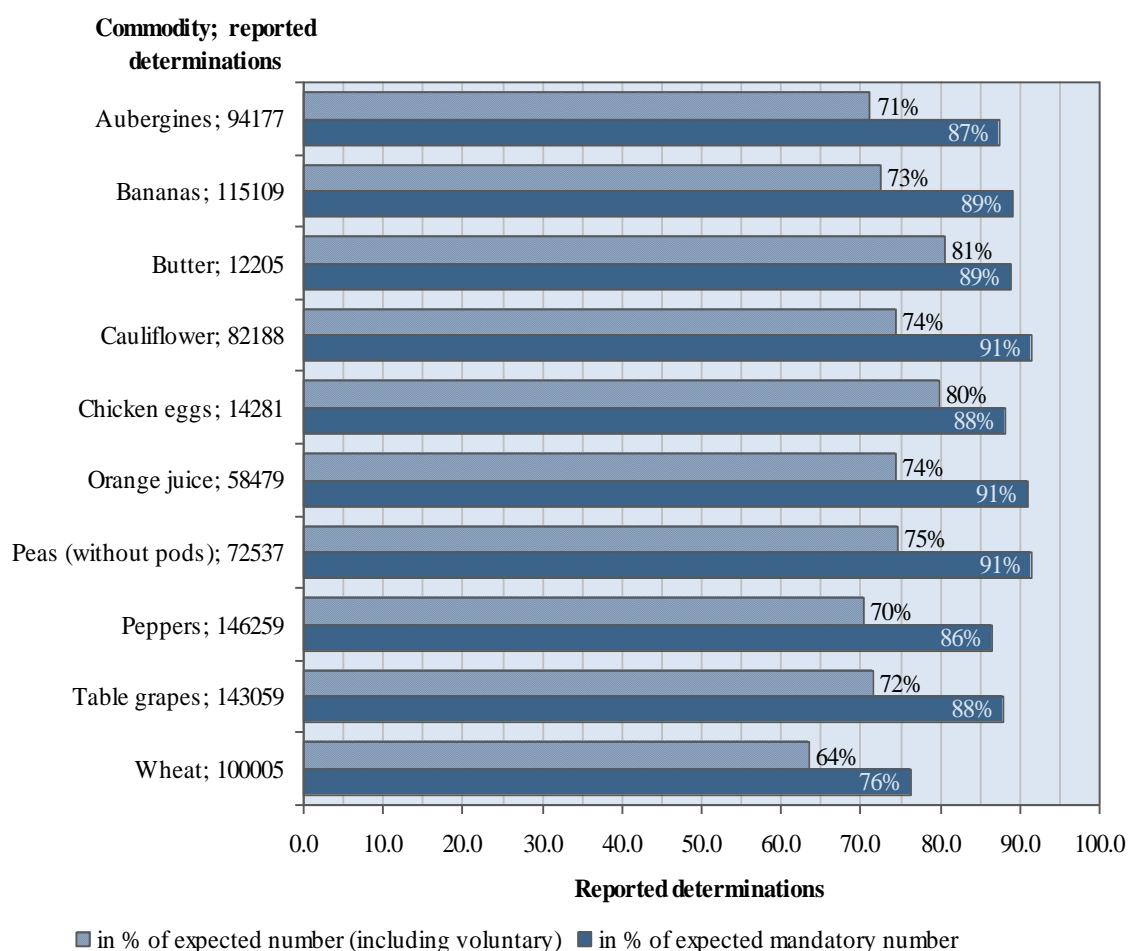
For the other food commodities, most Member States fulfilled or even considerably exceeded the required number of samples.

EFSA also noted that the number of determinations reported (838,299) does not correspond to the number of expected determinations calculated for the 10,553 samples reported under the coordinated programme, considering the number of pesticides that should be analysed on these samples. In other words, not all samples were analysed for all pesticides included in the control programme (Table 2-4). Figure 2-5 presents the actually reported determinations in percent of the expected number of determinations which ranged from 76% to 91%. From this figure it is noted that the commodity for which the lowest percentage of determinations were reported was wheat. Analysing the results for the individual pesticides separately, it became evident that 28 pesticides were analysed in less than 50% of the samples, 48 in less than 60% of the samples. These are mainly substances which can only be analysed with single-residue methods and are considered to be very resource consuming.

**Table 2-4:** EUCP – Pesticides which were analysed in less than 50% of samples

Compound	Not mandatory	Expected number of determinations	Actual determinations (in % of expected number of determinations)
Amitrole		9521	4.8%
Methoxychlor		1032	14.3%
Camphchlor (sum animal products)		1032	19.6%
Fipronil (sum)		9521	23.4%
Formetanate (sum)		9521	24.5%
Phoxim	X	9521	24.8%
Prothioconazole	X	9521	26.0%
Abamectin (sum)		10553	28.9%
Benfuracarb	X	9521	29.0%
Fenamiphos (sum)	X	9521	29.4%
Mepiquat	X	4148	30.8%
Chlormequat	X	4148	31.4%
Fosthiazate	X	9521	31.8%
Fenthion (sum)		1032	35.2%
Chlorpropham (sum)		9521	35.7%
Vinclozolin (sum)		9521	36.2%
Carbosulfan	X	9521	40.3%
Paclobutrazol	X	9521	40.9%
Tefluthrin	X	9521	41.8%
Propamocarb (sum)		9521	42.5%
Triticonazole	X	9521	42.6%
Dithiocarbamates		9521	42.6%
Trichlorfon	X	9521	42.7%
Fenvalerate/esfenvalerate (sum)		1032	42.8%
Chlordane (sum animal products)		1032	46.0%
Flutriafol	X	9521	46.4%
Prochloraz (sum)	X	9521	46.7%
Bromuconazole (sum)	X	9521	49.5%

In order to allow the comparison of results reported by the reporting countries it is important that Member States analyse the samples for the full scope of mandatory pesticides as defined in the monitoring regulation. If reporting countries fail to meet this requirement, general conclusions on the situation in reporting countries are impeded or biased<sup>44</sup>. The possibility to include certain pesticides as non-mandatory in the monitoring programme hampers the comparability of results and leads to situations where the number of results reported might not be sufficient to draw statistically valid conclusions. EFSA therefore recommends evaluating the reasons why not all substances were analysed by the laboratories in the reporting countries. If analytical problems were encountered in the laboratories concerned, the EU Reference Laboratories for pesticide residues should be consulted to provide support in establishing analytical methods covering all substances foreseen in the coordinated multiannual control programme. It is also recommended to reconsider the policy to leave certain pesticides as non-mandatory.



**Figure 2-5:** EUCP - Number of actual reported determinations, expressed as a percentage of the expected number of determinations for each commodity for the coordinated programme 2009.

<sup>44</sup> It is noted that enforcement laboratories face several problems impeding them to fulfill the legal obligations. For example, validated analytical methods applicable to all commodity types are not always available. The current legislation requires that companies applying for authorisations for pesticides have to provide analytical methods only for the crops for which uses of a pesticide are requested. In addition, the lack of analytical standards, in particular for metabolites included in the residue definition cause problems for enforcement laboratories. Because of limited budgetary resources analytical laboratories are also forced to limit the number of samples analysed with expensive single-methods.

## 2.2. National programmes

The official controls carried out at national level within the framework of the **national control programmes** are 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 have to define their priorities regarding the design of the national control programmes for pesticide residues in food (see Appendix II).

In designing their national control plans, the reporting countries typically take into account the following factors:

- Importance of a commodity in national food consumption;
- Food commodities with high residues/non-compliance rates in previous years;
- Food consumed fresh or in processed form;
- Balance of organic/conventional production;
- Origin of food: domestic, EU or third countries;
- Sampling at different marketing levels: farm gates, wholesalers, retailers, processing industry, schools or restaurants;
- Seasonal availability of food commodities;
- Crops with high RASFF notification rate;
- Food for sensitive groups of the population, e.g. baby food;
- Geographic representatives for the reporting country/cultivation area;
- Food produced by producers with non-compliance 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;
- Pesticides notified in the RASFF
- Toxicity of the active substances;
- Cost of the analysis: single methods/multiple methods;
- Capacity of laboratories.

More details on the design of the national control programmes are reported in Appendix II of the current report. The number of samples and the analytical scope of the analysis performed by the participating countries are strongly determined by national budgets. Thus, reporting countries have to focus on the specific aspects which are considered most relevant for their national control activities. These results are of value for assessing the MRL compliance at national level; however, due to the

variability of the programme designs, the comparison of results from different reporting countries needs to take into account the different focuses of the national programmes.

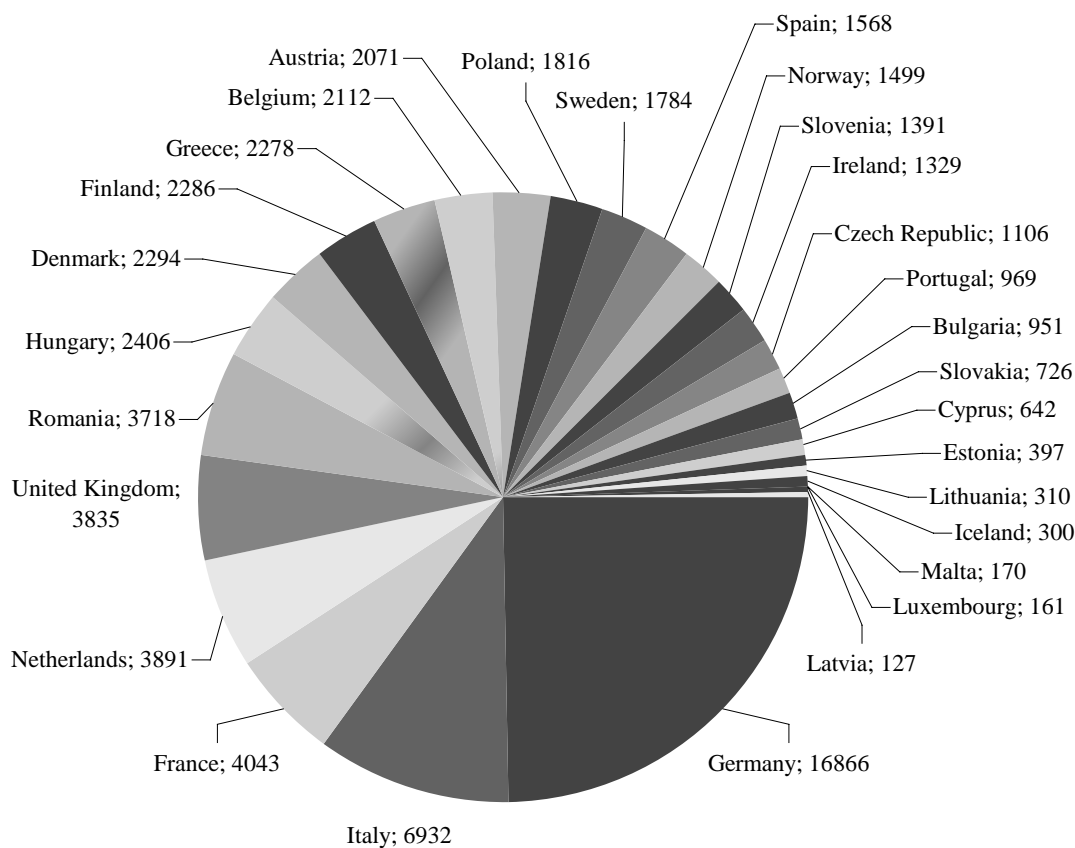
### 2.2.1. Number of samples – national programmes

The total number of samples taken in the context of the national programmes in 2009 was 67,978<sup>45</sup>, (Table 2-5). Compared to the previous year, this is a decrease of 3.1%.

**Table 2-5:** EU+NCP - Number of samples in 2009 by programme type and sampling strategy.

Programme	Enforcement	Surveillance	Total
EU coordinated	-	10553	10553
National	1428	55997	57425
<b>Total</b>	<b>1428</b>	<b>66550</b>	<b>67978</b>

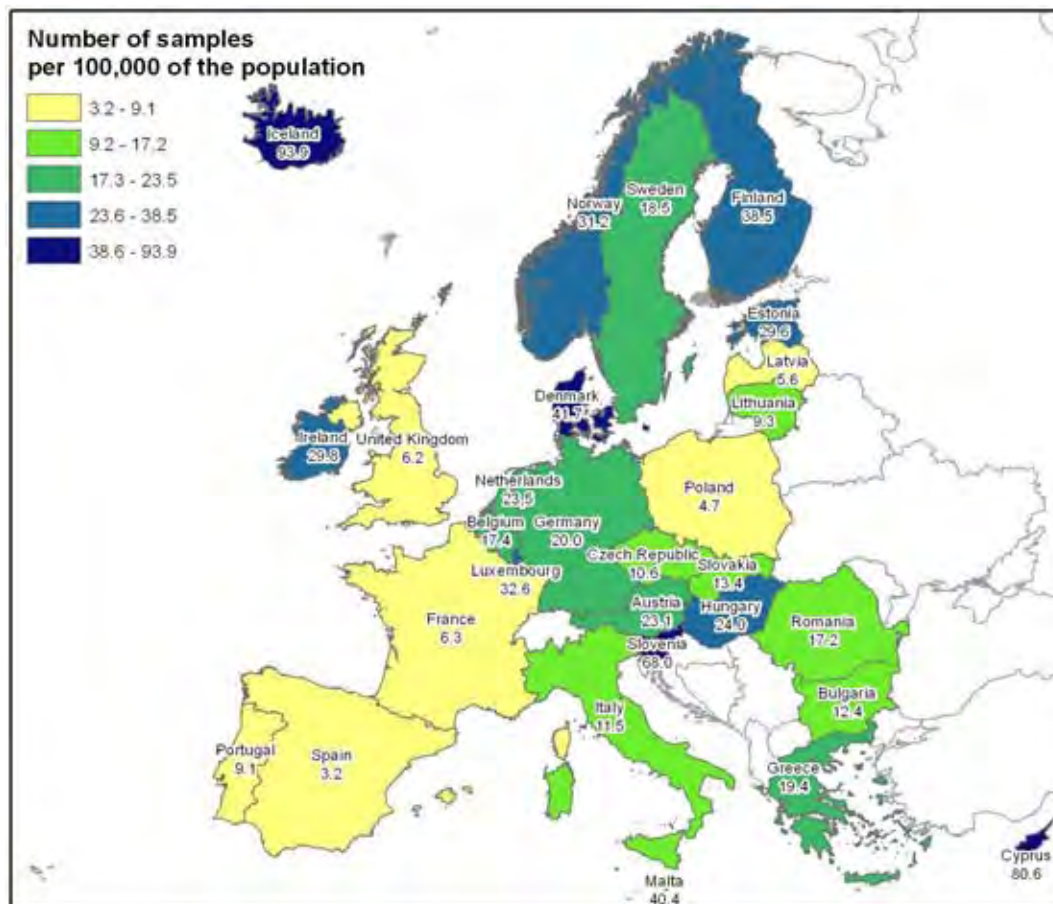
In Figure 2-6 the distribution of the total samples taken among the reporting countries is displayed.



**Figure 2-6:** EU+NCP - Total number of samples taken in 2009 by each reporting country (surveillance and enforcement).

The number of samples taken by the participating countries, normalised by the population, is depicted in Map 2-1.

<sup>45</sup> This figure also comprises the number of samples taken for the EU-coordinated programme since in many countries these samples were analysed for a wider range of active substances than defined in the coordinated programme and therefore belong to both programmes, the national and the EU-coordinated programme.



**Map 2-1:** EU+NCP - Number of surveillance samples taken in 2009 by each reporting country normalised by the national population<sup>46</sup>.

Depending on the sampling strategy applied, the national programmes are classified as either surveillance or enforcement programmes (see “Background information - glossary”).

In the **surveillance programmes**, samples are taken without any particular suspicion towards a specific producer and/or consignment. The EU-coordinated control programme is an example of a surveillance programme. However, the national surveillance programmes are in most cases more targeted to achieve the objectives defined in the national control programmes and are therefore already focussed on specific pre-selected food products and countries, but the selection of the consignment/lot is randomised.

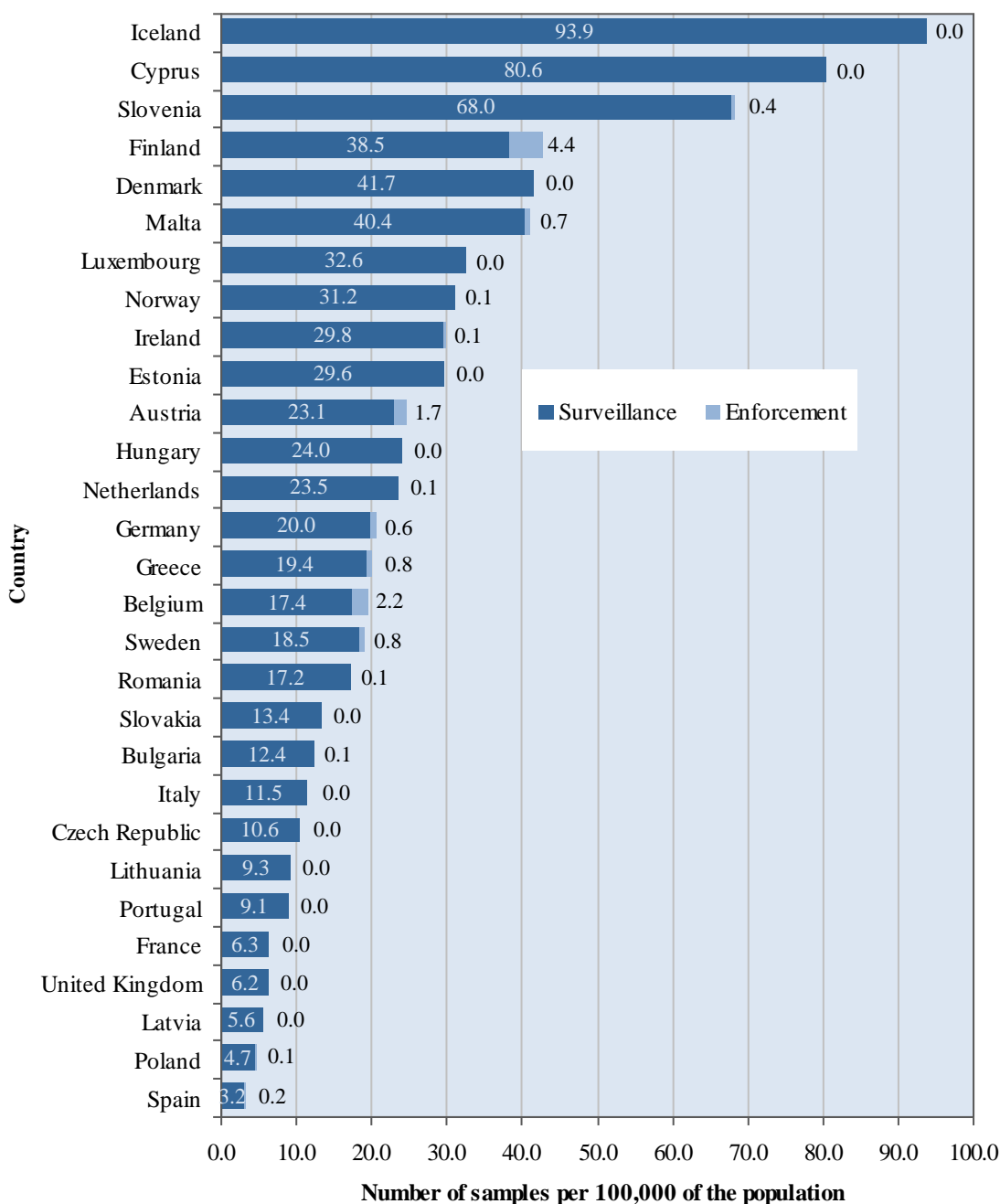
In 2009, the majority of the samples taken are classified as surveillance samples (66,550 samples, 97.9% of the total number of samples). Table 2-6 splits them up into the different product groups.

<sup>46</sup> Source of population per country 2009: Eurostat  
<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tps00001> (Download: 09-11-2010 10:59:12)

**Table 2-6:** EU+NCP - Number of surveillance and enforcement samples in different product groups - 2009.

Product	Enforcement		Surveillance		Total		% of product samples from total
	Number of samples	Thereof processed	Number of samples	Thereof processed	Number of samples	Thereof processed	
Fruit and nuts	622	11	25963	2838	26585	2849	39.1
Vegetables	700	50	28452	833	29152	883	42.9
Cereals	42	21	4001	1126	4043	1147	6.0
Other plant products	34	19	2200	1113	2234	1132	3.3
Animal products	23	0	3846	1217	3869	1217	5.7
Fish products	4	2	146	15	150	17	0.2
Babyfood/Infant formulae	3	3	1888	1697	1891	1700	2.8
Other products	-	-	54	51	54	51	0.1
<b>Total</b>	<b>1428</b>	<b>106</b>	<b>66550</b>	<b>8890</b>	<b>67978</b>	<b>8996</b>	<b>100.0</b>

The number of surveillance samples taken and normalised per 100,000 inhabitants varied from 3.2 (Spain) to 93.9 (Iceland) (Map 2-1).

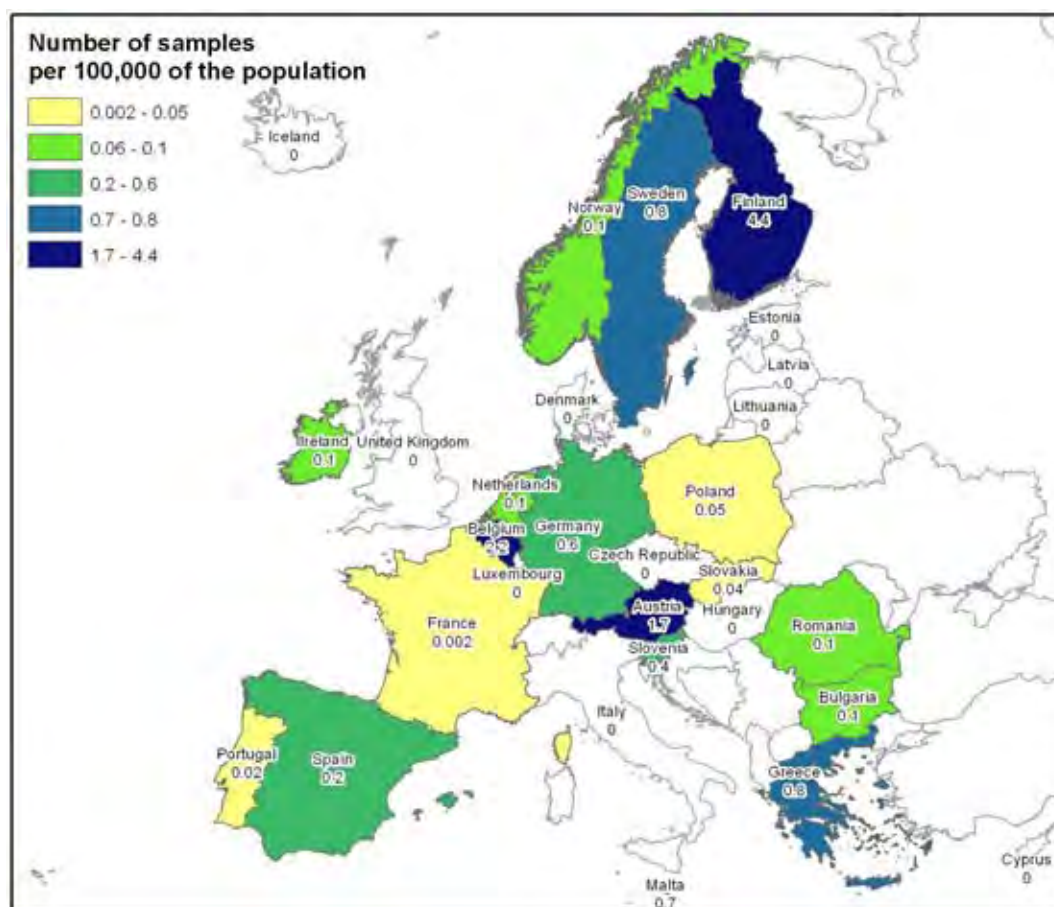


**Figure 2-7:** EU+NCP - Number of surveillance and enforcement samples by countries normalised by the national population - 2009.

In **enforcement programmes**, the probability of finding samples with positive results or samples exceeding the legal limits is higher than in surveillance programmes in which, by definition, the selection of samples is randomised and not directed towards a specific food sample/consignment of a defined population of a given crop. In enforcement sampling the samples are not taken randomly and therefore cannot be considered representative of the food item available in the market place. Typically, enforcement samples are collected if there is a suspicion about the safety of a product and/or as follow-up of violations found previously.

The total number of enforcement samples taken by all reporting countries was 1,428 (2.1% of the total number of samples). In Table 2-6, the breakdown of the total enforcement samples according to the food products is reported.

The distribution of the enforcement samples over the reporting countries can be found in Map 2-2.



**Map 2-2:** EU+NCP - Number of enforcement samples taken in 2009 by each reporting country normalised by the national population<sup>46, 47</sup>.

### 2.2.2. Pesticides analysed – national programmes

In 2009, approximately 500 pesticides were authorised for use as plant protection products in EU Member States<sup>48</sup>. However, more than 1,000 pesticides can potentially be used as plant protection products worldwide and may result in residues in food traded and consumed in Europe. In addition, metabolites resulting from these pesticides may be present on food.

In 2009, the total number of pesticides sought was 834<sup>49</sup>; including the metabolites the total number of analytes covered by all reporting countries was 1,035.

Table 2-7 shows the number of pesticides sought in the commodity groups by each reporting country. This number varies within a wide range, e.g. in fruits and nuts between 61 and 744 pesticides were sought. It is noted that due to the nature of the national control programmes not all samples were analysed for the full scope of the active substances reported in the table above, but in certain cases, in particular for enforcement samples, less analytes were covered by the analytical methods used to check the samples.

<sup>47</sup> Source of population per country 2009: Eurostat  
<http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=tps00001> (Download: 09-11-2010 10:59:12)

<sup>48</sup> Information from the European Commission database available at: [http://ec.europa.eu/sanco\\_pesticides/public/index.cfm](http://ec.europa.eu/sanco_pesticides/public/index.cfm)

<sup>49</sup> The number of pesticides sought refers to the residue definitions (see also background information - glossary). Metabolites or degradation products included in a residue definition are not counted separately.



**Table 2-7:** EU+NCP - Number of different residues<sup>50</sup> sought in commodity groups by each reporting country in 2009.

Country	Animal products	Baby and infant food	Cereals	Fruit and Nuts	Vegetables	Total sought
Austria	136	428	452	445	446	454
Belgium	44	288	407	432	421	439
Bulgaria	-	84	154	155	155	155
Cyprus	266	249	250	270	274	283
Czech Republic	32	300	301	301	301	310
Denmark	161	214	167	213	213	229
Estonia	45	238	266	321	321	323
Finland	53	290	296	314	315	330
France	267	277	298	298	298	298
Germany	671	655	713	744	754	794
Greece	37	223	61	286	287	295
Hungary	-	281	227	289	287	307
Iceland	-	-	-	61	61	61
Ireland	311	-	300	300	300	314
Italy	11	289	305	316	319	333
Latvia	29	118	120	119	121	137
Lithuania	54	283	258	283	283	304
Luxembourg	59	294	302	317	316	340
Malta	30	124	124	124	124	137
Netherlands	44	226	227	464	464	471
Norway	42	287	301	307	295	335
Poland	66	110	122	187	183	199
Portugal	-	194	224	227	226	227
Romania	-	78	132	139	139	179
Slovakia	62	111	228	241	240	286
Slovenia	43	200	301	258	309	332
Spain	157	360	253	453	476	497
Sweden	96	438	291	401	395	469
United Kingdom	43	138	65	295	296	316

In conclusion, these analyses demonstrate that reporting countries made considerable progress in expanding their analytical capacities, which is an important element in guaranteeing food safety. However, it is also noted that certain reporting countries still need to improve the analytical methods to ensure that the pesticides used on food commodities can be analysed and that the competent national authorities are able to enforce the European pesticide residue legislation properly.

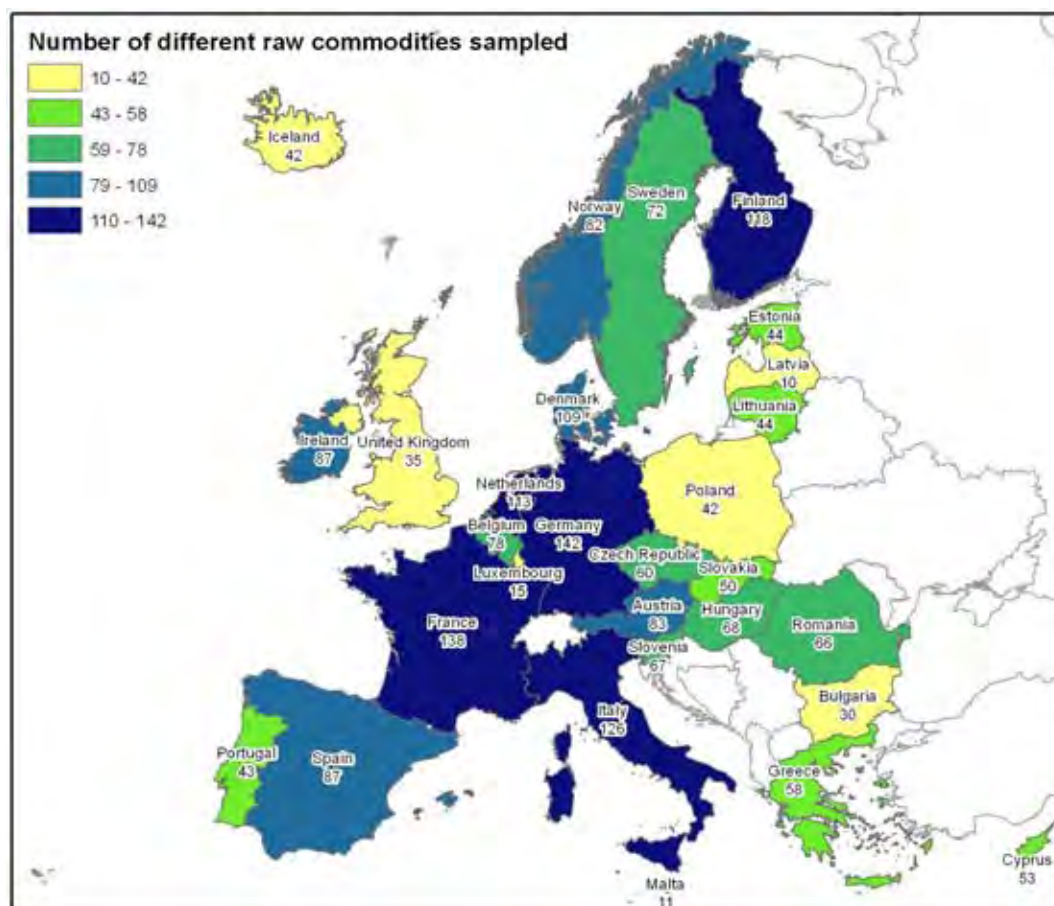
### 2.2.3. Food commodities analysed – national programmes

The EU MRL legislation lists about 400 agricultural commodities<sup>51</sup> for which MRLs have been established. The commodities have been classified in 12 main food categories (see Background information - glossary). These products and product groups refer to unprocessed raw commodities of plant or animal origin as placed on the market. The description of the commodities and the parts of the products to which the MRLs apply can be found in Annex I to Regulation (EC) No 396/2005.

<sup>50</sup> The numbers of different residues reported in the Table 2.2.2-1 include also the number of distinct metabolites and degradation products of the pesticides analysed.

<sup>51</sup> This figure includes the main crops and related varieties or other crops to which the MRLs apply.

In 2009, approximately 300 different food commodities (including processed and unprocessed food commodities) were analysed for pesticide residues by all reporting countries. The number of different raw commodities sampled by the reporting countries is shown in Map 2-3.



**Map 2-3:** EU+NCP - The number of different raw commodities sampled by each reporting country (excluding processed and baby food) - 2009.

Comparing the results provided by the different reporting countries, it becomes evident that in some countries the scope of the control activities is restricted to only few commodities. Although national control plans are often risk based and contain mainly commodities which are considered as relevant in consumption or which are known to frequently cause MRL exceedances, EFSA recommends considering the diversity of food consumed in the respective country and the potential presence of pesticides on these food commodities when planning the monitoring programmes. If appropriate, the national control plans should be expanded to more food commodities which are considered as relevant for ensuring consumer safety.

#### 2.2.4. Baby food monitoring

A general default EU MRL of 0.01 mg/kg is applicable for all pesticides, unless specific MRLs lower than 0.01 mg/kg are established under the specific EU legislation for baby food (Table 2-8) (see Background information – glossary “MRL”). Table 2-9 lists the pesticides which shall not be used in agricultural production intended for the production of infant and follow-on formulae, processed cereal-based foods and baby foods for infants and young children. They are considered as not used if their residues do not exceed 0.003 mg/kg.

In Regulation (EC) No 1213/2008 it was specified that at least ten samples of baby food based mainly on vegetables, fruit or cereal should be analysed in each Member State. The regulation, however, did not specify which pesticides should be included in the analytical scope for baby food.

It should be noted that for some pesticides with specific MRLs for baby food the analytical methods used were not sensitive enough. In other words, the LOQs of the analytical methods applied exceeded the legal limit. It is therefore necessary to develop analytical methods, which are capable of quantifying the pesticide residues in baby food at or below the regulated MRLs.

**Table 2-8:** Substances for which specific MRLs lower than 0.01 mg/kg are established for baby food.

Chemical name of the substance	MRL (mg/kg)
Cadusafos	0.006
Demeton-S-methyl/demeton-S-methyl sulfone/oxydemeton-methyl (individually or combined, expressed as demeton-S-methyl)	0.006
Ethoprophos	0.008
Fipronil (sum of fipronil and fipronil-desulfinyl, expressed as fipronil)	0.004
Propineb/propylenethiourea (sum of propineb and propylenethiourea)	0.006

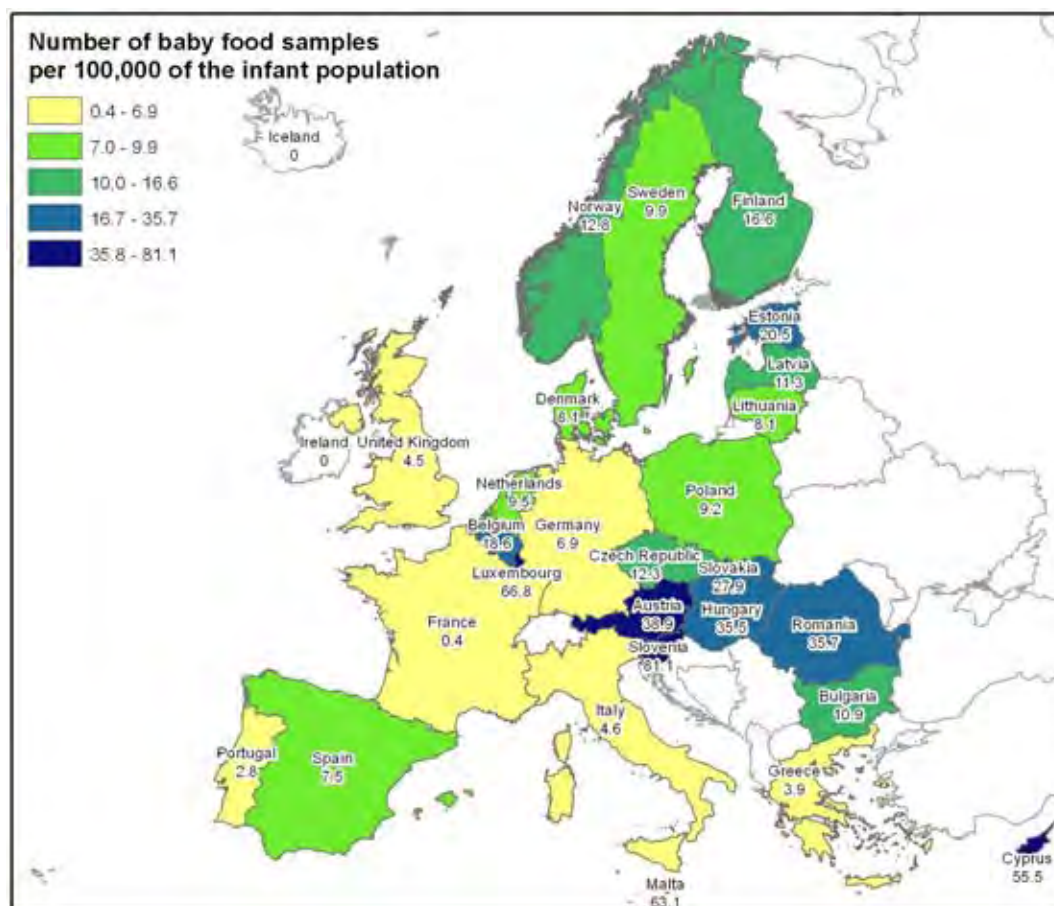
**Table 2-9:** Substances which shall not be used in agricultural production intended for the production of infant formulae and follow-on formulae used as baby food.

Chemical name of the substance (residue definition)
Aldrin and dieldrin, expressed as dieldrin
Disulfoton (sum of disulfoton, disulfoton sulfoxide and disulfoton sulfone expressed as disulfoton)
Endrin
Fensulfothion (sum of fensulfothion, its oxygen analogue and their sulfones, expressed as fensulfothion)
Fentin, expressed as triphenyltin cation
Haloxypop (sum of haloxypop, its salts and esters including conjugates, expressed as haloxypop)
Heptachlor and trans-heptachlor epoxide, expressed as heptachlor
Hexachlorobenzene
Nitrofen
Omethoate
Terbufos (sum of terbufos, its sulfoxide and sulfone, expressed as terbufos)

In 2009, a total of 1,888 surveillance samples of baby food were reported by 26 countries (Map 2-4).

Three countries did not include any baby food samples in the control programme although the EU-coordinated control programme recommended that each Member State should take at least 10 samples.

EFSA notes that different residue definitions were established in Regulation (EC) No 396/2005 and the specific regulations for baby food which puts additional burden on control laboratories and hampers the comparability of monitoring results for different food products. Therefore, EFSA recommends harmonising these residue definitions across the different legal frameworks. In addition, EFSA also notices that the levels of the MRLs for baby food have never been revised since they were established in 1999 for the first time. It would be appropriate to review the criteria for setting specific MRLs in baby food and to adapt the MRL levels where necessary. In the past, the toxicological profile of active substances was a selection criterion for setting specific MRLs for baby food. Thus, the most recent information on toxicological properties of active substances should be used to select active substances for which MRLs for baby food are considered necessary.



Map 2-4: EU+NCP - Number of baby food samples (only surveillance) normalised by infant population<sup>52</sup> - 2009.

### 2.2.5. Organic food monitoring

At EU level, no specific MRLs for organic products have been established. Thus, the MRLs set in Regulation (EC) 396/2005 equally apply for organic food. However, Regulation (EC) No 834/2007 and Regulation (EC) No 889/2008 on organic production of agricultural products define specific labelling provisions and production methods which entail significant restrictions on the use of pesticides. Only those products listed in Table 2-10 may be used in cases of immediate threat to the crop, provided that the products are used in accordance with the provisions established at Member State level. It has to be noted, that there is a discrepancy regarding pesticides that are listed in the positive list for organic production and those active substances that may be used in EU Member States in accordance with the provisions of Directive 91/414/EEC.

<sup>52</sup> Source of infant population per country 2008: Eurostat  
[http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo\\_pjan&lang=en](http://appsso.eurostat.ec.europa.eu/nui/show.do?dataset=demo_pjan&lang=en) (Download: 10-11-2010 15:27:36)

**Table 2-10:** Pesticides that can be used in organic farming.

Group	Name	Description, compositional requirement, conditions for use
<b>1. Substances of crop or animal origin</b>		
	Azadirachtin extracted from <i>Azadirachta indica</i> (Neem tree)	Insecticide
	Beeswax	Pruning agent
	Gelatine	Insecticide
	Hydrolysed proteins	Attractant, only in authorised applications in combination with other appropriate products of this list
	Lecithin	Fungicide
	Plant oils (e.g. mint oil, pine oil, caraway oil).	Insecticide, acaricide, fungicide and sprout inhibitor
	Pyrethrins extracted from <i>Chrysanthemum cinerariaefolium</i>	Insecticide
	Quassia extracted from <i>Quassia amara</i>	Insecticide, repellent
	Rotenone extracted from <i>Derris</i> spp. and <i>Lonchocarpus</i> spp. and <i>Terphrosia</i> spp.	Insecticide
<b>2. Micro-organisms used for biological pest and disease control</b>		
	Micro-organisms (bacteria, viruses and fungi)	
<b>3. Substances produced by micro-organisms</b>		
	Spinosad	Insecticide Only where measures are taken to minimise the risk to key parasitoids and to minimise the risk of development of resistance
<b>4. Substances to be used in traps and/or dispensers</b>		
	Diammonium phosphate	Attractant, only in traps
	Pheromones	Attractant; sexual behaviour disrupter; only in traps and dispensers
	Pyrethroids (only deltamethrin or lambda-cyhalothrin)	Insecticide; only in traps with specific attractants; only against <i>Bactrocera oleae</i> and <i>Ceratitis capitata</i> Wied.
<b>5. Preparations to be surface-spread between cultivated plants</b>		
	Ferric phosphate (iron (III) orthophosphate)	Molluscicide
<b>6. Other substances from traditional use in organic farming</b>		
	Copper in the form of copper hydroxide, copper oxychloride, (tribasic) copper sulphate, cuprous oxide, copper octanoate	Fungicide Up to 6 kg copper per ha per year. For perennial crops, Member States may, by derogation from the previous paragraph, provide that the 6 kg copper limit can be exceeded in a given year provided that the average quantity actually used over a 5-year period consisting of that year and of the four preceding years does not exceed 6 kg
	Ethylene	Degreening bananas, kiwis and kakis; Degreening of citrus fruit only as part of a strategy for the prevention of fruit fly damage in citrus; Flower induction of pineapple; sprouting inhibition in potatoes and onions
	Fatty acid potassium salt (soft soap)	Insecticide
	Potassium aluminium (aluminium sulphate) (Kalinite)	Prevention of ripening of bananas
	Lime sulphur (calcium polysulphide)	Fungicide, insecticide, acaricide
	Paraffin oil	Insecticide, acaricide
	Mineral oils	Insecticide, fungicide; only in fruit trees, vines, olive trees and tropical crops

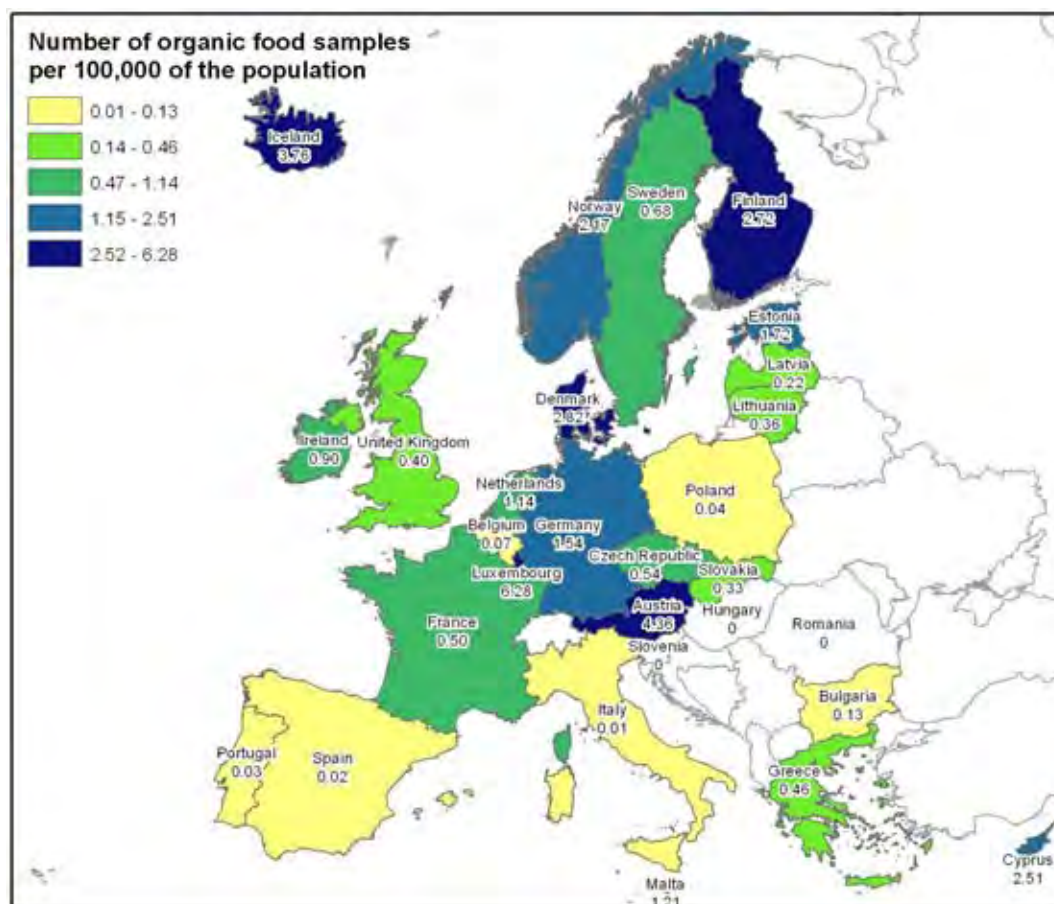
Group	Name	Description, compositional requirement, conditions for use
		(e.g. bananas)
	Quartz sand	Repellent
	Sulphur	Fungicide, acaricide, repellent
7. Other substances		
	Calcium hydroxide	Fungicide Only in fruit trees, including nurseries, to control <i>Nectria galligena</i>
	Potassium bicarbonate	Fungicide

The European Commission recommended taking at least one sample originating from organic farming of aubergines, bananas, cauliflower, table grapes, orange juice, peas (fresh/frozen, without pod), peppers (sweet), wheat, butter and eggs (i.e. the products covered by the coordinated programme). The percentage of samples of organic farming should represent the market share of organic production in each Member State.

In 2009, a total of 3,090 samples of organic origin were taken by a total of 25 countries (Table 2-11 and Map 2-5), which corresponds to 5% of all surveillance samples taken in the reporting countries.

**Table 2-11:** EU+NCP - Number of samples (only surveillance) in organic food in 2009.

Product	Organic samples	Total number of samples	Organic samples in % of total
Fruit and nuts	918	25963	3.5
Vegetables	1097	28452	3.9
Cereals	408	4001	10.2
Other plant products	181	2200	8.2
Animal products	193	3846	5.0
Fish products	0	146	0.0
Babyfood/Infant formulae	288	1888	15.3
Other products	5	54	9.3
<b>Total</b>	<b>3090</b>	<b>66550</b>	<b>4.6</b>



**Map 2-5:** EU+NCP - Number of organic food samples (surveillance and enforcement) in 2009, normalised by the national population<sup>46</sup> reported in framework of Regulation (EC) No 396/2005.

In some of the reporting countries the production type was not recorded in the national data management systems used to handle the sample information. Therefore, it is assumed that more samples were taken and analysed but could not be reported accordingly.

## 2.2.6. Processed-food monitoring

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

Annex VI of Regulation (EC) No 396/2005, which will include processing factors for processed products, has not yet been established but other sources provide summary information on the change of pesticides under processing conditions (e.g. information provided in EFSA conclusions and EFSA reasoned opinions<sup>53</sup>, German database developed by the Federal Institute for Risk Assessment<sup>54</sup>). These sources can be considered to enforce the legal provisions in processed food.

In 2009, a total of 8,996 samples (surveillance and enforcement) of processed products (without baby food) were taken by 28 countries. This makes up 13% of the total samples. The samples cover a range of approximately 190 different products; 1,073 of the samples referred to products derived from grapes (wine or other processed grape products), 796 samples were produced from citrus fruits (oranges), mainly juices. In 2008 samples of processed food accounted only for 5% of the total

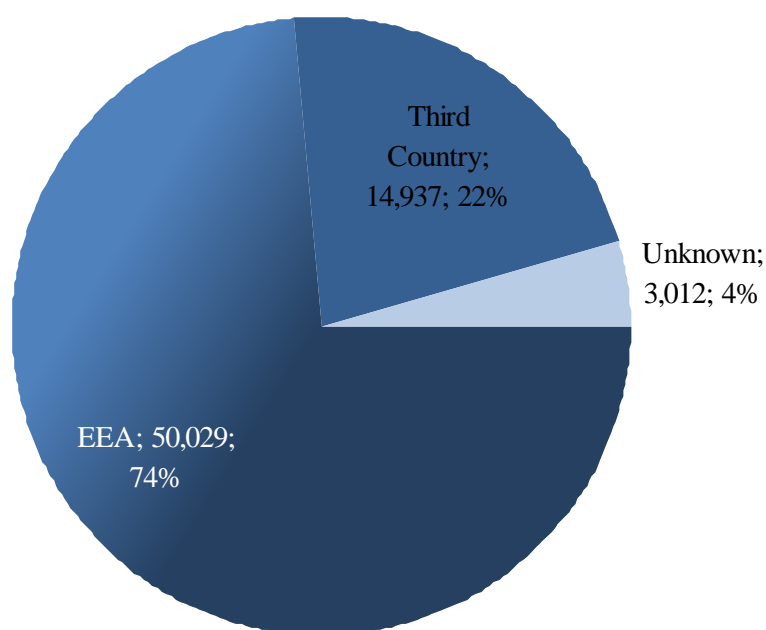
<sup>53</sup> <http://www.efsa.europa.eu/en/publications.htm>

<sup>54</sup> The database is available at <http://www.bfr.bund.de/cd/579> (BfR compilation of 2009-07-01).

number of samples reported. The important increase in 2009 could be ascribed to the new data reporting format that clearly discriminates processed from the raw products. Moreover, in 2009 the EU-coordinated programme requested for the first time the mandatory analysis of two processed commodities (butter and orange juice).

### 2.2.7. Origin of samples

National programmes cover samples originating from domestic, European Union, EFTA countries and third country production (Figure 2-8). The majority of samples taken were produced in one of the reporting countries (74%). 22% of the samples were taken from imported consignments or lots. In 4% of the samples the origin of the samples was not reported.



**Figure 2-8:** EU+NCP - Origin of samples (reporting countries) surveillance and enforcement.

In Table 2-12, the samples from the reporting countries are further split up into individual countries, in Table 2-13, the samples originating from third countries are further specified.

**Table 2-12:** EU+NCP - Number of samples 2009 by origin country (only EEA).

Origin		Number of samples		
		Surveillance	Enforcement	Total
EEA	Italy	8537	60	8597
	Germany	7788	-	7788
	Spain	7174	125	7299
	Netherlands	3276	26	3302
	France	3210	26	3236
	Greece	2574	96	2670
	Poland	1949	27	1976
	United Kingdom	1951	1	1952
	Romania	1940	12	1952
	Belgium	1605	34	1639
	Hungary	1594	1	1595
	Austria	947	-	947
	Denmark	884	-	884

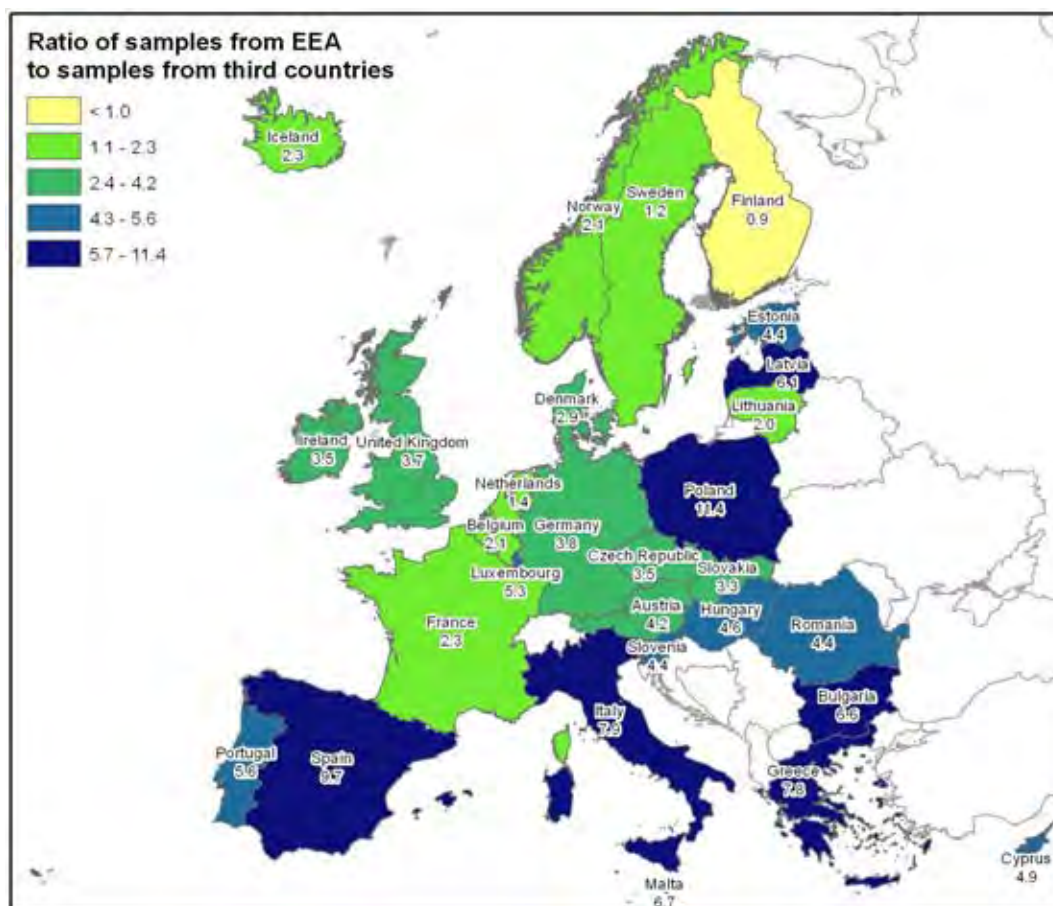


Origin		Number of samples		
		Surveillance	Enforcement	Total
	Bulgaria	733	4	737
	Ireland	694	-	694
	Portugal	687	4	691
	Slovenia	570	-	570
	Sweden	533	-	533
	Norway	517	-	517
	Cyprus	498	-	498
	Czech Republic	352	1	353
	Finland	340	1	341
	Slovakia	235	-	235
	Estonia	220	-	220
	Lithuania	120	-	120
	Iceland	88	-	88
	Malta	86	-	86
	Latvia	51	-	51
	Luxembourg	50	-	50

**Table 2-13:** EU+NCP - Number of samples 2009 originating from Third Countries (TC), only Top 10 listed

Origin		Number of samples		
		Surveillance	Enforcement	Total
TC	Turkey	1591	35	1626
	South Africa	1127	13	1140
	Thailand	841	217	1058
	Egypt	774	47	821
	Chile	783	4	787
	Argentina	679	77	756
	China	712	27	739
	Israel	679	15	694
	Brazil	622	21	643
	Morocco	577	5	582

Map 2-6 shows the ratio of samples originating from the EEA area and third countries for each reporting country. These data demonstrate that some countries focus the national control programmes on food products imported from third countries (ratio <1) whereas in other cases reporting countries prioritise samples originating from EEA countries (ratio >1).



**Map 2-6:** EU+NCP - Ratio of samples from EEA to samples from third countries in reporting countries (surveillance and enforcement) - 2009.

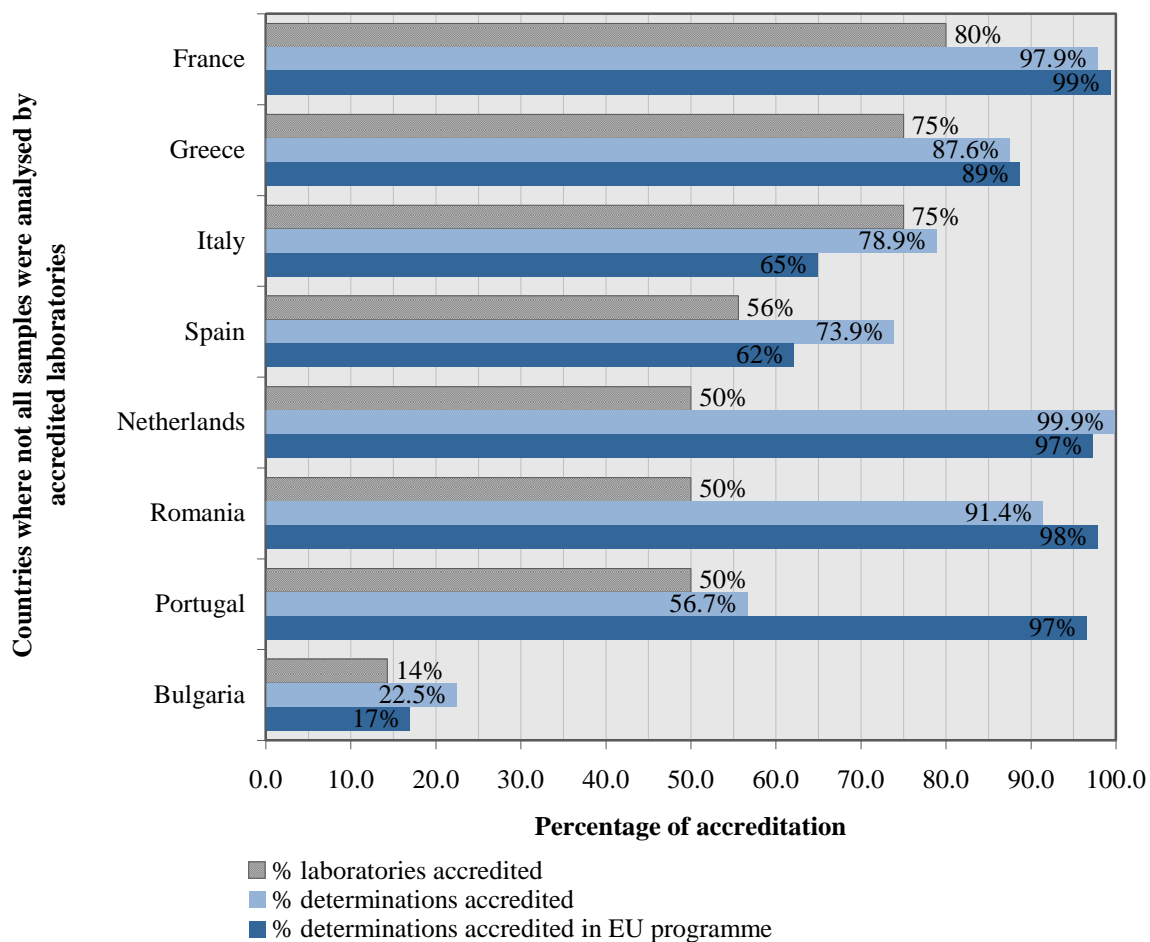
### 2.3. Quality assurance

In accordance with Art.12 of Regulation 882/2004, laboratories designated for official controls must be accredited to ISO/IEC 17025 (ISO, 2005), or make use of the derogation in Art.18 of Regulation (EC) No 2076/2005. Non-accredited laboratories must, as a minimum, have a quality system as described in document SANCO/3131/2007 on “Method Validation and Quality Control Procedures for Pesticide Residues Analysis in Food and Feed” (EC, 2007).

In 2009, the majority of countries used accredited laboratories for the control programmes, but in 8 countries part of the samples were analysed by non-accredited laboratories (Figure 2-9).

Since the exemption for non-accredited laboratories expired at the end of 2009 (Art. 1 of Regulation (EC) No 2076/2005), it is important that all laboratories contributing to the EU control programmes make efforts to obtain accreditation.

EFSA notes that the national standards for accreditation of pesticide residue laboratories differ significantly among the reporting countries. EFSA recommends taking an initiative for a Europe-wide harmonisation of the accreditation approaches for pesticide residue laboratories because this would contribute to achieve better comparability of the control systems. The EURL should take a leading role in these activities.



**Figure 2-9:** EU+NCP - Status in 2009 for those contributing countries where not all samples were analysed by accredited laboratories.

## SUMMARY CHAPTER 2

EU Member States perform official controls to ensure the compliance of feed and food samples with regard to the pesticide MRL legislation. Typically, national control programmes (designed by each country) and the EU-coordinated Community control programme are in place.

The EU-coordinated control programme for 2009 is laid down in Commission Regulation (EC) No 1213/2008. The food commodities to be analysed in 2009 were aubergines, bananas, butter, cauliflower, chicken eggs, orange juice, peas without pods, peppers (sweet), table grapes and wheat.

The 2009 EU-coordinated programme for food defined 120 pesticides, of which 100 were mandatory which had to be analysed in food samples of plant origin; food of animal origin had to be analysed for 32 pesticides (29 thereof were mandatory).

The control programme in Regulation (EC) No 1213/2008 defines the minimum number of samples to be analysed in the framework of the 2009 EU-coordinated programme, varying from 12 or 15 to 93 samples per product, depending on the population of the Member State.

A total number of 10,553 samples of 10 different commodities were analysed in the 2009 EU-coordinated monitoring programme. It should be noted that 5 commodities (butter, chicken eggs, orange juice, peas without pods and wheat) were not analysed by all reporting countries. For the commodities of animal origin – butter and eggs – no results were reported by 10 and 7 countries respectively. For these commodities, the number of samples required to obtain representative results at EU level was not achieved.

The total number of samples taken in the context of the national and the EU-coordinated programmes in 2009 was 67,978. Compared with the previous year, this is a decrease of 3.1%. In 2009, the majority of the samples taken were classified as surveillance samples (66,550 samples, 97.9% of the total number of samples). The total number of enforcement samples taken by all reporting countries was 1,428 (2.1% of the total number of samples). In 2009, the total number of pesticides and metabolites sought was 1,035. The number of pesticides sought in 2009 was 834. Countries made considerable progress in expanding their analytical capacities which is an important element in guaranteeing food safety. In 2009, approximately 300 different food commodities were analysed for pesticide residues by all reporting countries.

Regarding baby food, a general default EU MRL of 0.01 mg/kg is applicable for all pesticides, unless specific MRLs lower than 0.01 mg/kg are established under the specific EU legislation. It should be noted that for some pesticides the analytical methods are not sensitive enough to determine residues at these low levels with adequate certainty. In 2009, a total of 1,888 surveillance samples of baby food were reported by 26 countries.

At EU level, no specific MRLs for organic products have been established, but Regulation (EC) No 834/2007 and Regulation (EC) No 889/2008 on organic production of agricultural products define specific labelling provisions and production methods. In 2009, a total of 3,090 samples of organic origin were taken by a total of 26 countries, which corresponds to 5% of all surveillance samples taken in the reporting countries.

In 2009, a total of 8,996 samples (surveillance and enforcement) of processed products (without baby food) were taken by 28 countries. This is 13% of the total samples.

The majority of total samples taken were produced in one of the reporting countries (74%). 22% of the samples were taken from imported consignments or lots. In 4% of the samples, the origin of the samples was not reported. The data submitted by the reporting countries demonstrate that the ratio of samples with EU provenience and samples imported from third countries varied significantly.

In accordance to the regulations, laboratories designated for official controls must be accredited. In 2009, the majority of countries used accredited laboratories for the control programmes, but in 8 countries part of the samples were analysed by non-accredited laboratories. Since the exemption for non-accredited laboratories expired at the end of 2009, it is important that all laboratories contributing to the EU control programmes make efforts to obtain accreditation.

**Recommendations:**

EFSA recommends revising the general design of the coordinated multiannual control programme, taking into account the increased number of reporting countries. In particular, a new calculation of the total number of necessary samples to be analysed for each commodity and the allocation to the individual Member States and reporting countries should be performed. The policy to include certain pesticides as non-mandatory in the monitoring programme should be reconsidered because it hampers the comparability of results and leads to situations where the number of results reported might not be sufficient to draw statistically valid conclusions.

EFSA also recommends evaluating the reasons why not all pesticides included in the EU-coordinated programme were analysed by the laboratories in the reporting countries. If needed, support should be provided by the EU Reference Laboratories to improve the analytical capacities in order to cover all substances foreseen in the coordinated multiannual control programme.

EFSA recommends considering the diversity of food consumed and the possibility of finding pesticides on these food commodities when planning the monitoring programmes. If appropriate, the national control plans should be expanded to more food commodities which are considered as relevant for ensuring consumer safety.

In certain reporting countries the analytical methods applied in the official food control have to be improved, including more pesticides in the analytical programme to ensure that the pesticides MRL legislation can be enforced. The problems in MRL enforcement caused by lack of validated methods should be solved, e.g. by amending the data requirements in the pesticide legislation, asking manufacturer/companies requesting pesticide authorisations to provide analytical methods for all major crop categories or by improving the information exchange among enforcement laboratories regarding the development/validation of in-house methods. The currently established complex residue definitions, which often require expensive single-residue methods to be used in enforcement practice, should be reviewed and possibilities to simplify residue definitions to allow the use of multi-residue methods should be considered.

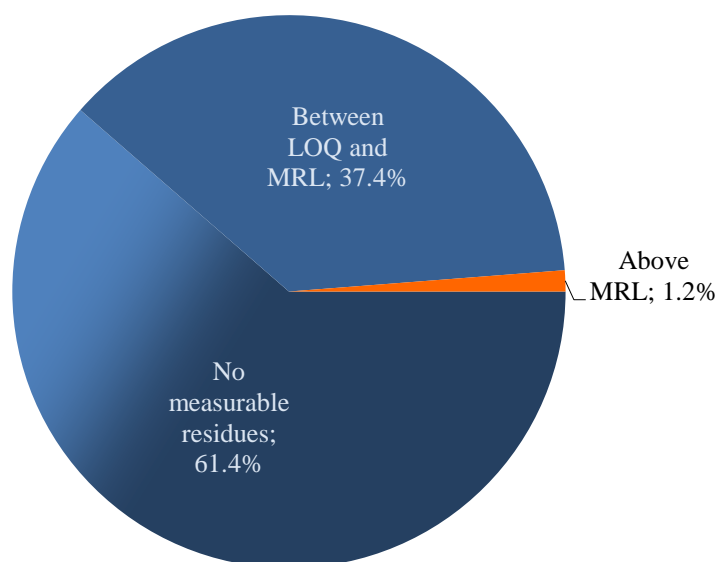
EFSA recommends to improve the compatibility of the EU legislation for baby food with the legislation for pesticide authorization and pesticide MRLs. In particular, the residue definitions set in Regulation (EC) No 396/2005 and in the specific legislation for baby food should be harmonised. In addition, the criteria for setting specific MRLs in baby food should be reconsidered and the MRL levels should be revised where necessary. Efforts have to be made to develop analytical methods, which are capable of quantifying low residue concentrations as required in the baby food MRL legislation. EFSA also recommends that in future EU Regulations on the EU coordinated monitoring programme it should be specified that baby food samples have to be analysed for all pesticides listed in the baby food legislation with specific MRLs and for all the pesticides listed in the EU monitoring regulation.

EFSA recommends making efforts to harmonise the accreditation approaches at EU level. Common standards would be desirable to improve Europe-wide comparability of the laboratories.

### 3. Results of the EU-coordinated programme

#### 3.1. Overall results for MRL exceedances

The analysis of the results of the 2009 EU-coordinated programme shows that 1.2% of the 10,553 samples taken in the framework of the EU-coordinated programme exceeded the MRL, while 37.4% of samples had measurable residues above the reporting level, but below or at the MRL. In 61.4% of the samples no residues were measured (Figure 3-1).



**Figure 3-1:** EUCP - Overall frequency of samples with and without measurable residues in 2009.

Compared to the rate of the previous year (2.2%), the overall MRL exceedance-rate is lower in 2009. It should also be noted that the percentage of samples without measurable residues decreased slightly from 62.1% in 2008 to 61.4% in 2009. However, in the previous control programme, different food commodities were sampled<sup>56</sup> and therefore a direct comparison of the results of these two years is not appropriate to analyse differences because the MRL exceedance rate is strongly influenced by crops analysed in the EU programme.

In order to analyse the change of the MRL exceedance rate over the time, it is more appropriate to compare the results of the 2009 monitoring year with 2006 where the same food commodities of plant origin were analysed under the EU-coordinated programmes. However, it is important to know that the number of pesticides to be monitored increased from 55 in 2006 to 100 pesticides; in addition, 20 pesticides were included to be analysed on a voluntary basis.

A decrease in the overall MRL exceedance rate from 4.4% in 2006 to 1.2% in 2009 was observed. This finding can be partially ascribed to the new EU legislation on pesticide MRLs which entered into force in September 2008<sup>57</sup>; before this date, MRL exceedances often resulted from food produced in

<sup>56</sup> In 2008 the following commodities were included in the coordinated monitoring programme: beans, carrots, cucumbers, oranges, mandarins, pears, rice potatoes, spinach.

<sup>57</sup> 2008 was an important year for the harmonisation of the Maximum Residue Levels (MRLs) for pesticides at European level. Whereas before 1 September 2008 a mixed system with harmonised Community MRLs for *ca.* 250 active substances and national MRLs for the remaining substances was in place, after this date harmonised MRLs became applicable for all active substances used in plant protection products that have the potential to enter the food chain. The new pesticide MRL legislation has improved the clarity of legislation by eliminating ambiguities as regards the legal limits to be applied for food produced and moved within the territory of the European common market (MRLs established in Member State of origin vs. MRLs applicable in destination Member State).

one Member State in compliance with the MRLs set in the country of origin, but when moved to other Member States - where the national MRLs were set at different levels - the residue exceeded the national MRLs in the country of destination. The harmonisation has simplified the MRL system in Europe and therefore improved the clarity about which MRLs are applicable. The increased clarity and the simplification of the legal system have also enabled to improve the self-control systems established by food business operators.

However, also other factors have influenced the difference in the MRL exceedance rate between 2006 and 2009, e.g. the change in the pesticide authorisation status and use patterns, the improvement in the data reporting system<sup>57</sup> and the efficient implementation of the general provisions of the European food law which imposes the responsibility on food business operators at all stages of production, processing and distribution to ensure that food satisfies the legal requirements by implementing appropriate control systems. Another factor contributing to this finding is the inclusion of samples of animal origin in the coordinated control programme in 2009 (ca. 10% of the total number of samples in the coordinated programme were butter and eggs), since pesticide residues are detected in animal products less frequently. Excluding the results for animal products does not have a significant impact on the percentage of samples exceeding the MRL (1.3%)<sup>58</sup>. An increased percentage of organic samples included in the coordinated programme might also contribute to the positive trend (in 2009 4.1%, for 2006 the figure cannot be retrieved because this information was not reported).

A comparison of the results obtained in these two years showed an increase regarding the percentage of samples free of measurable residues (53.9% in 2006 to 61.4% in 2009). Considering the wider scope of the control programme and a general improvement in the sensitivity of analytical methods, this result is surprising since it is expected that expanded analytical scope of pesticide sought would correlate with the rate of samples with measurable residues.

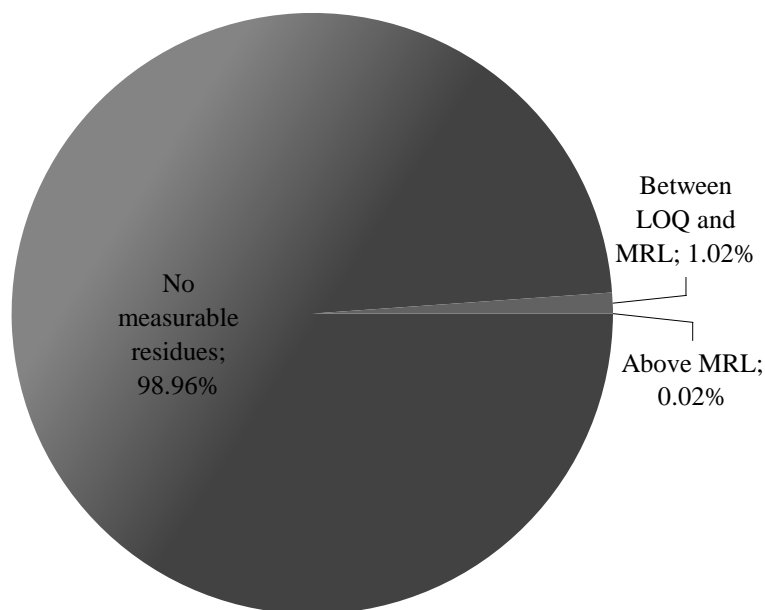
In 2009, taking all the individual analyses of pesticides on the 10 food commodities into account, 838,299 singular determinations were reported under the EU-coordinated programme.<sup>59</sup> 0.02% of the determinations exceeded the MRL, while 1.02% of the determinations had measurable residues above the reporting level, but below or at the MRL. 98.96% of all data points were below the limit of quantification (no measurable residues) (Figure 3-2).

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<sup>57</sup> In 2010 all the reporting countries have submitted for the first time the results of the 2009 control activities at single determination level, by using a new data reporting model called Standard Sample Description (SSD). More information on the SSD is available at: <http://www.efsa.europa.eu/en/efsajournal/pub/1457.htm>.

<sup>58</sup> The data analysis shown that the percentage of samples (plant commodities only) free of measurable residues is slightly lower (58.5%) compared to the total database including plant and animal products (61.4%) but is still higher than in 2006 (53.9%).

<sup>59</sup> The term "determination" refers to the individual measurement obtained in the chemical analysis of a sample. If a sample is analysed for 200 different pesticides, 200 determinations are reported.



**Figure 3-2:** EUCP - Overall frequency of determinations above and below the MRL with and without measurable residues in 2009.

### 3.2. Results by reporting country

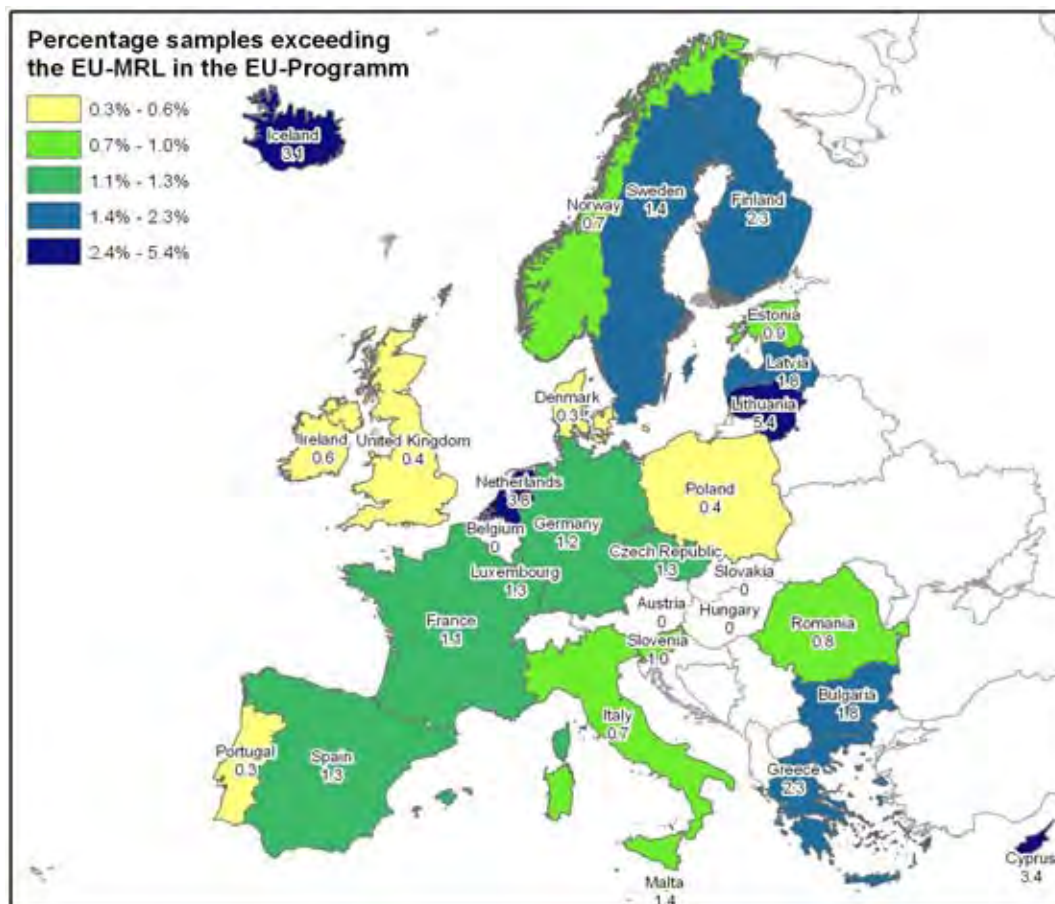
The MRL exceedance rate, as reported by each country, is depicted in Map 3-1. The rates clearly vary among the reporting countries, ranging from 0% to 5.4% of the samples analysed. Additionally, the results per reporting country are tabulated in Appendix III, Table G.

The reasons for the significant variations among the reporting countries are not clear. EFSA can only make guesses regarding possible explanations. The variability may partly be explained by a difference in the occurrence of the measured residues. A potential explanation could be a difference in the analytical performances of the national laboratories in the reporting countries in 2009, the sensitivity of the methods used and the scope of the analytical methods in these countries<sup>60</sup>. Although the samples for the EU coordinated monitoring programme should be selected randomly, some of the reporting countries might have applied more targeted sampling strategies also for these samples, leading to higher non-compliance rates. Finally, the percentage of samples from third countries and the percentage of organic samples may also bias the result.

More details on findings on the 10 commodities analysed in the 2009 EU-coordinated programme are reported in Tables G, H and I of Appendix III.

<sup>60</sup> As reported in section 2.1.3, not all samples were analysed for all pesticides included in the coordinated control programme.





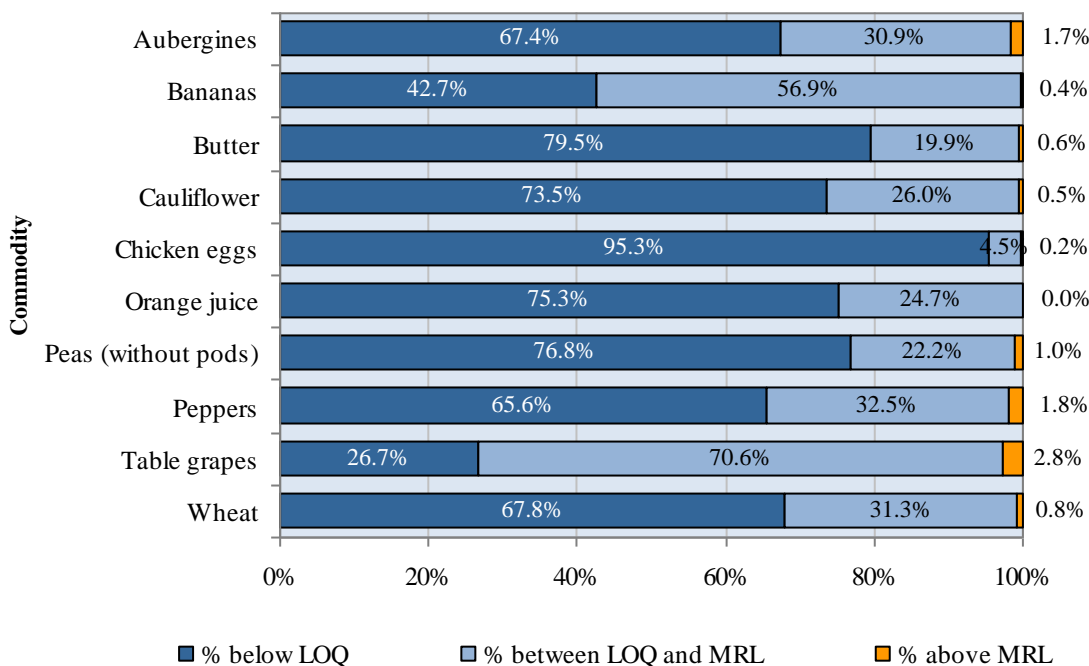
Map 3-1: EUCP - Rate of MRL-exceeding samples by country in 2009.

### 3.3. Results by food commodity

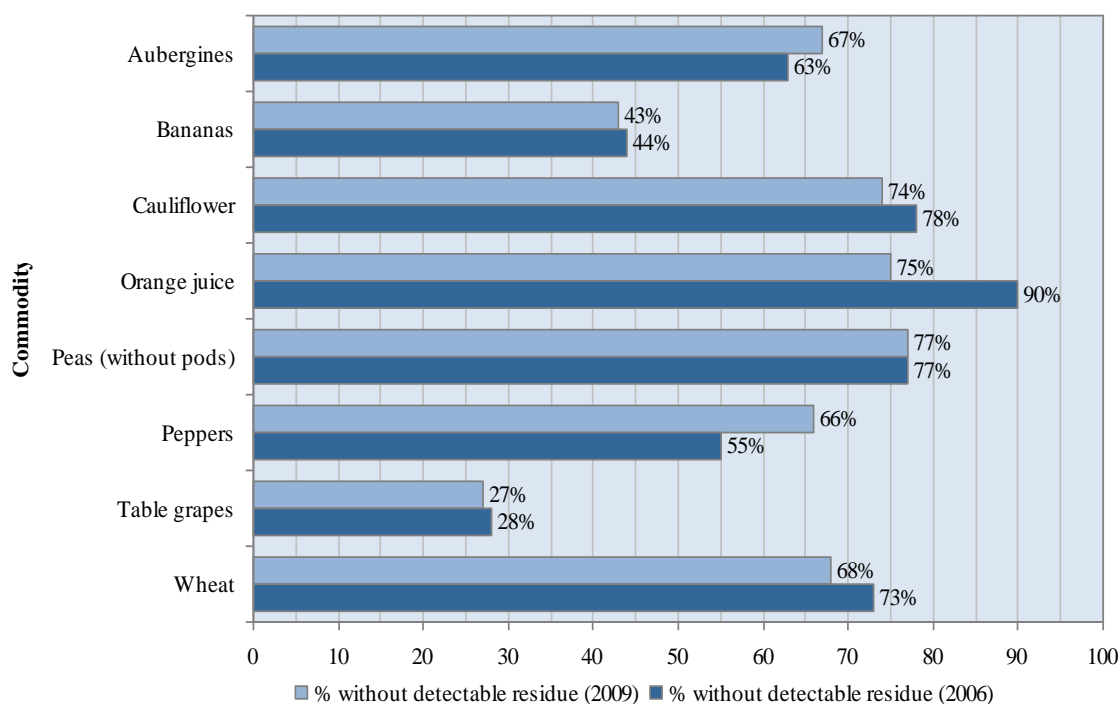
10 food commodities were analysed in the 2009 EU-coordinated control programme. The highest percentage of samples exceeding the MRL was identified for table grapes (2.8%), followed by peppers (1.8%), aubergines (1.7%), peas (1.0%), wheat (0.8%), butter (0.6%), cauliflower (0.5%), bananas (0.4%), and chicken eggs (0.2%). In orange juice no MRL exceedances were identified.

Table grapes also had the highest percentage of samples with measurable pesticide residues below or at MRLs (70.6%), followed by 56.9% of the banana samples and 32.5% of the pepper samples. Samples of chicken eggs, butter, peas without pods and orange juice less frequently contained measurable residues at or below the MRL (Figure 3-3).

Compared to the results of the 2006 EU-coordinated control programme, where the same food commodities were analysed, the highest decrease of samples without detectable residues was found for orange juice (90% in 2006 to 75% in 2009), the highest increase was found for peppers (55% in 2006 to 66% in 2009). These findings are reported in Figure 3-4.



**Figure 3-3:** EUCP - Percentage of samples not measurable, below MRL, above MRL for the 10 food commodities in the EU-coordinated programme 2009.



**Figure 3-4:** EUCP - Percentage of samples with no measurable residues for the 8 food commodities analysed in the EU coordinated programmes 2006 and 2009.

The increased percentage of samples free of measurable residues in some commodities is surprising, since the scope of the coordinated programme has been extended to a high degree (2006: 55 substances, 2009: 120 pesticides, 20 of them were on a voluntary basis) and analytical methods have

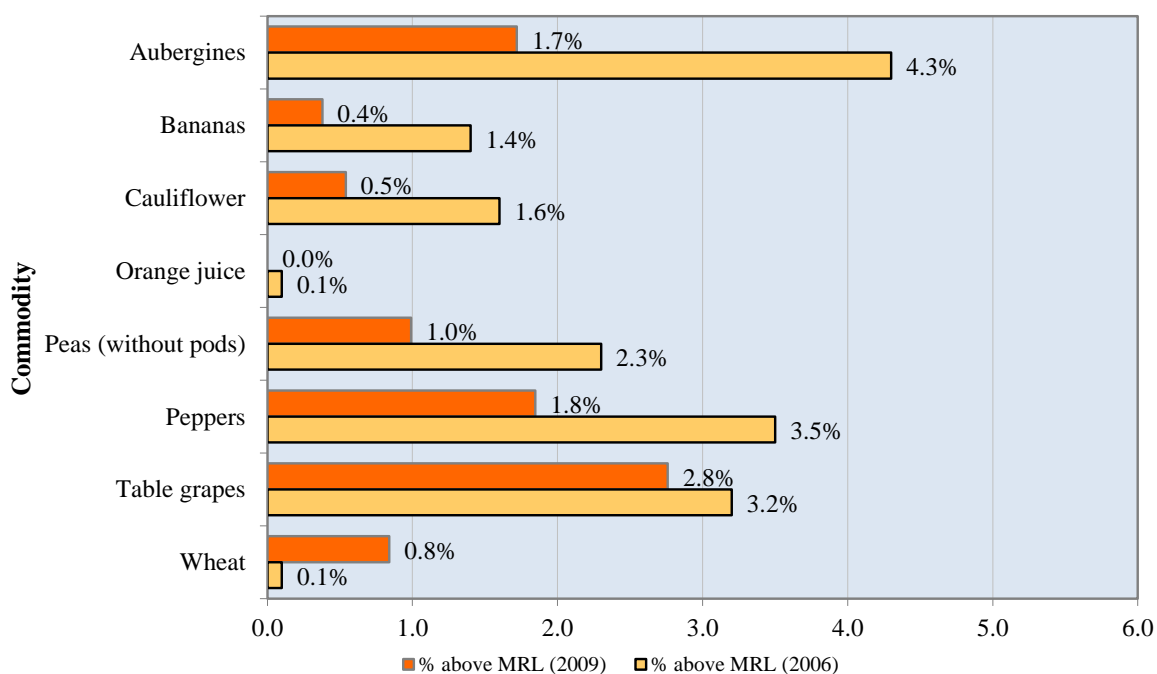
been improved with regard to their sensitivity. Having more active substances in the programme, one would expect an increase in positive findings.

The percentage of samples exceeding the MRLs has decreased for all commodities, except for wheat where the percentage increased from 0.1% to 0.8%. The highest difference was detected for aubergines (4.3% in 2006 to 1.7% in 2009) followed by peppers (3.5% in 2006 to 1.8% in 2009). In Figure 3-5 the comparison of the MRL exceedance observed in 2006 and 2009 is depicted.

The EU-coordinated programme requested the Member States to sample and analyse organic food. However, since the total number of organic samples taken in the framework of the European programme among all reporting countries (427 samples among all the 10 commodities tested) was not sufficient to perform reliable statistical analysis EFSA decided to present the results on the organic food in section 4 of the report, where the results concerning the national and EU programme are combined.

According to article 2(2) of the 2009 European control Regulation at least 10 samples of baby-food - based mainly on vegetables, fruits and cereals – should had been taken and analysed. However, due to limitations in some laboratory information systems and insufficient guidance on how to report baby-food results taken under the EU programme, the latter could not clearly be identified. EFSA identified the need to provide the reporting countries with more guidance on the use of the new data reporting system. The results of baby food control are reported in section 4 of the report, where both the national and EU results are combined.

Detailed results per commodity and reporting country of the EU-coordinated control programme are listed in Appendix III, Table I.



**Figure 3-5:** EUCP - Percentage of samples with residues above MRL for the 8 food commodities analysed in the EU coordinated programme 2006 and 2009.

In the framework of the EU-wide harmonisation of the pesticide residues in 2008 partially higher MRLs were established, but in many cases the national MRLs were not considered as safe for all EU Member States (EFSA 2007) and were therefore deleted or replaced by lower values. The

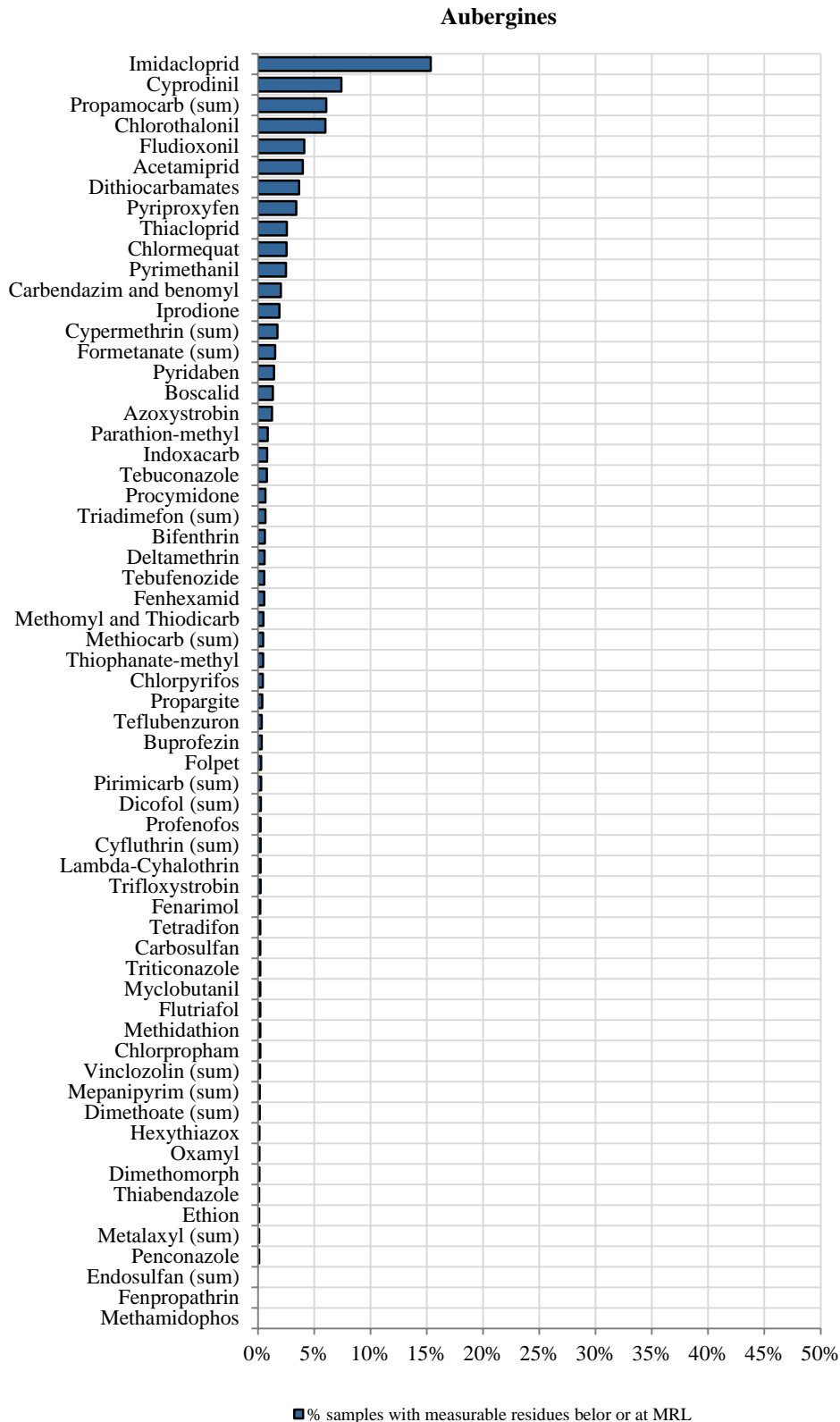
harmonisation of MRLs at EU level had an impact on the overall MRL compliance rate; the harmonisation has improved the clarity about which MRLs are to be applied. The increased clarity of the legal system and its simplification has also enabled to improve the self-control systems established by food business operators. The comparison of MRL exceedance rates of different years does not give an objective figure which allows drawing conclusions on the consumer exposure. EFSA is of the opinion that instead of the MRL exceedance rates, the results of the exposure assessments are a better indicator to estimate trends of pesticide uses and the impact on human exposure to pesticide residues. This aspect is further discussed in section 5 of this report.

### 3.4. Results by pesticide-commodity combination

In this section (Figure 3-6 to Figure 3-24), more detailed findings for the 10 commodities covered by the coordinated programme are reported. The charts present the percentage of samples containing residues of the 120 pesticides (100 mandatory) included in the programme and the percentages of samples with residues exceeding the MRLs. For each commodity, the pesticides found in that commodity are sorted according to the frequency of samples with residue findings above the reporting limit (including samples with residues above the quantification level and above the MRL)<sup>61 62</sup>.

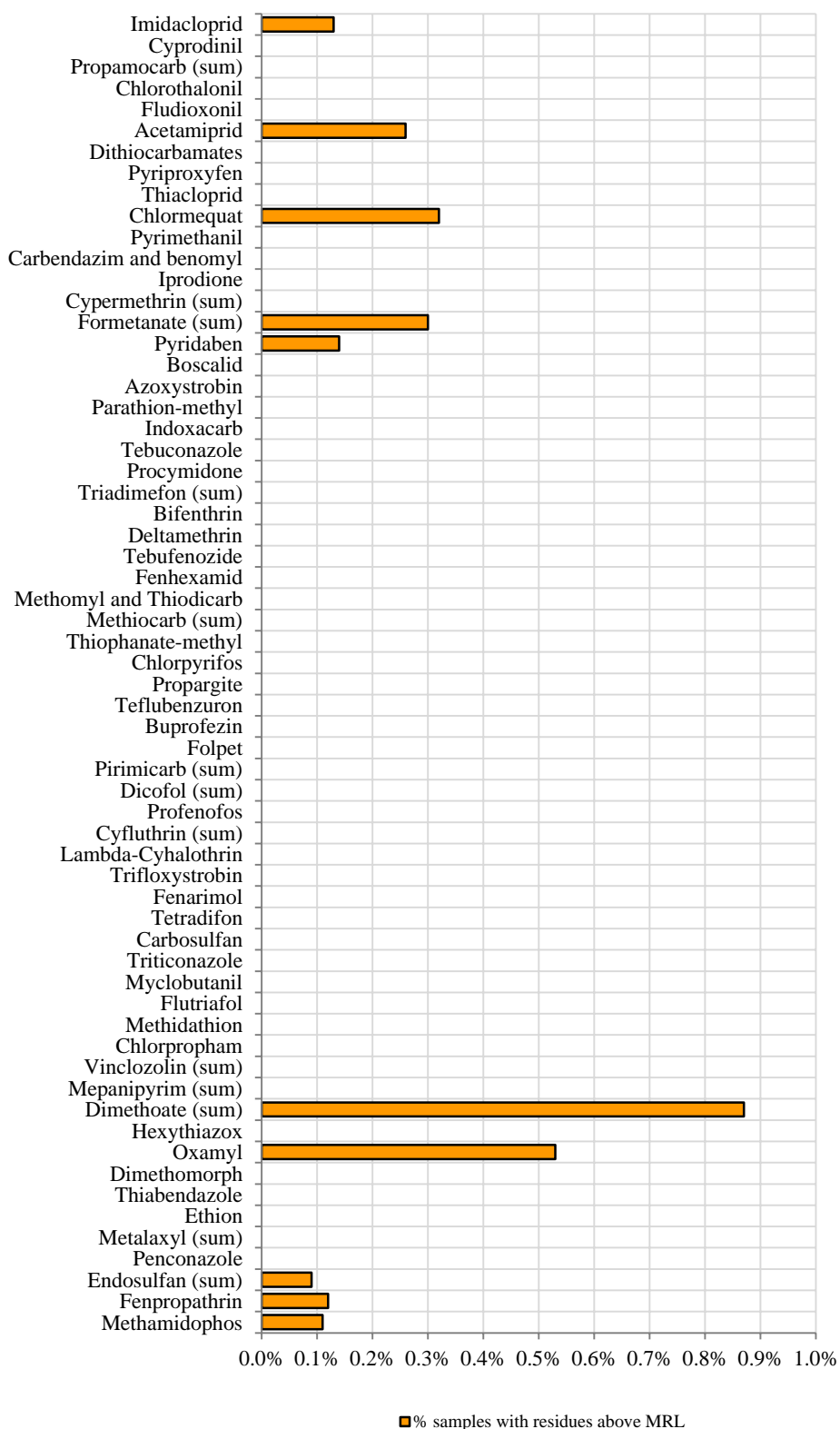
<sup>61</sup> It is noted that not all samples were analysed for all active substances. For this reason, the same number of samples with detection or instances of exceedance can result in different frequencies within the same commodity. In addition, analyses of a lower number of samples regarding a specific pesticide residue have an influence on the frequency.

<sup>62</sup> For pesticides with complex residue definitions (residue definition comprising the active substance and one or several metabolites, e.g., endosulfan) the MRL normally refers to the sum of the individual compounds covered, expressed as parent active substance (e.g., sum of alpha, and beta-isomers and endosulfan-sulphate, expressed as endosulfan). In some cases reporting countries did not analyse for all individual components covered by the residue definition. In the following figures the results for samples fully compliant with the residue definition and those results which cover only part of the residue definition were aggregated.



**Figure 3-6:** EUCP - Percentage of samples of aubergines with measurable residues below or at the MRL 2009.

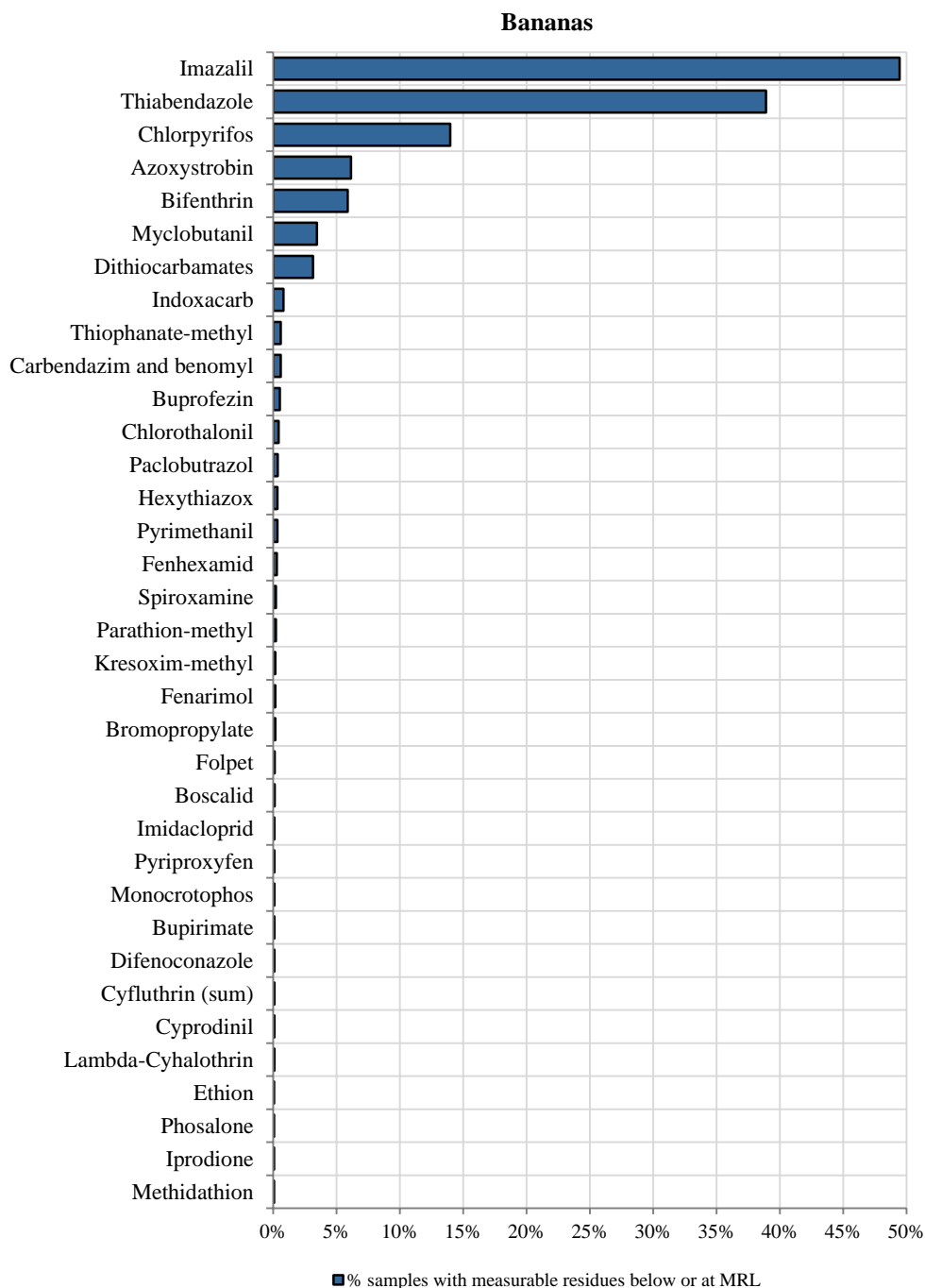
### Aubergines



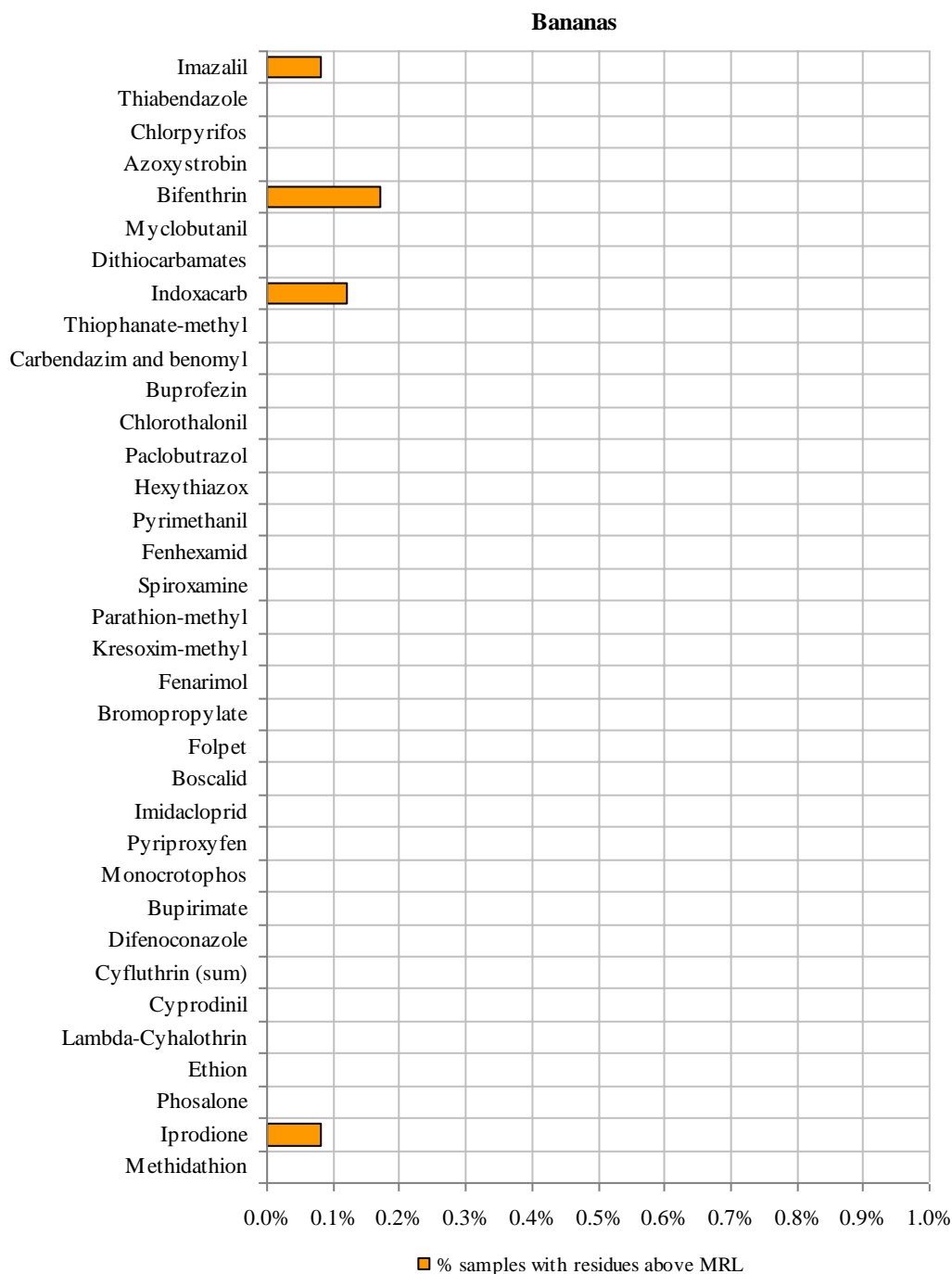
**Figure 3-7:** EUCP - Percentage of samples of aubergines with measurable residues above the MRL 2009.

In aubergines, 62 different pesticides were found in 1,103 samples. The most frequent active substances found were imidacloprid, cyprodinil and propamocarb (sum). Dimethoate (sum) (six

samples), oxamyl (four samples), acetamiprid (two samples), imidacloprid, chlormequat, formetanate (sum), pyridaben, endosulfan (sum), fenpropathrin and methamidophos (each one sample) were found to exceed the MRL. Samples with MRL exceedances came mainly from Thailand (5 samples), Turkey (4 samples) and the Netherlands (4 samples).



**Figure 3-8:** EUCP - Percentage of samples of bananas with measurable residues below or at the MRL 2009.



**Figure 3-9:** EUCP - Percentage of samples of bananas with measurable residues above the MRL 2009.

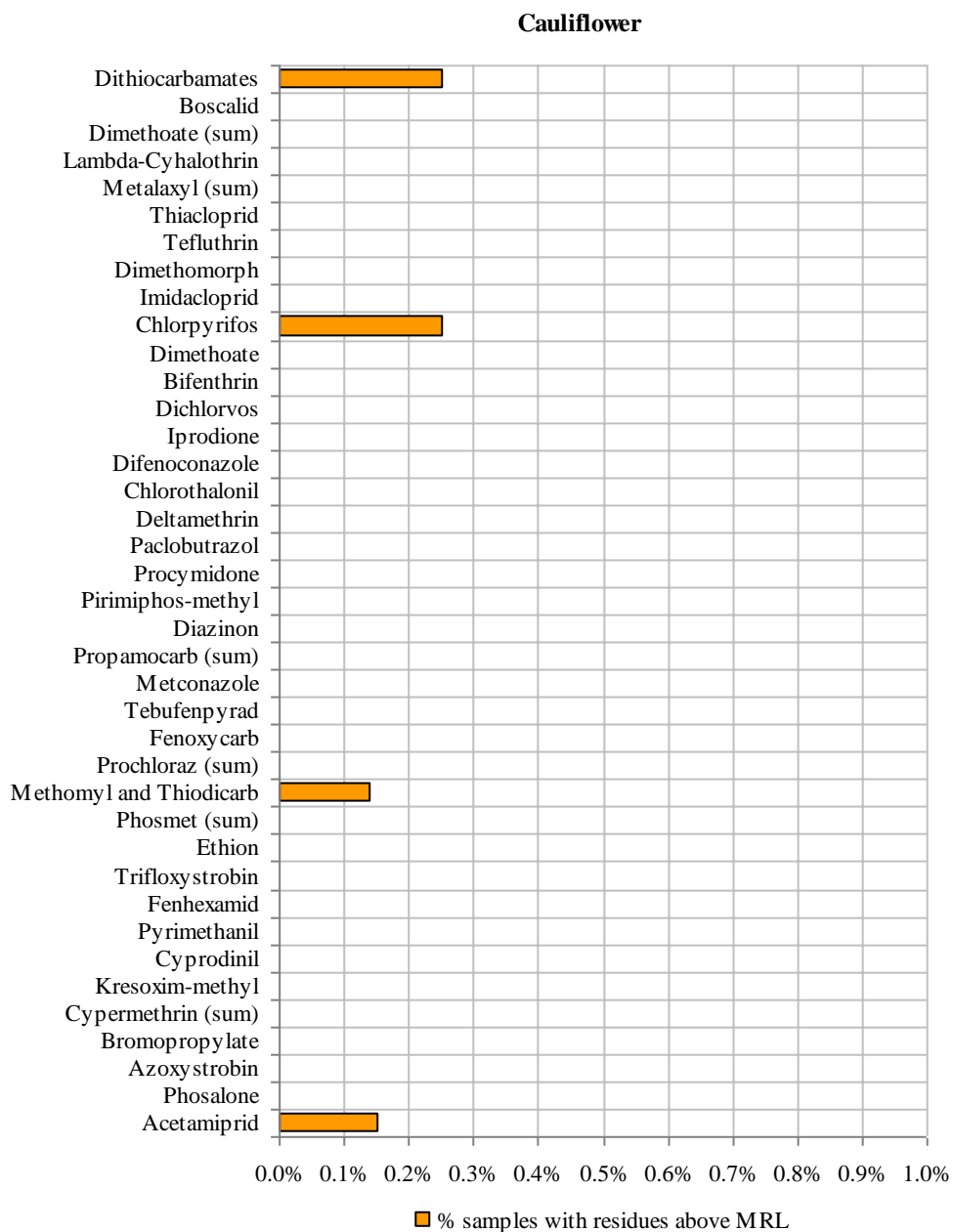
In bananas, 35 different pesticides were found in 1,323 samples. The most frequently found active substances were imazalil, thiabendazole, chlorpyrifos and azoxystrobin. The high findings of imazalil and thiabendazole are not surprising, as these pesticides are frequently used as post-harvest treatment. MRL exceedances were observed for 4 active substances. Bifenthrin was found in 2 samples (0.17%), imazalil, indoxacarb and iprodione in one sample each. Banana samples exceeding the MRL were reported to originate from EEA and from third countries (Spain, Portugal, Costa Rica and Ecuador).



**Cauliflower**



**Figure 3-10:** EUCP - Percentage of samples of cauliflower with measurable residues below or at the MRL 2009.

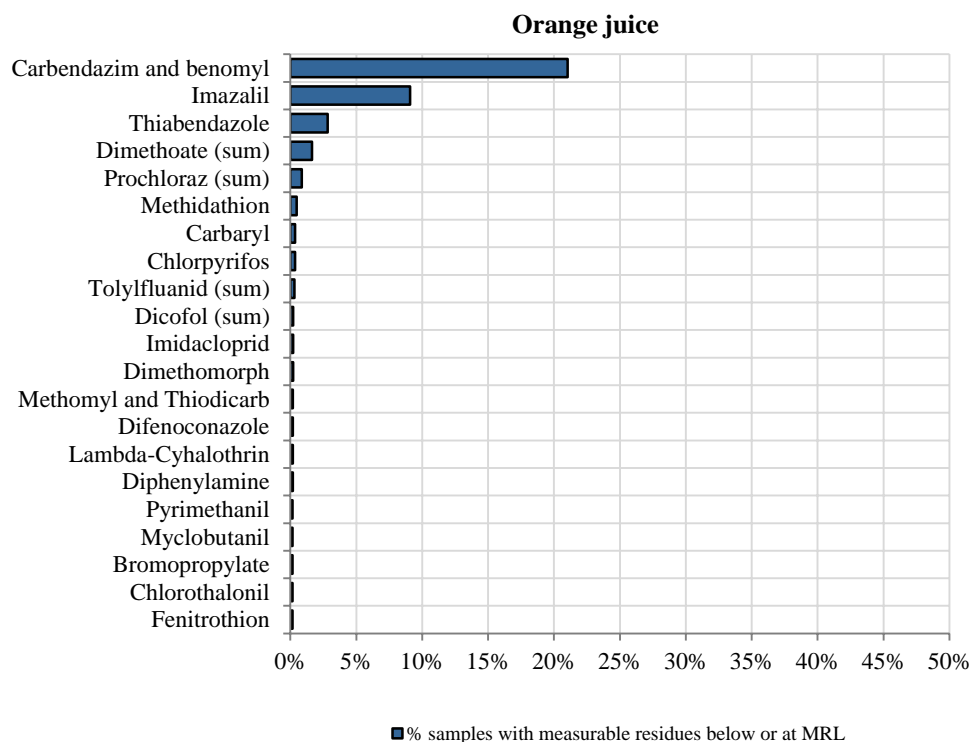


**Figure 3-11:** EUCP - Percentage of samples of cauliflower with measurable residues above the MRL 2009.

In cauliflower, 39 different pesticides were found in 921 samples. Dithiocarbamates were detected most frequently. In 52.3% of the samples this residue could be measured. The other residues, e.g. boscalid (7 samples) or dimethoate (sum) (6 samples) were found in only 1% of cauliflower samples. Four different pesticides were found in concentrations exceeding the MRL. Chlorpyrifos was found to exceed the MRL in 2 samples (0.3%). The MRL exceedances were reported for acetamiprid (1 sample; 0.2%), the dithiocarbamate group (1 sample; 0.3%) and methomyl/thiodicarb (1 sample; 0.1%). Cauliflower samples exceeding the MRL were all originating from the EU.

The prominent results regarding the high frequency of dithiocarbamates detections are probably not the result of a pesticide treatment but are most likely a false positive result. Brassica vegetables naturally contain substances which may lead to the formation of CS<sub>2</sub> during the analytical process (Perz *et al.*, 2000) and may mimic the occurrence of dithiocarbamates residues on food. It is

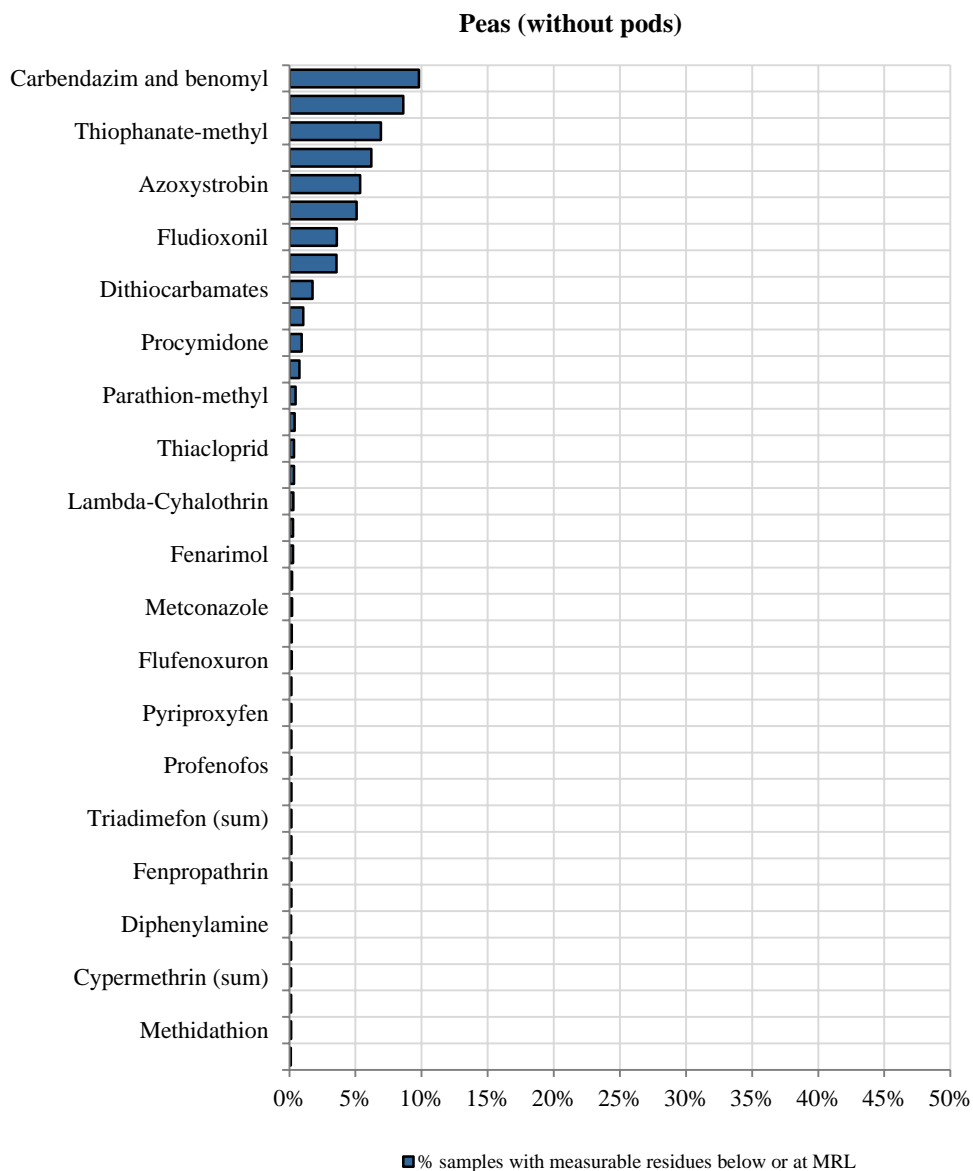
recommended to investigate improvements of the analytical methods used for the detection of dithiocarbamates with view of avoiding the reporting of false positive results.



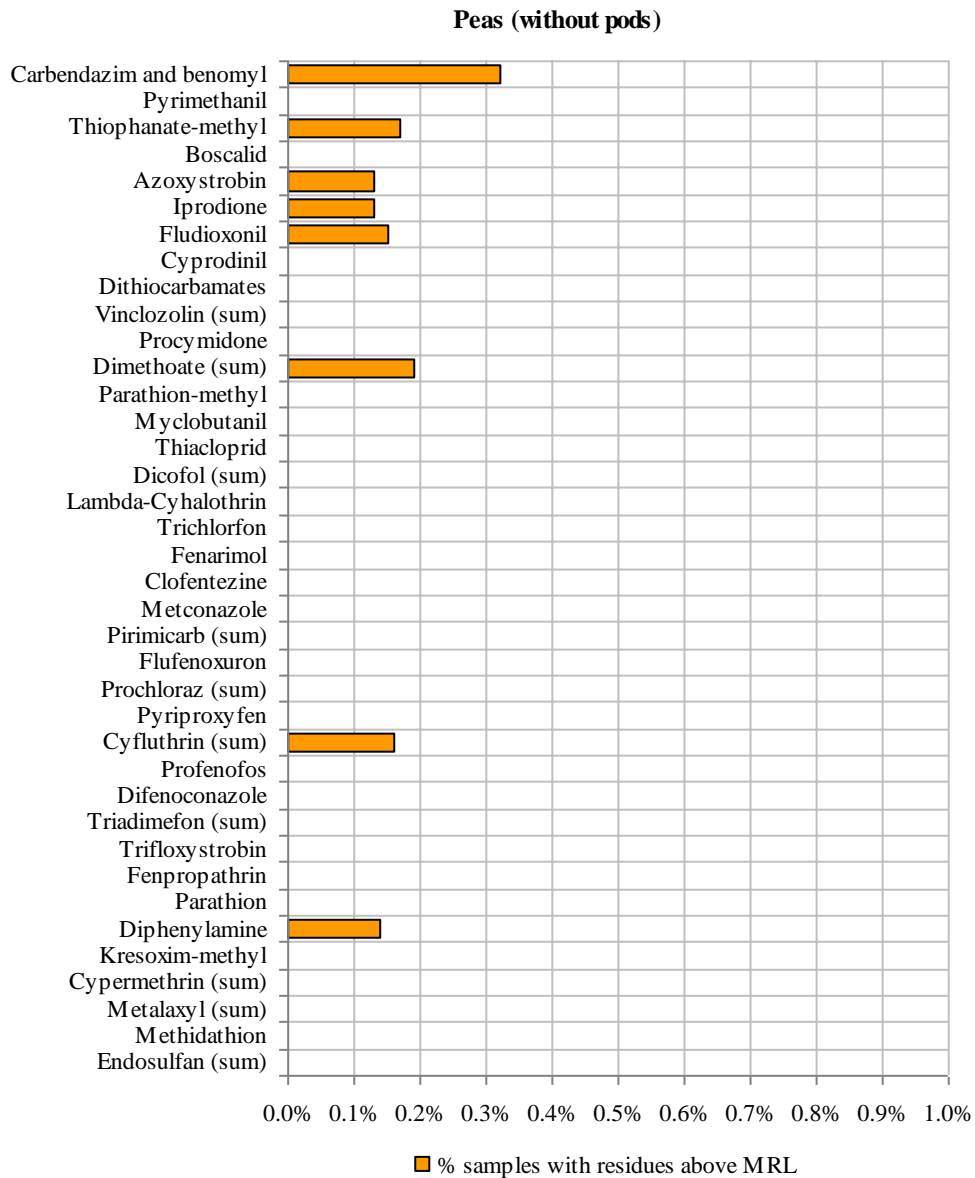
**Figure 3-12:** EUCP - Percentage of samples of orange juice with measurable residues 2009.

In orange juice, 21 different pesticides were found in 655 samples. The most frequent pesticides were carbendazim and benomyl<sup>63</sup>, followed by imazalil and thiabendazole. No MRL exceedances were reported.

<sup>63</sup> Residue definition: Sum of benomyl and carbendazim expressed as carbendazim



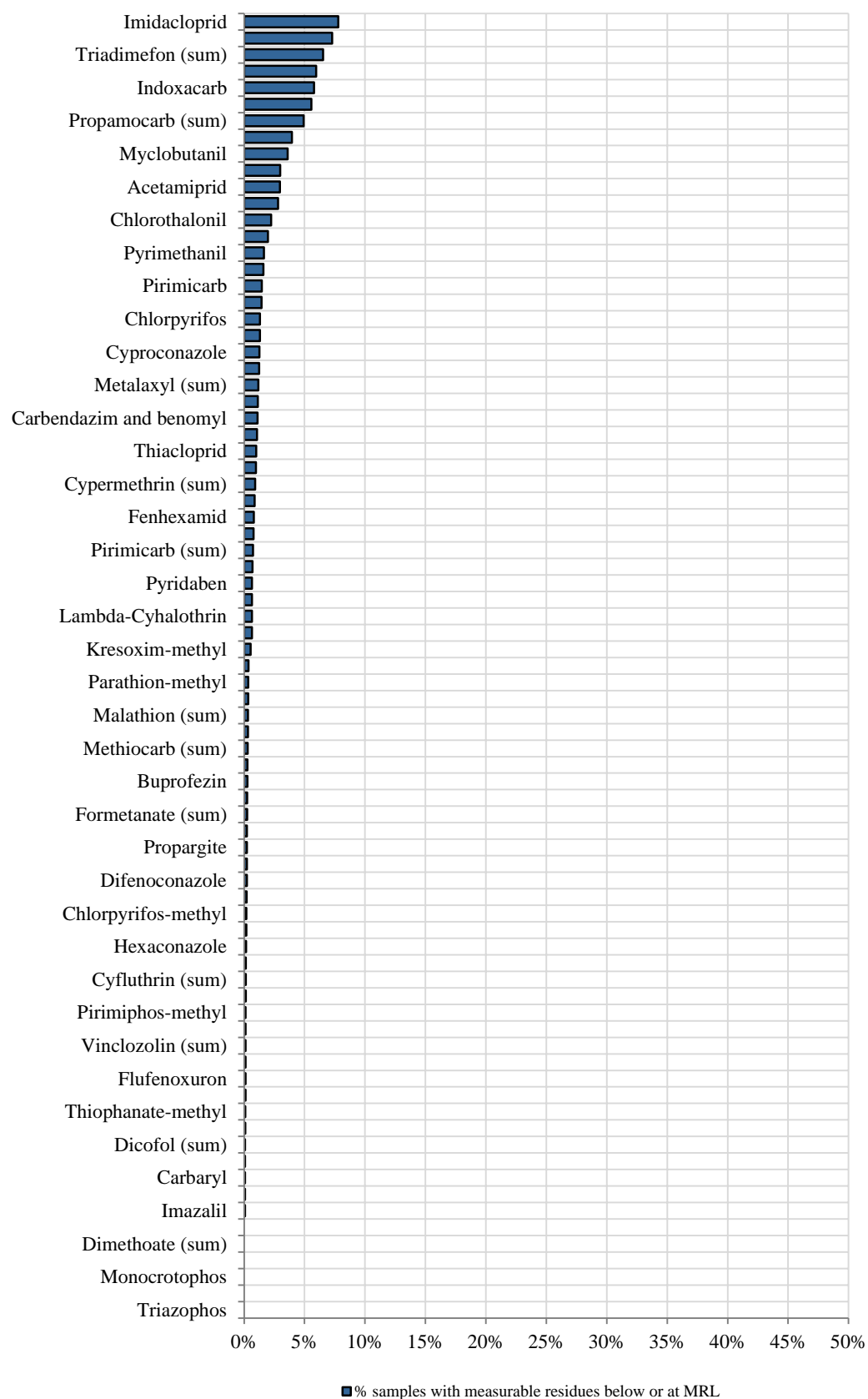
**Figure 3-13:** EUCP - Percentage of samples of peas without pods with measurable residues below or at the MRL 2009.



**Figure 3-14:** EUCP - Percentage of samples of peas without pods with measurable residues above the MRL 2009.

In peas (without pods), 38 different pesticides were found in 810 samples. The most frequent pesticides found were carbendazim and benomyl (in 9.8% of the samples), pyrimethanil, thiophanate-methyl and boscalid. MRL exceedances were observed for 8 active substances (carbendazim and benomyl, thiophanate-methyl, azoxystrobin, iprodione, fludioxonil, dimethoate (sum), cyfluthrin (sum) and diphenylamine). Pea samples exceeding the MRL were all from the EU.

### Peppers



**Figure 3-15:** EUCP - Percentage of samples of pepper (sweet) with measurable residues below or at the MRL 2009.

Peppers

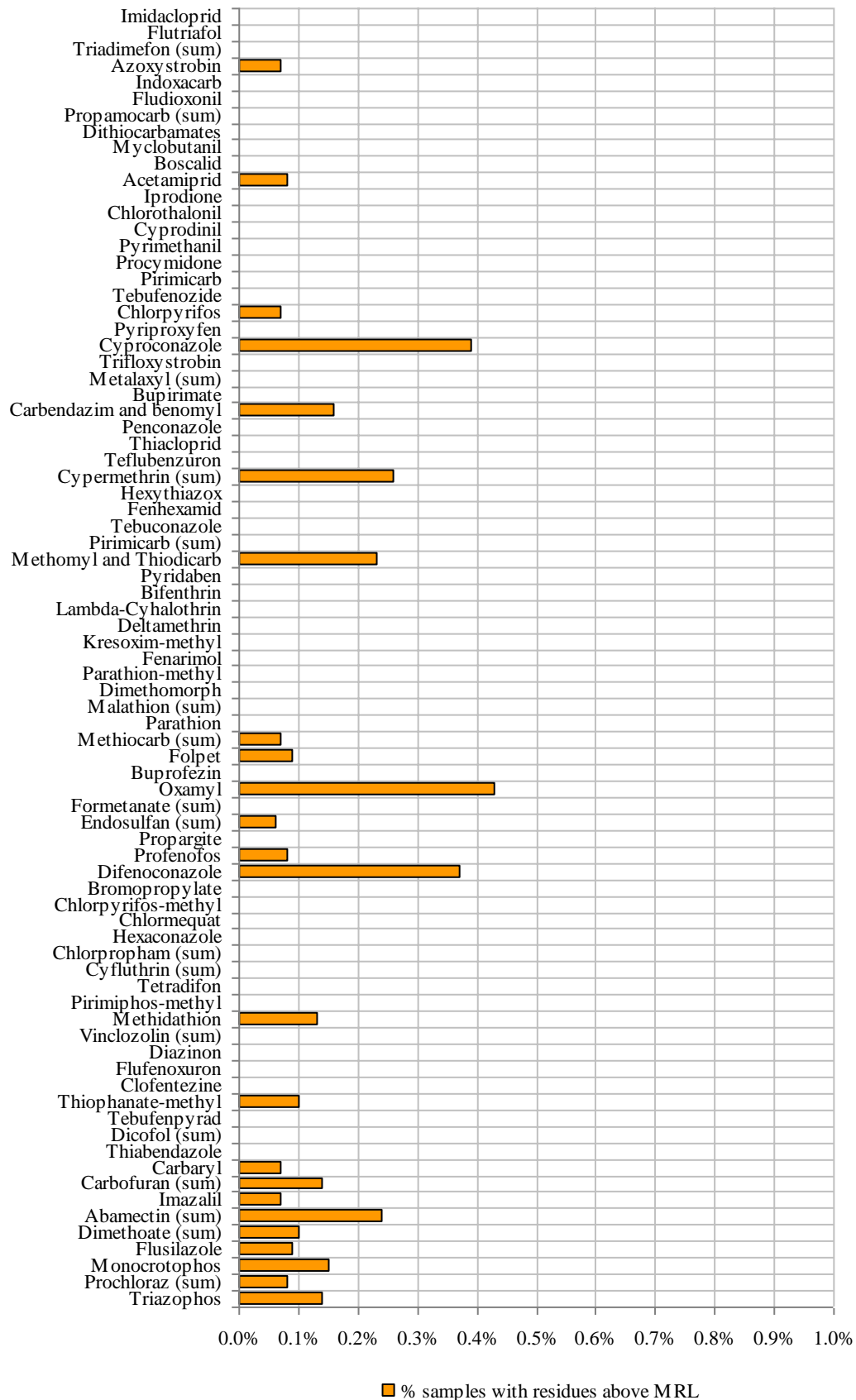
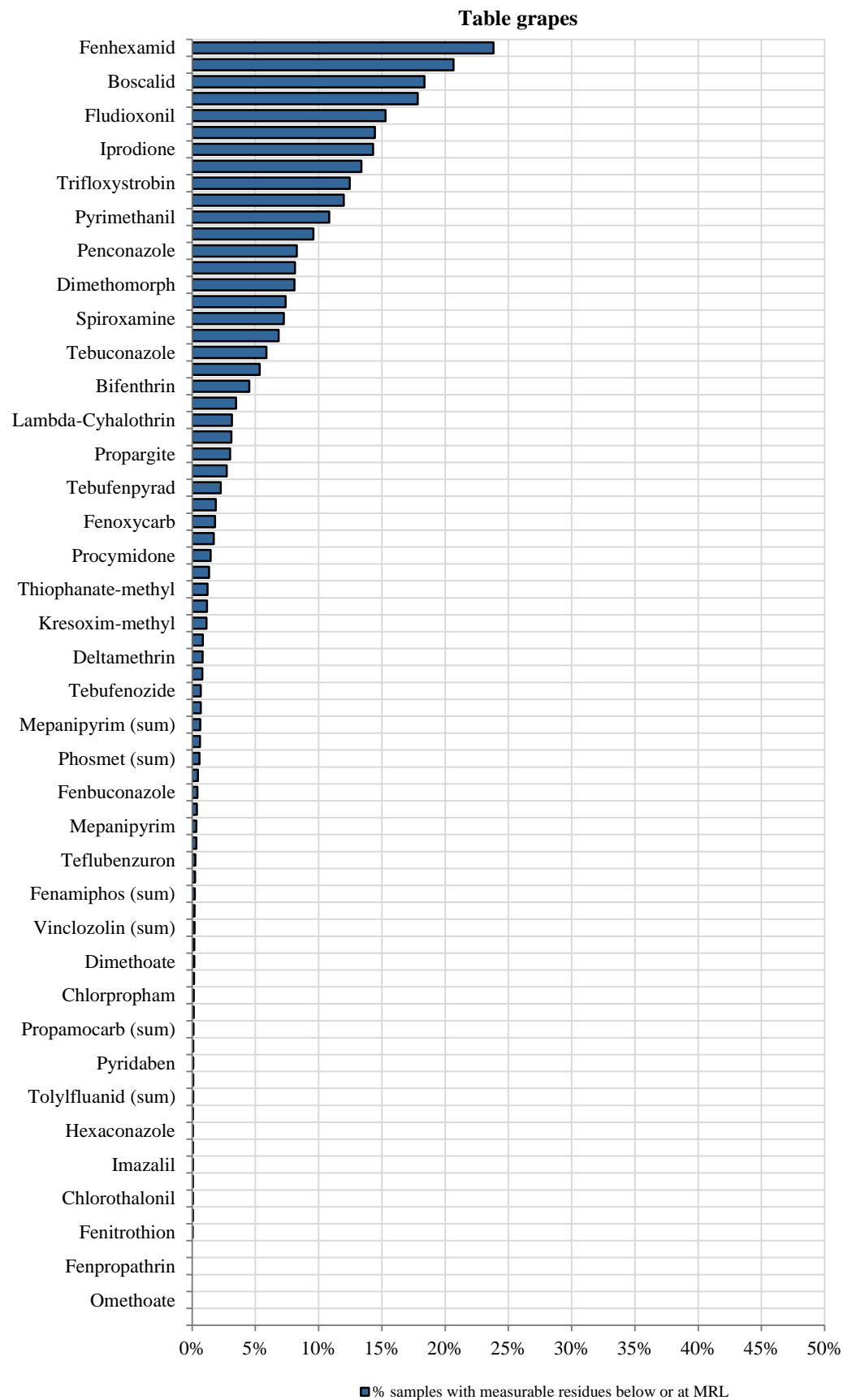


Figure 3-16: EUCP - Percentage of samples of pepper (sweet) with measurable residues above the MRL 2009.

In peppers, 79 different pesticides were found in 1,733 samples. The most frequently found pesticides were imidacloprid, flutriafol, triadimefon (sum), azoxystrobin, indoxacarb and fludioxonil. 24 pesticides were found in concentrations exceeding the MRLs in 45 samples. Countries with most non-compliant samples were Thailand (14), Turkey (7), Egypt (6) and India (4). Oxamyl was found to exceed the MRL in 0.4% (5 samples), followed by cyproconazole in 0.39% (4 samples) and difenoconazole in 0.37% (5 samples).





**Figure 3-17:** EUCP - Percentage of samples of table grapes with measurable residues below or at the MRL 2009.

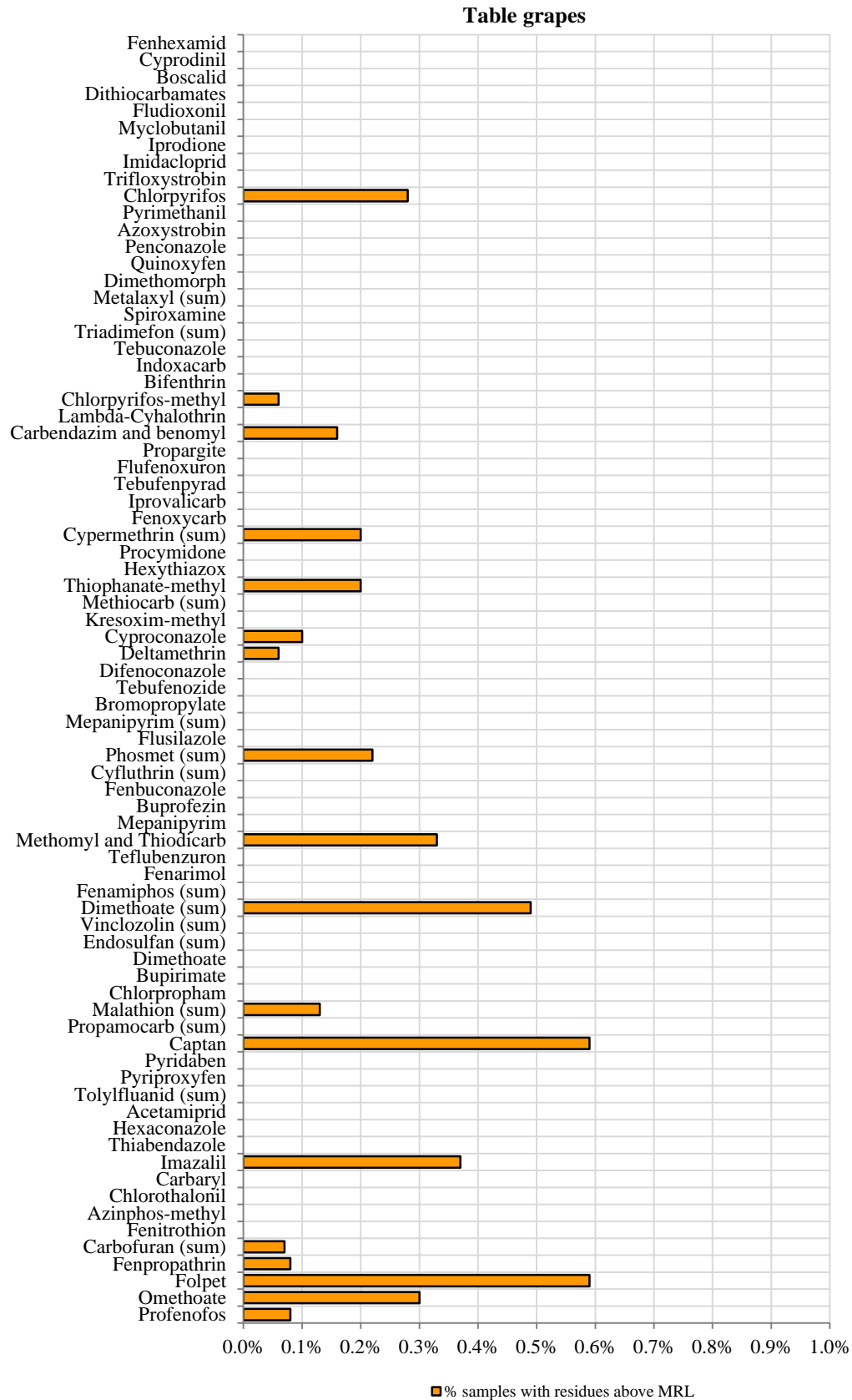
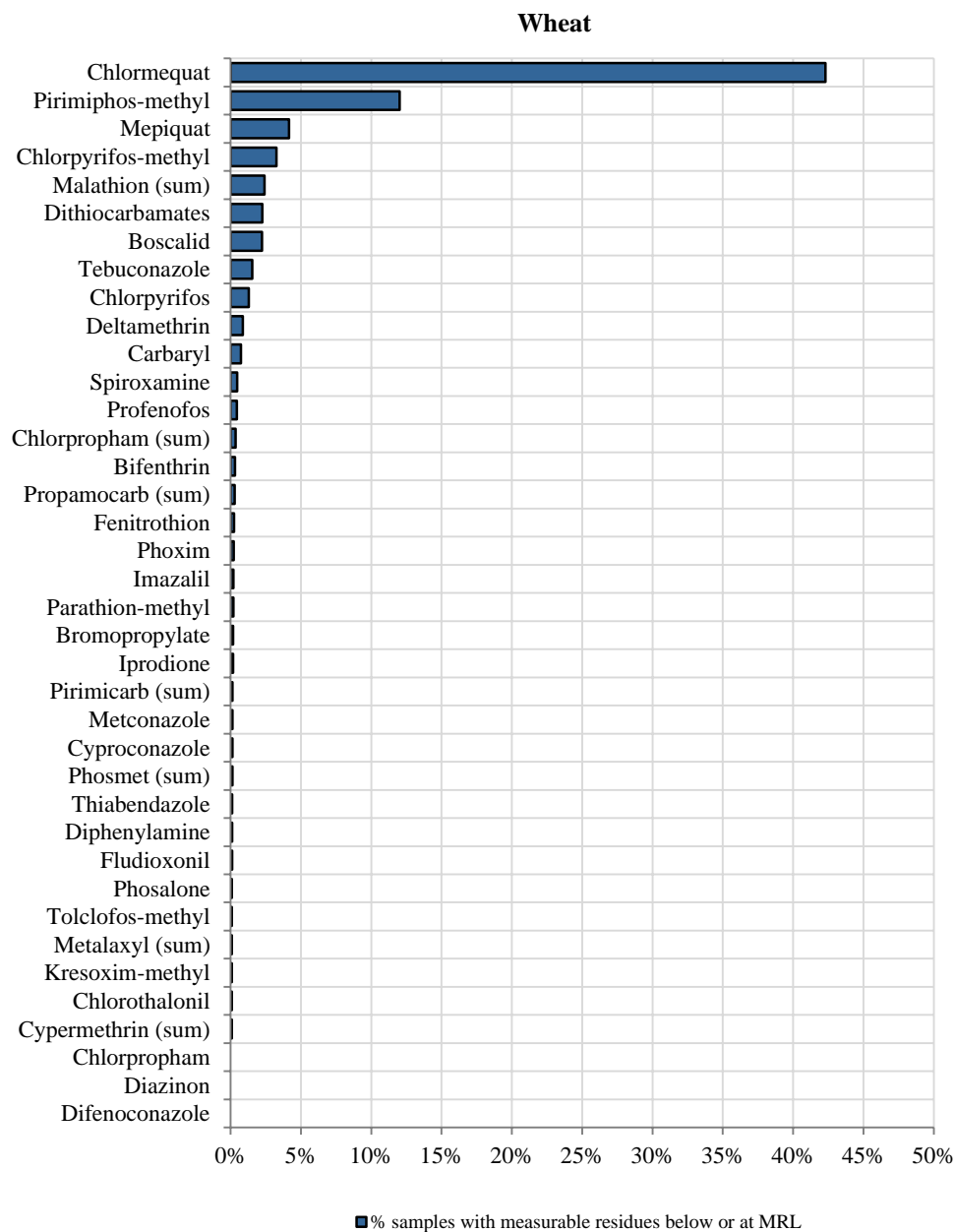
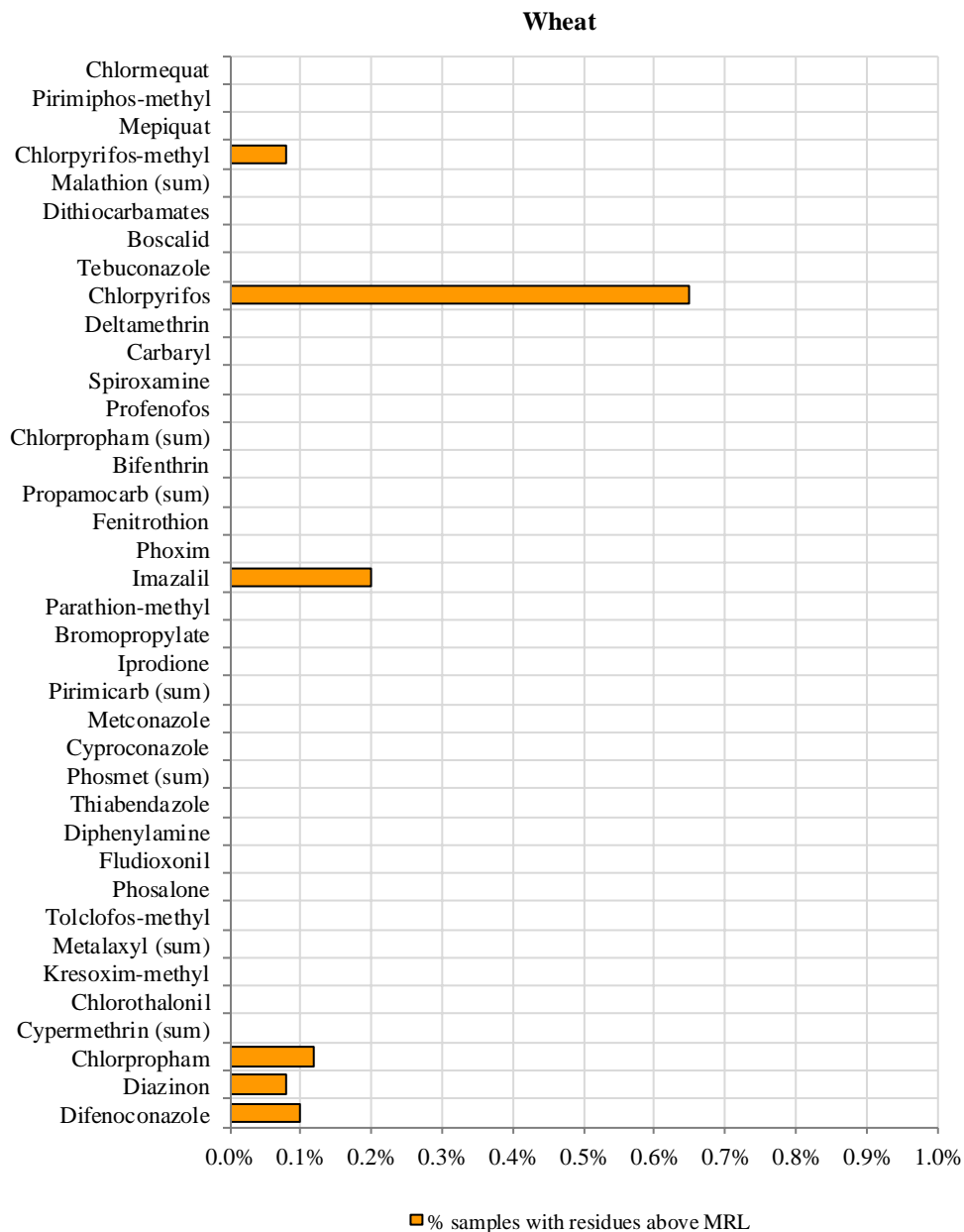


Figure 3-18: EUCP - Percentage of samples of table grapes with measurable residues above the MRL 2009.

In table grapes, 76 different pesticides were found in 1,664 samples. The most frequent pesticides found were fenhexamid, followed by cyprodinil, boscalid and dithiocarbamates. 18 pesticides were found in concentrations exceeding the MRL in 49 samples. Captan and folpet showed the highest rate of MRL exceedance (0.59%, 6 samples), followed by dimethoate (sum) (0.49%), imazalil (0.37%) and methomyl/thiodicarb (0.33%). Countries with most non-compliant table grapes samples were Chile (9), Italy (8), Greece (5), Turkey (5) and Cyprus (4).

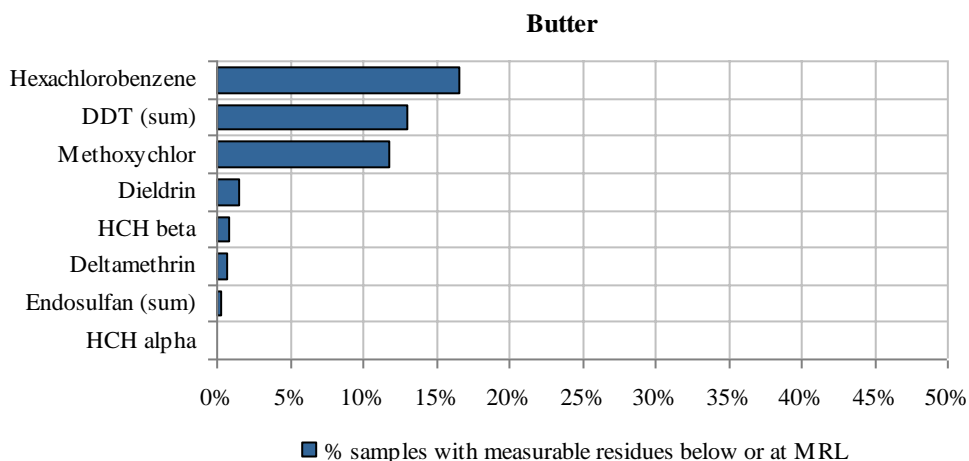


**Figure 3-19:** EUCP - Percentage of samples of wheat with measurable residues below or at the MRL 2009.

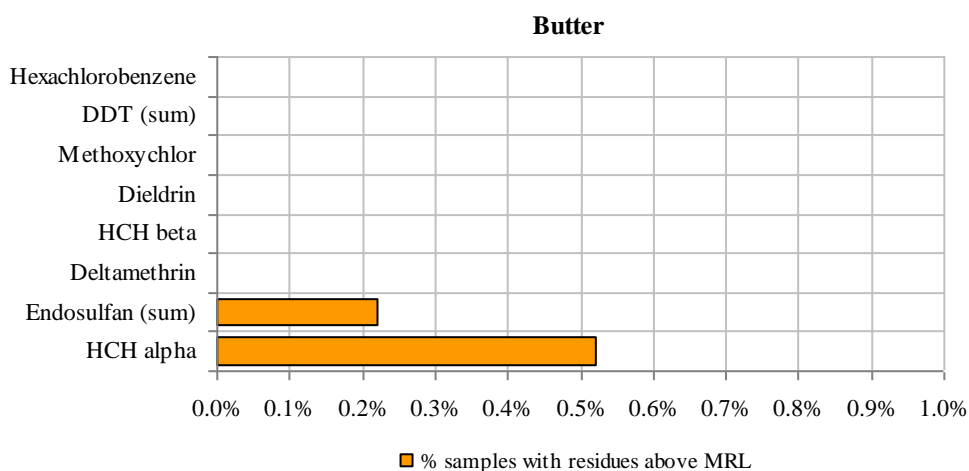


**Figure 3-20:** EUCP - Percentage of samples of wheat with measurable residues above the MRL 2009.

In wheat, 38 different pesticides were found in 1,312 samples. The most frequent pesticides found were chloromequat (42.3% of samples), followed by pirimiphos-methyl, mepiquat and chlorpyrifos-methyl. Six pesticides were found in concentrations exceeding the MRL. Chlorpyrifos showed the highest rate of MRL exceedance (0.65%, 7 samples).

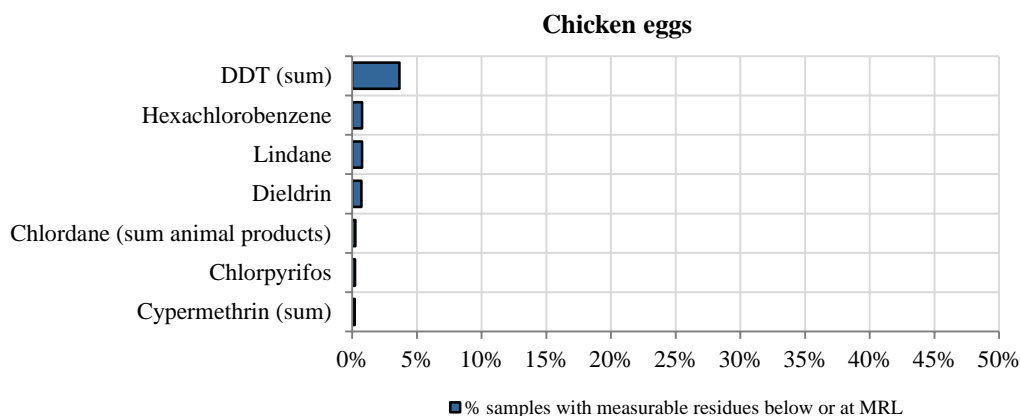


**Figure 3-21:** EUCP - Percentage of samples of butter with measurable residues below or at the MRL residues 2009.

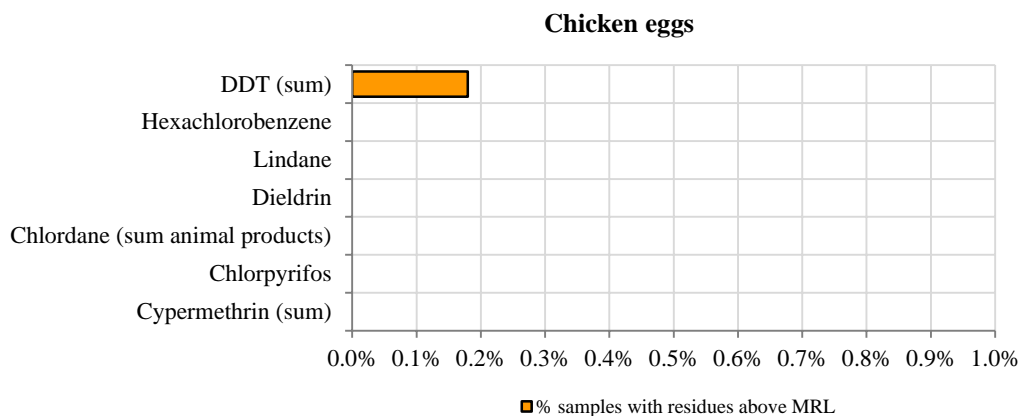


**Figure 3-22:** EUCP - Percentage of samples of butter with measurable residues above the MRL residues 2009.

In butter, 8 different pesticides were found in 473 samples. The most frequently found pesticide residues were hexachlorobenzene, DDT (sum) and methoxychlor. MRL exceedances were observed for HCH alpha (twice) and endosulfan (sum), all samples coming from the EU. Although these substances – except deltamethrin - are no longer used at EU level and in most third countries, they are still found in food, in particular in food of animal origin, because of their high persistence and because they have a tendency to accumulate in the food chain.



**Figure 3-23:** EUCP - Percentage of samples of chicken eggs with measurable residues below or at the MRL 2009.



**Figure 3-24:** EUCP - Percentage of samples of chicken eggs with measurable residues above the MRL 2009.

In chicken eggs, 7 different pesticides were found in 559 samples. DDT was most often found (in about 3.6% of samples). In one sample (from the EU), DDT exceeded the MRL. Although these substances found in eggs – except chlorpyrifos and cypermethrin - are no longer used at EU level and in most third countries, they are still found in food, in particular in food of animal origin, because of their high persistence and because they have a tendency to accumulate in the food chain.

The pesticide/crop combination where residue concentrations above the reporting level were found most frequently was imazalil/bananas (49.5%), chlormequat/wheat (42.3%), thiabendazole/bananas (38.9%) and fenhexamid/table grapes (23.8%)<sup>64</sup> (Table 3-1).

The highest percentages of MRL exceedances were found for dimethoate (sum) in aubergines, where the MRL was exceeded in 0.87% of all samples. In aubergines, oxamyl also exceeded the MRL in 0.53% of all samples. In wheat, 0.65% of the samples showed an exceedance of the MRL of chlorpyrifos. In table grapes, the MRL for captan and folpet was exceeded in 0.59% of the samples. The other most frequent pesticide/crop combinations with MRL exceedances are given in Table 3-2.

<sup>64</sup> The value for dithiocarbamate on cauliflower (52.3%) was not included in this statistic because of possible false positive results included in this figure.

**Table 3-1:** EUCP - Most frequent detections of particular pesticide/commodity combinations (above 10%) - 2009.

Product	Compound	% samples above the LOQ analysed for compound	Background information on the active substances found
Aubergines	Imidacloprid	15.48	Systemic insecticide used against different pests in a wide range of crops.
Bananas	Imazalil	49.54	Systemic fungicide used to control a wide range of fungal or storage diseases in fruit and other crops
	Thiabendazole	38.90	Mainly used as post-harvest fungicide to control a wide range of different plant pathogens and storage diseases.
	Chlorpyrifos	13.98	Non-systemic insecticide used to control different pests in soil or on foliage in fruit and other crops.
Butter	Hexachlorobenzene	16.58	Persistent organic pollutant, in Europe banned since 1979.
	DDT (sum)	12.96	Persistent organic pollutant, in Europe banned since 1979.
	Methoxychlor	11.76	Insecticide used against a wide range of insect pests in field crops, but also for control of insect pests in animal houses.
Cauliflower	Dithiocarbamates	52.53	Probably false positive results resulting from natural occurring substances in brassica vegetables mimicking the presence of dithiocarbamates.
Eggs	-	-	
Orange juice	Carbendazim and benomyl	21.04	Carbendazim is a systemic fungicide used to control plant diseases in a wide range of diseases in cereals, fruit and vegetables. Also used as surface treatment against storage diseases of fruit. Benomyl is no longer authorised in Europe.
Peas (without pods)	Carbendazim and benomyl	10.11	Carbendazim is a systemic fungicide used to control plant diseases in a wide range of diseases in cereals, fruit and vegetables. Also used as surface treatment against storage diseases of fruit. Benomyl is no longer authorised in Europe.
Peppers	-	-	Foliar fungicide used to control pathogens in grapes, berries, stone fruit, citrus and vegetables.
Table grapes	Fenhexamid	23.82	Systemic fungicide used as foliar spray in cereals, fruit, and vegetables.
	Cyprodinil	20.66	Foliar fungicide used for control of plant diseases in a range of fruit and vegetables.
	Boscalid	18.37	Group of active substances used to control fungal diseases in a wide range of fruit and other crops.
	Dithiocarbamates	17.83	Non-systemic fungicide used for foliar treatment of fruit and vegetables.
	Fludioxonil	15.29	Systemic fungicide used against powdery mildew in vines and different diseases in fruit and vegetable crops.

	Myclobutanil	14.46	Contact fungicide used to control different diseases in grapes, but also in other fruit and vegetables and cereals.
	Iprodione	14.31	Systemic insecticide used against different pests in a wide range of crops.
	Imidacloprid	13.38	Broad-spectrum fungicide used in agricultural and horticultural crops.
	Trifloxystrobin	12.46	Non-systemic insecticide used to control different pests in soil or on foliage in fruit and other crops.
	Chlorpyrifos	12.26	Fungicide used to control of grey mould on grapes, fruit and vegetables.
	Pyrimethanil	10.85	Foliar fungicide used to control pathogens in grapes, berries, stone fruit, citrus and vegetables.
Wheat	Chlormequat	42.30	Plant growth regulator used in cereals.
	Pirimiphos-methyl	12.02	Insecticide used to protect stored cereals against losses caused by insects.

**Table 3-2:** EUCP - Most frequent MRL exceedances of pesticide/commodity combinations (above 0.5%) - 2009.

Product	Compound	% samples above MRL analysed for compound
Aubergines	Dimethoate (sum)	0.87
	Oxamyl	0.53
Bananas	-	-
Butter	HCH alpha	0.52
Cauliflower	-	-
Chicken eggs	-	-
Orange juice	-	-
Peas (without pods)	-	-
Peppers	-	-
Table grapes	Captan	0.59
	Folpet	0.59
Wheat	Chlorpyrifos	0.65

### 3.5. Results by pesticides

In the EU-coordinated programme, residues exceeding the MRL were found for 47 different pesticides or group of pesticides (Figure 3-25). The most frequent MRL exceedances (expressed in % of samples analysed for the respective pesticide) were detected for residues of HCH alpha (0.26%; 2 of total 761 samples; both exceedances occurred in butter) and dimethoate which exceeded the MRL in 0.22% of the samples (distributed among several commodities).

For the following 27 pesticides, no samples with measurable residues were identified in the EU-coordinated control programme: acephate, aldicarb (sum), amitrole, azinphos-ethyl, benfuracarb, bromuconazole (sum), cadufos, camphechlor, chlorbenzilate, chlorfenvinphos, dichlofluanid, endrin, ethoprophos, fenthion (sum), fenvalerate/esfenvalerate (sum), fipronil (sum), fluquinconazole, fosthiazate, heptachlor, linuron, methoxychlor, oxydemeton-methyl (sum), parathion-methyl (sum), permethrin (sum), prothioconazole, pyrazophos and resmethrin.



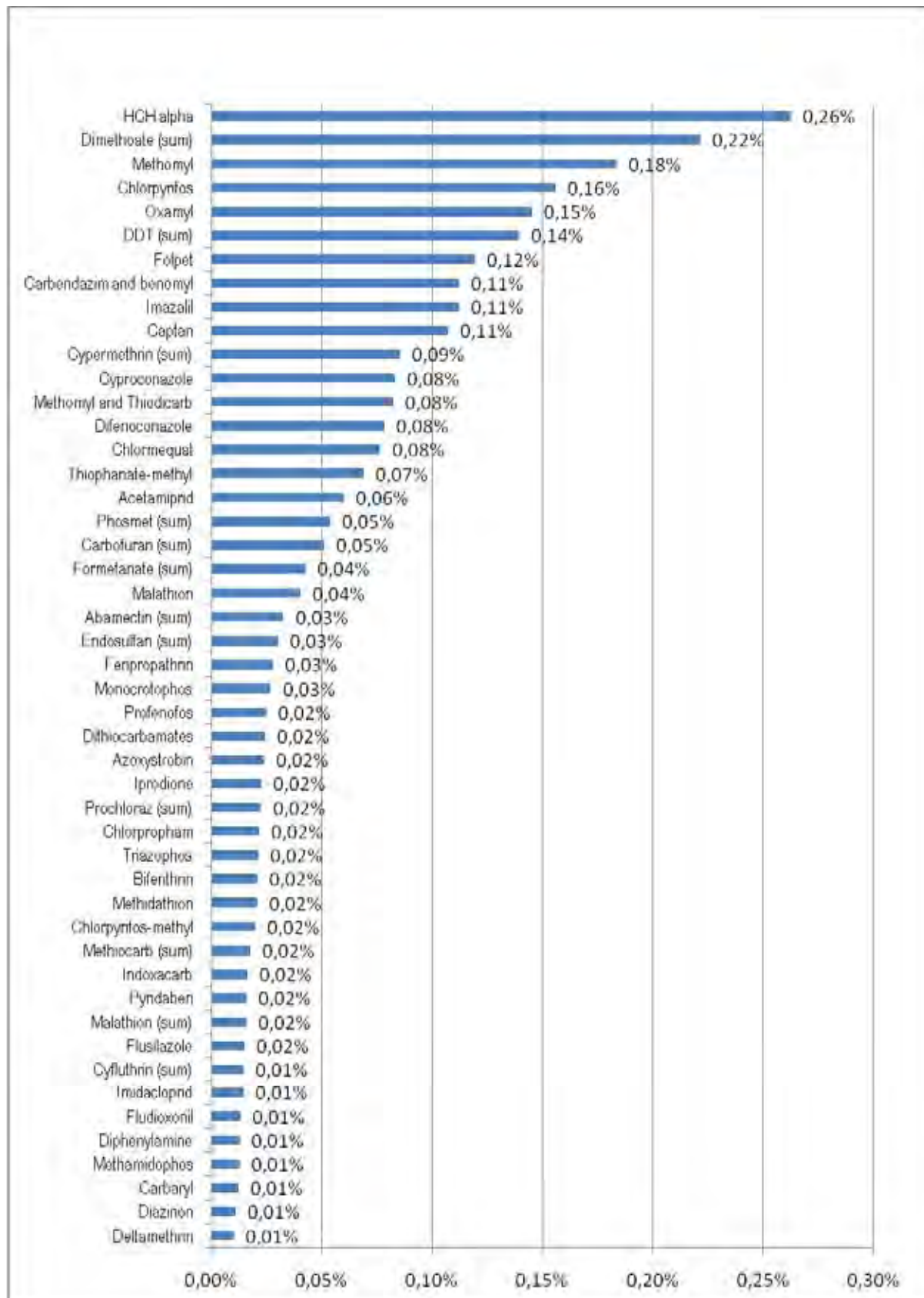
Measurable residues were found for 111 different substances. The top 50 of these pesticides are shown in Figure 3-26. All the remaining pesticides were found in less than 0.45% of the samples. Chloromequat was found most frequently (15.7% of total 1,308 samples). DDT (sum), imazalil, hexachlorobenzene, thiabendazole, imidacloprid and cyprodinil had frequencies of 5 – 10%. DDT (sum) and hexachlorobenzene were predominantly present in food of animal origin (butter and eggs)<sup>65</sup>. Imazalil and thiabendazole were found frequently in bananas and orange juice because of their use as post-harvest plant protection product. Boscalid, fenhexamid, fludioxonil, azoxystrobin, chlorpyrifos, carbendazim and benomyl, myclobutanil, iprodione, pyrimethanil, methoxychlor, triadimefon (sum), trifloxystrobin and indoxacarb were found with frequencies between 2 and 5% of the samples.

Figure 3-27 and Figure 3-28 summarise the frequencies of MRL exceedances and occurrence of pesticide residues in the different commodities. The highest percentage of MRL exceedances was 0.87% for dimethoate (sum) in aubergines. The most frequently found pesticide in this evaluation was chloromequat in wheat which was found in 42.3% of the wheat samples analysed.

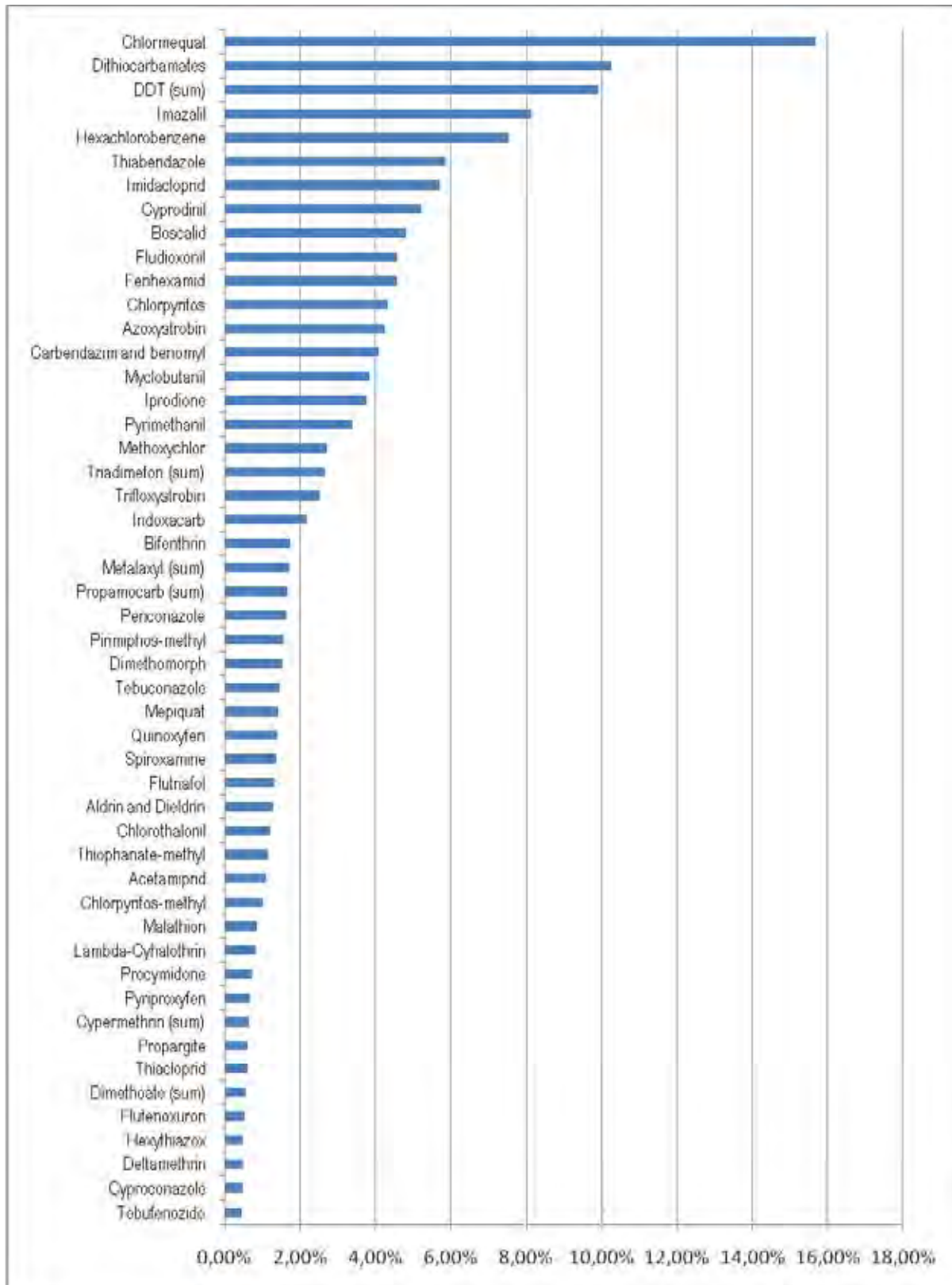
Results for all pesticides analysed in the EU coordinated control programme 2009 are tabulated in Appendix III, Table H.

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<sup>65</sup> A high value for dithiocarbamates on cauliflower was also observed (10.3%); however, this finding may be affected by possible false positive determinations.



**Figure 3-25:** EUCP - Percentage of samples with measurable residues above the MRL- 2009.



**Figure 3-26:** EUCP - Percentage of samples with measurable residues between LOQ and MRL - 2009.

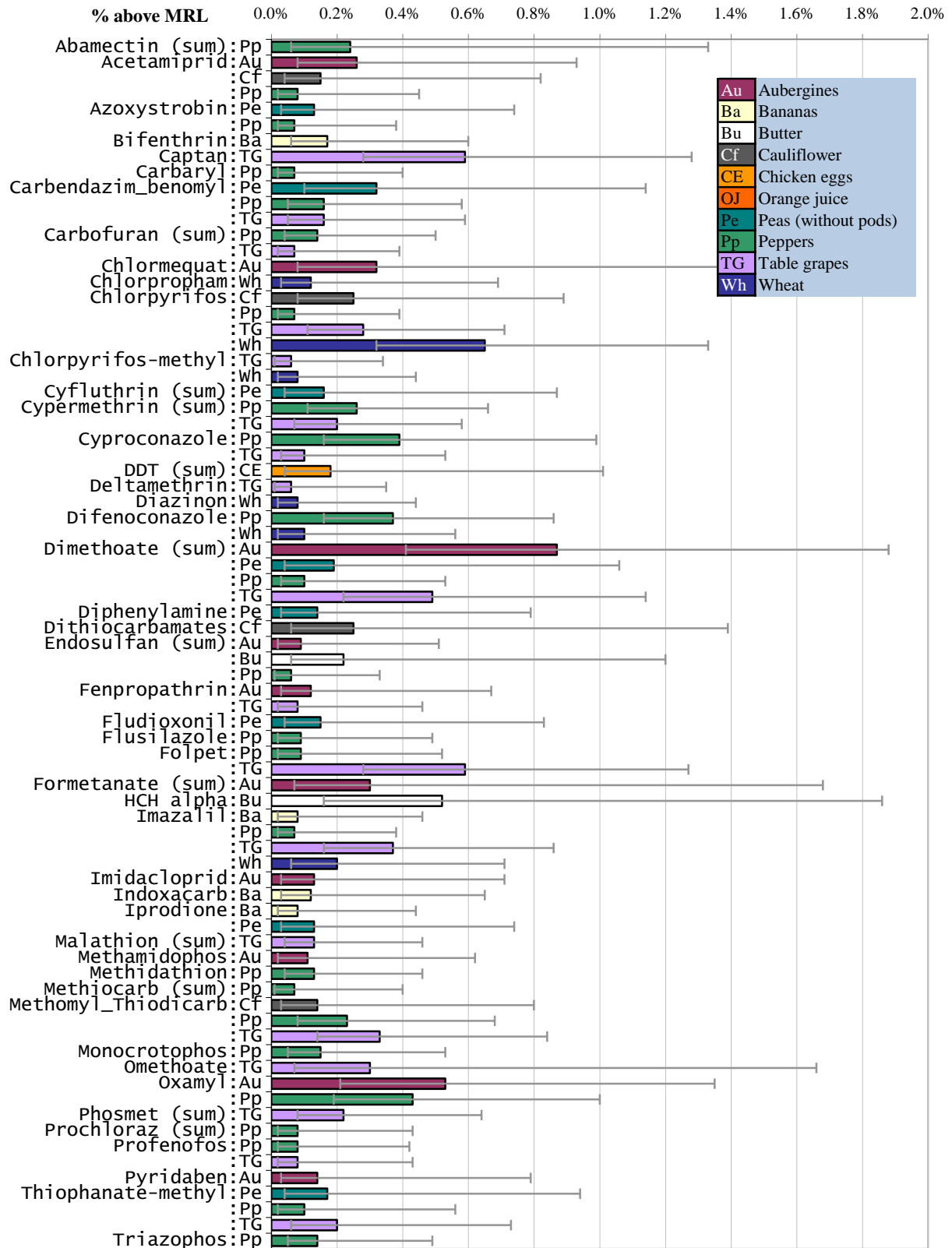
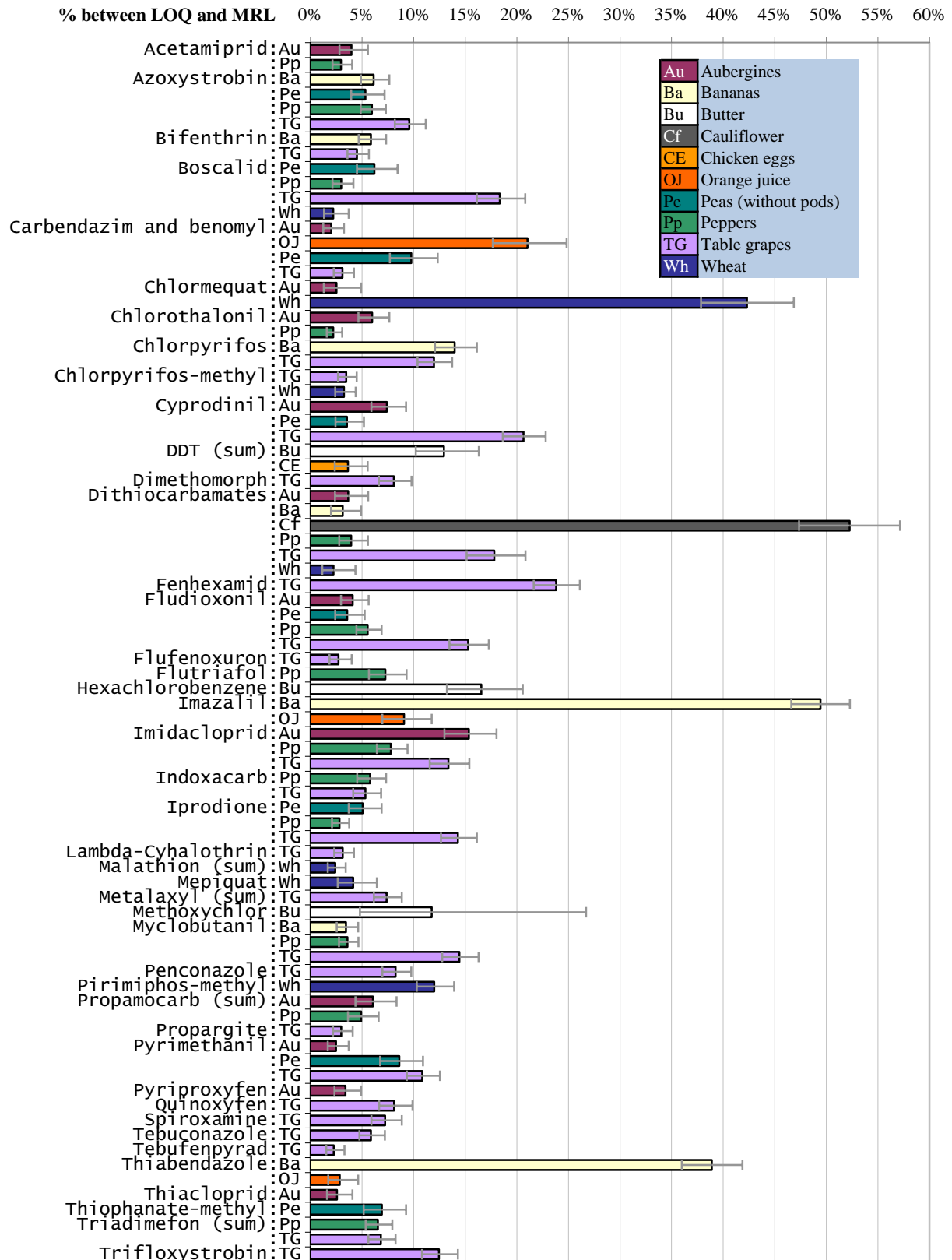


Figure 3-27: EUCP - Percentage of samples (incl. confidence intervals) with measurable residues above the MRL by commodity in 2009.



**Figure 3-28:** EUCP - Percentage of samples (incl. confidence intervals) with measurable residues below or at MRL by commodity in 2009.

### SUMMARY CHAPTER 3

The analysis of the results of the 2009 EU-coordinated programme shows that 1.2% of the 10,553 samples exceeded the MRL, while 37.4% of the samples had measurable residues above the reporting level but below or at the MRL. 61.4% of the samples were free of measurable pesticide residues.

In 2006 and 2009 the same food commodities of plant origin were analysed under the EU-coordinated programmes, but the number of pesticides to be controlled increased from 55 in 2006 to 100 in 2009, with additional 20 pesticides to be analysed on a voluntary basis. A distinct decrease in the overall MRL exceedance rate from 4.4% in 2006 to 1.2% in 2009 was observed. The lower MRL exceedance rate can partly be ascribed to the new harmonised EU MRL legislation entering into force in September 2008, which resulted in a simpler and clear legal system. Also other factors have contributed to the change in the MRL exceedance rate.

A comparison of the results obtained in 2006 and 2009 revealed an increase of the percentage of samples free of measurable residues (53.9% in 2006 to 61.4% in 2009).

The MRL exceedance rates vary among the reporting countries, ranging from 0% to 5.4% of the samples analysed. 10 food commodities were analysed in the 2009 EU-coordinated control programme.

The highest percentage of samples exceeding the MRL was identified for table grapes (2.8%), followed by peppers (1.8%), aubergines (1.7%), peas (1.0%), wheat (0.8%), butter (0.6%), cauliflower (0.5%), bananas (0.4%) and chicken eggs (0.2%). Table grapes also had the highest percentage of samples with measured pesticide residues below or at MRLs (70.6%), followed by 56.9% of the banana samples and 32.5% of the peppers. Compared to the results of the 2006 EU-coordinated control programme, where the same food commodities were analysed, the highest decrease of samples without detectable residues was found for orange juice (90% in 2006 to 75% in 2009), the highest increase was considered for peppers (55% in 2006 to 66% in 2009). The percentage of samples exceeding the MRLs has decreased for all commodities, except wheat.

*Aubergines:* 62 different pesticides were found in 1,103 samples. The most frequent active substances found were imidacloprid, cyprodinil and propamocarb (sum). Dimethoate (sum) (6 samples), oxamyl (4 samples) acetamiprid (two samples), imidacloprid, chlormequat, formetanate (sum), pyridaben, endosulfan (sum), fenprothrin and methamidophos (each one sample) were found to exceed the MRL.

*Bananas:* 35 different pesticides were found in 1,323 samples. The most frequently found active substances were imazalil, thiabendazole, chlorpyrifos and azoxystrobin. MRL exceedances were observed for four active substances (bifenthrin, indoxacarb, imazalil and iprodione).

*Cauliflower:* 39 different pesticides were found in 921 samples. Especially dithiocarbamates were detected at a high frequency (on 52.5% of samples) but this finding reflects very likely a false positive results. The other pesticides were found in 1% or less of cauliflower samples. Four pesticides were found in concentrations exceeding the MRL (chlorpyrifos, dithiocarbamates, methomyl/thiodicarb and acetamiprid).

*Orange juice:* 21 different pesticides were found in 655 samples. The most frequent pesticides were carbendazim/benomyl followed by imazalil and thiabendazole. No MRL exceedances were reported.

*Peas (without pods):* 38 different pesticides were found in 810 samples. The most frequent pesticides found were carbendazim/benomyl pyrimethanil, thiophanate-methyl and boscalid. MRL exceedances were observed for eight active substances (carbendazim/benomyl, thiophanate-methyl, azoxystrobin, iprodione, fludioxonil, dimethoate, cyfluthrin and diphenylamine).

*Pepper (sweet):* 79 different pesticides were found in 1,733 samples. The most frequently found pesticides were imidacloprid, flutriafol, triadimefon (sum), azoxystrobin, indoxacarb and fludioxonil.

24 pesticides were found in concentrations exceeding the MRLs; the highest exceedance rate was observed for oxamyl, cyproconazole and difenoconazole.

*Table grapes:* 76 different pesticides were found in 1,664 samples. The most frequent pesticides found were fenhexamid followed by cyprodinil, boscalid and dithiocarbamates. 18 pesticides were found in concentrations exceeding the MRL; the most frequent MRL exceedances concerned captan, folpet, methomyl, dimethoate and imazalil.

*Wheat:* 38 different pesticides were found in 1,312 samples. The most frequent pesticides found were chlormequat (42.3% of samples), followed by pirimiphos-methyl, mepiquat and chlorpyrifos-methyl. Six pesticides were found in concentrations exceeding the MRL (chlorpyrifos, imazalil, chlorpropham, difenoconazole, chlorpyrifos-methyl and diazinon).

*Butter:* 8 different pesticides were found in 473 samples. The most frequently found pesticide residues were hexachlorobenzene, DDT and methoxychlor. MRL exceedances were observed for HCH alpha and endosulfan.

*Chicken eggs:* 7 different pesticides were found in 559 samples. DDT (sum) was most often found (in about 4.8% of samples). In one sample DDT (sum) exceeded the MRL.

The main pesticide/crop combination where values above the reporting level were found most frequently was imazalil/bananas (49.5%), chlormequat/wheat (42.3%), thiabendazole/bananas (38.9%) and fenhexamid/table grapes (23.8%).

The highest percentages of MRL exceedances were found for dimethoate in aubergines, where the MRL was exceeded in 0.87% of all samples.

In the EU-coordinated programme residues exceeding the MRL were found for 47 different pesticides. The most frequent MRL exceedances were detected for residues of HCH alpha (0.26% of the samples) and dimethoate which exceeded the MRL in 0.22% of the samples.

Measurable residues were found for 111 different substances.

### **Recommendations**

EFSA recommends further investigating if the high frequency of residues of dithiocarbamates in cauliflower is resulting from the use of analytical methods which give false positive results. It should be also examined if more robust analytical methods would be applicable where this problem does not occur.

EFSA recommends the reporting countries to make efforts to analyse the samples according to the full residue definitions, including all metabolites, as required in EU pesticide legislation.

EFSA is recommended to provide the reporting countries with additional guidance on the use of the new data reporting system, in particular for the reporting of the control results on baby food.

#### 4. Results of the national control programmes

Samples taken in the framework of the EU-coordinated programme were in many cases analysed for a wider range of active substances than defined in the coordinated programme. Therefore, they were also counted as samples falling under the national control programmes. Consequently, findings reported in this section (e.g. results on the multiple residues) refer to results of both the national and the EU-coordinated control activities. Thus, the results of this chapter summarise the results of EU coordinated and national programmes.

##### 4.1. Overall results for MRL exceedances

In total, results for 67,978 samples were analysed in 2009, the reporting countries submitted results for more than 14 million individual determinations.

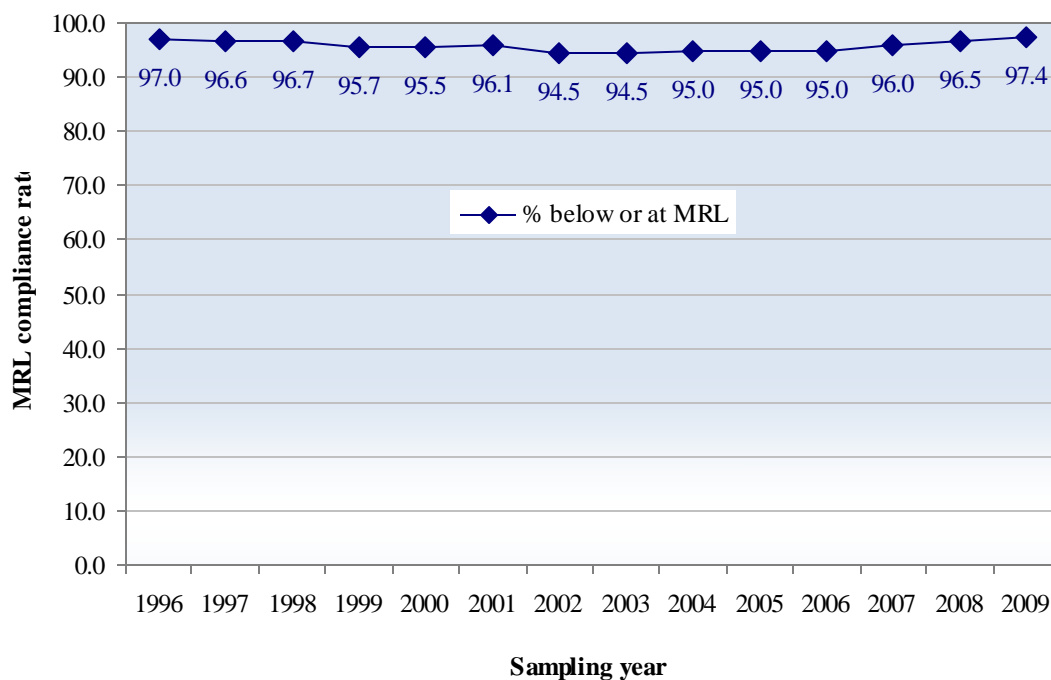
97.4% (64,810 samples) of the surveillance samples analysed (national and EU-coordinated multiannual programme) were below or at the legal MRLs. In 2.6% (1,740 samples) of the samples the legal limits were exceeded for one or more pesticides.

##### 4.2. MRL exceedance rate over the time

The overall reported MRL exceedance rate (2.6%) is slightly lower than in the previous year where 3.5% of the samples were found to exceed the MRL. From 1996 to 2008, the exceedance rate ranged from 3.0% to 5.5%.

Figure 4-1 shows the trend of exceeding/non-exceeding samples of the monitoring reports from 1996 to 2009. The figure for 2008 and 2009 includes surveillance samples from both the national and the EU-coordinated programme. For the period 1996-2007, the figure also includes enforcement samples.





**Figure 4-1:** EU+NCP - MRL compliance rate for samples from the national and EU-coordinated pesticide residue programmes 1996-2009<sup>66</sup>.

Different factors may influence the overall MRL exceedance rate in a positive or negative way. In the following, some possible reasons are listed and discussed (factors that may lead to a higher exceedance rate are indicated as “↑”, whereas factors having an opposite effect are marked with “↓”):

- Changes of MRLs in EU legislation
  - ↓ The MRL harmonisation which entered into force in September 2008 is expected to lead to lower MRL exceedance rate because of the increased clarity of the European MRL legislation and because the differences of the national legal limits - where noted – were eliminated.
  - ↑ In the framework of the harmonisation, many MRLs were deleted or reduced. If the use pattern of the pesticides were not adapted to the new legal limits in time, an increase of MRL exceedances would be the consequence.
- Change of the use patterns of pesticides
  - ↑ In the last years authorisations for pesticides have been withdrawn as a consequence of the evaluation of pesticides under Directive 91/414/EEC and consequently MRLs were lowered. If these pesticides were still used according to the previous GAPs, MRL exceedances might have been the consequence.
- Scope of analytical methods used for analysing the samples
  - ↑ Including more pesticides in the monitoring programme increases the probability of finding MRL exceedances.

<sup>66</sup> Note that for 2008 and 2009 only surveillance samples are included, while for 1996-2007, enforcement samples are included as well.

- Sensitivity of analytical methods used
  - ↑ In particular for MRLs set at the limit of quantification, sufficiently sensitive analytical methods increase the probability of detecting MRL exceedances.
- Change of sampling strategies
  - ↑↓ Switching to less targeted sampling would lead to a lower MRL exceedance rate, whereas if sampling strategies focus on high risk products higher MRL exceedance rate would be the consequence.
- Selection of crops/products which are known to have a higher/lower risk of exceeding the MRLs
  - ↑↓ Selecting crops, commodities or consignments with a higher/lower probability of finding residues (e.g. lower risk of MRL exceedance is expected for organic products, baby food, and processed food).
- Implementation of general provisions of the food law (Regulation (EC) No 178/2002)
  - ↓ Implementing the provisions of the food law which imposes the responsibility on food business operators at all stages of production, processing and distribution to ensure that food satisfies the legal requirements by implementing appropriate control systems.

One would expect that extended scope of the analytical methods and the increased sensitivity of the analytical methods would lead to an increased number of positive detections and MRL exceedances for MRLs set at the LOQ. The average number of pesticides analysed in the laboratories of the reporting countries has increased from 1999 to 2009 to a high degree and the LOQs are constantly moving towards lower levels. On the other hand, the results from 1996 – 2007 include enforcement samples (the percentage of enforcement samples and level of targeting is not reported in the previous reports) for which the rate of exceedance is expected to be higher than for surveillance samples. In 2008 and 2009, the enforcement samples were not included in this calculation. The number of enforcement samples taken in 2008 and 2009 made up 3.2% and 2.1% of the total number of samples taken, respectively. There, the MRL exceedance rate observed in enforcement samples tested in 2008 and 2009 amounted to 10.2% and 20.7%, respectively. Also the proportion of samples from organic and conventional production has an impact on the overall MRL exceedance rate. Additionally, the harmonisation of the MRLs which in many cases resulted in the raising of the MRL level might have had an opposite effect on the exceedance rates, i.e. fewer MRL exceedances. The fact that a significant number of MRLs has been deleted in September 2008 might have reduced the effect. Finally, the efficient implementation of the food law provisions on the implementation of appropriate control system might also have contributed to lowering the MRL exceedance rate.

EFSA concludes that the slight reduction of the MRL exceedance rate is probably the consequence of several factors. The impact of each individual factor on the observed overall exceedance rate cannot be exactly quantified.

#### 4.3. Origin of samples exceeding the EU MRLs (only surveillance)

In 2009, EFSA received detailed sample information which included the origin of the sample. Thus, an evaluation of the findings in relation to the origin of the samples could be performed. For 2009, the harmonised EU MRLs were more often exceeded for surveillance samples from third countries (6.9%) than for samples from the EU (1.5%) (Table 4-1).

**Table 4-1:** EU+NCP - Exceedances of EU MRLs according to origin (EU, imported, unknown) of sample (surveillance) - 2009.

Sample origin	Number of samples	Above MRL	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
EEA	49448	719	1.5	1.4	1.6
Third country	14181	982	6.9	6.5	7.4
Unknown	2921	39	1.3	1.0	1.8
<b>Total</b>	<b>66550</b>	<b>1740</b>			

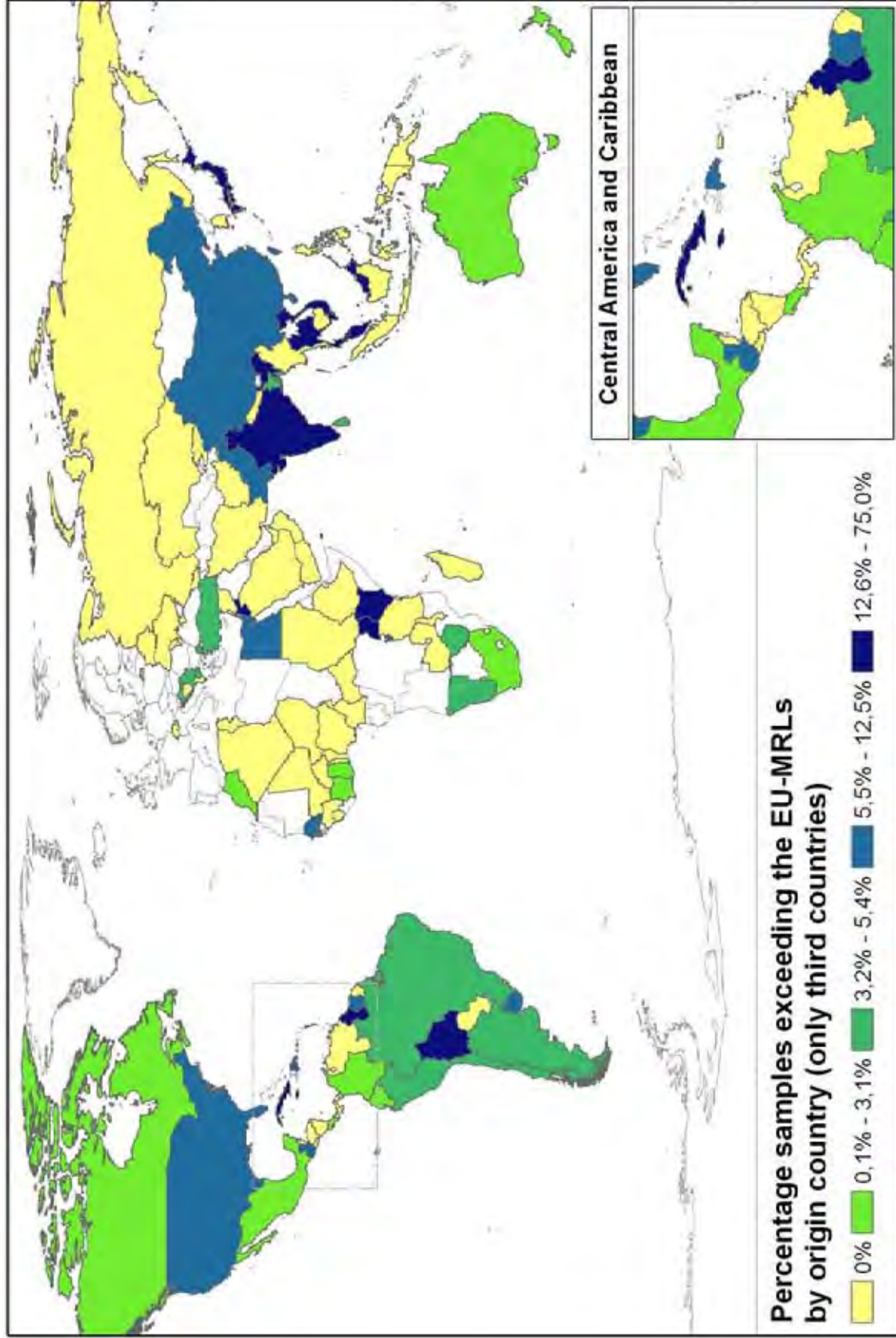
(a): Lower confidence limit (see “Background information” section)

(b): Upper confidence limit

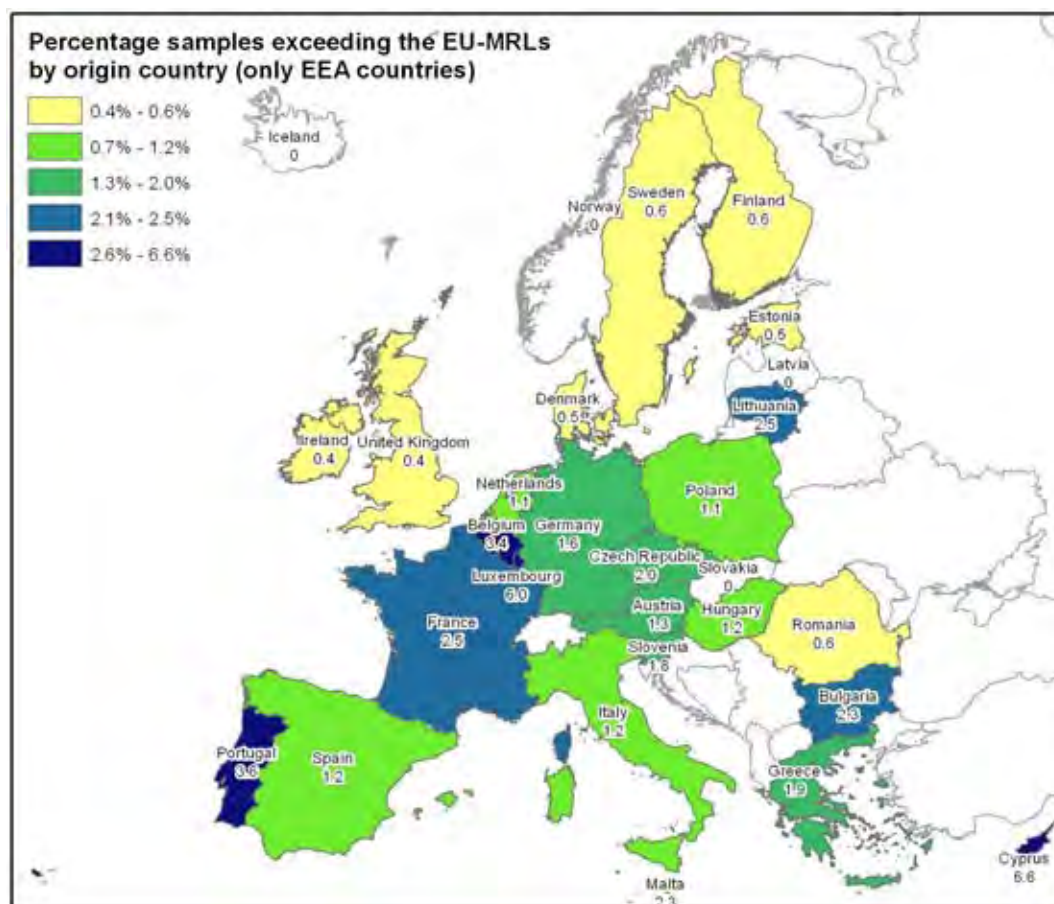
The results are also presented in a map (Map 4-1). The results for the 29 reporting countries are shown separately in Map 4-2. (Please note, that the colour codes used in both maps refer to different scales)

These analyses demonstrate that for food originating from Bolivia (75%), Guyana (33.3%), Thailand (30.7%), Uganda (23.7%), Jamaica (20%), Japan (20%), India (18%), Malaysia (16.7%), Kenya (16.5%), Vietnam (14.5%), Cuba (13.3%) and Jordan (13.2%) the highest MRL exceedance rates were observed. However, it has to be taken into account that the total numbers of samples for these countries differ widely: less than 10 samples for Bolivia, Guyana and Jamaica, thus the results are affected by a high statistical uncertainty. Relatively high numbers of samples were analysed originating from Thailand (841 samples) and India (438 samples). It should be recalled that due to the variability of the national programme designs the direct comparison of results from different countries is not possible because of the different factors considered in designing the programmes (e.g. selection of the food commodities, origin of the samples, number of samples and pesticides analysed).

For the EEA area the highest percentage of samples exceeding the MRLs were identified for products originating from Cyprus, Portugal, Belgium and Lithuania.



**Map 4-1:** EU+NCP - Percentage of surveillance samples exceeding the EU MRLs by origin country (only third countries) - 2009.



Map 4-2: EU+NCP - Percentage of surveillance samples exceeding the EU MRLs by origin country (only countries from the EEA area) - 2009.

Table 4-2 focuses on food commodities where at least 10 samples were analysed and where more than 25% of the samples exceeded the MRL. For this subset of data, the origin of the sample and the type of food concerned is reported. Some of the samples are associated with cases notified in the RASFF-system.

Table 4-2: EU+NCP - Imported food products most frequently exceeding the MRL by country of origin - 2009.

Origin country <sup>(a)</sup>	Food item	Total no. of samples analysed	% of samples above MRL
Brazil	Figs	10	60.0
China	Wild fungi	14	57.1
Dominican Republic	Beans (with pods)	37	27.0
Egypt	Pomegranate	15	40.0
	Peppers	30	33.3
	Peaches	17	29.4
India	Peppers	14	64.3
	Okra, lady's fingers	52	61.5
	Pomegranate	27	25.9
Israel	Fresh Herbs	35	45.7
Kenya	Passion fruit	10	70.0
Suriname	Other spinach and similar (leaves)	12	33.3
South Africa	Spices	10	60.0
Thailand	Beans (with pods)	31	71.0

Origin country <sup>(a)</sup>	Food item	Total no. of samples analysed	% of samples above MRL
	Peppers	80	55.0
	Fresh Herbs	84	51.2
	Spices	12	50.0
	Basil	47	46.8
	Other miscellaneous large fruits with inedible peel	13	46.2
	Guava	20	45.0
	Celery leaves	32	43.8
	Lychee (Litchi)	14	35.7
	Other spinach and similar (leaves)	29	34.5
	Onions	13	30.8
	Aubergines (egg plants)	46	28.3
	Mangoes	44	27.3
	Other herbs	28	25.0
Turkey	Pears	31	38.7
Uganda	Peppers	12	58.3

(a) List of origin countries with 25% or more samples above MRL and food items with 10 or more samples

Table 4-3 further analyses of the pesticides found on food items for which a high MRL exceedance rate was identified in the analysis presented in Table 4-2. The table lists only those combinations of food items, country of origin and compounds, where at least 10 samples were analysed and MRL-exceedances occurred. The highest proportion of MRL-exceedances was found for amitraz (sum) in Turkish pears (73% of the total number of Turkish pear samples analysed for this pesticide exceeded the MRL). Wild fungi with nicotine or tetramethrin originating from China had exceedance rates of 57% and 55%, respectively. Also for table grapes from Germany, a high exceedance rate of 56% was found regarding residues of folpet<sup>67</sup>.

<sup>67</sup> It is noted that for folpet different MRLs are in place for table grapes (0.02 mg/kg, equivalent to the LOQ) and for wine grapes (5 mg/kg). The high exceedance rate identified for table grapes is probably due to a treatment of table grapes according to the GAP for wine grapes or wine grape samples were by mistake labelled as table grapes.

**Table 4-3:** EU+NCP – Combinations of food item/country of origin/compound with the highest percentages of MRL-exceedances (only surveillance samples) - 2009.

Country of origin	Product	Compound	No. of samples analysed(*)	% of samples analysed with residues above the MRL(*)
Turkey	Pears	Amitraz (sum)	15	73%
China	Wild fungi	Nicotine	14	57%
Germany	Table grapes	Folpet	34	56%
China	Wild fungi	Tetramethrin	11	55%
Greece	Melons	Pyrimethanil	11	45%
Egypt	Oranges	Malathion	19	42%
South Africa	Spices	Methamidophos	10	40%
India	Peppers	Ethion	14	36%
India	Okra, lady's fingers	Triazophos	46	35%
Suriname	Other spinach and similar (leaves)	Cypermethrin (sum)	12	33%
Turkey	Figs	Ethephon	16	31%
Thailand	Other miscellaneous large fruits with inedible peel	Cypermethrin (sum)	13	31%
France	Lettuce	Folpet	23	30%
Germany	Tea	Imidacloprid	10	30%
Thailand	Beans (with pods)	Dimethoate (sum)	27	30%
Thailand	Lychee (Litchi)	Carbendazim and benomyl	14	29%
Egypt	Pomegranate	Ethion	14	29%
India	Okra, lady's fingers	Acephate	46	28%
Thailand	Spices	Chlorpyrifos	11	27%
Thailand	Aubergines (egg plants)	Dimethoate (sum)	46	26%
India	Peppers	Triazophos	12	25%
Italy	Radishes	Dithiocarbamates	13	23%
Greece	Carrots	Chlorpyrifos	23	22%
Thailand	Guava	Carbendazim and benomyl	19	21%
Thailand	Peppers	Profenofos	78	21%

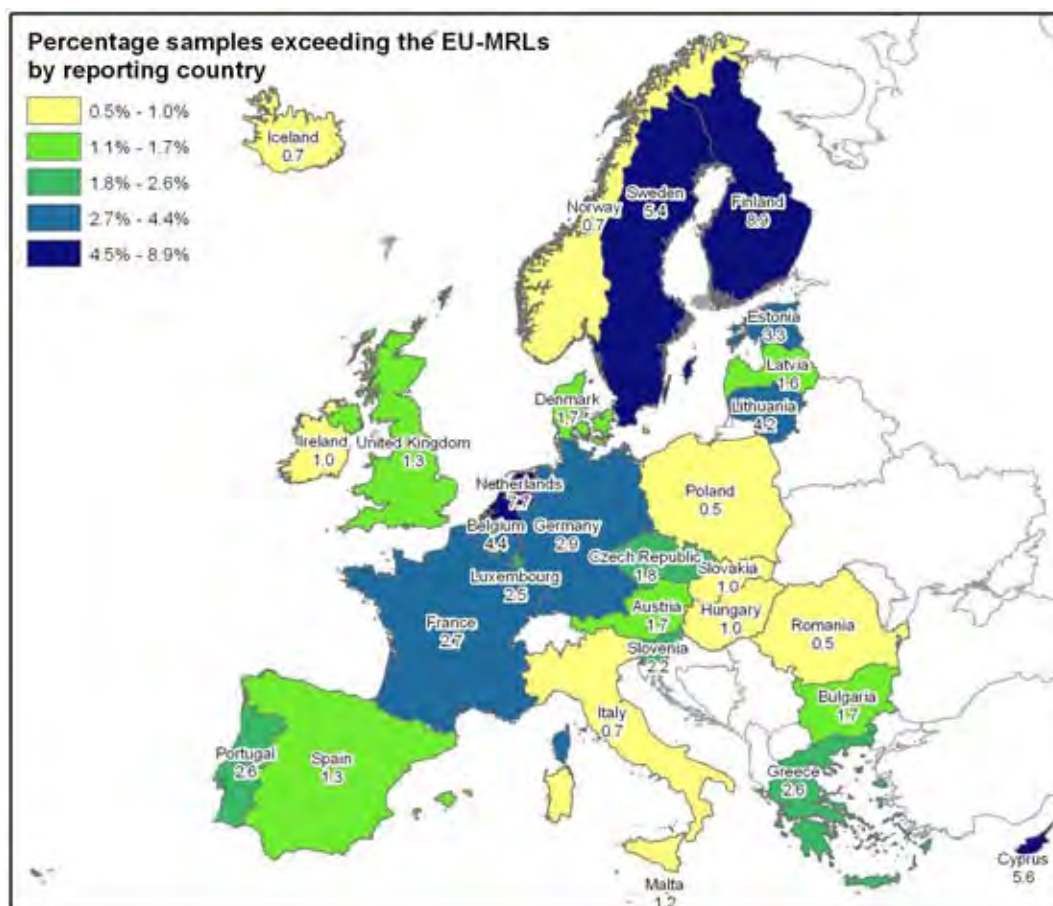
(\*) The number of samples analysed and the percentage of samples with residues above the MRL refers to samples that were analysed for the respective pesticide.

Table 4-3 supports the legal actions taken to control imports from third countries as laid down in the Regulation (EC) No 669/2009. However it should also be noted that for some of the results further confirmations should be provided regarding the origin of the samples, since the information provided is not very reliable (e.g. tea produced in Germany). Also the result for dithiocarbamate on Italian radishes needs to be confirmed as not being a false positive result.

The full list of results per country of origin of both, enforcement and surveillance sampling is given in Appendix III, Table L.

#### 4.4. Results reported per reporting country (only surveillance)

The MRL exceedance rate calculated for each reporting country is represented in Map 4-3. Similar to the results found in the EU coordinated programme (Map 3-1), the results vary significantly among the reporting countries, ranging from a 8.91% MRL exceedance rate in Finland to 0.5% in Poland. MRL exceedance rates above the average were also observed in the Netherlands, Cyprus, Sweden, Belgium, Lithuania, Estonia, Germany, France, Greece and Portugal.

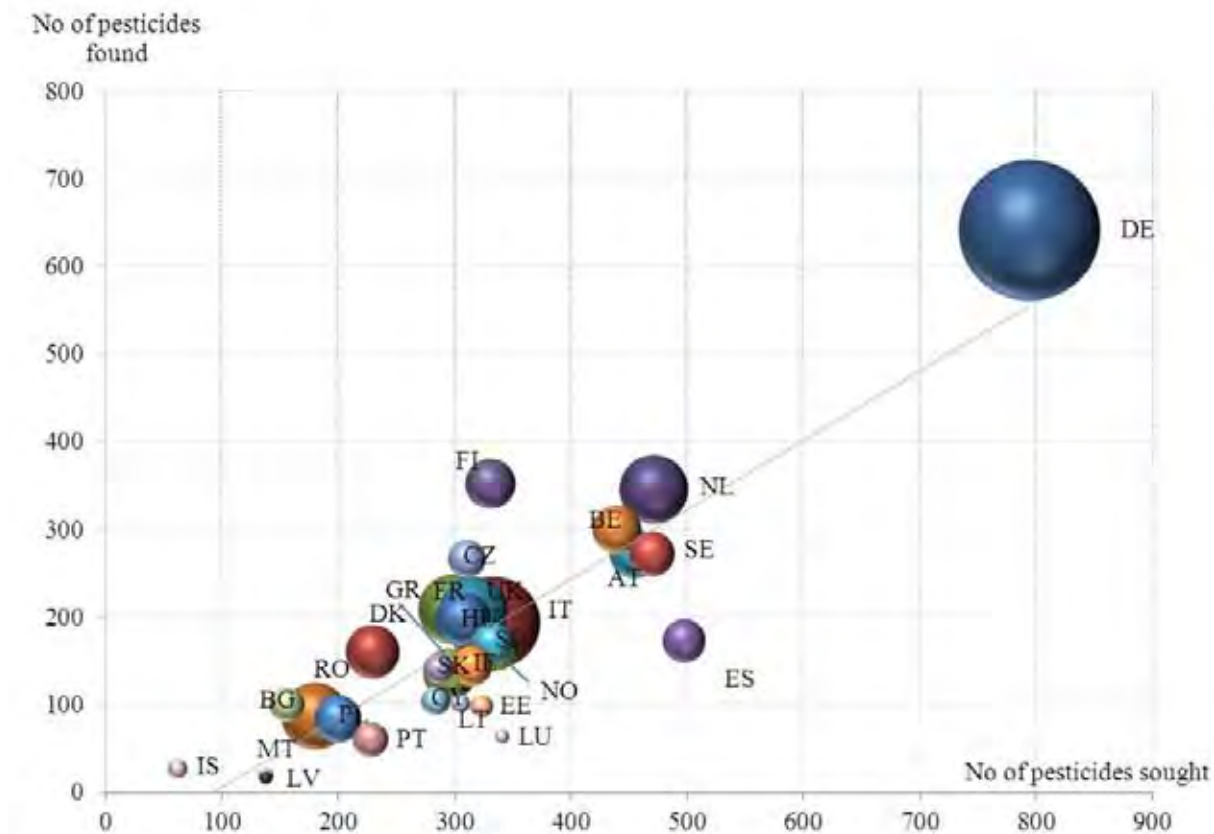


**Map 4-3:** EU+NCP – Percentage of surveillance samples exceeding the EU MRLs by reporting country - 2009.

In Figure 4-2 key figures of the national control programmes are displayed, comparing the scope of the analytical methods, the actual number of found pesticides and the number of samples (surveillance samples only) analysed in each reporting country, represented by the size of the bubble. This presentation should give an impression of the variability of national programmes and the comparability problems resulting thereof. This presentation revealed a correlation between the number of pesticides sought and the number of pesticides actually found. The figure also demonstrates that some countries analysed samples for a relative high number of pesticides, but the number of pesticides found was relatively low (bubble below the line in the figure). Thus, the analytical methods comprise pesticides which are not present on the food samples analysed. In contrast, countries with a bubble displayed above the trend line have included pesticides in their analysis programme which are actually present on the food samples analysed.

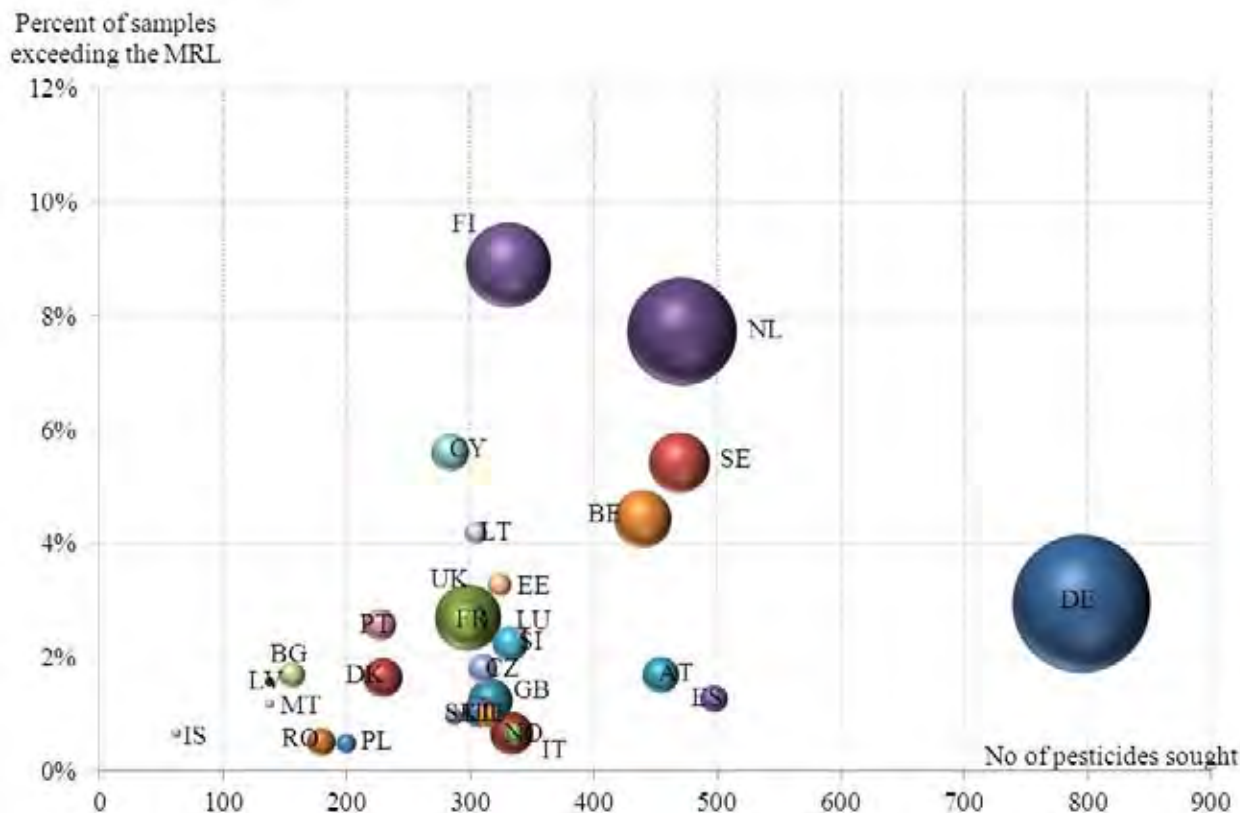
EFSA recommends that reporting countries should analyse whether the selection of pesticides included in the analytical methods used for the pesticide monitoring covers the pesticides actually found on food available on the EU market and if necessary to expand the scope of the analytical methods.





**Figure 4-2:** EU+NCP – Number of samples analysed per reporting country (size of the dot), in combination with scope of the analytical methods used (total number of pesticides sought) and the number of different pesticides found.

EFSA analysed whether a positive correlation can be found between the number of pesticides sought and the MRL exceedances rate found in the individual reporting countries. For checking this hypothesis the proportion (in percent) of samples exceeding the MRLs (y-axis) were displayed as a function of the number of pesticides sought (x-axis). The size of the symbols for each reporting country represents the absolute number of samples above the MRL (Figure 4-3). From this analysis it can be concluded that there is no clear correlation between the exceedance rate and the analytical methods used. In other words, the MRL exceedance rate is not directly driven by the scope of the analytical methods used, but it is more likely the result of more targeted sampling strategies, reflected in the selection of crops or origin of samples.

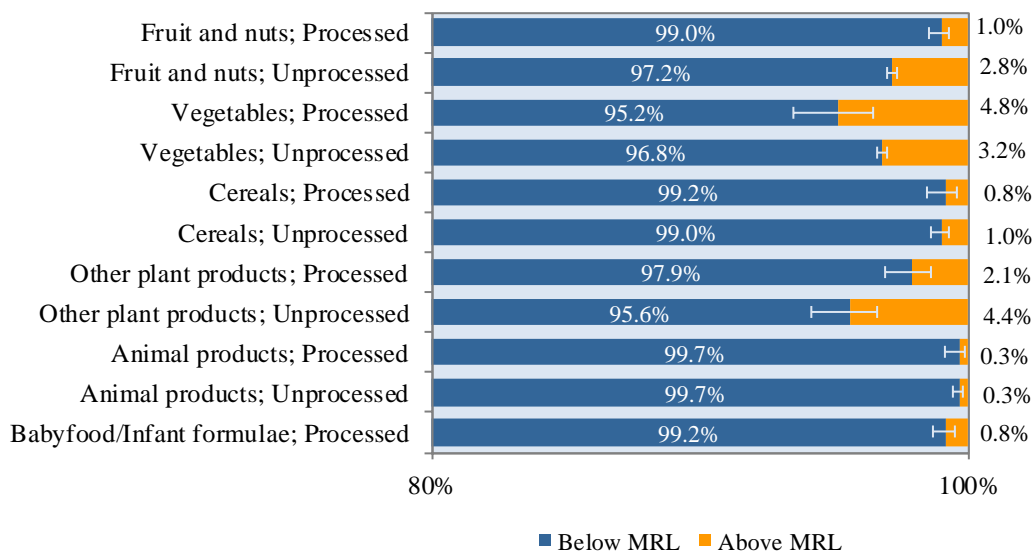


**Figure 4-3:** EU+NCP – Percentage of samples exceeding the MRL in combination with scope of the analytical methods used (total number of pesticides sought) and the number of samples exceeding the MRL.

#### 4.5. Results by food commodity

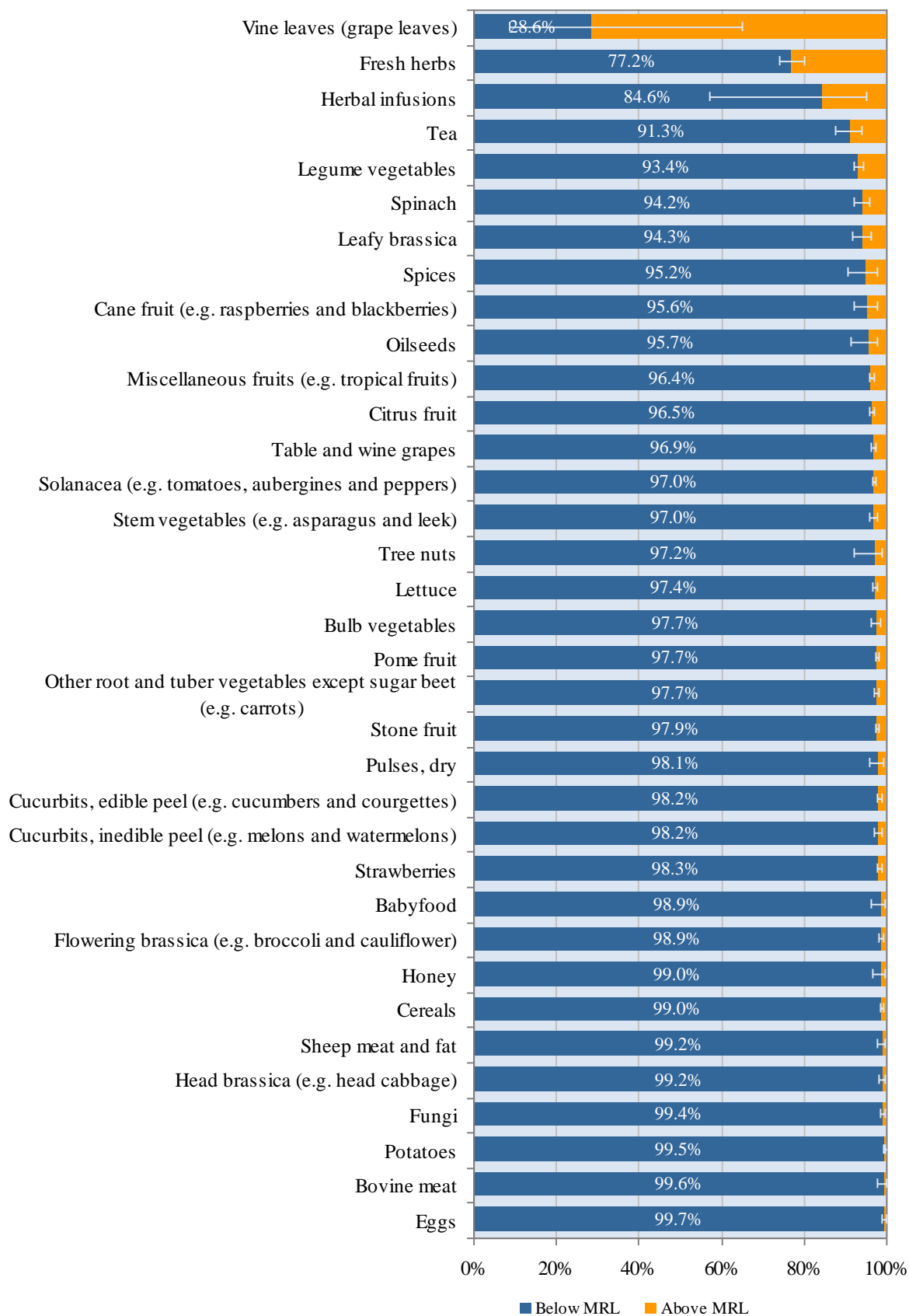
Figure 4-4 describes the MRL exceedance rate according to the food categories fruit and nuts, vegetables, cereals, other plant products, animal products and baby food, differentiated between processed and unprocessed food (see Background information – glossary). Most MRL-exceedances in surveillance samples were found in processed vegetables (4.8%), followed by unprocessed other plant products with 4.4% of samples exceeding the MRL. The result for processed vegetables was mainly driven by the results for dried mushrooms containing nicotine. In the light of previous findings in 2008 and 2009, the European Commission recommended that Member States put in place a monitoring programme focussing on this pesticide/crop combination (DG SANCO, 2009). In total, 5,995 samples of mushrooms were reported, 0.85% of them exceeding the legal value.

Residues exceeding the MRL were found in 0.8% of the samples of baby food.



**Figure 4-4:** EU+NCP - MRL compliance rate of surveillance samples 2009.

In Figure 4-5, a more detailed presentation of the food commodities or commodity groups is presented, illustrating the MRL exceedance rates observed in the national and the EU coordinated control programmes. The highest MRL exceedance rates were detected for vine leaves (from Turkey and Greece), fresh herbs and herbal infusions (originating from different reporting countries and third countries). It should be mentioned, that in some cases (e.g. vine leaves or herbal infusions (leaves)) only a very low number of samples were reported. High MRL exceedance rates were also observed in the food group miscellaneous fruits (e.g. tropical fruits), in particular in guava, lychee, passion fruit, okra and pomegranate. The uncertainty of the MRL exceedance rate is reflected by a wider confidence interval.



**Figure 4-5:** EU+NCP - Percentage of compliance with EU MRL for unprocessed commodities (surveillance samples) - 2009.

Table 4-4 and Table 4-5 allow a comparison of the percentage of samples above the MRL reported for surveillance samples and for enforcement samples. It is noted that for enforcement samples no confidence levels were calculated because the number of samples was too low.

**Table 4-4:** EU+NCP - Summary of the results of surveillance samples 2009.

Product		No. of samples	Above MRL	%	LCL(a)	UCL(b)
Fruit and nuts	Processed	2838	28	1.0	0.7	1.4
	Unprocessed	23125	652	2.8	2.6	3.0
Vegetables	Processed	833	40	4.8	3.6	6.5
	Unprocessed	27619	885	3.2	3.0	3.4
Cereals	Processed	1126	9	0.8	0.4	1.5
	Unprocessed	2875	28	1.0	0.7	1.4
Other plant products	Processed	1113	23	2.1	1.4	3.1
	Unprocessed	1087	48	4.4	3.4	5.8
Animal products	Processed	1217	4	0.3	0.1	0.8
	Unprocessed	2629	8	0.3	0.2	0.6
Babyfood/Infant formulae	Processed	1888	15	0.8	0.5	1.3

(a): Lower confidence limit

(b): Upper confidence limit

**Table 4-5:** EU+NCP - Summary of the results of enforcement samples 2009.

Product		No. of samples	Above MRL	%
Fruit and nuts	Processed	11	0	0.0
	Unprocessed	611	122	20.0
Vegetables	Processed	50	7	14.0
	Unprocessed	650	156	24.0
Cereals	Processed	21	0	0.0
	Unprocessed	21	7	33.3
Other plant products	Processed	19	0	0.0
	Unprocessed	15	3	20.0
Animal products	Unprocessed	23	0	0.0
Babyfood/Infant formulae	Processed	3	0	0.0

Generally, in enforcement samples the MRL exceedance rate was higher than in surveillance samples. In total, 295 samples, corresponding to 20.7% of all enforcement samples, exceeded the MRL. No exceedance of the MRL was seen for the baby food enforcement samples.

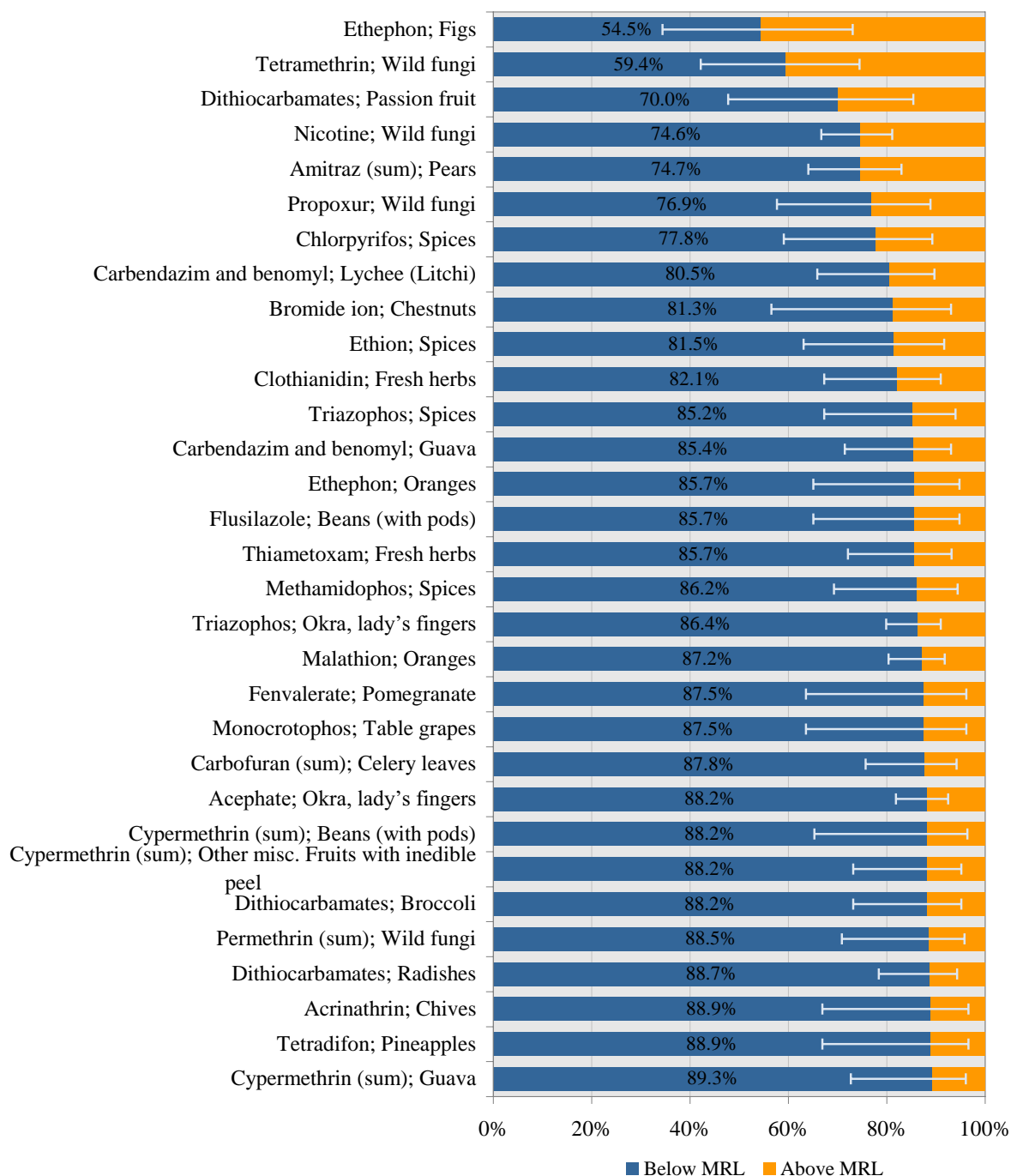
In total, residues of 338 pesticides were found in measurable quantities in vegetables, 319 in fruit and nuts, while in cereals residues of 93 different pesticides were observed. As in previous years, in 2009 the number of different pesticide residues found in fruit and vegetables was higher than the number of pesticides found in cereals, which also reflects the greater number of plant protection products used in the fruit and vegetables category and the diversity of crops summarised in these categories.

#### 4.6. Results by pesticide/crop combinations

The 36 pesticide/crop combinations with the highest MRL exceedance rates are shown in Figure 4-6. It should be noted that the number of positive detections is affected by uncertainties resulting from the sampling frequency of certain commodities (e.g. the crops included in the 3-year cycle of the EU programme are the most frequent samples), by the sampling strategies and by the number of reporting countries testing for the specific crop/pesticide combination. The number of positive detections may also be influenced by the samples taken in response to RASFF notifications (see "Background information - glossary").

The figure shows that there are special pesticide/crop combinations, like ethephon in figs (most of them from Turkey), tetramethrin in wild fungi (dried, most of them from China) or dithiocarbamates in passion fruits (most of them from Kenya) with high frequencies of MRL-exceedances which should be considered in future control programmes and follow-up actions at national level.

The full list of pesticides found in surveillance samples of animal products, cereals, fruit and vegetables can be found in Appendix III, Table A. Results of surveillance sampling per reporting country are listed in Appendix III, Table B (cereals), Table C1 (fruit and nuts), Table C2 (vegetables), Table C3 (other plant products), Table D (animal products) and Table E (baby food). Results of enforcement sampling per reporting country are tabulated in Appendix III, Table J.



**Figure 4-6:** EU+NCP - Pesticide/crop combinations with MRL exceedance rates >10% and more than 15 samples (surveillance samples), incl. confidence intervals for percentages- 2009.

#### 4.6.1. Baby Food/Infant Formulae – Challenge of LOQ

A general default EU MRL for baby food/infant formulae of 0.01 mg/kg is applicable to all active substances unless specific MRLs lower than 0.01 mg/kg were established in Commission Directive 2006/141/EC for infant formulae and follow-on formulae and in Commission Directive 2006/125/EC for processed cereal-based foods and baby foods for infants and young children. In 2009, 27 countries reported data on analyses of baby food. Overall, 1,888 surveillance samples were analysed. Residues above the reporting level were found in 110 samples (5.8% of the samples), while the MRL was exceeded in 15 samples (0.8%). 7 of the MRL exceedances were related to captan residues in infant

formulae; other MRL-exceedances in baby food/infant formulae were due to residues of pirimiphos-methyl, imazalil, chlorpropham, thiabendazole and diazinon.

The results of the surveillance samples for baby food for each reporting country are listed in Appendix III, Table E. From Table 4-6 it can be seen, that in many cases some reporting countries did not apply analytical methods which were sensitive enough to analyse residues below or at the MRL. In other words, the LOQs achieved by control laboratories were often higher than the legal limits.

EFSA notes that due to deficiencies in the analytical methods applied, a correct enforcement of the baby food legislation is not ensured. It is therefore recommended to improve the analytical methods in order to be capable of quantifying residues at the MRL with sufficient accuracy. If considered necessary by the reporting countries concerned, the European Reference Laboratories should collaborate with the national laboratories to implement adequate analytical methods.

**Table 4-6:** EU+NCP - Baby food / infant formulae analysis with LOQ above MRL (only surveillance samples) - 2009.

Compound <sup>(a)</sup>	No. of samples	% of total	Compound	No. of samples	% of total
Hymexazol	43	100.0	tau-Fluvalinate	149	20.2
Beflubutamid	53	100.0	Acephate	231	20.1
Disulfoton (sum)	447	71.7	Triforine	108	19.7
Fipronil (sum)	289	65.1	Dicamba	52	19.7
Omethoate	747	60.4	Fenazaquin	170	19.2
Captafol	335	55.6	Oxadixyl	201	19.1
Endrin	904	55.5	Prochloraz (sum)	139	18.4
Pyrethrins	260	55.1	Azinphos-methyl	231	18.4
Aldrin and Dieldrin	493	54.3	Fenpropidin	86	16.6
Hexachlorobenzene	798	50.4	Chlorpropham (sum)	95	16.6
Nitrofen	500	47.2	Formothion	152	16.4
Captan	443	44.6	Tefluthrin	112	16.1
Heptachlor (sum)	318	43.0	Vinclozolin (sum)	102	16.1
Carbosulfan	222	42.3	Tebuconazole	202	15.7
Abamectin (sum)	210	41.4	Buprofezin	198	15.7
Cadusafos	408	41.1	Heptachlor (baby & infant food)	47	15.2
Binapacryl	157	37.7	Dichlobenil	49	14.1
Clomazone	160	35.4	Tolylfluanid (sum)	127	14.1
Fluazinam	152	33.9	Fenthion (sum)	100	14.0
Bitertanol	321	33.1	Mecarbam	201	13.6
Folpet	323	32.6	Azoxystrobin	171	13.5
Bifenox	132	32.0	Chlorobenzilate	71	13.2
Azinphos-ethyl	290	31.7	Napropamide	53	13.2
Monolinuron	126	31.0	Permethrin (sum)	169	13.1
Ethoprophos	382	30.1	Lufenuron	74	13.0
Metconazole	146	29.3	Chlorfenvinphos	151	12.9
Carboxin	100	28.8	Aclonifen	63	12.8
Propachlor (sum)	115	28.8	Thiophanate-methyl	105	12.6
Phosphamidon	232	28.5	Teflubenzuron	79	12.4
Dioxathion	116	28.0	Molinate	56	12.4
Dicofol (sum)	282	27.9	Difenoconazole	134	12.0
Cypermethrin (sum)	276	27.8	Profenofos	184	11.6
Chlorpropham	162	27.7	Etridiazole	51	11.4



Compound <sup>(a)</sup>	No. of samples	% of total	Compound	No. of samples	% of total
Fenamiphos (sum)	123	26.5	Bromophos-ethyl	78	11.3
Ethoxyquin	118	26.1	Furathiocarb	67	11.3
Propham	218	25.9	Pyridaben	113	11.1
Iprodione	322	25.6	Bromopropylate	145	11.1
Demeton-S-Methyl (baby & infant food)	84	25.4	Dimethomorph	103	10.9
Chlordane (sum)	136	25.0	Diethofencarb	101	10.8
Terbufos (sum)	98	24.4	Phenmedipham	51	10.6
Diphenylamine	275	22.2	Diflubenzuron	72	10.5
Dichlofluanid	288	22.0	DDT (sum)	102	10.4
Cyfluthrin (sum)	216	21.6	Tebufenpyrad	95	10.3
Flucythrinate	139	21.2	Benalaxyl (sum)	49	10.1
Deltamethrin	275	20.4	Prosulfocarb	43	10.0

(a) Only results with a percentage higher than 10% are listed.

#### 4.6.2. Organic food production

Data on organic food were provided by 26 reporting countries; the results are summarised in Table 4-7. Due to the harmonised electronic data submission system, data of the singular samples were available and it was possible to conduct more in-depth calculations and statistical evaluations compared with previous years.

**Table 4-7:** EU+NCP - Summary of results in organic food (surveillance samples) - 2009.

Product	Production method	No. of samples	Above MRL			
			No.	%	LCL(a)	UCL(b)
Fruit and nuts	Organic	918	4	0.4	0.2	1.1
	Other production	25045	676	2.7	2.5	2.9
Vegetables	Organic	1097	5	0.5	0.2	1.1
	Other production	27355	920	3.4	3.2	3.6
Cereals	Organic	408	1	0.3	0.1	1.4
	Other production	3593	36	1.0	0.7	1.4
Other plant products	Organic	181	1	0.6	0.1	3.0
	Other production	2019	70	3.5	2.8	4.4
Animal products	Organic	193	0	0.0	0.0	1.5
	Other production	3653	12	0.3	0.2	0.6
Fish products	Organic	-	-	-	-	-
	Other production	146	0	0.0	0.0	2.0
Babyfood/Infant formulae	Organic	288	1	0.4	0.1	1.9
	Other production	1600	14	0.9	0.5	1.5
Other products	Organic	5	0	0.0	0.0	39.3
	Other production	49	0	0.0	0.0	5.8

(a): Lower Confidence Limit

(b): Upper Confidence limit

For fruit and nuts, a lower rate of MRL exceedances (0.4%) in comparison to conventionally grown fruit and nuts (2.7%) was found. For vegetables, the exceedance rate of the surveillance samples was 0.5% and 3.4% for organic and conventionally grown products, respectively. It is noteworthy that for

baby food or infant formulae the difference is less pronounced; taking the confidence levels into account, no difference between the two production systems could be detected.

Comparison of organic and other production results per reporting country can be found in Appendix III, Table K1. Table K2, in Appendix III shows more detailed results on different production types by commodity.

Due to the new structure of the data reporting, information is available on which pesticides were actually found in samples of organic produced food.

The following substances were found in organic samples, even though the use was not allowed in organic farming according to Regulation (EC) No 834/2007 and Regulation (EC) No 889/2008 (see Table 2-10):

- chlormequat (0.002 up to 0.424 mg/kg; wheat, rye, cultivated fungi<sup>68</sup>),
- dithiocarbamates (0.008 – 1.2 mg/kg; cauliflower and rocket<sup>69</sup>),
- fenbutatin oxide (0.001 – 0.01 mg/kg on different crops),
- MCPA and MCPB (0.002 mg/kg; 0.003 mg/kg on different crops),
- mepiquat (0.006 – 0.016 mg/kg; cultivated fungi),
- methabenzthiazuron (0.001 mg/kg, 0.004 mg/kg on different crops) and
- propamocarb (0.003 mg/kg, 0.007 mg/kg on different crops).

#### 4.6.3. Processed Food

The MRLs applicable to processed commodities are based on the MRLs established for raw agricultural commodities, taking into account changes in levels of pesticide residues caused by processing or mixing. In 2009, 28 countries reported data on analysis of processed products. A total of 9,015 surveillance samples were analysed. Residues above the MRL were found in 119 samples (1.3%). It is not reported which processing factors were applied to derive the MRL for processed commodities. This is one of the main uncertainties regarding compliance of processed food.

Detailed results for surveillance samplings per commodity are shown in Appendix III, Table K3.

Recognizing the legal uncertainty for enforcing MRL legislation for processed food, in Annex VI of Regulation (EC) No 396/2005 EFSA recommends establishing legally binding processing factors, derived from appropriate processing studies. This would improve the robustness of the assessment whether samples are compliant with the legal limits.

#### 4.6.4. Results for samples with multiple residues

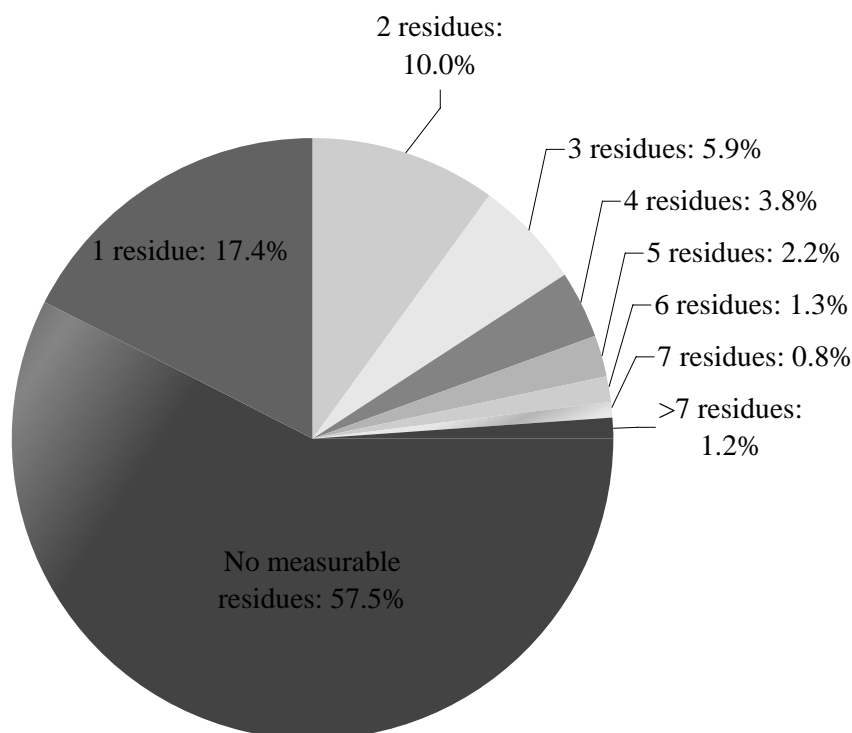
Considering the results of both the national and the EU-coordinated programmes in 2009, residues of two or more pesticides were found in 25.1% of the analysed surveillance samples (Figure 4-7). In

<sup>68</sup> Chlormequat and mepiquat are usually used as plant growth regulators in cereals. Thus, residues of these two pesticides are expected in conventionally produced cereal straw. The presence of these two pesticides in organic cultivated fungi may be caused by their residues in straw used as growth substrate.

<sup>69</sup> The possibility of false positive results due to naturally occurring sulphur compounds in the untreated crop should be examined.

2009, the highest number of different pesticides in one sample was 26 (found by the Netherlands in a sample of processed grapes (raisins) from Turkey). Without knowing the details of the sample, only assumptions can be made regarding the reason for the high number of pesticides in this sample. The high number of pesticides is probably the result of mixing lots of different producers.

Multiple residues were reported by all reporting countries.



**Figure 4-7:** EU+NCP - Number of residues found in individual surveillance samples in 2009.

Due to the extended scope of analytical methods used by control laboratories nowadays, the probability of finding multiple residues in samples is much higher than in 1997. The average scope in 1997 was 137 substances (individually up to 275), it was raised to 754 substances in 2009.

The highest frequency of multiple residues was found in vine leaves (grape leaves), but since only a limited number of results is available for this crop the robustness of this figure is questionable (only 7 samples). Important commodities with high frequencies of multiple residues were citrus fruit (56.6%), table and wine grapes (55.5%) and strawberries (53.8%). Additional commodities with multiple residues, sorted according to the percentage of multiple residues, can be found in Table 4-8.

According to the current EU legislation, the presence of multiple residues in one sample as such is not a reason to consider a sample as not compliant with the MRL legislation as long as the individual residues do not exceed the MRLs according to the residue definitions. However, the presence of multiple residues from pesticides sharing the same mode of action may be an indication of bad agricultural practices. Only in case one or more MRLs are exceeded, legal actions have to be imposed by the Member States.

In 2009, 299 unprocessed surveillance samples were found to exceed two or more EU MRLs (Table 4-9 ). The highest number of multiple MRL exceedances in one sample was 10, measured in vine

leaves (grape leaves). The commodity with the highest number of samples with multiple MRL exceedances was peppers (80 samples).

The number of samples with multiple residues per reporting country can be found in Appendix III, Table F.

**Table 4-8:** EU+NCP - Percentage of unprocessed surveillance samples with multiple residues by commodities (with more than five samples) - 2009

Commodity	Number of samples	Number of residues									% samples with multiple (>1) residues
		0	1	2	3	4	5	6	7	>=8	
Vine leaves (grape leaves)	7	28.6			14.3	14.3	14.3	14.3		14.3	71.4
Cane fruit (e.g. raspberries and blackberries)	295	24.1	18.3	11.9	12.9	12.9	8.5	4.7	4.4	2.4	57.6
Citrus fruit	4258	27.0	16.4	18.4	15.9	11.1	6.1	2.9	1.2	1.1	56.6
Table and wine grapes	3019	26.2	18.2	15.4	11.2	8.1	6.1	4.6	3.4	6.7	55.5
Strawberries	2408	28.7	17.4	13.8	13.3	10.4	6.8	4.2	2.1	3.2	53.8
Pome fruit	5124	34.8	18.9	15.2	11.1	8.2	4.4	3.0	1.6	2.7	46.3
Cocoa, fermented beans	57	38.6	22.8	17.5	17.5	1.8			1.8		38.6
Lettuce	3249	43.1	19.0	12.9	7.4	6.5	4.2	3.0	1.6	2.3	37.9
Fresh herbs	727	46.6	18.0	11.8	8.3	4.8	3.7	2.5	1.8	2.5	35.4
Stone fruit	3508	45.8	21.9	13.2	8.1	4.8	2.6	1.2	1.0	1.4	32.3
Herbal infusions	13	53.8	15.4	15.4	15.4						30.8
Tea	300	60.7	12.7	10.0	4.3	4.0	3.7	1.3	1.0	2.3	26.7
Solanacea (e.g. tomatoes, aubergines and peppers)	6895	59.7	18.9	9.5	5.2	2.9	1.3	0.9	0.5	1.0	21.3
Cucurbits, edible peel (e.g. cucumbers and courgettes)	2229	62.3	18.6	7.7	5.6	2.7	1.7	0.5	0.4	0.4	19.1
Leafy brassica	436	58.5	22.5	10.6	4.8	1.8		0.7	0.7	0.5	19.0
Goat meat	11	72.7	9.1	18.2							18.2
Cucurbits, inedible peel (e.g. melons and watermelons)	766	66.4	16.4	11.0	3.7	1.4	0.5	0.1	0.3	0.1	17.1
Legume vegetables	2236	67.1	16.0	8.6	4.1	2.2	1.0	0.5	0.4	0.1	16.9
Other root and tuber vegetables except sugar beet (e.g. carrots)	2407	64.1	20.0	8.4	4.0	1.8	0.7	0.4	0.4	0.2	15.9
Sheep meat and fat	375	74.4	12.0	12.8	0.8						13.6

Commodity	Number of samples	Number of residues									% samples with multiple (>1) residues
		0	1	2	3	4	5	6	7	>=8	
		Percentage of samples									
Head brassica (e.g. head cabbage)	877	71.7	15.2	7.1	2.6	1.7	0.9	0.6		0.2	13.1
Pulses, dry	319	60.8	27.0	6.6	3.1	1.9	0.6				12.2
Stem vegetables (e.g. asparagus and leek)	1360	75.4	12.7	5.2	2.7	2.4	1.1	0.1	0.1	0.2	11.9
Spices	147	76.9	12.9	5.4	3.4	0.7	0.7				10.2
Spinach	662	75.5	14.8	6.2	2.3	0.3	0.6		0.2	0.2	9.7
Fungi	674	75.1	17.1	6.4	1.2	0.1	0.1				7.9
Eggs	741	85.3	7.0	6.2	1.1	0.4					7.7
Cereals	2875	72.5	20.2	5.1	1.4	0.6	0.2	0.1			7.3
Bovine meat	272	89.7	4.0	4.4	1.8						6.3
Flowering brassica (e.g. broccoli and cauliflower)	1343	72.0	22.3	3.8	1.5	0.3	0.1				5.7
Poultry meat	125	90.4	4.0	2.4	3.2						5.6
Honey	204	83.8	10.8	4.9	0.5						5.4
Potatoes	2203	74.0	21.2	3.3	1.0	0.3	0.1	0.1		0.1	4.8
Bulb vegetables	795	86.4	9.4	2.5	0.6	0.5	0.3		0.3		4.2
Babyfood	181	88.4	7.7	1.1	1.7		0.6			0.6	3.9
Oilseeds	161	80.1	17.4	2.5							2.5
Swine meat	407	95.6	2.0	1.5	0.7	0.2					2.5
Tree nuts	106	89.6	8.5	0.9	0.9						1.9

**Table 4-9:** EU+NCP - Summary of results of unprocessed samples with multiple EU MRL exceedances (only surveillance samples) - 2009

Commodity	Number of samples	Number of MRL exceedances						% samples with multiple (>1) MRL exceedances
		0	1	2	3	4	>4	
		Percentage of samples						
Sunflower seed	3	33.3		66.7				66.7
Vine leaves (grape leaves)	7	28.6	14.3	42.9			14.3	57.1
Beans (dry)	2	50.0		50.0				50.0
Cumin seed	2		50.0	50.0				50.0
Chives	10	60.0	10.0	30.0				30.0
Lychee (Litchi)	22	59.1	22.7	13.6			4.5	18.2
Basil	68	55.9	26.5	13.2	2.9	1.5		17.6
Guava	24	54.2	29.2	8.3	8.3			16.7
Turnips	6	66.7	16.7	16.7				16.7
Okra, lady's fingers	130	65.4	19.2	10.0	4.6		0.8	15.4
Fresh herbs	319	69.3	17.9	6.6	1.9	1.9	2.5	12.9
Cinnamon	8	87.5		12.5				12.5
Peas (dry)	8	75.0	12.5	12.5				12.5
Other miscellaneous large fruits with inedible peel	17	58.8	29.4	5.9	5.9			11.8
Passion fruit	56	67.9	23.2	5.4	1.8	1.8		8.9
Beans (without pods)	12	75.0	16.7	8.3				8.3
Spring onions	12	41.7	50.0		8.3			8.3
Pomegranate	75	78.7	13.3	4.0	4.0			8.0
Celery leaves	77	80.5	11.7	5.2	1.3	1.3		7.8
Pineapples	30	90.0	3.3	6.7				6.7
Parsley	76	77.6	17.1	3.9		1.3		5.3
Celery	77	74.0	22.1	3.9				3.9
Beans (with pods)	774	87.3	9.0	3.2	0.1	0.1	0.1	3.6
Beet leaves (chard)	31	87.1	9.7	3.2				3.2
Spinach	400	92.8	4.3	2.3	0.5		0.3	3.0
Kale	178	88.8	8.4	2.8				2.8
Persimmon	74	94.6	2.7	2.7				2.7
Peppers	1704	93.4	3.9	1.3	0.7	0.4	0.3	2.7
Tea	241	89.2	8.3	2.1	0.4			2.5
Mangoes	171	88.3	9.4	1.2	1.2			2.3
Peas (with pods)	102	88.2	9.8	2.0				2.0
Papaya	124	88.7	9.7	0.8	0.8			1.6
Kohlrabi	68	97.1	1.5	1.5				1.5
Rocket, Rucola	271	94.1	4.8	1.1				1.1
Rice	197	92.9	6.1		1.0			1.0
Currants (red, black and white)	255	93.3	5.9	0.8				0.8
Apricots	278	96.4	2.9	0.7				0.7
Onions	143	93.0	6.3	0.7				0.7
Fennel	148	96.6	2.7	0.7				0.7
Cherries	394	96.7	2.8	0.5				0.5
Grapefruit	394	92.4	7.1	0.3	0.3			0.5
Aubergines (egg plants)	797	95.6	3.9	0.5				0.5
Celeriac	261	94.3	5.4	0.4				0.4
Strawberries	1567	97.3	2.3	0.3	0.1			0.4
Wheat	541	97.6	2.0	0.4				0.4
Peas (without pods)	292	96.2	3.4	0.3				0.3

Commodity	Number of samples	Number of MRL exceedances						% samples with multiple (>1) MRL exceedances
		0	1	2	3	4	>4	
		Percentage of samples						
Pears	1207	95.7	4.0	0.3				0.3
Melons	324	96.0	3.7	0.3				0.3
Oranges	1345	95.5	4.2	0.3				0.3
Cucumbers	1054	97.5	2.2	0.3				0.3
Peaches	1257	97.0	2.8	0.2				0.2
Table grapes	2664	96.6	3.2	0.2	0.0			0.2
Apples	2531	97.5	2.3	0.2				0.2
Lettuce	2102	97.1	2.7	0.2				0.2
Plums	552	98.0	1.8	0.2				0.2
Mandarins	857	95.3	4.6	0.1				0.1

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 minimize the development of pest resistance to pesticides. Besides the reasons for multiple residues resulting from agricultural practices mentioned above, other possible reasons for the occurrence of multiple residues are:

- mixing of lots which were treated with different pesticides, either during the sampling or in the course of the sorting of the commodities (e.g. sorting for quality classes);
- residues resulting from uptake via soil in cases where pesticides have high persistence in 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, packing and storage.

Further analysis of samples containing multiple residues would be an asset in order to better understand the reasons for the presence of multiple residues and to derive recommendations and, if needed, to take corrective measures. Considering the total number of data on commodities which are concerned, EFSA decided to select only one crop for which repeatedly multiple residues were observed and to do an in-depth analysis of the relevant residue results.

#### 4.6.4.1. Case study on table grapes

Table grapes were chosen for the case study because of the high percentage of multiple residues and MRL-exceedances and the importance of table grapes for the human consumption.

The total number of surveillance samples for unprocessed table grapes was 2,664. 24.3% (646) of these samples had no residues, and 17.6% (470) had one pesticide residue; more than half of all table grape samples (1,548 samples – 58.1%) had multiple residues (Figure 4-8).

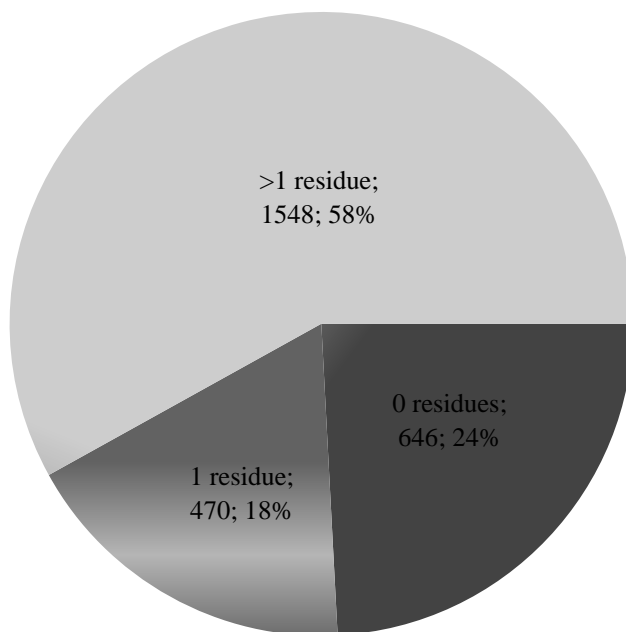


Figure 4-8: EU+NCP - Numbers of table grapes samples with 0, 1 or >1 residue - 2009.

Figure 4-9 shows a further breakdown of the percentages of samples containing multiple residues.

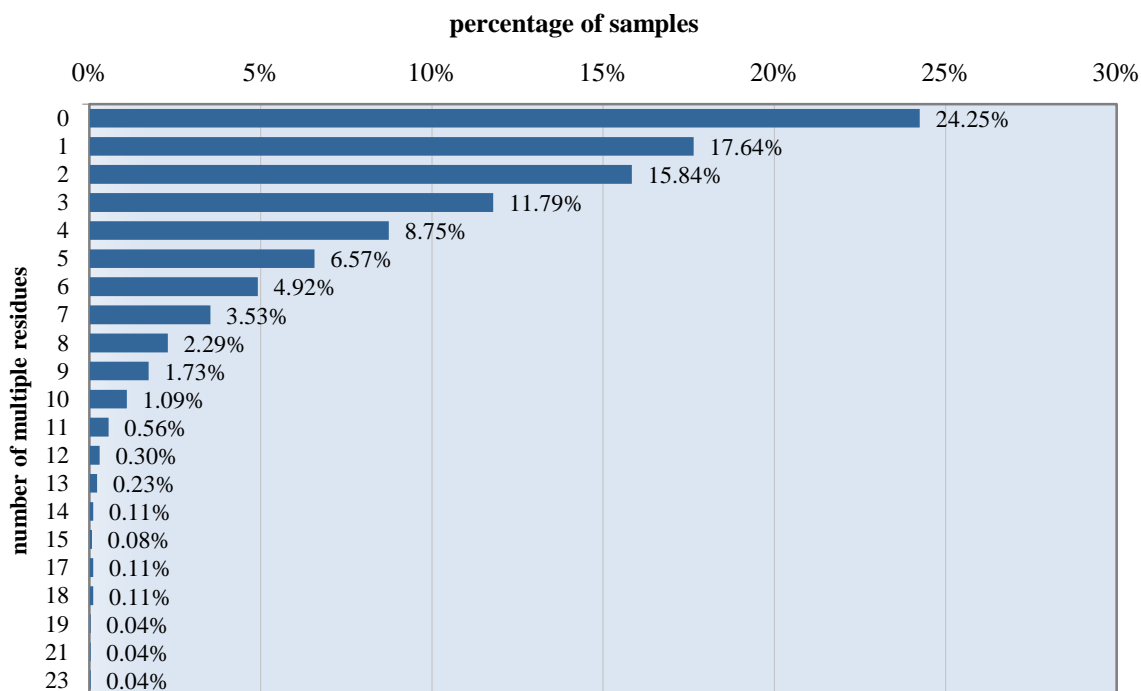


Figure 4-9: EU+NCP - Percentage of the several numbers of residues for table grapes (unprocessed) 2009.

As one could suspect that a higher scope of analytical methods would lead to higher numbers of multiple residues, this relationship was analysed. There is a weak positive, but highly significant correlation of 0.24 between the scope of the analytical methods used (number of pesticides included



in the analytical method used to analyse the samples) and the number of multiple residues measured. The conclusion is that the analytical scope has some influence but is not a driving factor of high importance.

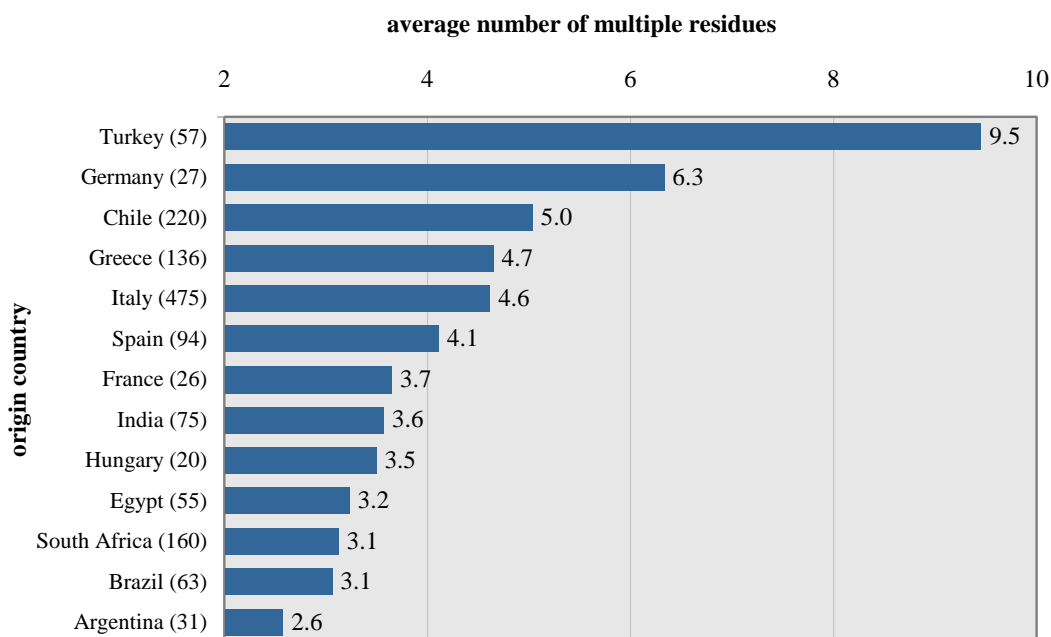
The countries of origin of table grape samples and the percentage of samples containing no measurable residues, residues of one or more than one pesticides are listed in Table 4-10. From this analysis it can be concluded that the percentage of samples with none or only one pesticide was the highest for samples originating from Bulgaria, Romania, Namibia, Argentina and Cyprus. Samples from Chile, India, Turkey, Germany and Spain had the highest occurrence rate of more than one pesticide.

**Table 4-10:** EU+NCP - Numbers of table grapes samples with 0, 1 or >1 residue by country of origin - 2009.

Country of Origin	Total number of samples	Number of residues					
		0		1		>1	
		No. and % of samples					
		No.	%	No.	%	No.	%
Chile	278	31	11.2	27	9.7	220	79.1
India	96	11	11.5	10	10.4	75	78.1
Turkey	75	10	13.3	8	10.7	57	76.0
Germany	36	2	5.6	7	19.4	27	75.0
Spain	139	23	16.5	22	15.8	94	67.6
France	39	7	17.9	6	15.4	26	66.7
Morocco	17	1	5.9	5	29.4	11	64.7
Italy	737	168	22.8	94	12.8	475	64.5
Brazil	98	20	20.4	15	15.3	63	64.3
Israel	14	0	0.0	5	35.7	9	64.3
Peru	20	7	35.0	2	10.0	11	55.0
Hungary	37	8	21.6	9	24.3	20	54.1
South Africa	305	62	20.3	83	27.2	160	52.5
Greece	284	85	29.9	63	22.2	136	47.9
Egypt	123	32	26.0	36	29.3	55	44.7
Malta	12	7	58.3	0	0.0	5	41.7
Unknown	74	35	47.3	11	14.9	28	37.8
Cyprus	23	10	43.5	5	21.7	8	34.8
Argentina	92	37	40.2	24	26.1	31	33.7
Namibia	28	12	42.9	7	25.0	9	32.1
Romania	68	43	63.2	16	23.5	9	13.2
Bulgaria	24	13	54.2	8	33.3	3	12.5

Country of origin with more than 10 samples, ordered by % >1

The average number of multiple residues sorted by country of origin gave a different ranking which is summarised in Figure 4-10. The highest value was calculated for grapes from Turkey with an average number of 9.5, followed by Germany, Chile, Greece and Italy.



**Figure 4-10:** EU+NCP - Average number of multiple residues by origin country in table grapes (unprocessed) 2009.

The maximum number of residues found was 23, found in one sample from Turkey. The detected compounds were: acetamiprid, azoxystrobin, boscalid, carbendazim and benomyl, cyprodinil, fenvalerate and esfenvalerate (sum of RR and SS + sum of RS and SR isomers), flufenoxuron, flusilazole, gibberellic acid, imazalil, indoxacarb, iprodione, metalaxyl (sum), metrafenone, myclobutanil, procymidone, propargite, pyrimethanil, quinalphos, tetraconazole, thiophanate-methyl, triadimefon (sum).

For the 2,664 table grape samples a total of 212,365 determinations were reported; the majority of the determinations was below the LOQ (205,102 determinations). 470 determinations refer to grapes where only one pesticide was found. The rest (6,800 determinations) are linked to samples with multiple residues.

In total, 141 different pesticides were found on table grapes, 132<sup>70</sup> different pesticides were found in samples with multiple residues. The top 50 pesticides are reported in Table 4-11. The most frequently found pesticides on grapes were fenhexamid (548 determinations), cyprodinil (509 determinations), fludioxonil (365 determinations), boscalid and myclobutanil (345 and 339 determinations, respectively). In the last column of this table the pesticide category is specified.

**Table 4-11:** EU+NCP – most frequently found pesticides on table grapes (samples with multiple residues only)

Pesticide	No of determinations	Pesticide category <sup>(a)</sup>
Fenhexamid	548	FU
Cyprodinil	509	FU
Fludioxonil	365	FU
Boscalid	345	FU
Myclobutanil	339	FU

<sup>70</sup> Results for samples analysed for part of the residue definition were aggregated with samples analysed for full residue definition.

Pesticide	No of determinations	Pesticide category <sup>(a)</sup>
Iprodione	322	FU
Trifloxystrobin	303	FU
Imidacloprid	265	IN
Pyrimethanil	246	FU
Azoxystrobin	242	FU
Chlorpyrifos	242	IN, AC
Penconazole	181	FU
Methoxyfenozide	177	IN
Dimethomorph	172	FU
Quinoxyfen	168	FU
Metalaxyl (sum)	157	FU
Triadimefon (sum)	152	FU
Spiroxamine	141	FU
Tebuconazole	137	FU
Dithiocarbamates	134	FU
Indoxacarb	124	IN
Spinosad (sum)	102	IN
Chlorpyrifos-methyl	95	IN, AC
Bifenthrin	85	IN, AC
Pyraclostrobin	78	FU, PG
Tetraconazole	66	FU
Lambda-Cyhalothrin	64	IN, AC
Famoxadone	57	FU
Propargite	53	AC
Iprovalicarb	52	FU
Flufenoxuron	51	IN
Tebufenpyrad	45	AC
Kresoxim-methyl	39	FU
Procymidone	39	FU
Carbendazim and benomyl	34	FU
Cypermethrin (sum)	33	IN, AC
Zoxamide	30	FU
Hexythiazox	25	AC, IN
Folpet	24	FU
Fenoxycarb	23	IN
Deltamethrin	22	IN
Methiocarb (sum)	21	IN, MO, RE
Thiametoxam (sum)	21	IN
Triadimenol	21	FU
Spirodiclofen	20	AC, IN
Fenamidone	19	FU
Thiophanate-methyl	18	FU
Tebufenozide	17	IN
Dimethoate (sum)	16	IN, AC
Flusilazole	16	FU

(a) FU: fungicide, IN: insecticide, AC: acaricide, PG: plant growth regulator, MO: molluscicide, RE: repellent

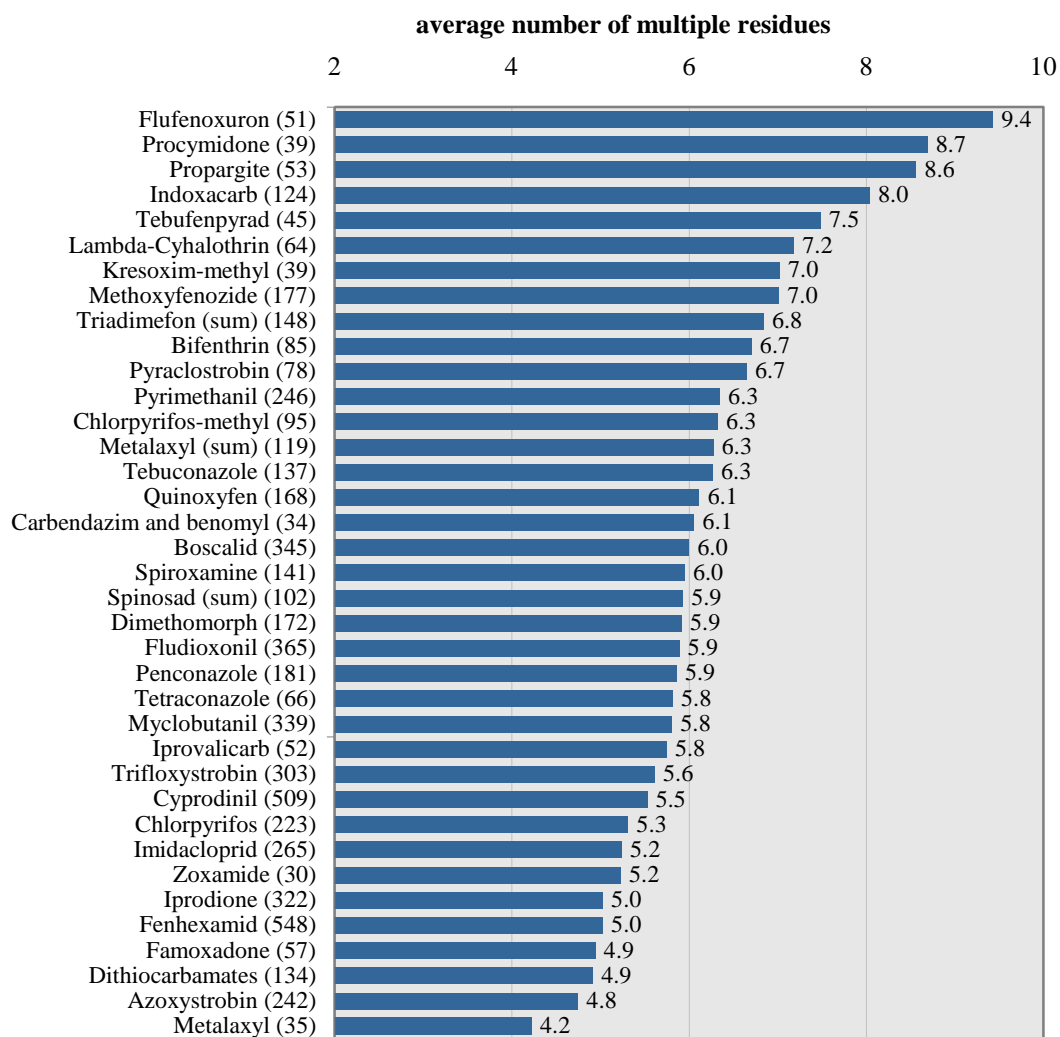
The most frequent combination of two pesticides was cyprodinil and fludioxonil (344 samples). Additional frequent paired pesticides are listed in Table 4-12.

**Table 4-12:** EU+NCP - Frequencies of pair wise compound combinations in multiple residue samples of table grapes - 2009.

Compound1	Compound2	no. of samples	% of total samples with multiple residues (1548)
Cyprodinil	Fludioxonil	344	22.2
Cyprodinil	Fenhexamid	205	13.2
Trifloxystrobin	Fenhexamid	166	10.7
Fenhexamid	Fludioxonil	149	9.6
Boscalid	Fenhexamid	137	8.9
Boscalid	Cyprodinil	129	8.3
Fenhexamid	Imidacloprid	127	8.2
Fenhexamid	Iprodione	121	7.8
Cyprodinil	Imidacloprid	117	7.6
Trifloxystrobin	Cyprodinil	107	6.9
Boscalid	Iprodione	105	6.8
Myclobutanil	Fenhexamid	104	6.7
Boscalid	Fludioxonil	103	6.7
Cyprodinil	Iprodione	98	6.3
Boscalid	Imidacloprid	95	6.1
Myclobutanil	Cyprodinil	94	6.1
Pyrimethanil	Fenhexamid	93	6.0
Pyrimethanil	Cyprodinil	88	5.7
Fludioxonil	Imidacloprid	88	5.7
Fenhexamid	Azoxystrobin	81	5.2
Trifloxystrobin	Fludioxonil	78	5.0
Imidacloprid	Iprodione	78	5.0

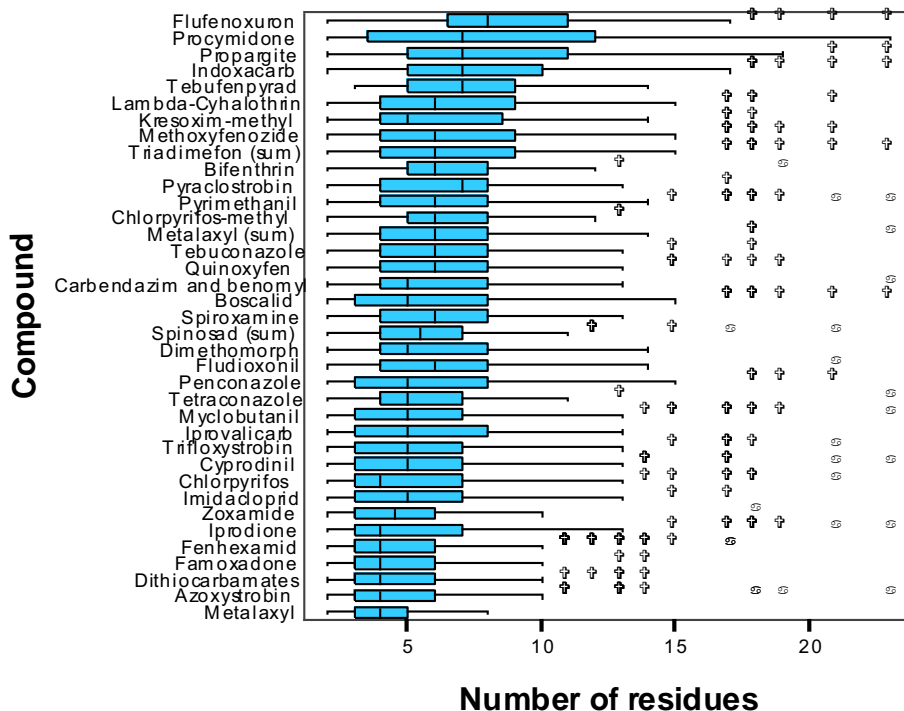
The most frequent pesticide combinations contain pairs of the top 10 pesticides listed in Table 4-12, in most cases combinations of two fungicides; the most frequent combination (cyprodinil/fludioxonil) is commercially available as combi product.

Figure 4-11 gives a ranking of pesticides which were found in combination with other pesticides. Only those compounds with at least 30 multiple residue samples are listed (top 37 substances ranked in Table 4-11). In the 1,548 samples with at least 2 multiple residues flufenoxuron was detected in 51 samples. The average number of multiple residues with flufenoxuron was 9.4. The larger this average number the higher is the probability of a certain pesticide to be found in multiple residue samples. Pesticides with a high tendency for multiple residues are therefore flufenoxuron, procymidone, propargite and indoxacarb. In other words, the substances listed on top of the chart are more often found in combination with other pesticides than the pesticides at the lower end of the chart.



**Figure 4-11:** EU+NCP - Average number of multiple residues by compounds in table grapes (unprocessed) 2009 (in brackets: the number of samples).

The next figure gives more details regarding the frequency distribution of multiple residue categories for each compound. The so-called box plot diagram shows the minimum value, the 25%-quartile (left edge of the box), the median (vertical line within the box) and the 75%-quartile (right edge of the box). Dots (“69”) and cross-marks (“+”) show very high values of multiple residues. In the figure only compounds with at least 30 multiple residue samples are depicted.



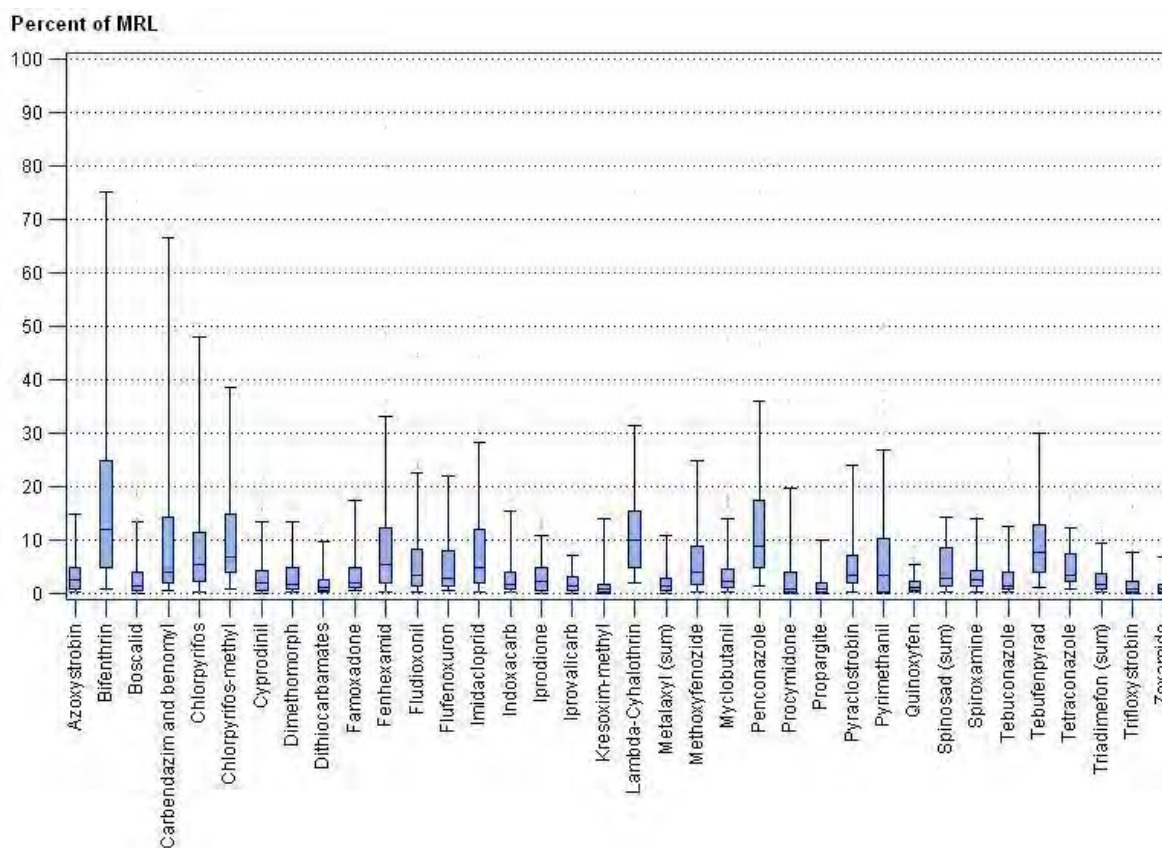
**Figure 4-12:** EU+NCP - Box plots for the number of multiple residues by compounds in table grapes (unprocessed) 2009.

The figures above show that the highest average level of multiple residues in table grapes was found for flufenoxuron, procymidone, propargite and indoxacarb.

When assessing multiple residues in food, not only the total number of different pesticides is of relevance, but also the concentration of the individual pesticides found on the samples need to be taken into account. In Figure 4-13 EFSA presents the measured residue concentrations for the most frequent pesticides on table grapes containing multiple residues, compared with the MRL for the pertinent pesticide. Results for which the % MRL was above 100% are not depicted. The box plot diagram presents the 25%-quartile (lower edge of the box), the median (line within the box) and the 75%-quartile (upper edge of the box) of the residue concentration, expressed in percent of the MRL. The whiskers (lines with margin) represent the 5th and 95th percentiles. Individual extreme values are presented as dots. From this presentation it becomes evident, that all median residue concentrations for these substances except one are below 10% of the MRL, the 75%-quartiles for all but four cases lie below 15% of the MRL.

As a next step of the analysis of multiple residues in table grapes, EFSA focussed on samples with MRL exceedances: in 3.4% of the table grape samples the MRL was exceeded (91 samples). In 0.2% of the cases (5 samples) multiple MRL exceedances were observed. The multiple MRL exceedances refer to the following pesticides: carbaryl, imidacloprid, folpet oxydemeton-methyl, carbendazim/benomyl, imazalil and chlorpyrifos.

Thus, these data show that in most cases where multiple residues are found on table grapes, the measured residues occur in concentrations well below the MRL. However, individual samples contained residues in concentrations close to or even above the MRL (please note that for reasons of readability of the results not all extreme values for carbendazim, chlorpyrifos, chlorpyrifos-methyl and penconazole exceeding 100% of the MRL could not be presented).



**Figure 4-13:** EU+NCP - Box plots for the multiple residues in table grapes (unprocessed) 2009, expressed in percent of the MRL

Even if the individual MRLs for pesticides are not exceeded, a food item may be of concern if the occurrence of the individual substances causes the same toxicological effect in humans and if the cumulated concentration exceeds the threshold concentration, taking into account the different toxicological potencies of the individual substances. Thus, if compounds belonging to a group of chemicals which have a common mode/mechanism of action are present, a cumulative exposure assessment should be performed. EFSA is currently assessing which pesticides should be considered as common assessment groups with regard to cumulative exposure. In addition, a methodology is developed which will give guidance on the calculation of the cumulative exposure. Since the final grouping of chemicals in common assessment groups is not yet agreed, detailed analysis of the results is not possible at this stage.

The case study on table grapes demonstrates that the issue of multiple residues is very complex and requires detailed analysis. An important element for the assessment of multiple residues will be the assessment of the cumulative consumer exposure which will be performed as soon as the methodology is available.

#### 4.6.5. Food of animal origin

In total, 3,869 samples of animal origin were analysed, covering meat, fat and liver of bovine, swine, poultry, sheep, goat and horses, milk and milk products, eggs and honey. The majority of the samples were free of detectable residues (99.7% of samples were reported below the LOQ).

In total, 34 different pesticides were found in animal products; the most frequently found pesticides were DDT and hexachlorobenzene which were detected in 16.5 and 10.9% of the samples analysed for these substances, respectively.

Although both substances have been banned in Europe for more than 30 years<sup>71</sup> and are no longer used in most third countries, residues are still found in the environment and in the food chain because these substances are very persistent and have a tendency to accumulate in food, in particular in fat tissue.

DDT was found in chicken eggs at levels up to 0.55 mg/kg (positive in 87 of 397 samples, MRL 0.05 mg/kg) and in sheep meat/fat at levels up to 0.43 mg/kg (positive in 42 of 88 samples, MRL 1 mg/kg). The highest values of hexachlorobenzene were analysed in bovine, goat and sheep meat/fat (up to 0.08 mg/kg, MRL 0.2 mg/kg).

Surveillance sampling results for food of animal origin per reporting country are listed in Appendix III, Table D.

The existing MRLs for these persistent environmental pollutants like DDT, hexachlorobenzene, and also for other substances which were less frequently found in animal commodities (e.g. lindane, endosulfane, aldrin, dieldrin, heptachlor, hexachlorocyclohexane) are based on residue levels found in the past in monitoring samples. These values should be regularly revised in view of the possibility of lowering the MRLs, taking into account the declining concentrations found in the more recent monitoring programmes. EFSA therefore tried to perform an analysis of whether the current findings would allow amending the MRLs. However, EFSA found that some reporting countries did not report the results in compliance with the MRL regulation which requires that the results measured in meat should be expressed on fat basis. Because of the difficulties to compare the reported results, EFSA could not derive sound conclusions and recommendations. In order to improve the situation, however, EFSA recommends giving clear guidance to reporting countries on how to report the results for food of animal origin for pesticide residues which are labelled as fat soluble in the pesticide legislation and giving practical examples of how the provisions explained in the footnotes of Regulation (EC) No 178/2006 and Regulation (EU) No 600/2010<sup>72</sup> are to be applied in practice.

#### 4.6.6. Reasons for MRL exceedances

In 2009, 2,035 samples (including enforcement samples) were found to exceed national or EU MRLs. Due to the limited number of reported explanations, the samples are not considered to be representative for all MRL exceedances reported in 2009. Member States hardly ever do follow-up investigations at farm level after MRL violations and thus, it is not possible to establish the reasons for MRL exceedances. As a result, general conclusions on the reasons for MRL exceedances cannot be provided and possible risk management options cannot be formulated. It is therefore recommended that national authorities improve the reporting of this information. This may require improvement of the collaboration with national authorities involved in pesticide use and control and in the traceability of samples.

In the summaries of some reporting countries the following reasons for MRL-exceedances were mentioned:

- Products from third countries – illegal use in Europe

<sup>71</sup> Directive 78/117/EEC

<sup>72</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, 09.07.2010, p. 18-39.



- Illegal use of non-authorised plant protection products
- Use of authorised plant protection products in non-authorised commodities
- Incorrect timing of the pesticide applications (the minimum waiting period between the application of the pesticide and the harvest was not respected)
- Incorrect dosing of the pesticides
- Recent changes in a great number of agricultural practices due to the withdrawal of many substances that have been used for many years
- Environmental contamination (e.g. DDT)
- Change of EU MRLs

## SUMMARY CHAPTER 4

97.4% of the analysed surveillance samples (national and EU-coordinated multiannual programme) were below or at the legal MRLs. In 2.6% of the samples, the legal limits were exceeded for one or more pesticides. The overall reported MRL exceedance rate (2.6%) is lower than in the previous year where 3.5% of the samples were found to exceed the MRL. EFSA concludes that the reduction of the overall MRL exceedance rate is probably the consequence of several factors. The impact of each individual factor on the observed overall exceedance rate cannot be exactly quantified.

MRLs were more often exceeded for samples from third countries (6.9% of the surveillance samples) than for samples from the EU and EFTA countries (1.5% of the surveillance samples). For food originating from Bolivia (75%), Guyana (33.3%), Thailand (30.7%), Uganda (23.7%), Jamaica (20%), Japan (20%), India (18%), Malaysia (16.7%), Kenya (16.5%), Vietnam (14.5%), Cuba (13.3%) and Jordan (13.2%) the highest MRL exceedance rates were observed, but due to low sample numbers the results are affected by a high statistical uncertainty for some of the mentioned countries. For the countries of the EEA area the highest percentage of samples exceeding the MRLs were identified for products originating from Cyprus, Portugal, Belgium and Lithuania.

Most of the MRL-exceedances in surveillance samples were found in processed vegetables (4.8%), followed by unprocessed other plant products, with 4.4% of samples exceeding the MRL. In baby food and animal products the lowest MRL exceedance rates were observed (0.8% and 0.3%, respectively). For enforcement samples, the MRL exceedance rate was generally higher (maximum for unprocessed vegetables: 24.0%).

The pesticide/crop combinations which most frequently exceeded the MRLs were found for ethephon in figs, tetramethrin in wild fungi, dithiocarbamates in passion fruit, nicotine in wild fungi and amitraz on pears.

In total, residues of 338 distinct pesticides were found in measurable quantities in vegetables, 319 in fruit and nuts, while in cereals residues of 93 different pesticides were observed.

Overall, 1,888 samples of baby food/infant formulae were analysed. Residues above the reporting level were found in 110 samples, while the MRL was exceeded in 15 samples (0.8%). It was noted that the analytical methods used to analyse baby food were often not sensitive enough to quantify residues at the legal limits.

Data on organic food were provided by 26 reporting countries. For fruit and nuts, a lower rate of MRL exceedances (0.4%) was found in comparison to conventionally grown fruit and nuts (2.7%), for vegetables the exceedances of the surveillance samples were 0.5% and 3.4% respectively. The following substances were found in organic samples, even if the use was not allowed in these commodities: chlormequat, dithiocarbamates, fenbutatin oxide, MCPA and MCPB, mepiquat, methabenzthiazuron and propamocarb.

A total of 9,015 surveillance samples of processed products were analysed. Residues above the MRL were found in 119 samples (1.3%). It is not reported which processing factors were applied to derive the MRL for processed commodities.

The majority of food of animal origin was free of detectable residues (99.7% of samples were reported below the LOQ). In total, 34 different pesticides were found in animal products; the most frequently found pesticides were DDT and hexachlorobenzene which were detected in 16.5 and 10.9% of the samples analysed for these pesticides, respectively. DDT was found in chicken eggs at levels up to 0.55 mg/kg and in sheep meat/fat at levels up to 0.43 mg/kg.

In 2009, multiple residues of two or more pesticides were found in 25.1% of the analysed surveillance samples. The highest frequency of multiple residues was found in vine leaves (grape leaves), but due to the low number of samples the significance of the result is limited. Important commodities with high frequencies of multiple residues were citrus fruit (56.6%), table and wine grapes (55.5%) and strawberries (53.8%). 299 unprocessed surveillance samples were found to exceed two or more EU MRLs. The highest number of multiple MRL exceedances in one sample was 10.

For a detailed special case study, table grapes were selected. The total number of surveillance samples for unprocessed table grapes was 2,664. 24.3% (646) of these had no residues, and 17.6% (470) had one pesticide residue. Consequently, more than half of these samples (1,548 – 58.1%) had multiple residues. There is a weak positive, but highly significant correlation of 0.24 between the scope of the analytical methods used to analyse the samples and the number of multiple residues found. The conclusion is that the level of the scope has some influence but is not a driving factor of high importance. The highest percentage of samples with multiple residues was observed for samples originated from Chile, India, Turkey, Germany and Spain. The most frequently found pesticides in multiple residue samples were fenhexamid, cyprodinil, fludioxonil, boscalid and myclobutanil. The most frequently found combinations are combinations of cyprodinil, fludioxonil, fenhexamid, trifloxystrobin, boscalid and imidacloprid. All but one median residue concentrations for pesticides found in table grapes as multiple residues were below 10% of the MRL. 3.4% of the table grape samples exceeded the MRL for one or more pesticides. In 0.2% of the samples multiple MRL exceedances were detected.

Due to the limited number of reported explanations regarding the reasons for MRL exceedances a general conclusion is not possible.

### **Recommendations**

Adequate analytical methods with a sufficient sensitivity need to be developed for baby food. The European Reference Laboratories should work together with the national laboratories to guarantee an adequate analysis.

Some data analyses were hampered because relevant information was not reported by the reporting countries. Therefore it is recommended to make efforts, in particular when reporting the following information:

- the possible reasons for MRL exceedances and
- production method for samples analysed (e.g. conventional or organic produced food)

Member States are encouraged to investigate possible follow-up investigations at farm level for samples where exceedances were established. This would help to understand better the reasons for MRL exceedances and strategies for reducing the number of MRL breaches.

EFSA also recommends collecting and publishing processing factors which can be used for enforcement of the legal values in processed commodities.

EFSA recommends to give clear guidance to reporting countries how to report the results for food of animal origin for pesticide residues which are labelled as fat soluble in the pesticide legislation and to give practical examples how the provisions explained in the footnotes of Regulation (EC) No 178/2006 and Regulation (EU) No 600/2010 are to be applied in practice.

## 5. Dietary exposure and dietary risk assessment

Exposure is basically a function of the amount of consumed food and the concentration of the chemical (e.g. pesticide residue concentration) and can be expressed by the following equation:

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

WHO provides the following definition: “Dietary exposure assessments combine food consumption data with data on the concentration of chemicals in food. The resulting dietary exposure estimate is then compared with the relevant toxicological or nutritional reference value for the food chemical of concern. Assessments may be undertaken for acute (short-term) or chronic (long-term) exposures, where acute exposure covers a period of 24 h (reference) and long-term exposure covers average daily exposure over the entire lifetime.” (WHO, 2009).

In the chronic (long-term) and acute (short-term) risk assessment, the estimated dietary exposure is compared to the relevant toxicological reference values, i.e. the acceptable daily intake (ADI) and the Acute Reference Dose (ARfD), respectively (see “Background information - Glossary” in Section 1).

The consumer is considered not to be at risk if the estimated dietary intake of a pesticide residue does not exceed the ADI or the ARfD. The ADI and ARfD are derived following a full hazard characterization<sup>73</sup> of a compound, including appropriate safety factors/uncertainty factors.

In the context of this Annual Report, EFSA estimated the dietary exposure of the European population to *actual* pesticide residues measured in food samples and assessed whether the exposure was likely to pose a consumer health risk. The residue data used to calculate the exposure levels were mainly derived from the 2009 EU coordinated monitoring programme. As the 2009 EU coordinated programme only covered 10 food commodities, residue data for additional food commodities relevant for the chronic exposure assessment were retrieved from the national control programmes (surveillance samples).

Before 2009, residue data were provided by the participating countries in aggregated format; therefore the dietary exposure assessment was affected by high levels of uncertainty. In the framework of this monitoring report the results of the control activities were for the first time submitted on a single determination level by all reporting countries. This was done using a new data model called Standard Sample Description (SSD), the details of which can be found in the published Guidance Document (EFSA, 2010). The SSD model allows for the harmonised description of data on analytical measurements in food by providing a list of standardised data fields (items describing characteristics of samples or analytical results such as country of origin, product, analytical method, limit of detection, result, etc.), controlled terminologies and data validation rules. By using the SSD to report the results of the monitoring data, uncertainties could be reduced compared to the risk assessments performed in previous years.

Regulation (EC) No. 396/2005 also requires that other relevant data sources, such as the report submitted under Directive 96/23/EC<sup>74</sup>, should be taken into account for risk assessment. EFSA recently published the report of 2009 on the results from the monitoring of veterinary medicinal

<sup>73</sup> Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market. Official Journal L 230, 19.08.1991, p. 1. Replaced by 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. Official Journal L 309, 24.11.2009, p. 1- starting from 14 June 2011.

<sup>74</sup> Council Directive 96/23/EC of 29 April 1996 on measure 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.

product residues and other substances in live animals animal products<sup>75</sup> (EFSA, 2011a). Some of the substances covered by this technical report (e.g. certain carbamates, pyrethroids and organophosphorous compounds) are substances that may also be used as plant protection products. Residues in food of animal origin, arising from veterinary uses, are therefore an additional source for consumer exposure. Data submitted by Member States under Directive 96/23/EC for products of animal origin could, however, not be considered in the present report, as in most cases only the numbers of samples exceeding or not exceeding the legal limits were reported but not the actual concentrations of residues measured in the samples. In addition, the data are generated from targeted sampling strategies and therefore are not representative of all products of animal origin available on the EU market. It would be desirable that the results for residues of veterinary medicinal products in animal products are reported in a less aggregated way to retrieve the necessary information needed to perform the exposure assessment as required in Regulation (EC) No 396/2005.

Currently no agreed international or European methodology for estimating the actual chronic and acute exposure to pesticide residues measured in monitoring programmes is available. For this task probabilistic models would be the best approach to estimate the exposure of the consumers. EFSA is currently working on the development of such models (EFSA Mandate M-2008-1020)<sup>76</sup>. Pending the finalisation of this work and the availability of agreed models, EFSA decided to adapt the risk assessment methodology developed for the pre-regulatory risk assessment (EFSA, 2007). The model implements the principle of the WHO methodologies for short-term and long-term risk assessment. The assumptions and considerations made for the development of the new risk assessment methodology are outlined in the next sections.

EFSA did not perform a Cumulative Risk Assessment since the European methodology for the assessment of the combined effect of mixtures of pesticides in food is also not yet available.

### 5.1. Model assumptions for the short-term exposure assessment

For the calculation of the short-term intake, EFSA calculated the International Estimation of Short Term Intake (IESTI) as described by JMPR (FAO 2009). The calculation methodology implements the coincidence of the following events:

- A consumer who eats a **large portion size** of the food item under consideration (normally 97.5<sup>th</sup> percentile of the daily food consumption reported in food surveys, considering only persons who have consumed the pertinent food item during the reference period) consumes a food item belonging to the **lot which contains the highest residue measured** (HRM) in the EU coordinated programme 2009.
- The HRM is multiplied by a factor (variability factor) which accommodates for potential **inhomogeneous residue distribution** among the individual units in the same lot. The variability factors depend on the unit size of the food item: for food commodities with a unit weight between 25 and 250 g, a factor of 7 is applied<sup>77</sup> (e.g. aubergines, bananas and peppers). 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 commodities with a unit weight of more than 250 g (e.g. cauliflower), a variability factor of 5 is applied. No variability factor is used for commodities with unit weights less than 25 g (e.g. peas without pods and wheat).

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 extremely unlikely. In case the estimated

<sup>75</sup> Document available at: <http://www.efsa.europa.eu/en/efsajournal/pub/1559.htm>

<sup>76</sup> Document available at <http://www.efsa.europa.eu/en/request/requests.htm>

<sup>77</sup> At present, the choice of the variability factor to be used for the acute risk assessment at European level is under discussion. At international level, a different factor can be applied. There, a variability factor of 3 is used for all commodities with unit weight greater than 25 g.

consumer exposure based on these very conservative assumptions leads to an exceedance of the toxicological reference values, the degree of exceedance (expressed in percent of the ARfD) and the probability of such an event occurring have to be considered. Therefore, not only the degree of exceedance of the ARfD but also the frequency of samples found to exceed the threshold is of relevance.

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 commodities in large portions within a short period of time and that all of these commodities contain residues of the same pesticide at the highest level observed during the reporting year. In the framework of this report, the short-term exposure was performed for nine food commodities included in the 2009 EU coordinated programme (i.e. aubergines, bananas, butter, cauliflower, eggs, peas without pods, peppers, table grapes and wheat).

In orange juice only few pesticides were measured in concentrations above the LOQ. However, since for orange juice specific consumption data are available for only few Member States, EFSA calculated how much of the orange juice containing the highest residue concentration (i.e. the “threshold consumption”) reported can be consumed without posing a consumer health risk. Details on the orange juice results are reported at the end of this section.

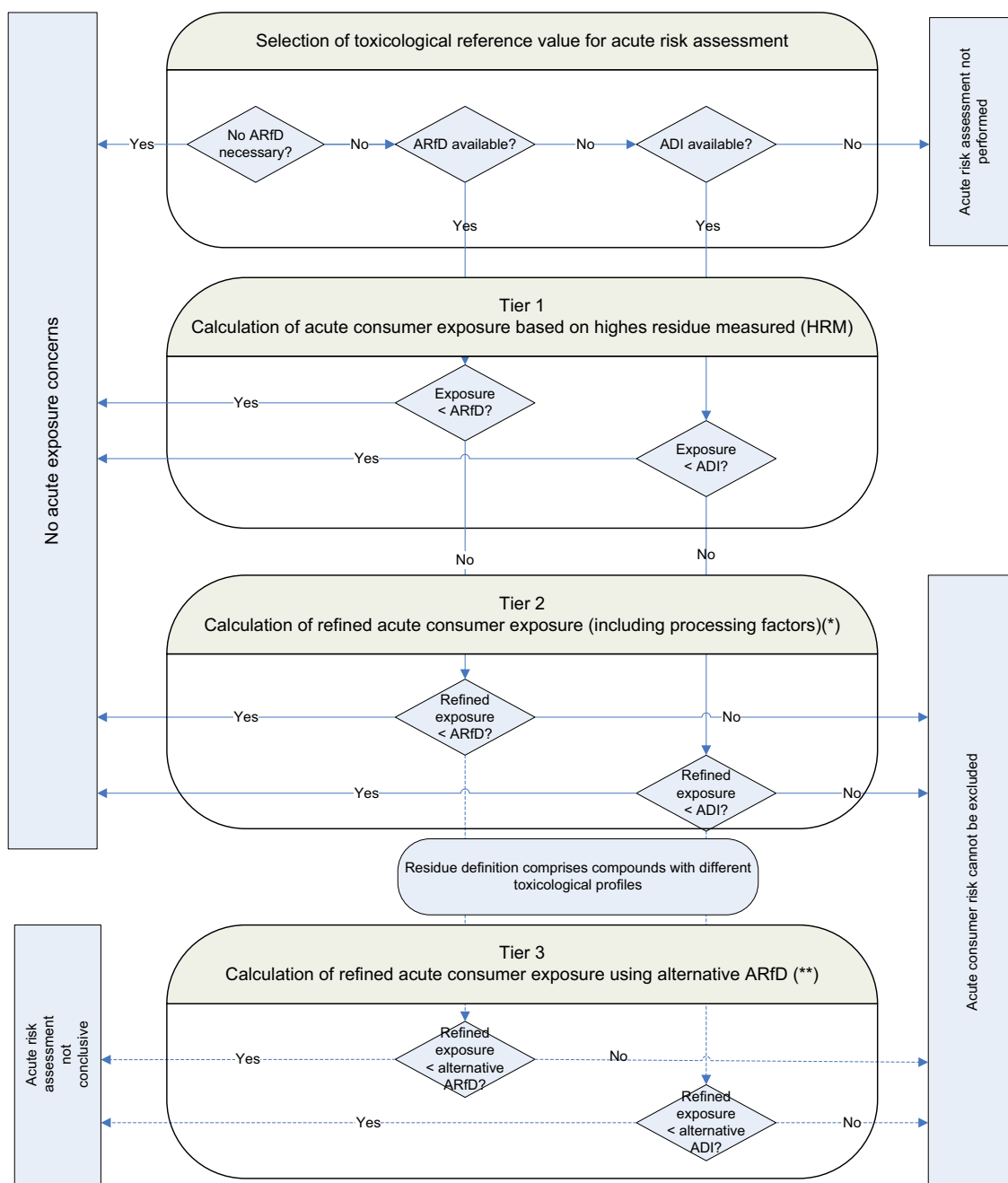
Since all active substances for which residues in butter were quantified are fat soluble, the results for butter were recalculated to milk, assuming a fat content of 4%.

The acute consumer health risk is calculated using the following input parameters:

- The highest residues measured (HRM) identified for each pesticide/crop combination with findings above the limit of quantification (LOQ) reported by EFTA countries and Member States (see section 5.1.1).
- Processing/peeling factor - only in case a refined calculation was considered necessary<sup>78</sup> - for those crops that normally are not consumed raw/whole (e.g. aubergines, banana, cauliflower and wheat).
- Large portion food consumption data retrieved from the EFSA PRIMo (EFSA, 2007)
- Unit weight for the individual food commodities (retrieved from the EFSA PRIMo, EFSA, 2007)
- Acute Reference Dose values (see section 5.1.2)

In Figure 5-1, the approach used in assessing the acute risk is represented.

<sup>78</sup> The peeling /processing factors were selected from the database available at <http://www.bfr.bund.de/cd/579> (BfR compilation of 2009-07-01), developed by the Federal Institute for Risk Assessment (BfR), which includes a collection of processing factors from annually published reports and evaluations by the FAO/WHO Joint Meeting on Pesticide Residues (JMPR), from draft assessment reports (DAR) prepared in the European Pesticide Risk Assessment Peer Review Programme (PRAPeR) and from residue data which were submitted within the framework of national authorisation procedures. Additional data concerning pulp/peel distribution were provided for BfR by retailers and were collected within the framework of national food monitoring programmes. The peeling factor for chlorpyrifos/banana was retrieved from the supporting documents used by EFSA to prepare reasoned opinions on MRL application.



(\*) The processing/peeling factors are applied only to food commodities normally not consumed row/whole (i.e. aubergines, bananas, cauliflower and wheat).

(\*\*) The 3<sup>rd</sup> tier of the risk assessment is only carried out for those pesticides for which the EU legal residue definition set for enforcement purposes includes more than one component characterised by different toxicological profiles.

**Figure 5-1:** Flow chart for the tiered approach used in assessing the potential acute risk to consumer's health.

### 5.1.1. Residue levels

The first tier IESTI calculations were performed with the residue levels reported in Table 5-1 which is the highest residue concentrations measured for the pesticide/crop combinations under the 2009 EU coordinated programme. Empty cells refer to pesticide/crop combinations for which in none of the samples residues were measured above the reporting level. For a total of 27 pesticides, no residues were measured above the quantification level in any crop included in the 2009 EU programme (Table 5-2).

The monitoring results were reported according to the enforcement residue definition<sup>79</sup> as defined in Regulation (EC) No. 396/2005.

**Table 5-1:** Highest residue measured (mg/kg) – not corrected by processing/peeling factors – used, where applicable, as input values for the short-term dietary exposure calculations (tier 1). Residues figures reported in bold text refer to pesticide/crop combinations for which MRL exceedances were reported.

Pesticide	Aubergines	Bananas	Milk/ butter	Cauli- flower	Chicken eggs	Peas (without pods)	Peppers	Table grapes	Wheat
Abamectin (sum of Avermectin B1a, Avermectin B1b and delta-8,9 isomer of Avermectin B1a)							<b>0.060</b>		
Acephate									
Acetamiprid	<b>0.140</b>			<b>0.014</b>			<b>0.390</b>	0.010	
Aldicarb (sum of Aldicarb, its sulfoxide and its sulfone, expressed as Aldicarb)									
Aldrin and Dieldrin (Aldrin and dieldrin combined expressed as dieldrin)			0.004		0.002				
Amitrole									
Azinphos-ethyl									
Azinphos-methyl								0.050	
Azoxystrobin	0.099	0.690		0.003		<b>0.220</b>	<b>2.030</b>	1.300	
Benfuracarb									
Bifenthrin	0.067	<b>0.190</b>		0.030			0.190	0.200	0.050
Boscalid	0.065	0.030		0.015		0.140	1.000	3.660	0.020
Bromopropylate		0.010		0.020			0.020	0.130	0.030
Bromuconazole (sum of diastereoisomers)									
Bupirimate		0.020					0.160	0.090	
Buprofezin	0.063	0.200					0.085	0.060	
Cadusafos									
Camphechlor (Sum of the three indicator compounds Parlar No 26, 50 and 62)									
Captan								<b>0.600</b>	
Carbaryl							<b>0.092</b>	0.003	0.130
Carbendazim and benomyl (sum of benomyl and carbendazim expressed as carbendazim)	0.098	0.100				<b>0.220</b>	<b>0.450</b>	<b>1.500</b>	

<sup>79</sup> A re-calculation to the risk assessment residue definition was not possible because the conversion factors are currently not available.



Pesticide	Aubergines	Bananas	Milk/ butter	Cauli- flower	Chicken eggs	Peas (without pods)	Peppers	Table grapes	Wheat
Carbofuran (sum of carbofuran and 3-hydroxy-carbofuran expressed as carbofuran)							<b>0.340</b>	<b>0.030</b>	
Carbosulfan	0.010								
Chlordane (sum of cis- and trans-isomers and oxychlordane expressed as chlordane)					0.014				
Chlorfenvinphos									
Chlormequat	<b>1.200</b>						0.050		1.000
Chlorobenzilate									
Chlorothalonil	0.332	0.060		0.060			1.800	0.020	0.003
Chlorpropham (Chlorpropham and 3-chloroaniline, expressed as Chlorpropham)							0.024		0.002
Chlorpyrifos	0.110	1.880		<b>0.200</b>	0.006		<b>0.830</b>	<b>1.210</b>	<b>0.310</b>
Chlorpyrifos-methyl							0.040	<b>0.220</b>	<b>1.000</b>
Clofentezine						0.006	0.011		
Cyfluthrin (Cyfluthrin including other mixtures of constituent isomers (sum of isomers))	0.010					<b>0.131</b>	0.150	0.100	
Cypermethrin (Cypermethrin including other mixtures of constituent isomers (sum of isomers))	0.310				0.012	0.010	<b>1.300</b>	<b>0.810</b>	
Cyproconazole							<b>0.170</b>	<b>0.330</b>	0.010
Cyprodinil	0.330	0.004		0.002		0.030	0.290	2.390	
DDT (sum of p,p'-DDT, o,p'-DDT, p,p'-DDE and p,p'-TDE (DDD) expressed as DDT)			0.023		<b>0.053</b>				
Deltamethrin (cis-deltamethrin)	0.200		0.003	0.050			0.100	<b>0.210</b>	1.510
Diazinon				0.008			0.020		<b>0.700</b>
Dichlofluanid									
Dichlorvos				0.005					
Dicofol (sum of p, p' and o,p' isomers)	0.020					0.010	0.020		
Difenoconazole		0.030		0.023		0.050	<b>0.460</b>	0.031	<b>0.160</b>

Pesticide	Aubergines	Bananas	Milk/ butter	Cauli- flower	Chicken eggs	Peas (without pods)	Peppers	Table grapes	Wheat
Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)	<b>0.150</b>			0.184		<b>0.069</b>	<b>0.080</b>	<b>0.410</b>	
Dimethomorph	0.002			0.013			0.056	0.830	
Diphenylamine						<b>0.066</b>			0.002
Dithiocarbamates (Dithiocarbamates expressed as CS <sub>2</sub> , including Maneb, Mancozeb, Metiram, Propineb, Thiram and Ziram)	0.240	0.400		<b>1.530</b>		0.096	0.748	2.300	0.539
Endosulfan (sum of alpha- and beta-isomers and endosulfan-sulphate expressed as endosulfan)	<b>0.140</b>		<b>0.051</b>			0.040	<b>2.400</b>	0.077	
Endrin									
Ethion	0.010	0.007		0.009					
Ethoprophos									
Fenamiphos (sum of fenamiphos and its sulphoxide and sulphone expressed as fenamiphos)								0.008	
Fenarimol	0.020	0.100				0.020	0.100	0.027	
Fenbuconazole								0.023	
Fenhexamid	0.180	0.020		0.017			0.046	4.770	
Fenitrothion								0.030	0.150
Fenoxycarb				0.019				0.570	
Fenpropathrin	<b>0.014</b>					0.003		<b>0.014</b>	
Fenthion (fenthion and its oxigen analogue, their sulfoxides and sulfone expressed as parent)									
Fenvalerate/Esfenvalerate (sum)									
Fipronil (sum Fipronil and sulfone metabolite (MB46136) expressed as Fipronil)									
Fludioxonil	0.109					<b>0.060</b>	0.220	0.885	0.002
Flufenoxuron						0.020	0.024	0.500	
Fluquinconazole									
Flusilazole							<b>0.230</b>	0.025	

Pesticide	Aubergines	Bananas	Milk/ butter	Cauli- flower	Chicken eggs	Peas (without pods)	Peppers	Table grapes	Wheat
Flutriafol	0.011						0.581		
Folpet	0.020	0.020					<b>0.460</b>	<b>2.100</b>	
Formetanate Sum of formetanate and its salts expressed as formetanate(hydrochlo ride)	<b>0.260</b>						0.019		
Fosthiazate									
Heptachlor (sum of heptachlor and heptachlor epoxide expressed as heptachlor)									
Hexachlorobenzene			0.004		0.004				
Hexachlorocyclohexan e (HCH), alpha-isomer			<b>0.020</b>						
Hexachlorocyclohexan e (HCH), beta-isomer			0.001						
Hexaconazole							0.013	0.080	
Hexythiazox	0.004	0.030					0.033	0.054	
Imazalil		<b>2.400</b>					<b>0.030</b>	<b>0.243</b>	<b>0.024</b>
Imidacloprid	<b>0.560</b>	0.010		0.048			0.370	0.400	
Indoxacarb as sum of the isomers S and R	0.010	<b>0.210</b>					0.190	0.690	
Iprodione	0.270	<b>0.022</b>		0.080		<b>0.340</b>	2.200	3.517	0.060
Iprovalicarb								0.187	
Kresoxim-methyl		0.030		0.015		0.020	0.170	0.150	0.026
Lambda-Cyhalothrin	0.044	0.032		0.060		0.049	0.050	0.070	
Lindane (Gamma- isomer of hexachlorociclohexane (HCH))					0.002				
Linuron									
Malathion (sum of malathion and malaixon expressed as malathion)							0.027	<b>0.490</b>	0.150
Mepanipyrim (Mepanipyrim and its metabolite (2-anilino- 4-(2-hydroxypropyl)-6- methylpyrimidine) expressed as mepanipyrim)	0.010							0.280	
Mepiquat									0.280

Pesticide	Aubergines	Bananas	Milk/ butter	Cauli- flower	Chicken eggs	Peas (without pods)	Peppers	Table grapes	Wheat
Metalaxyl (Metalaxyl including other mixtures of constituent isomers including Metalaxyl-M (sum of isomers))				0.004			0.320	0.330	
Metconazole				0.014		0.002			0.081
Methamidophos	<b>0.078</b>								
Methidathion	0.020	0.010				0.020	<b>0.040</b>		
Methiocarb (sum of methiocarb and methiocarb sulfoxide and sulfone, expressed as methiocarb)	0.160						<b>0.210</b>	0.040	
Methomyl and Thiodicarb (sum of methomyl and thiodicarb expressed as methomyl)	0.100			<b>0.011</b>			<b>0.750</b>	<b>0.111</b>	
Methoxychlor									
Monocrotophos		0.030					<b>2.400</b>		
Myclobutanil	0.020	0.181				0.020	0.180	0.960	
Oxamyl	<b>0.086</b>						<b>1.510</b>		
Oxydemeton-methyl (sum of oxydemeton-methyl and demeton-S-methylsulfone expressed as oxydemeton-methyl)									
Paclobutrazol		0.242		0.001					
Parathion						0.010	0.010		
Parathion-methyl (sum of Parathion-methyl and paraoxon-methyl expressed as Parathion-methyl)									
Penconazole	0.016						0.080	0.170	
Permethrin (sum of isomers)									
Phosalone		0.030		0.020					0.030
Phosmet (phosmet and phosmet oxon expressed as phosmet)				0.040				<b>0.100</b>	0.030
Phoxim									0.004
Pirimicarb (sum of Pirimicarb and Desmethyl pirimicarb expressed as Pirimicarb)	0.015					0.001	0.045		0.038

Pesticide	Aubergines	Bananas	Milk/ butter	Cauli- flower	Chicken eggs	Peas (without pods)	Peppers	Table grapes	Wheat
Pirimiphos-methyl				0.004			0.171		2.300
Prochloraz (sum of prochloraz and its metabolites containing the 2,4,6-Trichlorophenol moiety expressed as prochloraz)				0.005			<b>0.470</b>		
Procymidone	0.280			0.013		0.280	0.820	1.200	
Profenofos	0.040					0.050	<b>0.060</b>	<b>0.110</b>	0.030
Propamocarb (Sum of propamocarb and its salt expressed as propamocarb)	0.160			0.027			0.162	0.020	
Propargite	0.120						0.110	1.300	
Prothioconazole									
Pyrazophos									
Pyridaben	<b>0.280</b>						0.070	0.016	
Pyrimethanil	0.109	0.010		0.010		0.190	0.910	3.100	
Pyriproxyfen	0.150	0.030				0.020	0.043	0.020	
Quinoxifen								0.220	
Resmethrin (resmethrin including other mixtures of constituent isomers (sum of isomers))									
Spiroxamine		0.004						0.220	0.004
Tebuconazole	0.079						0.037	0.590	0.030
Tebufenozide	0.054						0.150	0.590	
Tebufenpyrad				0.003			0.002	0.160	
Teflubenzuron	0.018						0.140	0.017	
Tefluthrin				0.030					
Tetradifon	0.020						0.010		
Thiabendazole	0.010	1.820					0.002	0.020	0.044
Thiacloprid	0.235			0.015		0.028	0.720		
Thiophanate-methyl	0.030	0.010				<b>0.120</b>	<b>0.130</b>	<b>0.470</b>	
Tolclofos-methyl									0.020
Tolyfluanid (Sum of tolyfluanid and dimethylaminosulfotoluidide expressed as tolyfluanid)								0.070	
Triadimefon (sum of Triadimefon and Triadimenol)	0.079					0.009	0.340	0.397	
Triazophos							<b>0.063</b>		
Trichlorfon						0.003			
Trifloxystrobin	0.010			0.003		0.008	0.171	1.400	
Triticonazole	0.009								

Pesticide	Aubergines	Bananas	Milk/ butter	Cauli- flower	Chicken eggs	Peas (without pods)	Peppers	Table grapes	Wheat
Vinclozolin (sum of Vinclozolin and all metabolites containing the 3,5-dichloraniline moiety, expressed as Vinclozolin)						0.177		0.069	

**Table 5-2:** Pesticides for which no residues were quantified above the reporting level in any food commodities included in the 2009 EU programme.

Pesticide
Acephate
Aldicarb (sum of Aldicarb, its sulfoxide and its sulfone, expressed as Aldicarb)
Amitrole
Azinphos-ethyl
Benfuracarb
Bromuconazole (sum of diastereoisomers)
Cadusafos
Camphechlor (Sum of the three indicator compounds Parlar No 26, 50 and 62)
Chlorfenvinphos
Chlorobenzilate
Dichlofluanid
Endrin
Ethoprophos
Fenthion (fenthion and its oxigen analogue, their sulfoxides and sulfone expressed as parent)
Fenvalerate/Esfenvalerate (sum)
Fipronil (sum Fipronil and sulfone metabolite (MB46136) expressed as Fipronil)
Fluquinconazole
Fosthiazate
Heptachlor (sum of heptachlor and heptachlor epoxide expressed as heptachlor)
Linuron
Methoxychlor
Oxydemeton-methyl (sum of oxydemeton-methyl and demeton-S-methylsulfone expressed as oxydemeton-methyl)
Parathion-methyl (sum of Parathion-methyl and paraoxon-methyl expressed as Parathion-methyl)
Permethrin (sum of isomers)
Prothioconazole
Pyrazophos
Resmethrin (resmethrin including other mixtures of constituent isomers (sum of isomers))

### **5.1.2. Acute Reference Dose values (ARfDs)**

In order to perform the risk assessment, the calculated exposure for a certain pesticide/crop combination was compared with the ARfD value. In Table 5-3 the ARfD values used for the acute risk assessment are listed. It should be mentioned that some of the ARfD values were derived recently and were not in place in 2009 when the monitoring results were generated.

For substances which have not been evaluated with regard to the setting of the ARfD and/or the setting of the ARfD was not finalised (e.g. hexaconazole) the short-term risk assessment has been performed with the ADI instead of the ARfD. The list of ADI values can be found in Table 5-9.

**Table 5-3:** ARfD values used for the short-term risk assessment

Pesticide	ARfD (mg/kg bw)	ARfD evaluation year	ARfD <sup>(1)</sup> source
Abamectin	0.005	2008	EFSA
Acephate	0.1	2005	JMPR
Acetamiprid	0.1	2004	COM
Aldicarb	0.003	2001	ECCO
Amitrole	ARfD not necessary	2001	COM
Azinphos-ethyl	No ARfD and no ADI allocated, no residues measured above the LOQ		
Azinphos-methyl	0.01	2006	COM
Azoxystrobin	ARfD not necessary	2010	EFSA
Benfuracarb	0.02	2009	EFSA
Bifenthrin	0.03	2008	EFSA
Boscalid	ARfD not necessary	2006	JMPR
Bromopropylate	ADI used instead of ARfD		
Bromuconazole	0.1	2010	EFSA
Bupirimate	0.05	2010	EFSA
Buprofezin	0.5	2010	EFSA
Cadusafos (aka ebufos)	0.003	2009	EFSA
Camphechlor	No ARfD and no ADI allocated, no residues measured above the LOQ		
Captan	0.3	2009	EFSA
Carbaryl	0.01	2006	EFSA
Carbendazim/benomyl	0.02/0.03	2010	EFSA
Carbofuran	0.00015	2009	EFSA
Carbosulfan	0.005	2009	EFSA
Chlordane	ADI used instead of ARfD		
Chlorfenvinphos	ADI used instead of ARfD		
Chlormequat <sup>(2)</sup>	0.09	2008	EFSA
Chlorobenzilate	ADI used instead of ARfD		
Chlorothalonil	0.6	2006	COM
Chlorpropham	0.5	2003	COM
Chlorpyrifos	0.1	2005	COM
Chlorpyrifos-methyl	0.1	2005	COM
Clofentezine	ARfD not necessary	2009	EFSA
Cyfluthrin	0.02	2002	COM
Cypermethrin/alpha-cypermethrin	0.2/0.04	2004	COM
Cyproconazole	0.02	2010	DAR
Cyprodinil	ARfD not necessary	2006	DE
DDT	ARfD not necessary	2000	JMPR
Deltamethrin	0.01	2002	COM
Diazinon	0.025	2006	EFSA
Dichlofluanid	ARfD not necessary	Not available	NL
Dichlorvos <sup>(3)</sup>	No ARfD and no ADI allocated	2006	EFSA
Dicofol	0.15	2006	DAR <sup>(4)</sup>
Dieldrin/eldrin	ADI used instead of ARfD		
Difenoconazole	0.16	2011	EFSA
Dimethoate/omethoate	0.01/0.002	2006	EFSA
Dimethomorph	0.6	2006	EFSA



Pesticide	ARfD (mg/kg bw)	ARfD evaluation year	ARfD <sup>(1)</sup> source
Diphenylamine	ARfD not necessary	2008	EFSA
Dithiocarbamates-ziram/mancozeb	0.08/0.6	2004	COM
Endosulfan	0.02	2006	JMPR
Endrin	ADI used instead of ARfD		
Ethion	ADI used instead of ARfD		
Ethoprophos	0.01	2006	EFSA
Fenamiphos (aka phenamiphos)	0.0025	2006	EFSA
Fenarimol	0.02	2007	COM
Fenbuconazole	0.3	2010	EFSA
Fenhexamid	ARfD not necessary	1998	COM
Fenitrothion	0.013	2006	EFSA
Fenoxycarb	2	2010	EFSA
Fenpropathrin	0.03	2006	UK
Fenthion	0.01	2001	ECCO
Fenvalerate/esfenvalerate	No ARfD/0.05, no residues measured above the LOQ	2005	COM
Fipronil	0.009	2006	EFSA
Fludioxonil	ARfD not necessary	2007	EFSA
Flufenoxuron	ARfD not necessary	2011	EFSA
Fluquinconazole	0.02	2011	EFSA
Flusilazole	0.005	2007	COM
Flutriafol	0.05	2010	EFSA
Folpet	0.2	2009	EFSA
Formetanate	0.005	2006	EFSA
Fosthiazate	0.005	2003	COM
Hexachlorobenzene	No ARfD and no ADI allocated		
Heptachlor	No ARfD allocated, no residues measured above the LOQ		
HCH alpha	No ARfD and no ADI allocated		
HCH beta	No ARfD and no ADI allocated		
HCH gamma (aka Lindane)	0.01	1999	ECCO
Hexaconazole	ADI used instead of ARfD		
Hexythiazox	ARfD not necessary	2010	EFSA
Imazalil	0.05	2010	EFSA
Imidacloprid	0.08	2008	EFSA
Indoxacarb	0.125	2005	COM
Iprodione	ARfD not necessary	2002	COM
Iprovalicarb	ARfD not necessary	2002	COM
Kresoxim-methyl	ARfD not necessary	2010	EFSA
Lambda-Cyhalothrin	0.0075	2001	COM
Linuron	0.03	2002	COM
Malathion	0.3	2009	EFSA
Mepanipyrim	ARfD not necessary	2004	COM
Mepiquat	0.3	2008	EFSA
Metalaxyl/metalaxyl-M	0.5/0.5	2002	COM
Metconazole	0.01	2006	EFSA
Methamidophos	0.003	2007	COM
Methidathion	0.01	1997	JMPR

Pesticide	ARfD (mg/kg bw)	ARfD evaluation year	ARfD <sup>(1)</sup> source
Methiocarb	0.013	2006	EFSA
Methomyl/Thiodicarb	0.0025/0.01	2006	EFSA
Methoxychlor	No ARfD and no ADI allocated, no residues measured above the LOQ		
Monocrotophos	0.002	1995	JMPR
Myclobutanil	0.31	2010	EFSA
Oxamyl	0.001	2005	EFSA
Oxydemeton-methyl	0.0015	2006	EFSA
Pacllobutrazol	0.1	2010	EFSA
Parathion	0.005	2001	ECCO
Parathion-methyl	0.03	2002	ECCO
Penconazole	0.5	2008	EFSA
Permethrin	1.5	2002	JMPR
Phosalone	0.1	2006	EFSA
Phosmet	0.045	2006	EFSA
Phoxim	ADI used instead of ARfD		
Pirimicarb	0.1	2006	EFSA
Pirimiphos-methyl	0.15	2005	EFSA
Prochloraz	0.1	2001	JMPR
Procymidone	0.012	2007	DAR
Profenofos	1	2007	JMPR
Propamocarb	1	2006	EFSA
Propargite	No ARfD and no ADI allocated		
Prothioconazole/desthio- prothioconazole	0.2/0.01	2007	EFSA
Pyrazophos	0.001	1998	DE
Pyridaben	0.05	2010	EFSA
Pyrimethanil	ARfD not necessary	2006	EFSA
Pyriproxyfen	ARfD not necessary	2009	EFSA
Quinoxifen	ARfD not necessary	2003	COM
Resmethrin	ADI used instead of ARfD		
Spiroxamine	0.1	2010	EFSA
Tebuconazole	0.03	2008	EFSA
Tebufenozide	ARfD not necessary	2010	EFSA
Tebufenpyrad	0.02	2008	EFSA
Teflubenzuron	ARfD not necessary	2008	EFSA
Tefluthrin	0.005	2010	EFSA
Tetradifon	ARfD not necessary	2002	DE
Thiabendazole	ARfD not necessary	2001	COM
Thiacloprid	0.03	2003	COM
Thiophanate-methyl	0.2	2005	COM
Tolclofos-methyl	ARfD not necessary	2005	EFSA
Tolylfluanid	0.25	2005	EFSA
Triadimenol/triadimefon	0.05/0.08	2008	EFSA
Triazophos	0.001	2002	JMPR
Trichlorfon	No ARfD and no ADI allocated		
Trifloxystrobin	ARfD not necessary	2003	COM
Triticonazole	0.05	2005	EFSA
Vinclozolin	0.06	2006	COM

(1) For the short-term risk assessment, the most recent ARfDs available were used. It should be mentioned that some of the ARfD values were derived recently and were not in place in 2009 when the monitoring results were generated. The ARfD have been selected among the reference values established in the framework of toxicological evaluations carried out by European and international organisations (e.g. EFSA, European Commission and JMPR); where those were not available, the ARfDs set by national competent organisations have been selected.

(2) The ARfD for chlormequat chloride derived in the peer review under 91/414/EEC was 0.09 mg/kg. This value was recalculated to chlormequat to be comparable with the residue definition which is expressed as chlormequat (ion).

(3) A tentative ARfD was derived in an EPCO meeting. However, EFSA concluded that based on the available opinion of the PPR Panel, as there are still uncertainties and data requirement identified, neither the reference values nor the safety factor(s) are possible to be confirmed in the light of uncertainties on the overall picture of the toxicological properties and the data requirement for a long-term study.

(4) DAR = Draft Assessment Report prepared in the framework of the active substance peer-review under Directive EEC 91/414.

### 5.1.3. Presentation of the results of the short-term consumer exposure

For each pesticide/crop combination where a highest measured residue was derived (Table 5-1) the short-term exposure was calculated for all consumer groups for which food consumption data have been submitted in the framework of the development of the EFSA PRIMo. If an ARfD value has been established for the active substance concerned, the calculated exposures for the highest residue measured were expressed in percent of the ARfD. For 10 pesticides, lacking an ARfD the exposure was compared with the ADI which is considered as a more conservative approach. For each of the nine commodities the results, for the different diets are presented in a chart in Appendix IV.

In addition, for each food commodity concerned, EFSA calculated the threshold residue levels ( $TRL_{RAC}/TRL_{edible\ portion}$ ) (see “Background information/glossary” section) for the most critical diet included in the EFSA PRIMo. Residues at this threshold level correspond to 100% of the ARfD and represent therefore the maximum residue concentrations for which a consumer risk can be excluded.

Measured residue concentrations exceeding the calculated threshold residue level ( $TRL_{RAC}$  and  $TRL_{edible\ portion}$ ) are highlighted as values which may be of a potential consumer health concern.

The results of the acute exposure assessments are reported individually for each pesticide in an exposure assessment summary report. In these calculation reports (presented in Appendix IV), for each pesticide/crop combination the following information is reported:

- the EU MRL in place on 01/01/2009
- the total number of samples analysed for the given pesticide/crop combination
- the percentage of the samples with quantifiable residues below or at the EU MRL
- the percentage of the samples above the EU MRL
- the identified Highest Residue Measured (HRM)
- the number of samples exceeding the toxicological threshold level ( $TRL_{RAC}$  and  $TRL_{edible\ portion}$ )
- the maximum acute exposure for the most critical diet represented in the EFSA PRIMo, expressed in percent of the ARfD
- the most critical diet for which the highest consumer exposure was calculated
- the peeling/processing factor (PF), where applicable.

The percentage of samples with a residue level exceeding the lowest calculated TRL is taken as an indicator of the frequency of a potential critical consumer exposure for each pesticide/crop combination. If the exceedance of the threshold occurred in less than 0.1% of the samples which were analysed for the pesticide, the event was considered to be exceptional, a frequency of 0.1 to 1% was considered to be a seldom event, and a frequency above 1% was classified as non-seldom.

## 5.2. Results of the short-term risk assessment

The total number of pesticide/crop combinations analysed in the framework of the 2009 EU coordinated programmes was 1,242.

The short-term risk assessment was only performed for those combinations for which the ARfD was set (or – if the ARfD was not allocated – for which the ADI was available) and/or for which residues of the concerned substances were quantified above the limit of quantifications at least in one sample among all samples taken.

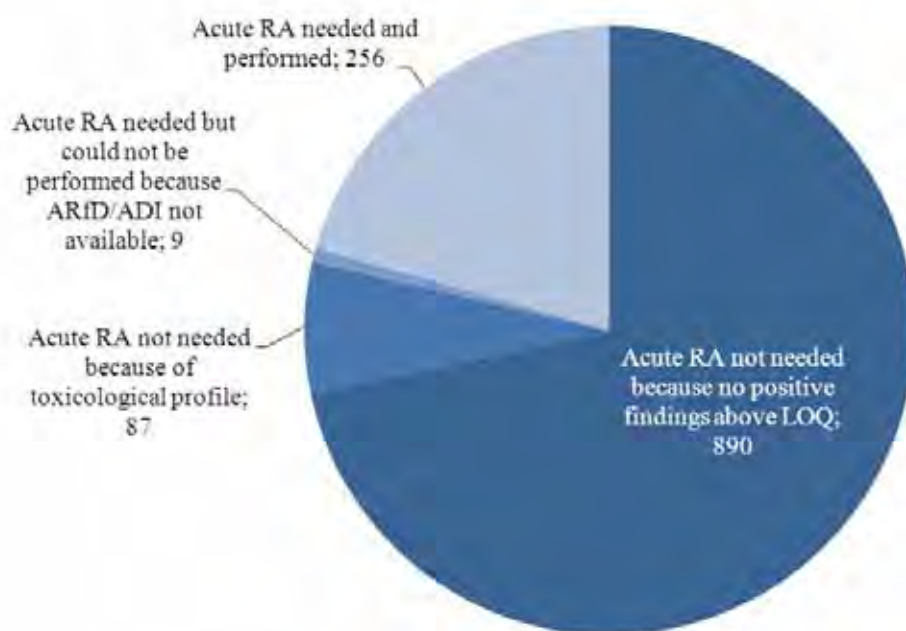
For a large number of combinations (890) no residues were measured among all the samples tested for those combinations. For these combinations, it was assumed that no consumer's exposure occurred.

For 87 pesticide/crop combinations with measurable residues no short-term risk assessment was considered necessary because no ARfD was allocated.

It is noted that for 9 combinations concerning 6 different pesticides where residues above the reporting level were measured, no acute risk assessment could be performed because of a lack of toxicological reference values (no ADI and no ARfD were derived). For those combinations, only the consumer's exposure was estimated.

For 256 pesticide/crop combinations - for which residues were reported above the LOQ – the short-term risk assessment was performed either with the ARfD or the ADI, where the ARfD was not available.

In Figure 5-2, a summary of the number of the pesticide/crop combinations according to the need and/or possibility to carry out the acute risk assessment is presented.

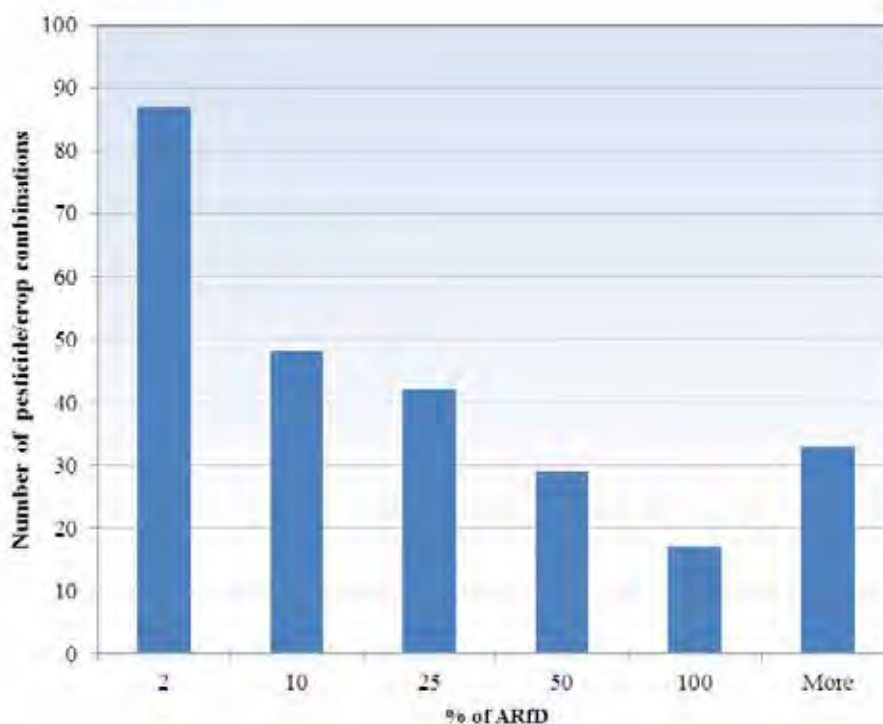


**Figure 5-2:** Breakdown of the total number of pesticide/crop combinations (1,242) according to the need and possibility to carry out the acute risk assessment. The number of combinations in each category is indicated (RA = Risk Assessment).

For 224 combinations of the 256 pesticide/crop combinations (87.5%) for which the acute risk assessment was calculated the estimated exposure was below 100% of the ARfD/ADI (Figure 5-3). Thus, based on the current scientific knowledge, for these combinations a potential short-term consumer risk was unlikely to occur.

The results of the assessment (tier 1/2 calculation) for the 32 pesticide/crop combinations for which a short-term risk could not be excluded are presented in the following sections.

The summary reports of the IESTI calculations for the pesticides for which an acute risk assessment was performed are reported in Appendix IV to the report.



**Figure 5-3:** Breakdown of the total number of pesticide/crop combinations for which the short-term risk assessment was performed (256) according to the results of the acute risk assessment, expressed as percentage of the ARfD exhaustion.

### 5.2.1. Pesticide/crop combinations for which a potential short-term risk could not be excluded

A potential consumer risk could not be excluded for the 32 pesticide/crop combinations listed in Table 5-4, assuming that the highly contaminated lots were consumed in high quantities (tier 1 calculation). In Table 5-5, additional information and recommendations to follow up on these findings are reported. In 11 cases the estimated exposure was between 100% and 150% of the ARfD. Bearing in mind the uncertainties and overall conservatism of the calculation, these events are considered as non-significant exceedances.

For 10 out of the 32 pesticide/crop combinations for which a potential consumer risk could not be excluded, the potential risk identified was considered to be an exceptional event, while for the remaining 22 combinations the frequency of occurrence was classified as a seldom event; in none of the 32 combinations the threshold level was exceeded in more than 1% of the analysed samples. Details on these findings are reported in the following paragraphs.

For 11 of the pesticide/commodity combinations for which a critical intake situation could not be excluded, risk management actions have already been taken by withdrawing authorisations or by lowering the MRLs.

In only one combination of concern (hexaconazole/table grapes) the acute exposure assessment was based on the ADI rather than the ARfD. When the short-term assessment is performed following this approach, it is expected that the assessment overestimates the actual acute consumer risk.

It is noted that in all cases the most critical sub groups of the population were infant/children.

**Table 5-4:** Summary results of the short-term risk assessment of the pesticide/crop combinations for which an acute risk could not be excluded.

Pesticide	Crop	2009 MRL (whole crop) mg/kg	Total number of samples analysed	% of samples with detectable residues below the MRL	Number of samples above the MRL	% samples exceeding the MRL	Highest residue measured (HRM) mg/kg	Highest residue measured corrected with PF (HRMc) mg/kg	Max exposure (% ARD) (scenario 1/2) (1)	Most critical diet	TRL in edible portion (mg/kg)	No. of samples exceeding the TRL (2)	% samples above the TRL	Exceedence of ARD is considered "Exceptional", "seldom" or "not seldom" event? (3)
Carbendazim/benomyl	Table grapes	0.3	939	2.8	2	0.2	1.50		491/327	DE child	0.305/0.458	2/2	0.21/0.21	Seldom
Carbendazim/benomyl	Peppers	0.1	961	1.4	2	0.2	0.45		142/95	DE child	0.318/0.476	1/0	0.10/0.00	Seldom
Carbofuran	Table grapes	0.02	1053	0.0	1	0.1	0.03		1310	DE child	0.002	1	0.095	Exceptional
Carbofuran	Peppers	0.02	1075	0.0	2	0.2	0.34		14275	DE child	0.002	2	0.186	Seldom
Cypermethrin/alpha-cypermethrin	Table grapes	0.5	1082	1.9	2	0.2	0.81		133/42	DE child	0.611/1.91	1/0	0.092	Exceptional
Cypermethrin/alpha-cypermethrin	Peppers	0.5	1155	0.7	4	0.4	1.30		205/65	DE child	0.635/1.98	3/0	0.260	Seldom
Cyproconazole	Table grapes	0.2	1047	0.9	1	0.1	0.33		108	DE child	0.305	1	0.096	Exceptional
Deltamethrin	Table grapes	0.2	1552	0.8	1	0.1	0.21		138	DE child	0.153	1	0.064	Exceptional
Dimethoate/omethoate	Table grapes	0.02	1024	0.2	5	0.5	0.41		1342/268	DE child	0.031/0.153	5/3	0.488	Seldom
Dimethoate/omethoate	Peppers	0.02	1051	0.0	1	0.1	0.08		251/50	DE child	0.032/0.159	1/0	0.095	Exceptional
Dimethoate/omethoate	Aubergines (egg plants)	0.02	688	0.2	6	0.9	0.15		187/37	UK 4-6 yr	0.080	2/0	0.291	Seldom
Dimethoate/omethoate	Cauliflower	0.2	616	1.0	0	0.0	0.18		607/119	NL child	0.030	2/1	0.320	Seldom
Dithiocarbamates/ ziram/ mancozeb	Table grapes	5	690	17.8	0	0.0	4.60		378/45	DE child	1.22/9.16	1/0	0.145	Seldom
Dithiocarbamates/ ziram/ mancozeb	Peppers	5	783	4.0	0	0.0	1.50		118/14	DE child	1.27/9.53	1/0	0.128	Seldom
Dithiocarbamates/ ziram/ mancozeb	Cauliflower	1	396	52.3	1	0.3	3.08		254/30	NL child	1.21/24.0	1/0	0.253	Seldom
Endosulfan	Peppers	1	1550	0.3	1	0.1	2.40		756	DE child	0.318	1	0.065	Exceptional
Flusilazole	Peppers	0.02	1146	0.0	1	0.1	0.23		290	DE child	0.079	1	0.087	Exceptional
Formetanate	Aubergines (egg plants)	0.2	328	1.5	1	0.3	0.26		130	UK 4-6 yr	0.200	1	0.305	Seldom
Hexaconazole	Table grapes	0.1	1225	0.1	0	0.0	0.08		105	DE child	0.076	1	0.082	Exceptional
Imazalil	Bananas	2	1185	49.5	1	0.1	2.40	1.25	209	UK infant	1.150	4	0.338	Seldom
Methiocarb	Peppers	0.2	1034	0.3	1	0.1	0.21		102	DE child	0.206	1	0.097	Exceptional
Methomyl/thiodicarb	Table grapes	0.05	845	0.4	2	0.2	0.11		291/73	DE child	0.038/1.53	4/0	0.473	Seldom
Methomyl/thiodicarb	Peppers	0.2	841	1.0	2	0.2	0.75		1889/472	DE child	0.040/0.159	4/3	0.476	Seldom
Monocrotophos	Bananas	0.01	1100	0.1	0	0.0	0.03		125	UK infant	0.024	1	0.091	Exceptional
Monocrotophos	Peppers	0.01	1369	0.0	2	0.2	2.40		7557	DE child	0.032	2	0.146	Seldom
Oxamyl	Peppers	0.02	1153	0.3	5	0.4	1.51		9510	DE child	0.016	5	0.434	Seldom
Oxamyl	Aubergines (egg plants)	0.02	752	0.1	4	0.5	0.09		215	UK 4-6 yr	0.040	4	0.532	Seldom
Procyimidone	Table grapes	5	1568	1.5	0	0.0	1.20		655	DE child	0.183	12	0.765	Seldom
Procyimidone	Peppers	2	1575	1.6	0	0.0	0.82		430	DE child	0.191	6	0.381	Seldom
Tebuconazole	Table grapes	2	1398	5.9	0	0.0	0.59		129	DE child	0.458	2	0.143	Seldom
Thioproprid	Peppers	1	993	1.0	0	0.0	0.72		151	DE child	0.476	1	0.101	Seldom
Triazophos	Peppers	0.01	1470	0	2	0.1	0.06		397	DE child	0.016	2	0.136	Seldom

(1) The maximum exposure is calculated for tier 1 and tier 3 when the residue definition for the concerned substance/group of substances includes substances with different toxicological profiles.

(2) The Threshold Residue Level (TRL) is the theoretical calculated residue level that represents the 100% of the ARD exhaustion. This value is calculated singularly for each pesticide/crop combination and for each diet.

(3) See section 5.1.3 for more details on the event classification.

**Table 5-5:** Details on the MRL exceedances and sample origin for the samples for which a short-term risk could not be excluded

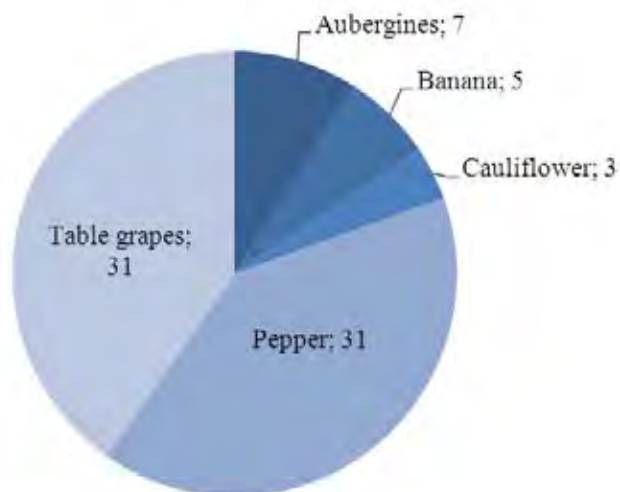
Pesticide	Crop	Number of samples above the TRL <sup>(1)</sup> (tier 1/2) <sup>(2)</sup>	Number of samples above the 2009 MRL	Origin of samples exceeding the 2009 MRL <sup>(3)</sup>	Pesticide authorisation status in EU in 2009 (Y/N)	Pesticide authorisation status in EU in 2011 in any crop (Y/N)	2009 MRL (mg/kg)	2011 MRL (mg/kg) <sup>(4)</sup>	TRL in edible portion (mg/kg)	Recommendations for	
										Member States <sup>(5)</sup>	Commission <sup>(6)</sup>
Carbendazim/benomyl	Table grapes	2/2	2	TR, PE	Y	Y	0.3	0.3	0.305/0.458	I	
Carbendazim/benomyl	Peppers	1/0	2	SR	Y	Y	0.1	0.1*	0.318/0.476	I	
Carbofuran	Table grapes	1	1	BR	n	n	0.02	0.02*	0.002	I	L
Carbofuran	Peppers	2	2	GR, TH	n	n	0.02	0.02*	0.002	I, M	L
Cypermethrin/alpha-cypermethrin	Table grapes	1/0	2	CY	Y	Y	0.5	0.5	0.611/1.91	M	
Cypermethrin/alpha-cypermethrin	Peppers	3/0	4	DO, TH	Y	Y	0.5	0.5	0.635/1.98	I	
Cyproconazole	Table grapes	1	1	MT	Y	Y	0.2	0.2	0.305	M	
Deltamethrin	Table grapes	1	1	GR	Y	Y	0.2	0.2	0.153	M	L
Dimethoate/omethoate	Table grapes	5/3	5	MK, MT, IT, TR	Y	Y	0.02	0.02*	0.031/0.153	I, M	E
Dimethoate/omethoate	Peppers	1/0	1	TH	Y	Y	0.02	0.02*	0.032/0.159	I	E
Dimethoate/omethoate	Aubergines (egg plants)	2/0	6	TH	Y	Y	0.02	0.02*	0.080	I	E, P
Dimethoate/omethoate	Cauliflower	2/1	0	TH	Y	Y	0.2	0.02*	0.03/0.153		
Dithiocarbamates/ ziram/ mancozeb	Table grapes	1/0	0		Y	Y	5	5	1.22/9.16	S	
Dithiocarbamates/ ziram/ mancozeb	Peppers	1/0	0		Y	Y	5	5	1.27/9.53	S	
Dithiocarbamates/ ziram/ mancozeb	Cauliflower	1/0	1	ES	Y	Y	1	1	1.21/24.0	S	P
Endosulfan	Peppers	1	1	IN	n	n	1	0.05*	0.318	I, N	
Flusilazole	Peppers	1	1	TH	Y	Y	0.02	0.02*	0.079	I	
Formetanate	Aubergines (egg plants)	1	1	ES	Y	Y	0.2	0.2	0.200	M	P
Hexaconazole	Table grapes	1	0		n	n	0.1	0.1	0.076	M	L
Imazalil	Bananas	4	1	EC	Y	Y	2	2	1.150	I	L
Methiocarb	Peppers	1	1	GR	Y	Y	0.2	0.2	0.206	M	
Methomy/thiodicarb	Table grapes	4/0	2	AU, CL	Y	Y	0.05	0.02*	0.038/1.53	I, N	E
Methomy/thiodicarb	Peppers	4/3	2	TR	Y	Y	0.2	0.02*	0.040/0.159	I, N	E
Monocrotophos	Bananas	1	0	PA	n	n	0.01	0.01*	0.024	D	P
Monocrotophos	Peppers	2	2	IN	n	n	0.01	0.01*	0.032	D	
Oxamyl	Peppers	5	5	MA, TR	Y	Y	0.02	0.02	0.016	I	L
Oxamyl	Aubergines (egg plants)	4	4	ES, IN, PL, TR	Y	Y	0.02	0.02	0.040	I, M	P
Procyimidone	Table grapes	12	0		n	n	5	0.02*	0.183	N	
Procyimidone	Peppers	6	0		n	n	2	0.02*	0.191	M, N	
Tebuconazole	Table grapes	2	0		Y	Y	2	2	0.458	M, N	L
Thiacloprid	Peppers	1	0		Y	Y	1	1	0.476		L
Triazophos	Peppers	2	2	IN, TH	n	n	0.01	0.01*	0.016	I	



- (1) The Threshold Residue Level (TRL) is the theoretically calculated residue level that represents the 100% of the ARfD exhaustion. This value is calculated singularly for each pesticide/crop combination and for each diet.
- (2) The maximum exposure is calculated for two scenarios when the residue definition for the concerned substance/group of substances includes substances with different toxicological profiles.
- (3) AU = Australia, BG = Bulgaria, CY = Cyprus, DO = Dominican Republic, EC = Ecuador, ES = Spain, GR = Greece, IN = India, IT = Italy, MA = Morocco MK = Macedonia, MT= Malta, NL = The Netherlands, TH = Thailand, TR = Turkey, SR = Suriname, PE = Peru
- (4) An asterisk following an MRL figure indicates an MRL set at the Limit of Quantification (LOQ).
- (5) S = Member State(s) to analyse/report single dithiocarbamate residues; N = Member State(s) to check compliance with new MRL; M = Member State(s) to check for possible misuses on domestic products; I = Member State(s) to check the MRL compliance of imported food; D = Member State(s) to check the MRL compliance of imported food against the default MRL (0,01)\* mg/kg).
- (6) E = To establish separate MRLs; L = To lower the current MRL; P = To set peeling/processing factor.

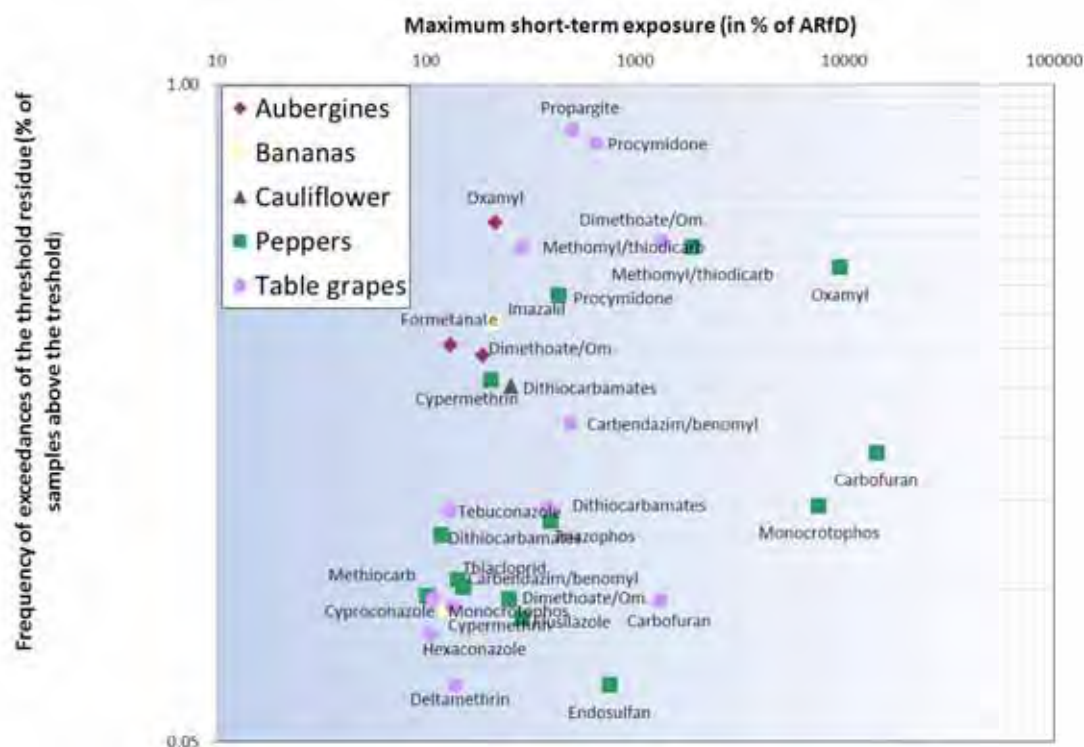
The total number of samples of the 2009 coordinated programme amounted to 10,553; of those, the samples exceeding the TRL (tier 1/2 calculation) were 77. 50 of them were also found exceeding the MRL.

The commodities with the highest number of samples of concern (31 samples) were table grapes and peppers (Figure 5-4).



**Figure 5-4:** Number of samples per food commodity for which a potential acute risk could not be excluded.

In Figure 5-5 the results of the short-term consumer risk assessment are summarised, each spot representing a sample which exceeded the threshold residue level (TRL). On the x-axis, the maximum IESTI calculated for the most critical diet on the basis of the highest residue measured (expressed in % of the ARfD) is displayed, whereas on the y-axis the frequency of samples exceeding the threshold residue (% of samples above the threshold) is depicted (see section 5.1.3 for the explanation of the frequency classification). For better readability a logarithmic scale was selected.



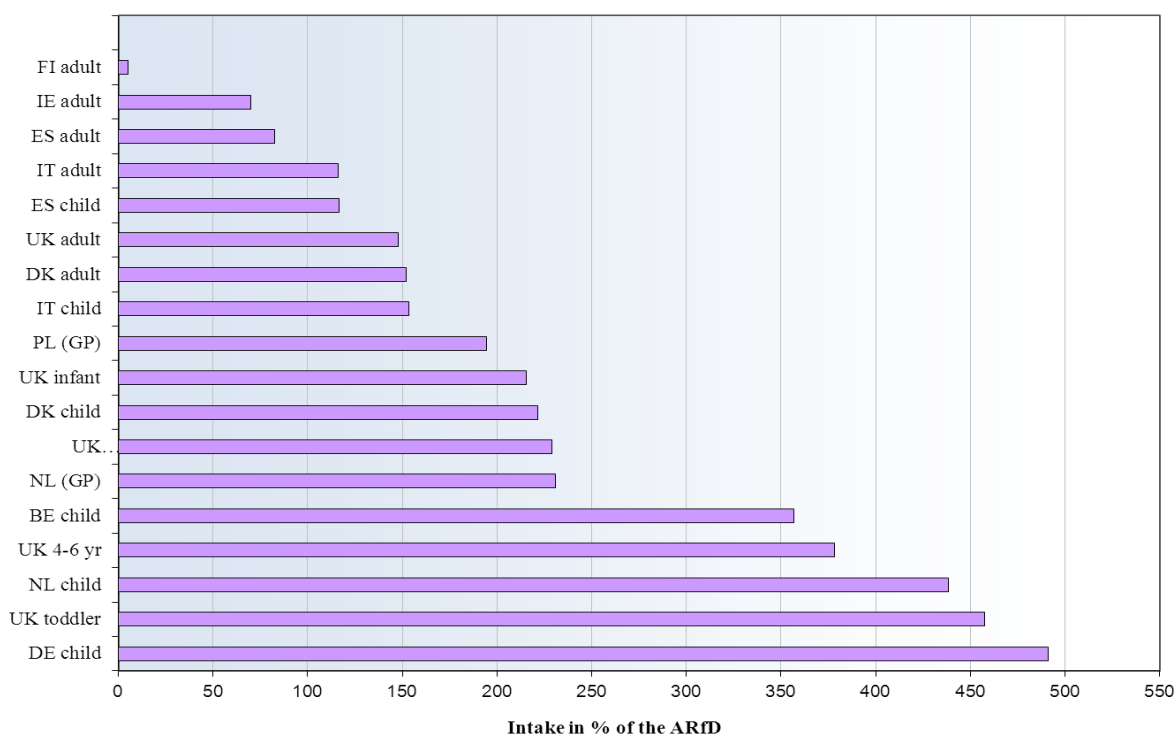
**Figure 5-5:** Summary of the results of the short-term consumer risk assessment for the pesticide/crop combinations for which a potential consumer risk could not be excluded. Frequency of the samples exceeding the threshold residue level (% of sample above the threshold) compared to maximum short-term exposure (expressed as % of the ARfD).

### 5.2.1.1. Carbendazim/benomyl

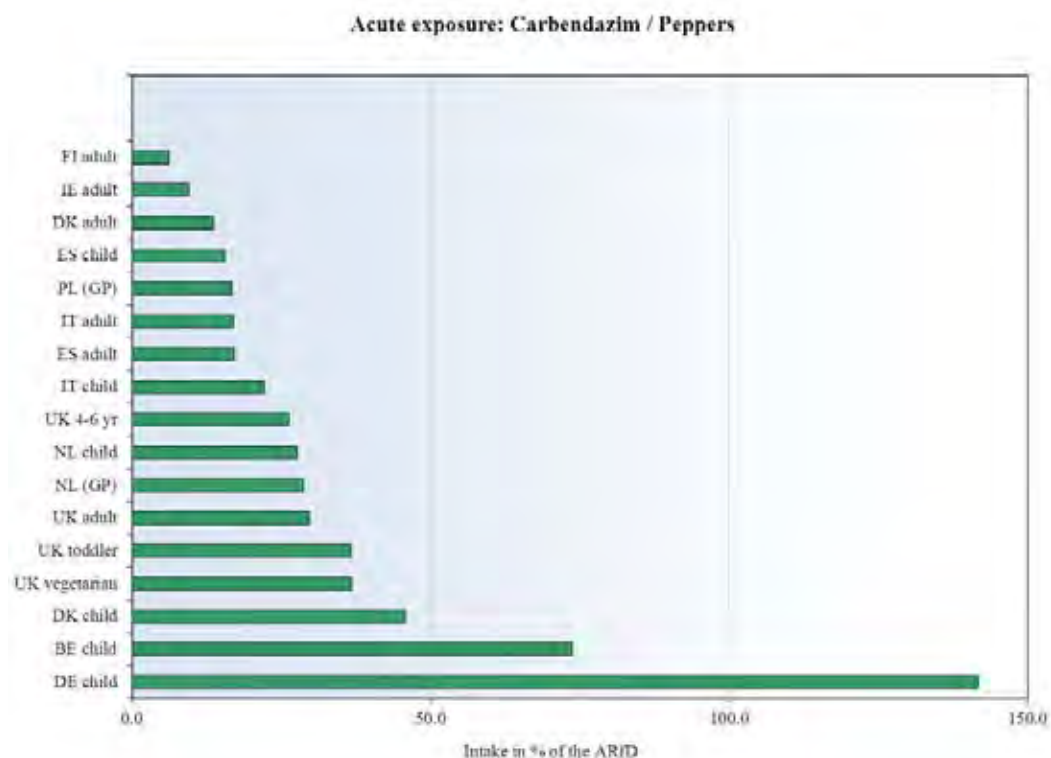
Carbendazim residues posing potential acute risks were found in only 2 samples of table grapes and 1 sample of peppers out of the 939 (0.2%) and 961 (0.1%) samples taken, respectively. The highest calculated IESTI accounted for about 491% and 142% of the carbendazim ARfD, respectively. In the short-term risk assessment, the ARfD set for carbendazim (0.02 mg/kg bw) was used (Figure 5-6 and Figure 5-7).

The exceedance of the threshold residue levels by these samples represents a seldom event.

Acute exposure: Carbendazim / Table grapes



**Figure 5-6:** Acute exposure of the European population to carbendazim residues in table grapes, expressed as percent of the ARfD set for carbendazim.



**Figure 5-7:** Acute exposure of the European population to carbendazim residues in peppers, expressed as percent of the ARfD set for carbendazim.

It is noted that the two table grapes samples for which a potential short-term risk could not be excluded (HRM 1.5 mg/kg) were also found exceeding the EU MRL applicable in 2009 (0.3 mg/kg) and that these samples originated from outside Europe (Turkey and Peru). Since 2009, the MRL applicable to table grapes has not changed.

The only sample of concern of pepper (HRM 0.45 mg/kg) was also found exceeding the MRL (0.1 mg/kg) and originated from outside Europe (Suriname).

The use of benomyl has not been authorised in Europe since 2002. Since January 2007, in Europe the use of carbendazim has been restricted for the following crops: cereals, rapeseed, sugar beets and maize. The presence of carbendazim residues may also result from the use of thiophanate-methyl.

EFSA recommends that Member States continue monitoring carbendazim/benomyl residues under the coordinated EU programme and to check MRL compliance of imported food.

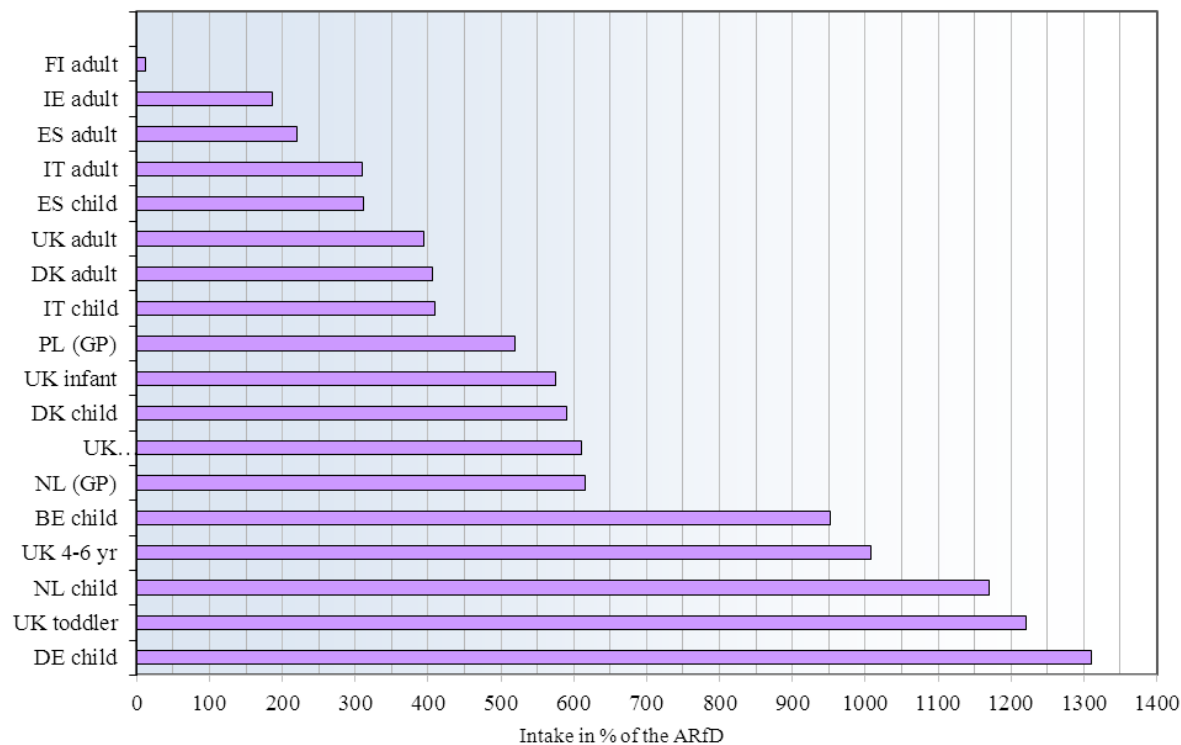
#### 5.2.1.2. Carbofuran

In 2009, a potential acute risk could not be excluded for one sample of table grapes and two samples of peppers; the highest calculated IESTI accounted for about 1,300% and 14,000% of the carbofuran ARfD, respectively (Figure 5-8 and Figure 5-9).

For these two crops, a total of 1,053 and 1,075 samples were taken, respectively. As a result, for the two crop of concern the exceedance of the ARfD was considered as exceptional and seldom event, respectively.

In Europe, the authorisations for plant protection products containing carbofuran had to be withdrawn by 13 December 2007. Any period of grace granted by Member States had to expire on 13 December 2008 at the latest.

**Acute exposure: Carbofuran / Table grapes**

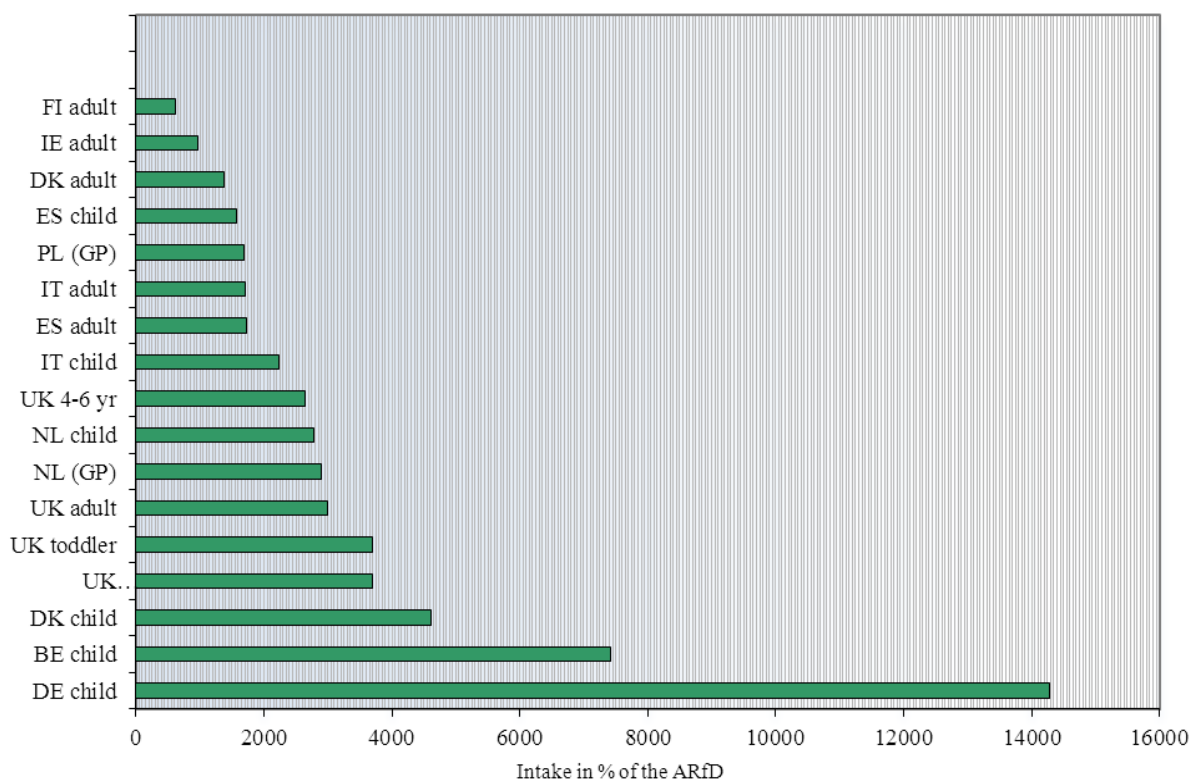


**Figure 5-8:** Acute exposure of the European population to carbofuran residues in table grapes, expressed as percentage of the ARfD.

It is noted that the current MRL for carbofuran for these crops of concern is set at the LOQ of 0.02 mg/kg and that the MRL is higher than the TRL of 0.002 mg/kg. Therefore, it is recommended to consider lowering the current LOQ.

The only table grape sample of concern (HRM 0.03 mg/kg) was also found exceeding the MRL (0.02 mg/kg) and originated from outside the EU (Brazil). Also the two pepper samples of concern (Greece and Thailand) were found exceeding the MRL. EFSA recommends continuing to monitor carbofuran residues in the future monitoring programmes and checking MRL compliance of imported food and food originated from the EU. In addition, EFSA recommends checking for possible misuses of carbofuran on domestic products.

Acute exposure: Carbofuran / Peppers



**Figure 5-9:** Acute exposure of the European population to carbofuran residues in peppers, expressed as percent of the ARfD.

5.2.1.3. Cypermethrin

The use of cypermethrin, alpha-cypermethrin and zeta-cypermethrin is authorised in Europe. No authorisations are granted for beta-cypermethrin.

The residue definition for enforcement is set to the sum of mixture of constituent cypermethrin isomers. Therefore, the identity of the measured residue in food samples is not determined. As a result, the short-term risk assessment was initially performed by comparing the estimated exposure to the ARfD of alpha-cypermethrin (0.04 mg/kg bw), the isomer with the lowest acute toxicological reference value.

For cypermethrin, a theoretical consumer risk was identified for one sample of table grapes (HRM 0.81 mg/kg) and three pepper samples (1.30 mg/kg) if the intake is compared to the lowest ARfD (0.04 mg/kg bw) established for the cypermethrin isomers (alpha-cypermethrin). For these two commodities, the maximum exposure was calculated to be 133% and 205% of the ARfD<sup>80</sup>, respectively (Figure 5-10 and Figure 5-11). The total number of samples analysed for these two pesticide/crop combinations amounted to 1,802 and 1,155, respectively. According to the 2009 data

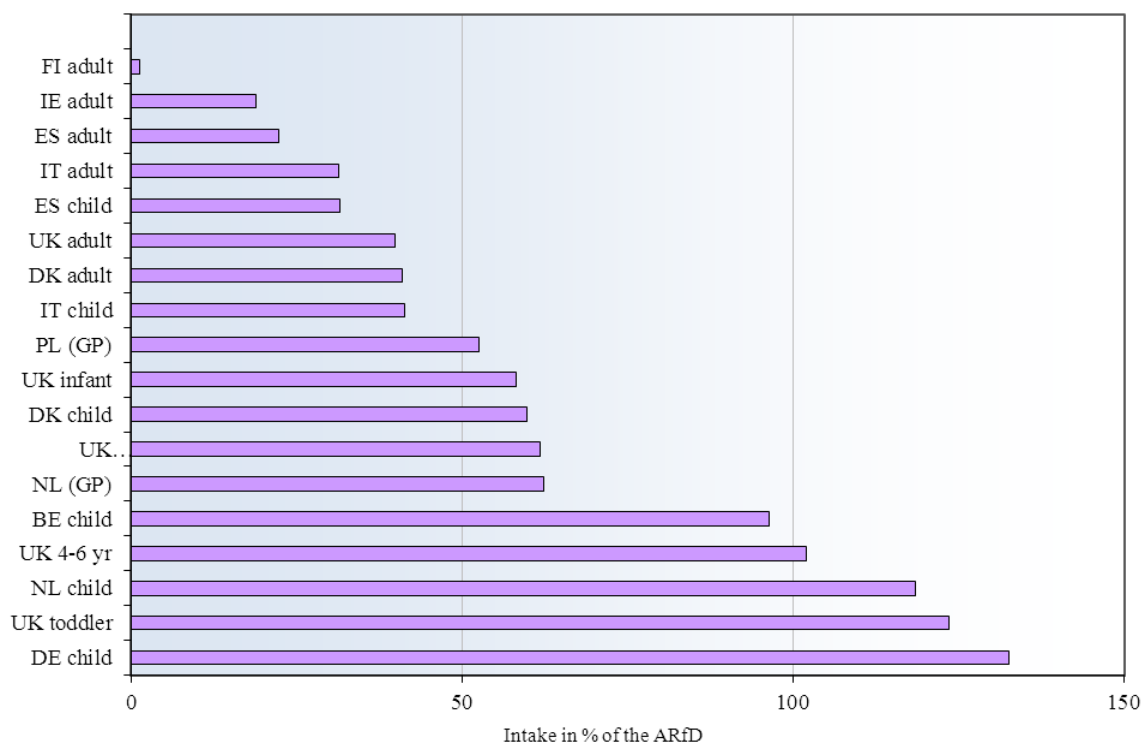
<sup>80</sup> If the estimated IESTI for the samples of concern is compared with the highest ARfD (0.125 mg/kg bw) established for the cypermethrin isomers (zeta-cypermethrin) no samples of concern are identified. In this case, the calculated exposure is well below the ARfD (42% for table grapes and 65% for peppers) and therefore a consumer risk is to be excluded (Figure 5-12 and Figure 5-13).

analysis, the exceedance of the threshold residue levels in table grapes and pepper can be considered as exceptional/seldom events.

The four samples of concern were also found non-compliant with the EU MRL of 0.5 mg/kg. The table grapes of concern originated from Cyprus and the three pepper samples of concern were from Thailand and the Dominican Republic.

On the basis of the above findings, EFSA recommends continued monitoring of cypermethrin residues in peppers and table grapes. Furthermore, Member States are recommended to check possible misuses of cypermethrin on domestic products and MRL compliance on imported food. Finally, EFSA also recommends to consider to set specific MRLs for alpha-cypermethrin to reduce uncertainties in the risk assessment.

Acute exposure: Cypermethrin / Table grapes



**Figure 5-10:** Acute exposure of the European population to cypermethrin residues in table grapes, expressed as percent of the ARfD set for alpha-cypermethrin.



Acute exposure: Cypermethrin / Peppers

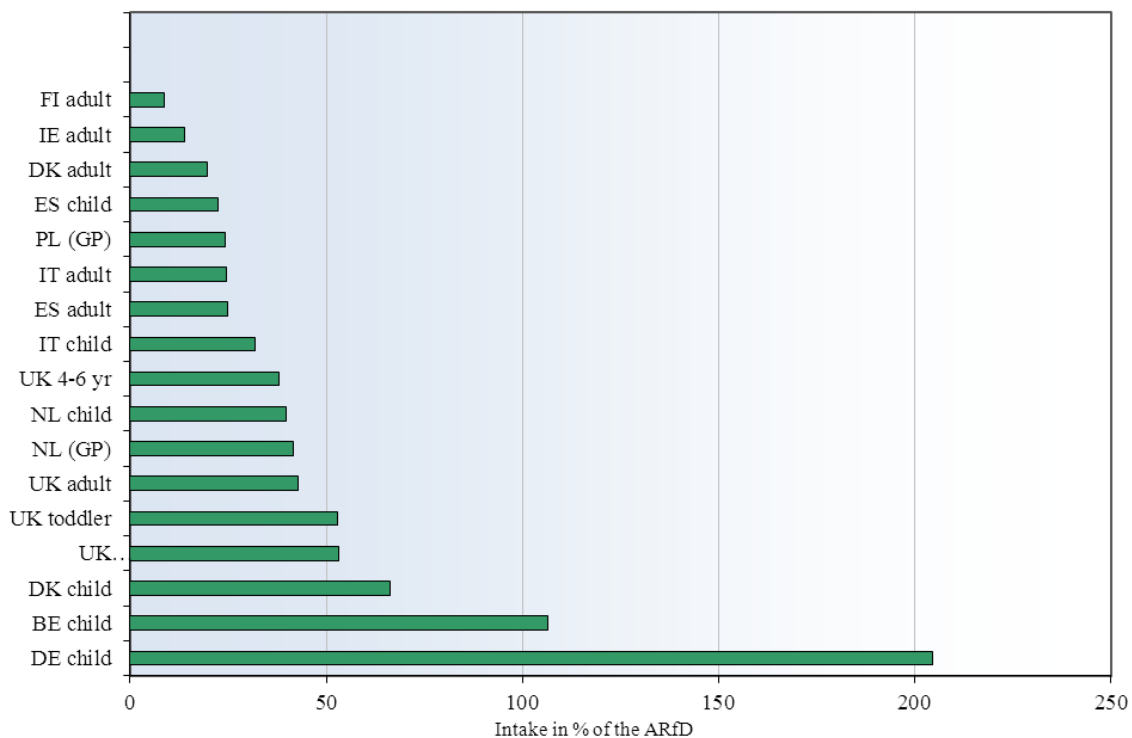


Figure 5-11: Acute exposure of the European population to cypermethrin residues in peppers, expressed as percent of the ARfD set for alpha-cypermethrin.

Acute exposure: Zeta-Cypermethrin / Table grapes

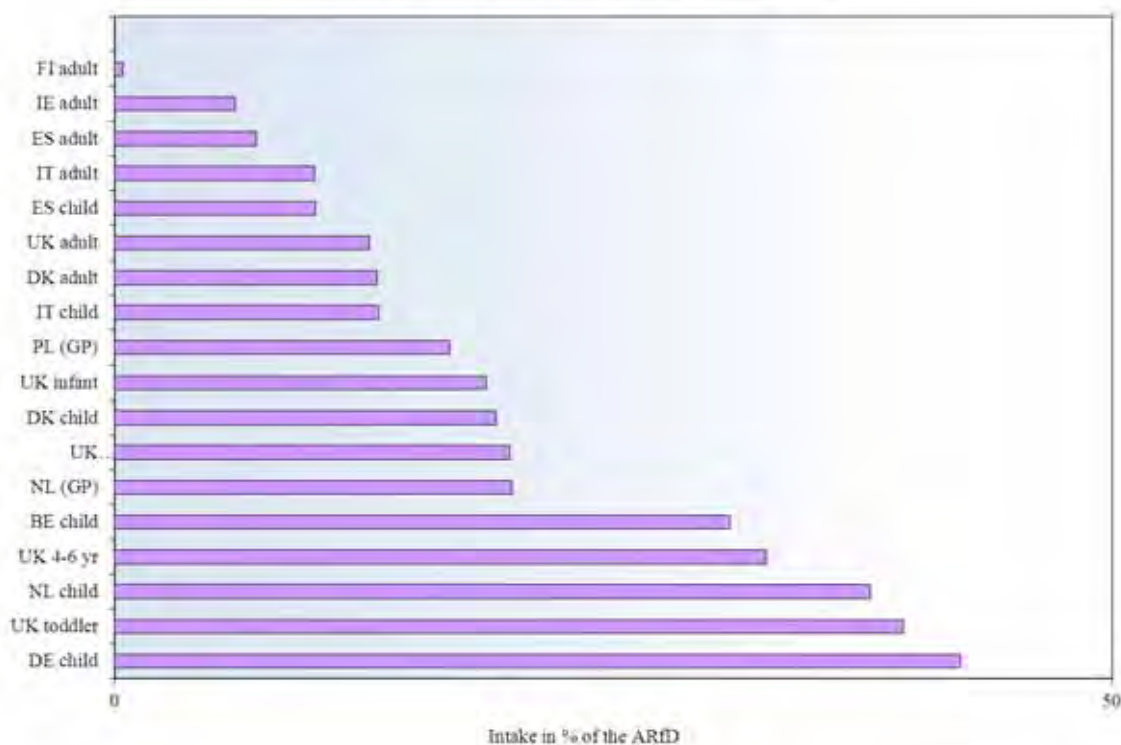
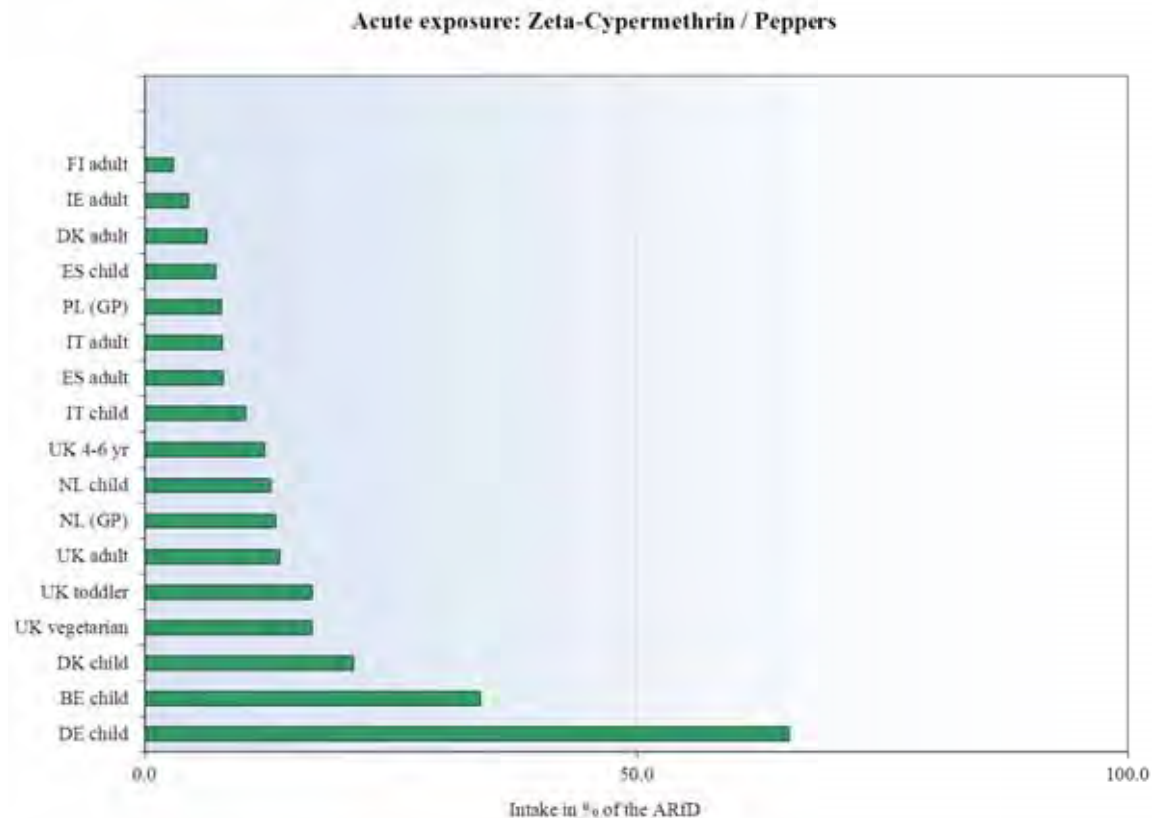


Figure 5-12: Acute exposure of the European population to cypermethrin residues in table grapes, expressed as percent of the ARfD set for zeta-cypermethrin.



**Figure 5-13:** Acute exposure of the European population to cypermethrin residues in peppers, expressed as percent of the ARfD set for zeta-cypermethrin.

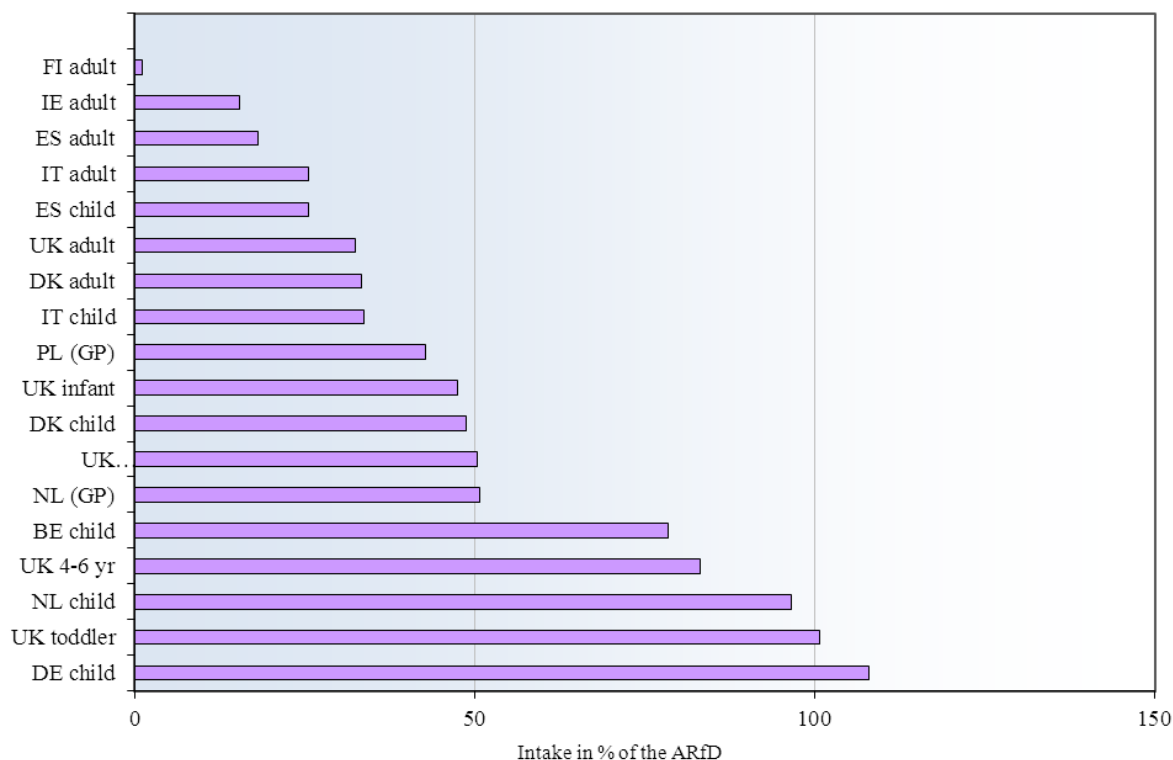
#### 5.2.1.4. Cyproconazole

The use of cyproconazole is authorised in Europe. In 2009, only one sample of table grapes of concern was identified (HRM 0.33 mg/kg) out of the 1,047 grape samples analysed (0.096%); the estimated IESTI for this sample (Figure 5-14) slightly exceeded the ARfD (108%).

This sample was also found exceeding the EU MRL set at 0.2 mg/kg and originated from Europe (Malta). The frequency of table grape samples exceeding the toxicological threshold is considered an exceptional event.

On the basis of the above findings, EFSA recommends controlling possible misuses of cyproconazole at national level and continuing to monitor residues of cyproconazole in table grapes.

Acute exposure: Cyproconazole/ Table grapes



**Figure 5-14:** Acute exposure of the European population to cyproconazole residues in table grapes, expressed as percent of the ARfD set for cyproconazole.

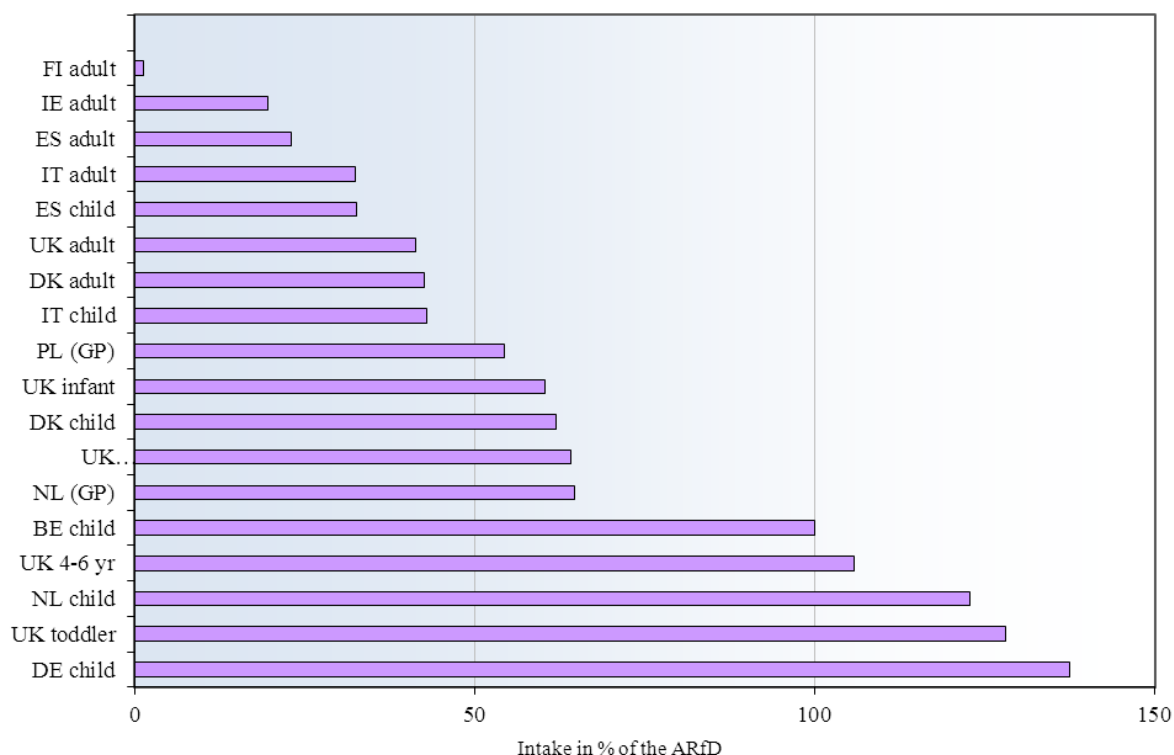
5.2.1.5. Deltamethrin

According to the results of the short-term exposure calculation, a potential acute consumer risk could not be excluded for one sample of table grapes (HRM 0.21 mg/kg) out of the 1,552 samples taken (0.06%). The highest IESTI calculated for table grapes amounted to 138% of the ARfD (Figure 5-15). The threshold residue level exceedance in this case was classified as exceptional.

The use of plant protection products containing deltamethrin is authorised in Europe. The table grape sample of concern (0.21 mg/kg) was slightly exceeding the EU MRL applicable in 2009 (0.2 mg/kg). This sample originated from Europe (Greece).

It is noted that the deltamethrin MRL set for table grapes has not been changed since 2009. As it is at a level higher than the toxicological threshold limit, EFSA recommends lowering this legal limit.

Furthermore, EFSA recommends to continue monitoring the residues of deltamethrin and checking the possible misuse at national level of products containing this substance.

**Acute exposure: Deltamethrin / Table grapes**


**Figure 5-15:** Acute exposure of the European population to deltamethrin residues in table grapes, expressed as percent of the ARfD set for deltamethrin.

#### 5.2.1.6. Dimethoate/omethoate

The use of dimethoate is authorised in Europe, while the use of omethoate is no longer permitted since 2003. Nevertheless, residues of omethoate in food commodities may occur, as omethoate is a plant metabolite of dimethoate. The analytical results are reported according to the enforcement residue definition: sum of dimethoate and omethoate, expressed as dimethoate. However, these substances have distinct toxicological profiles: the ARfD value derived for dimethoate being five times higher than the ARfD for omethoate (0.01 mg/kg bw and 0.002 mg/kg body weight, respectively)<sup>81</sup>.

Following a conservative approach an *indicative* exposure assessment was performed, assuming that the measured residues only contain the more toxic compound omethoate<sup>82</sup>. According to these calculations, a potential acute risk could not be excluded for several samples: table grapes (five samples), peppers (one sample), aubergines (two samples) and cauliflower (two samples). The samples of concern originated from within and outside Europe.

Taking into account the number of samples analysed, the potential acute risks identified for aubergines, cauliflower and table grapes considered as seldom events and for peppers as exceptional.

<sup>81</sup> As the compounds included in the residue definition for dimethoate/omethoate have additional effects, but have different toxicological potencies, a toxic equivalence factor based approach shall be used for risk assessment. For the acute risk assessment a factor of 6 shall be used to account for the contribution of omethoate.

<sup>82</sup> Please note that the HRM expressed as dimethoate was not corrected considering the slight different molecular weights of dimethoate/omethoate (correction factor close to 1).

The calculated IESTI for these four crops of concern ranged from 187% (aubergines) to 1,342% (table grapes) of the ARfD set for omethoate.

Also under the assumption that the reported residues comprised only the less toxic molecule dimethoate, a theoretical acute risk could not be excluded for table grapes (five samples) and cauliflower (two samples). In this case, the IESTI calculations accounted for 268% (table grapes) to 122% (cauliflower) of the ARfD established for dimethoate (Figure 5-16 to Figure 5-19).

Except for cauliflower, it is noted that the highest residues measured for the crops mentioned exceeded the existing MRLs applicable in 2009, which were in all cases established at the LOQ of 0.02 mg/kg. For cauliflower, the two samples of concern did not exceed the EU MRL set at 0.2 mg/kg. However, in the meantime the cauliflower MRL has been lowered to the LOQ of 0.02 mg/kg.

With the implementation of a new monitoring data reporting system<sup>83</sup>, the individual residue concentrations of the dimethoate and omethoate were reported for three commodities of concern (peppers, aubergines and cauliflower). In these cases, the residue levels were recalculated in line with the residue definition set for acute risk assessment: [Dimethoate] + 6\*[Omethoate], expressed as Dimethoate. The recalculated residue levels were then compared to the ARfD set for dimethoate. For peppers, aubergines and cauliflower, the more accurate exposure assessment shows that a potential risk could not be excluded for the samples of concern; in these cases, the calculated exposures amounts to 294%, 205% and 608% of the dimethoate ARfD, respectively. For table grapes, the refined exposure assessments could not be performed as the measured residues of dimethoate/omethoate were only reported as sum of the substances.

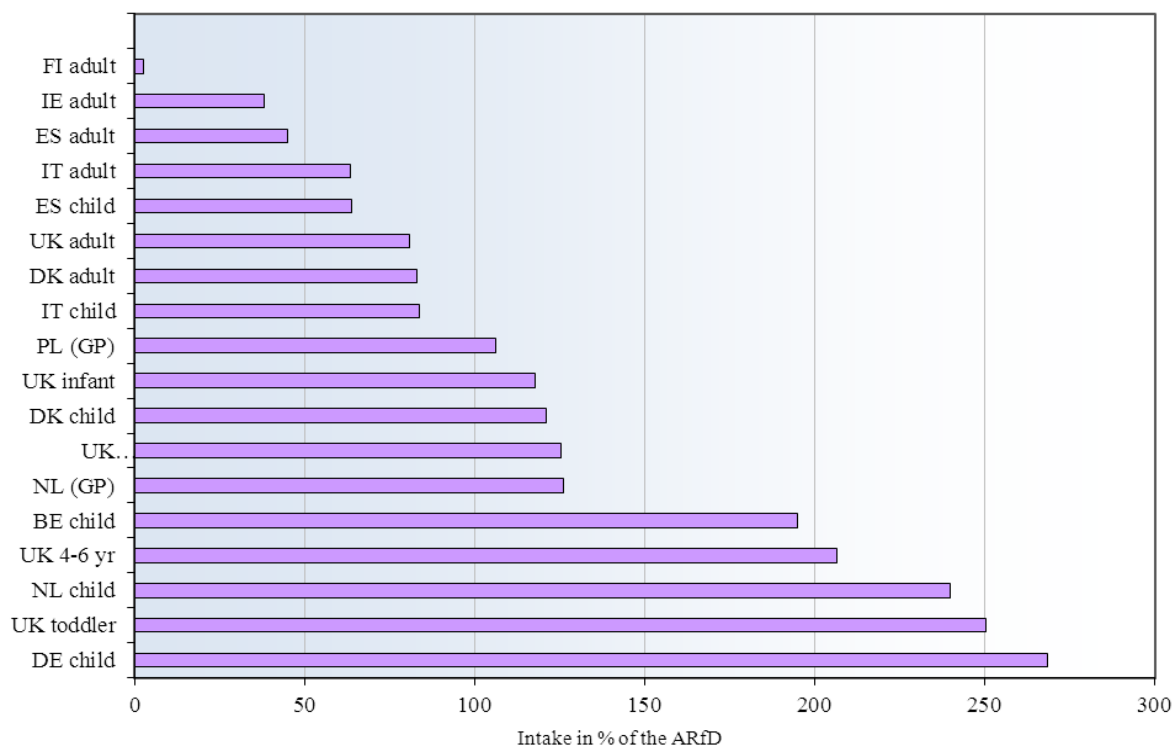
On the basis of the above findings, EFSA recommends the following:

- Amending the residue definition, taking into account the conclusions of the peer review of dimethoate performed in the framework of Directive 91/414/EEC (EFSA, 2006b) and establishing separate MRLs for dimethoate and omethoate;
- Continuing to monitor residues of dimethoate and omethoate.

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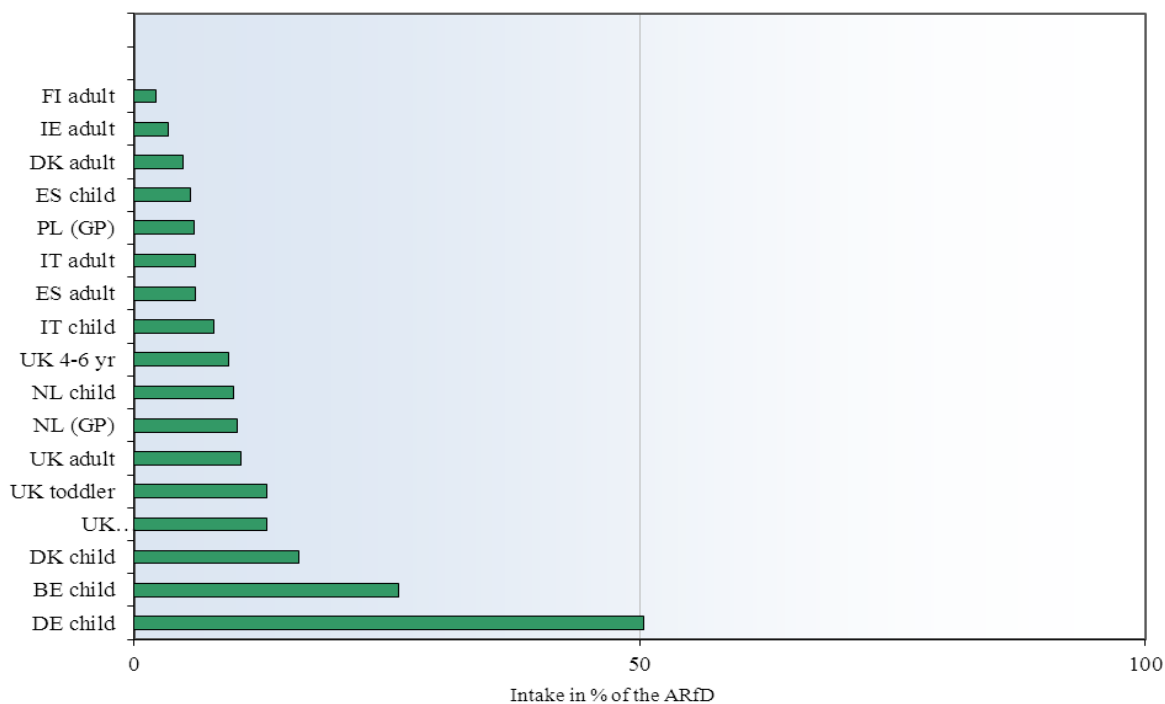
<sup>83</sup> Standard Sample Description in Food and Feed available at: <http://www.efsa.europa.eu/en/supporting/pub/1457.htm>

**Acute exposure: Dimethoate / Table grapes**



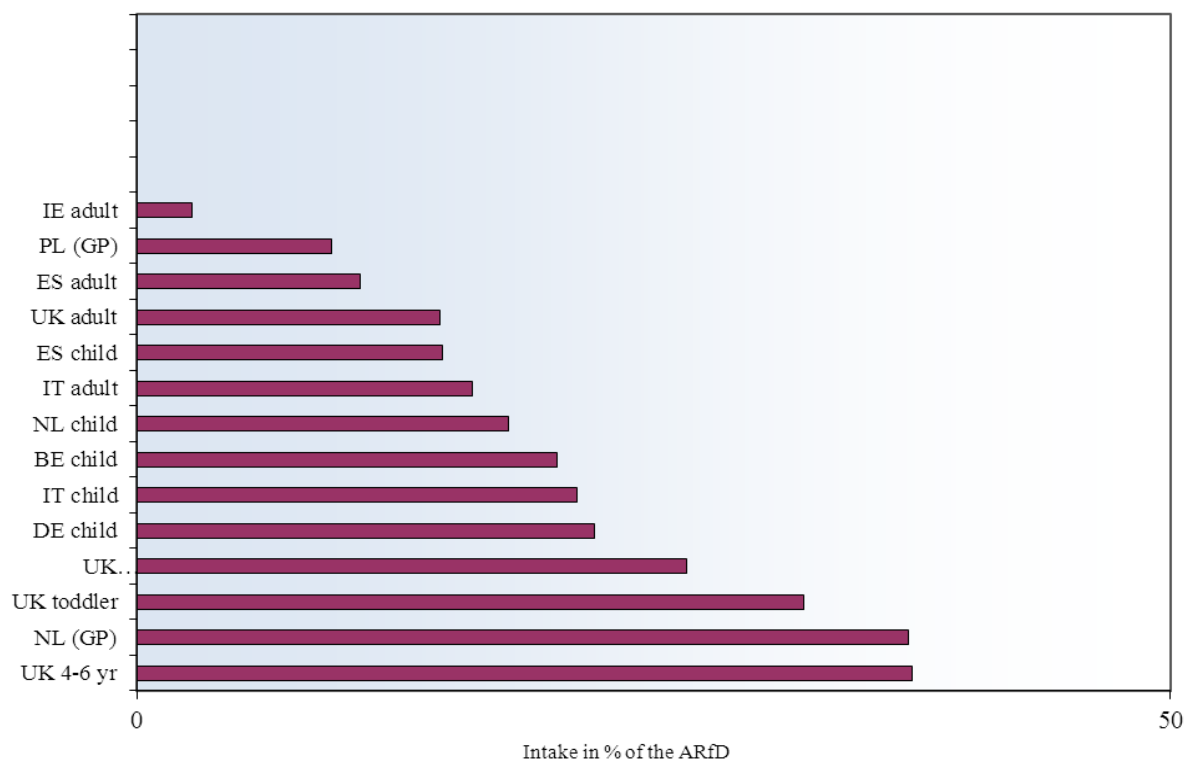
**Figure 5-16:** Acute exposure of the European population to dimethoate/omethoate residues in table grapes, expressed as percent of the ARfD set for dimethoate.

**Acute exposure: Dimethoate / Peppers**



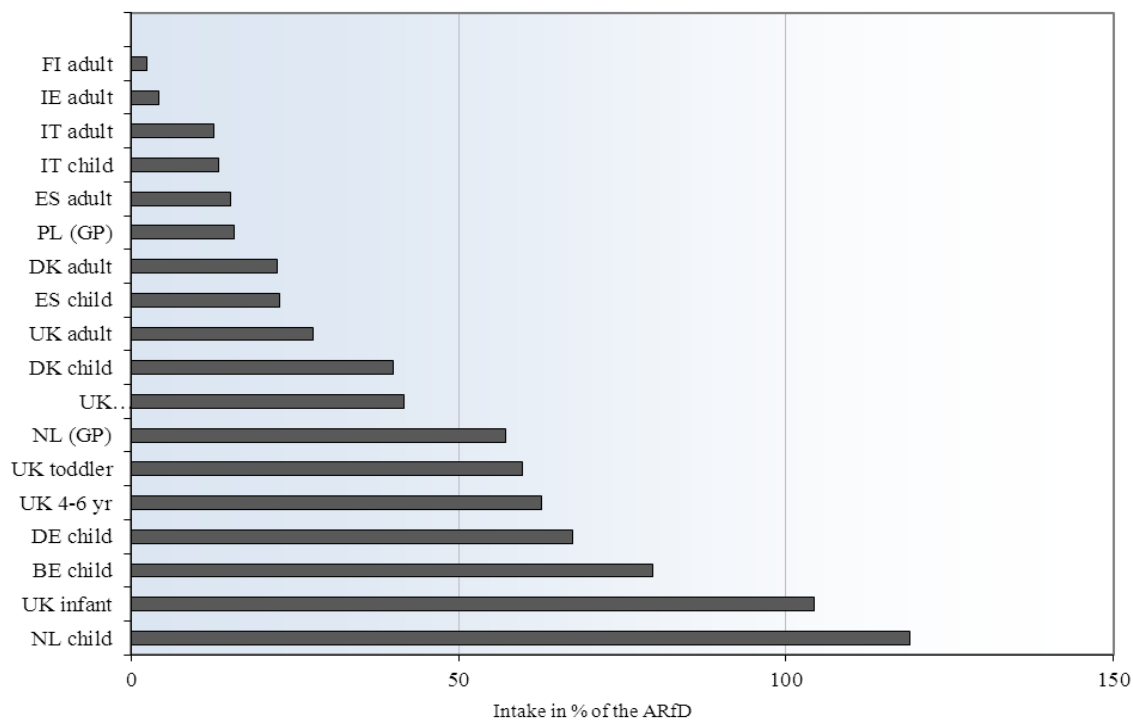
**Figure 5-17:** Acute exposure of the European population to dimethoate/omethoate residues in peppers, expressed as percent of the ARfD set for dimethoate.

**Acute exposure: Dimethoate / Aubergines**



**Figure 5-18:** Acute exposure of the European population to dimethoate/omethoate residues in aubergines, expressed as percent of the ARfD set for dimethoate.

**Acute exposure: Dimethoate / Cauliflower**



**Figure 5-19:** Acute exposure of the European population to dimethoate/omethoate residues in cauliflower, expressed as percent of the ARfD set for dimethoate.

#### 5.2.1.7. Dithiocarbamates

The dithiocarbamates are a group of active substances which have a comparable chemical structure, but have different toxicological properties. The analytical method used to analyse the samples for residues resulting from the use of dithiocarbamates determines the residue concentration of CS<sub>2</sub> without identifying the active substance that has been applied to the crop. For the risk assessment, EFSA used the ARfD value established for ziram, which is the dithiocarbamate compound with the lowest ARfD (0.08 mg/kg bw) and the ARfD for mancozeb (0.6 mg/kg bw), which is the dithiocarbamate which is most commonly used.

Assuming that all CS<sub>2</sub> is due to the use of ziram, the residue values reported as CS<sub>2</sub> were recalculated to ziram by using the molecular weight conversion factor of 2.01. According to IESTI calculations (Figure 5-20 to Figure 5-22), the samples that gave rise to theoretical acute intake concerns were one table grape sample (378% of the ARfD), one pepper sample (118% of the ARfD) and one cauliflower sample (254% of the ARfD).

Assuming that all CS<sub>2</sub> is due to the use of mancozeb, the residue values reported as CS<sub>2</sub> were recalculated to mancozeb by using the molecular weight conversion factor of 1.78. According to IESTI calculations, no samples gave rise to theoretical acute intake concern (the estimated acute exposure due to residues in table grapes, peppers and cauliflower accounted for 18%, 4% and 4% of the ARfD set for mancozeb, respectively). However, a final conclusion regarding the potential health risk related to the observed CS<sub>2</sub> residues cannot be drawn as the sources of the CS<sub>2</sub> residues are unknown and therefore the appropriate toxicological reference value could not be identified.

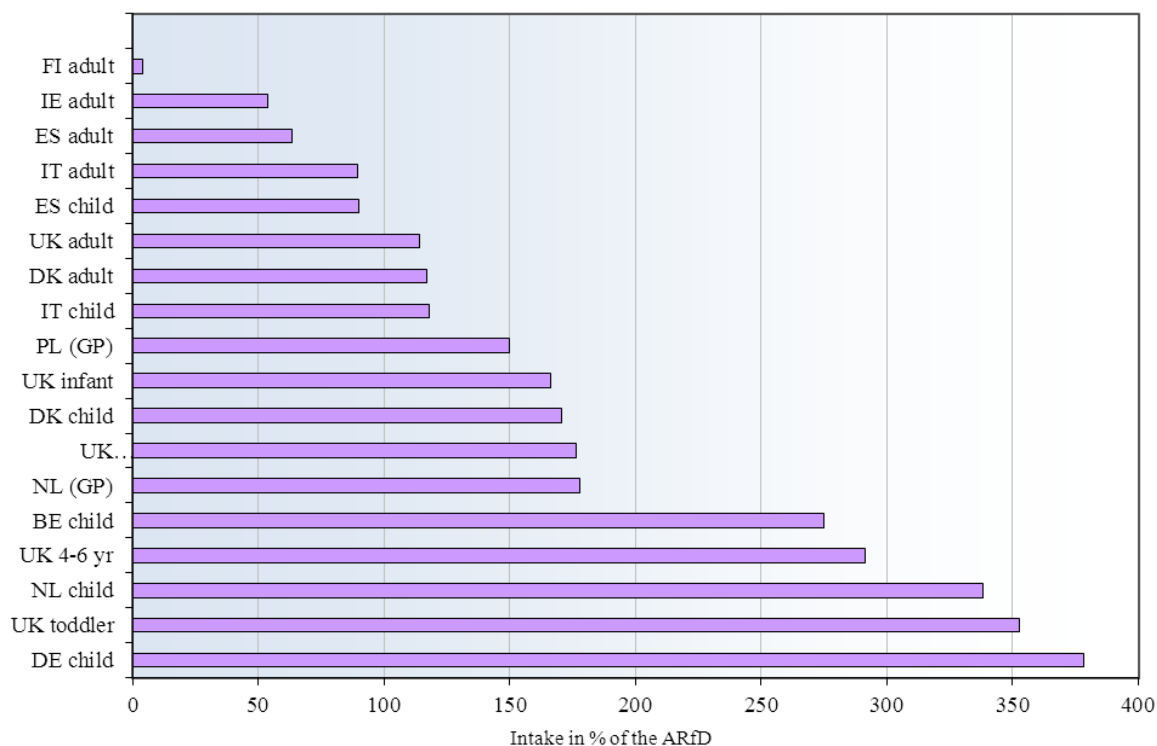
The three exceedances of the toxicological threshold level were classified as seldom events, as the number of samples taken for each of these crops amounted to 690, 783 and 396, respectively.

The HRMs reported for table grapes and peppers amounted to 4.60 mg/kg and 1.5 mg/kg, respectively. It is noted that the EU MRL set for dithiocarbamates in table grapes and peppers (5 mg/kg in both cases) was not exceeded. The threshold MRLs calculated for these two crops on the basis of the ARfD set for ziram are 1.22 and 1.27 mg/kg, respectively.

The only cauliflower sample of concern (3.08 mg/kg, expressed as CS<sub>2</sub>) originated from Europe (Spain) and was also found exceeding the MRL of 1 mg/kg. However, brassica vegetables are known to give false positive results for CS<sub>2</sub> up to 4 mg/kg. Thus, the CS<sub>2</sub> values determined by using the acid digestion method of crops rich in secondary metabolism sulphur compounds have to be interpreted carefully (Perz et al, 2000).

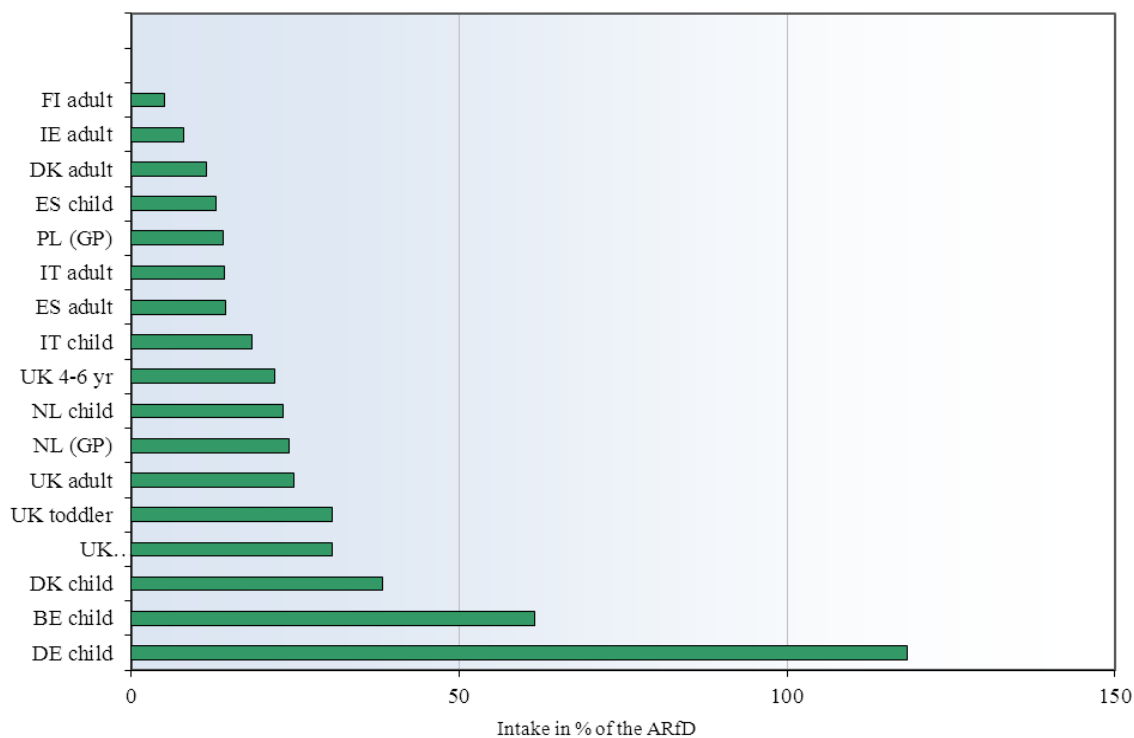


**Acute exposure: Dithiocarbamates / Table grapes**



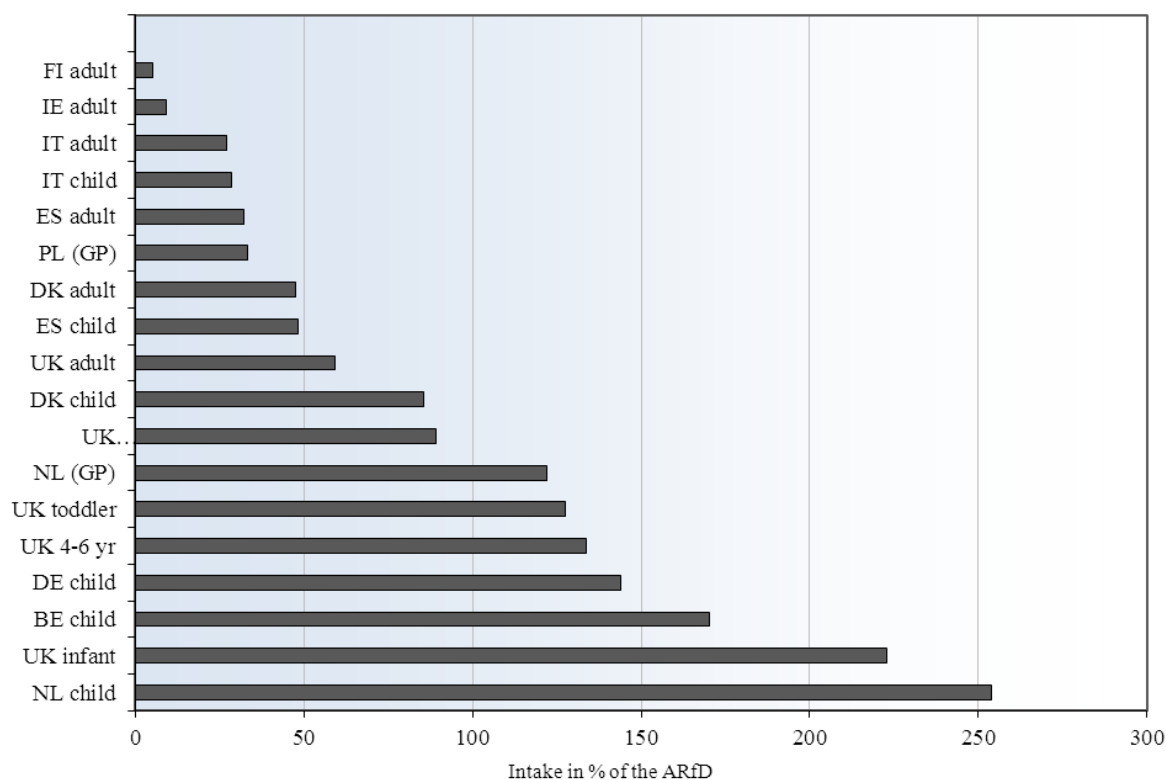
**Figure 5-20:** Acute exposure of the European population to dithiocarbamate residues in table grapes, expressed as percent of the ARfD set for ziram.

**Acute exposure: Dithiocarbamates / Peppers**



**Figure 5-21:** Acute exposure of the European population to dithiocarbamate residues in pepper, expressed as percent of the ARfD set for ziram.

Acute exposure: Dithiocarbamates / Cauliflower



**Figure 5-22:** Acute exposure of the European population to dithiocarbamate residues in cauliflower, expressed as percent of the ARfD set for ziram.

Because of the complex nature of the residue legislation for dithiocarbamates and the lack of specific analytical screening methods for the individual dithiocarbamates, EFSA recommends the following approach to be followed in MRL enforcement. If the CS<sub>2</sub> residue concentration exceeds the threshold residue for a specific commodity calculated for the most critical dithiocarbamate pesticide (i.e. ziram), the Member States should re-analyse the samples with specific methods to ensure that the MRLs established for thiram, ziram or propineb are not exceeded. The residue results should be reported separately for these three pesticides to allow a refined risk assessment.

Member States are also advised to use analytical methods which are not likely to give false positive results for commodities which are rich in secondary metabolism sulphur compounds, like brassica vegetables. It is suggested that the EURLs provide guidance on the use of analytical methods for the dithiocarbamates pesticides which are not likely to give false positive results for commodities which are rich in secondary metabolism sulphur compounds.

5.2.1.8. Endosulfan

According to the results of the short-term exposure calculation, a potential acute consumer risk could not be excluded for one sample of pepper (HRM 2.40 mg/kg) out of the 1,550 samples taken. The threshold residue level exceedances in this crop were classified as exceptional. The highest IESTI calculated for this sample amounted to 756% of the ARfD (Figure 5-23).

The pepper sample of concern exceeded the EU MRL applicable in 2009 (1.0 mg/kg). This sample originated from outside Europe (India). However, it is noted that the current MRL is set at the LOQ of 0.05 mg/kg and it is lower than the toxicological threshold (0.32 mg/kg).

In Europe, all uses of plant protection products containing endosulfan had to be withdrawn by June 2006.

EFSA recommends continuing the monitoring of imported food products with regard to endosulfan residues and checking MRL compliance with the new MRL.

Acute exposure: Endosulfan / Peppers

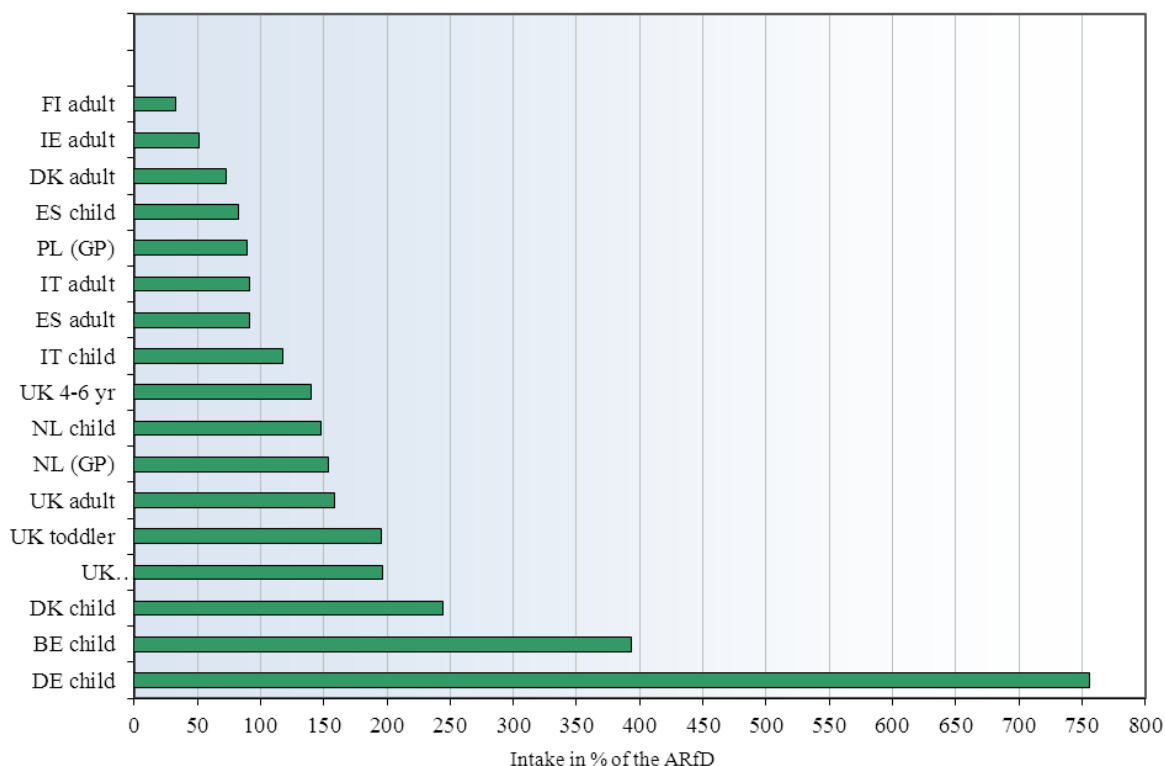


Figure 5-23: Acute exposure of the European population to endosulfan residues in peppers, expressed as percent of the ARfD.

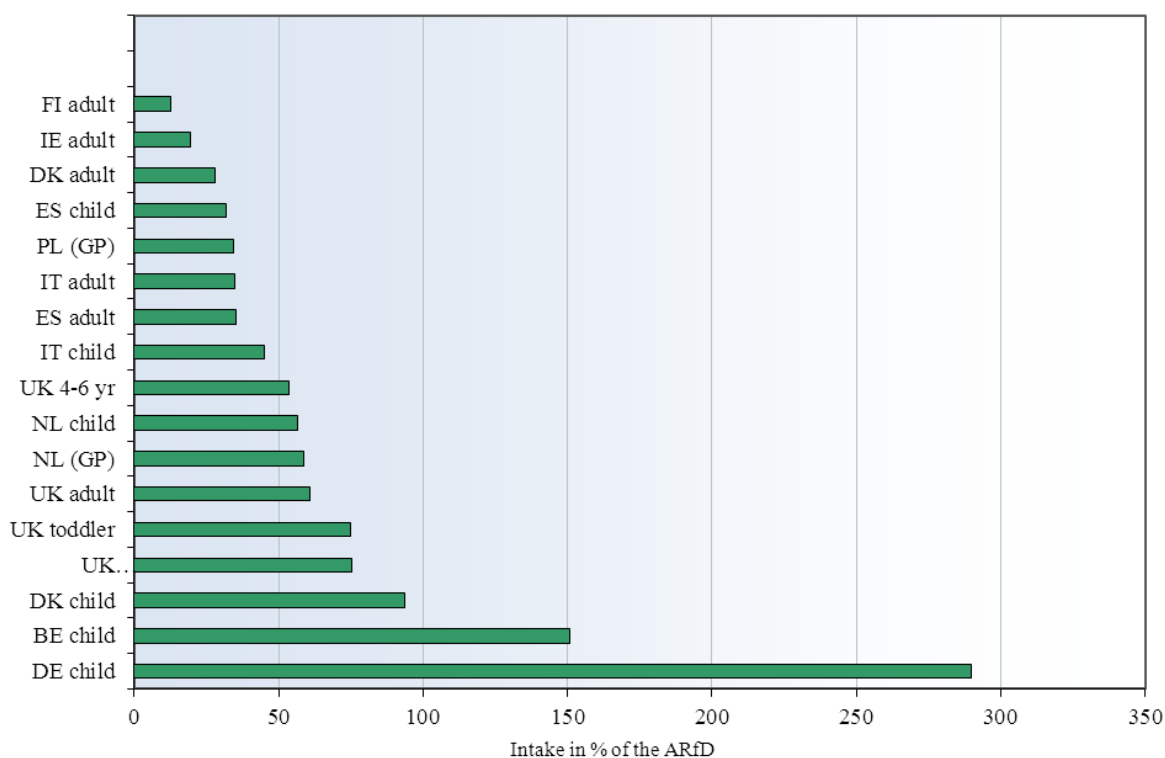
#### 5.2.1.9. Flusilazole

In 2009, an exceedance of the threshold residue level was identified for one pepper sample (HRM 0.23 mg/kg) out of the 1,146 samples analysed. For this sample, which originated from outside Europe (Thailand), a potential consumer risk could not be excluded as the highest IESTI exhausted 290% of the ARfD (Figure 5-24). The occurrence of this event of concern was considered exceptional.

The sample of concern was also found exceeding the MRL set at the LOQ of 0.02 mg/kg.

EFSA recommends that Member States continue to monitor flusilazole residues in pepper samples and check MRL compliance in imported food.

Acute exposure: Flusilazole/ Peppers



**Figure 5-24:** Acute exposure of the European population to flusilazole residues in peppers, expressed as percent of the ARfD.

5.2.1.10. Formetanate

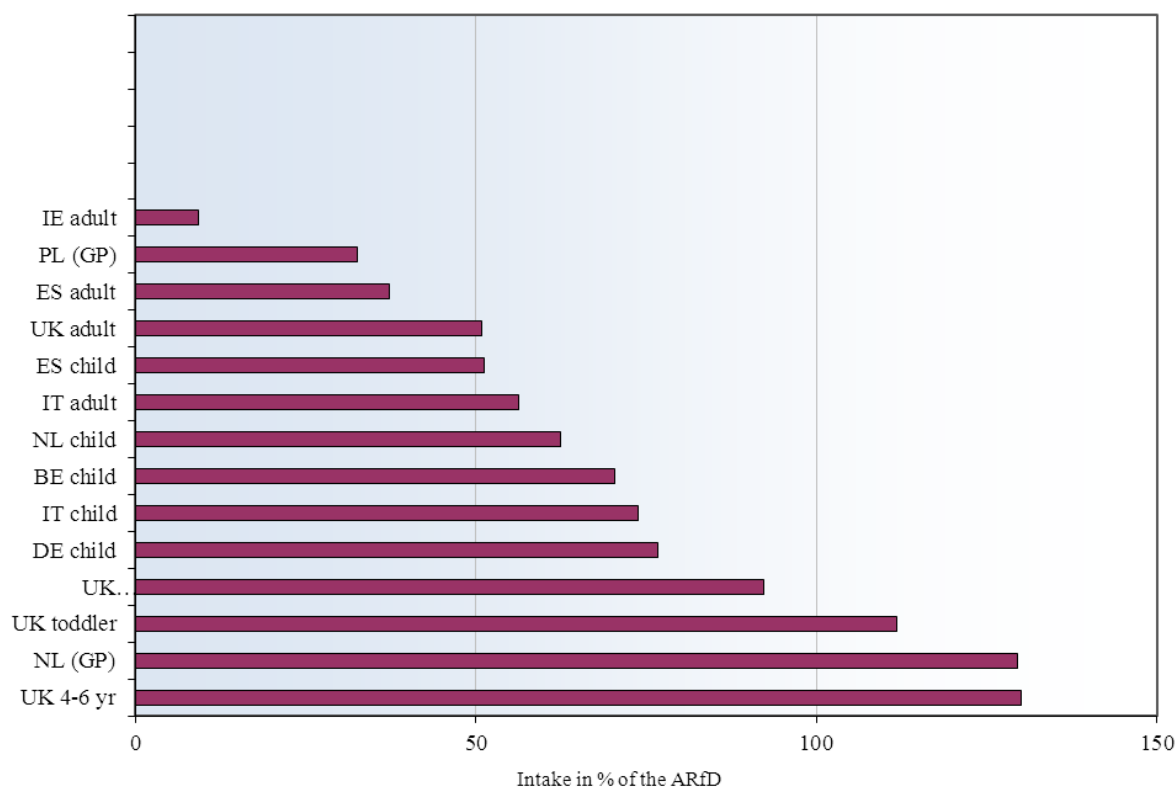
Of the 328 aubergine samples taken in 2009, one sample (0.26 mg/kg) was found exceeding the residue threshold; due to this finding, the event was considered a seldom event.

The highest IESTI calculated for this sample exhausted 130% of the ARfD (Figure 5-25). The IESTI calculated for aubergine could have been refined if a processing factor for cooking had been available.

The sample of concern originated from Europe (Spain) and exceeded also the MRL of 0.2 mg/kg.

EFSA recommends deriving a processing factor for formetanate/cooked vegetables and checking for possible misuses at national level on domestic products.

Acute exposure: Formetanate / Aubergines



**Figure 5-25:** Acute exposure of the European population to formetanate residues in aubergines, expressed as percent of the ARfD.

5.2.1.11. Hexaconazole

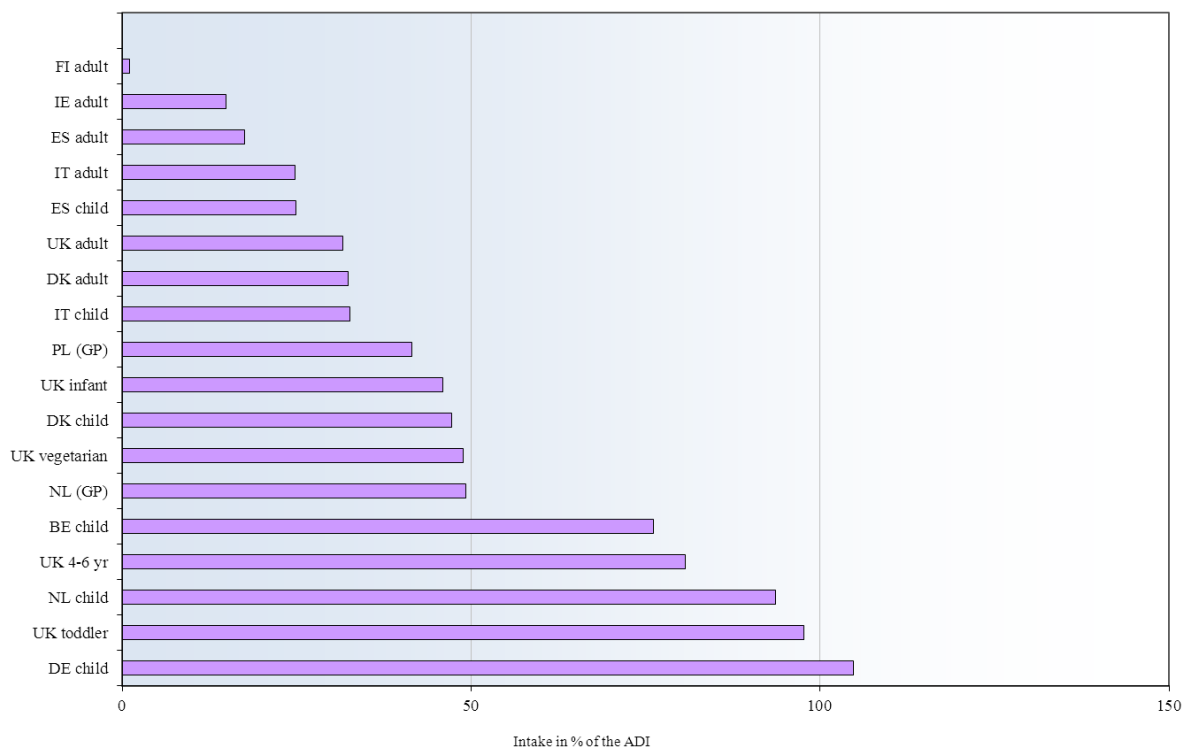
For hexaconazole no ARfD has been set. Therefore, the acute risk assessment was performed using the ADI established for this substance (0.005 mg/kg bw/day). According to the results of the short-term exposure calculation, only one sample of table grapes contained residues at a level that does not allow the exclusion of a potential acute consumer risk. The threshold residue level exceedances in this crop were classified as exceptional. The highest IESTI calculated for table grapes amounted to 105% of the ADI (Figure 5-26). Considering the number of table grape samples taken (1,225), the exceedance of the toxicological threshold is considered an exceptional event.

The grape sample of concern containing 0.08 mg/kg did not exceed the MRL which is set at 0.1 mg/kg. This sample originated from Europe (Italy).

The use of products containing hexaconazole is not authorised in Europe. The use of plant protection products containing this substance on grapes had to be suspended by May 2008. Currently, no national authorisations for products containing hexaconazole are in place.

EFSA recommends that Member States check for possible misuses of hexaconazole at national level and recommends EFSA to set an ARfD. Furthermore, it is recommended to review the existing hexaconazole MRLs.

## Acute exposure: Hexaconazole/ Table grapes



**Figure 5-26:** Acute exposure of the European population to hexaconazole residues in table grapes, expressed as percent of the ADI.

## 5.2.1.12. Imazalil

The highest IESTI calculated for banana samples (taking into account the peeling factor of 0.52)<sup>84</sup> exhausted 209% of the ARfD (Figure 5-27). The threshold residue in the edible part of the crop level (calculated by multiplying the peeling factor to the TRL) was exceeded for four samples; thus, for these samples a potential consumer risk could not be excluded. Considering that a total of 1,185 banana samples were analysed in 2009, the occurrence of these events of concern was considered seldom.

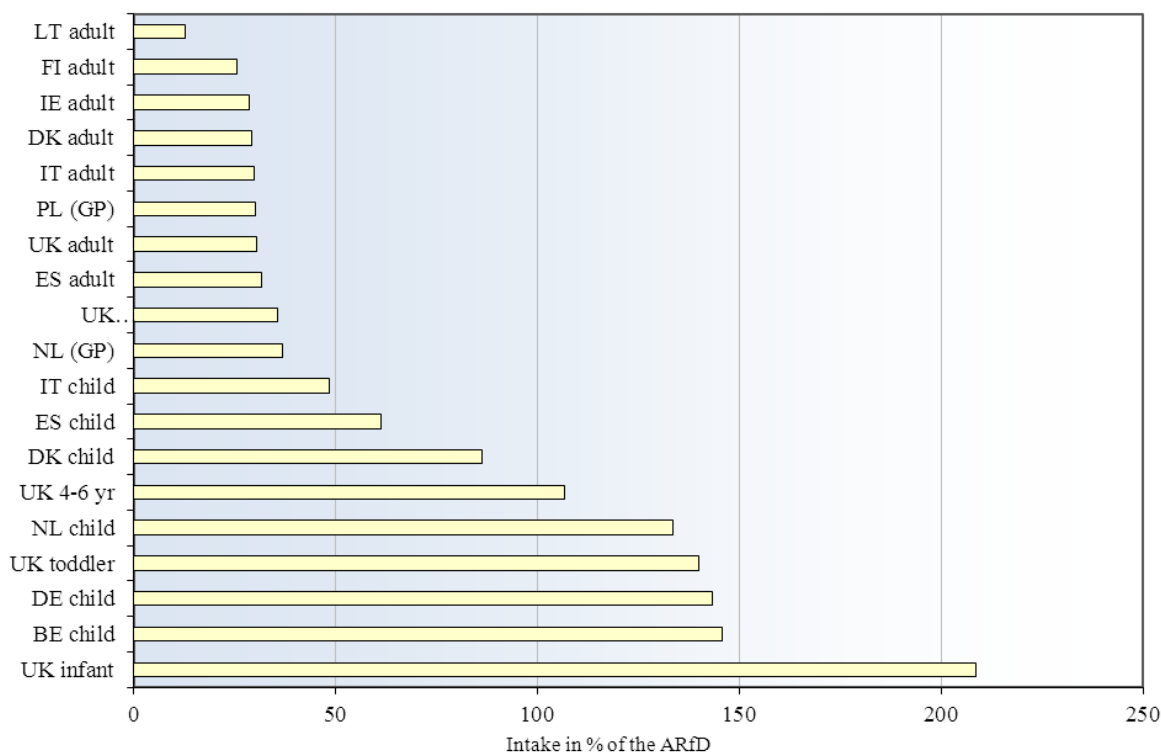
The four samples of concern originated from one unknown country and Suriname; one of those samples also exceeded the MRL of 2 mg/kg. It was noted that three samples were compliant with the MRL (highest residue measured 2.4 mg/kg whole crop), but exceeded the toxicological residue threshold of 0.6 mg/kg whole crop (1.2 mg/kg edible portion).

All the MRLs set for imazalil above the LOQ have not changed since 2009. Since the ARfD for imazalil was established in 2010, the existing MRLs are currently under review by EFSA in the framework of Art.12 of Regulation (EC) No 396/2005.

EFSA recommends the continued monitoring of imazalil residue in food crops and the revising of the existing MRLs, taking into account the recently established ARfD.

<sup>84</sup> The peeling factor has been selected from the database developed by the Federal Institute for Risk Assessment (BfR), which is available at: <http://www.bfr.bund.de/cd/579> (BfR compilation of 2009-07-01).

**Acute exposure: Imazalil / Bananas**



**Figure 5-27:** Acute exposure of the European population to imazalil residues in banana, expressed as percent of the ARfD.

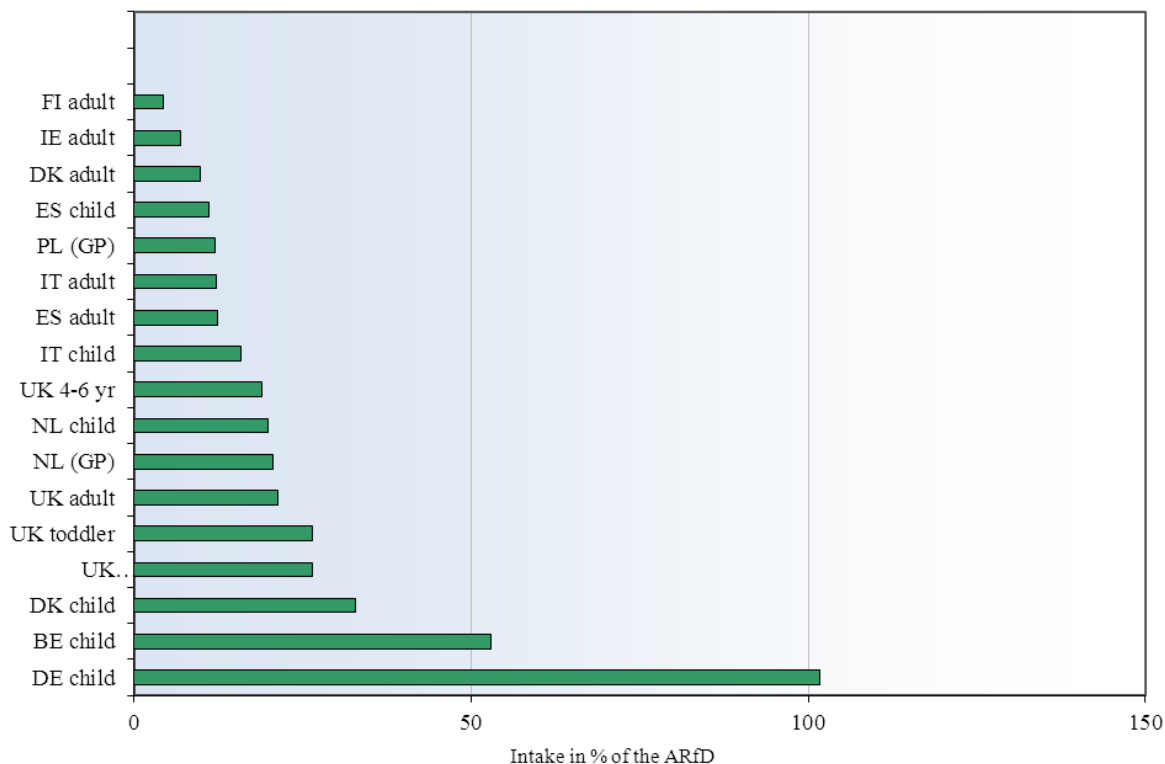
5.2.1.13. Methiocarb

In 2009, 1,034 pepper samples were taken. The only pepper sample for which a potential acute risk could not be excluded can be classified as exceptional event. The highest estimated exposure slightly exceeded the ARfD (102%) (Figure 5-28).

It is noted that the sample of concern (0.21 mg/kg) slightly exceeded the MRL in place in 2009 (0.2 mg/kg). This sample was produced in Europe (Greece).

EFSA recommends continued monitoring of methiocarb residues in pepper in future monitoring programmes and the checking for possible misuses of this substance at national level.

Acute exposure: Methiocarb (aka mercaptodimethur) / Peppers



**Figure 5-28:** Acute exposure of the European population to methiocarb residues in pepper, expressed as percent of the ARfD set for methiocarb.

5.2.1.14. Methomyl/thiodicarb

The use of methomyl in plant protection products was authorised in 2009 in Europe. Authorisations for thiodicarb uses have been withdrawn by 25 November 2007, with a period of grace until 25 November 2008.

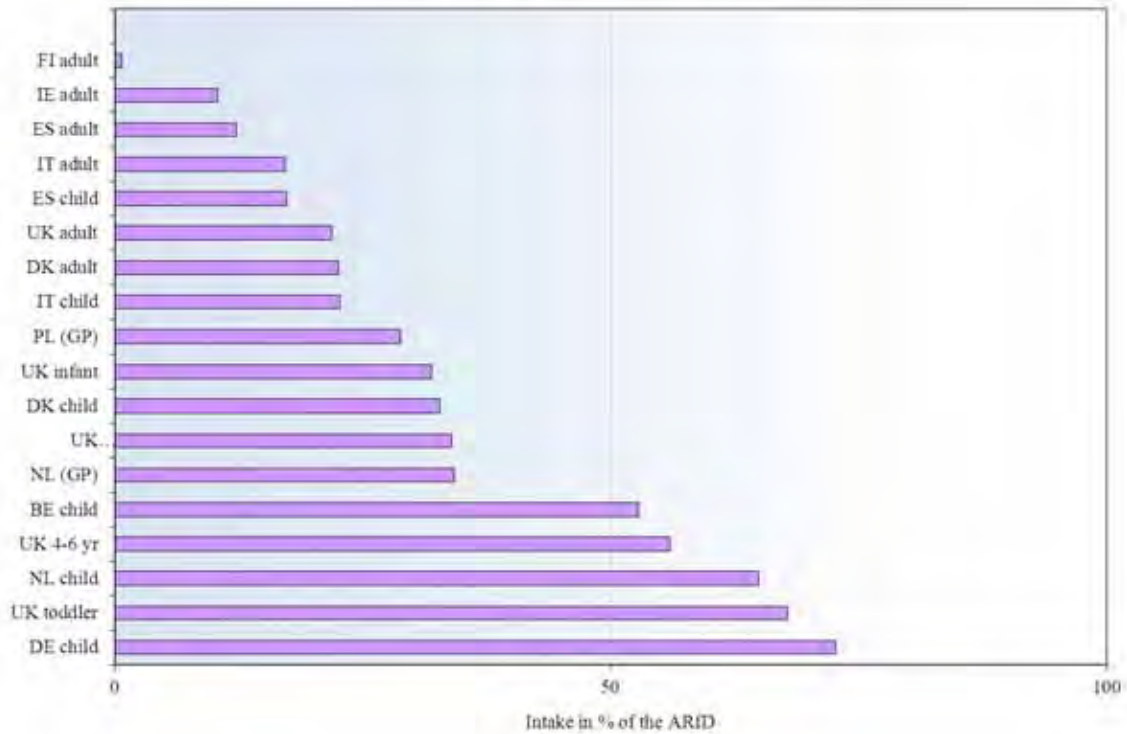
The results of the monitoring were reported as “*Sum of methomyl and thiodicarb, expressed as methomyl*”.

Following a conservative approach, assuming that the measured residues comprise only the more toxic compound methomyl, EFSA performed a risk assessment based on the ARfD for methomyl. According to these calculations, a potential acute risk could not be excluded for table grapes (four samples) and peppers (four samples). The potential acute risks identified for these crops are considered seldom events. The calculated IESTI for these two crops of concern ranged from 291% (table grapes) to 1,889% (peppers) of the ARfD set for methomyl (Figure 5-31 and Figure 5-32)<sup>85</sup>.

<sup>85</sup> Assuming that the measured residues consist only of thiodicarb, the calculated exposure exceeded the ARfD of thiodicarb (0.01 mg/kg bw) for pepper samples only (472%). For table grapes, the IESTI calculated was below the ARfD (72% of the ARfD). The HRM was not corrected as the differences in the molar yield and molecular weights of the two substances was small. These findings are reported in Figure 5-29 and Figure 5-30.

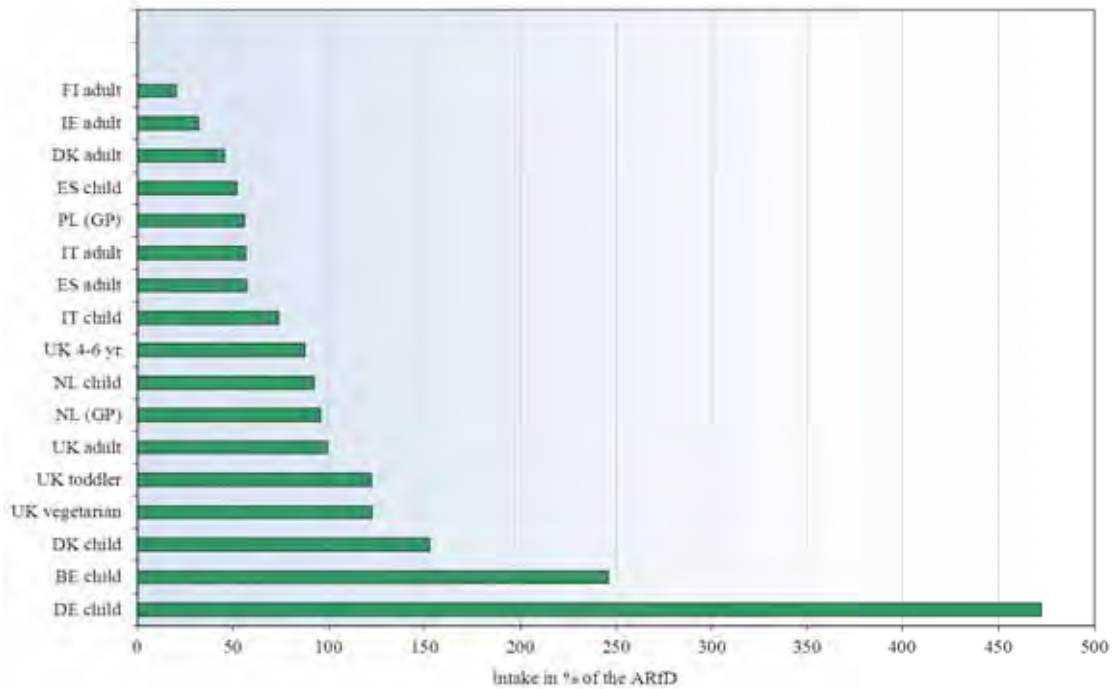


**Acute exposure: Thiodicarb/ Table grapes**

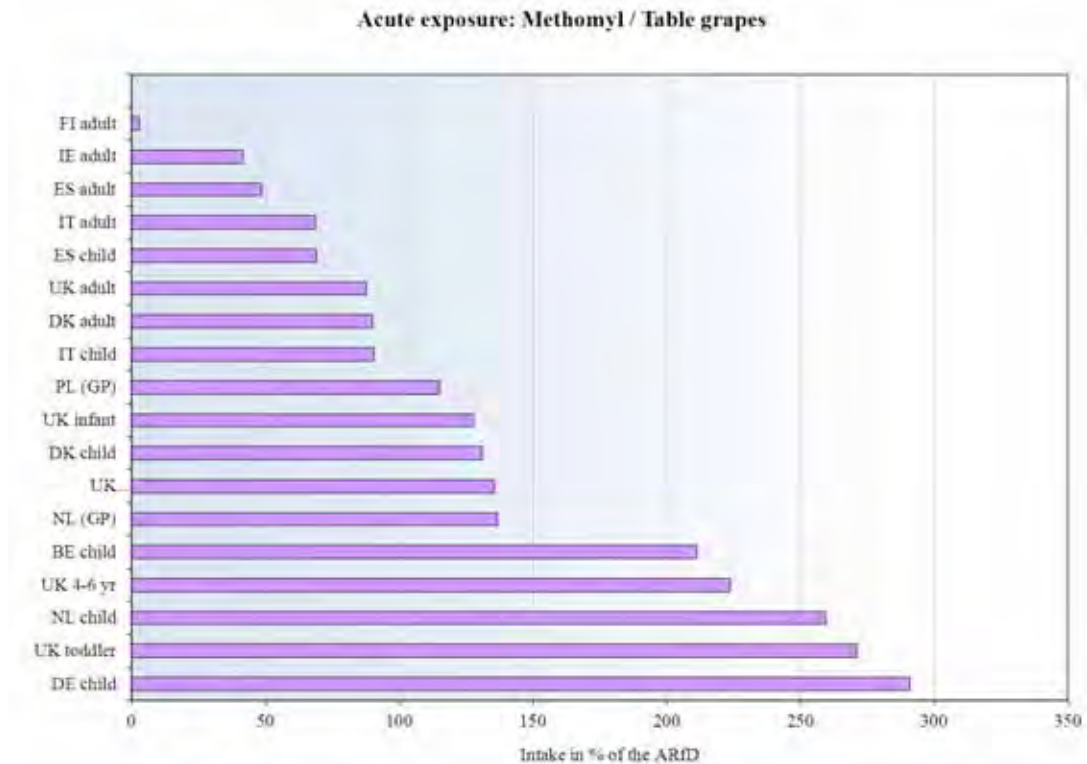


**Figure 5-29:** Acute exposure of the European population to thiodicarb residues in table grapes, expressed as percent of the ARfD set for thiodicarb.

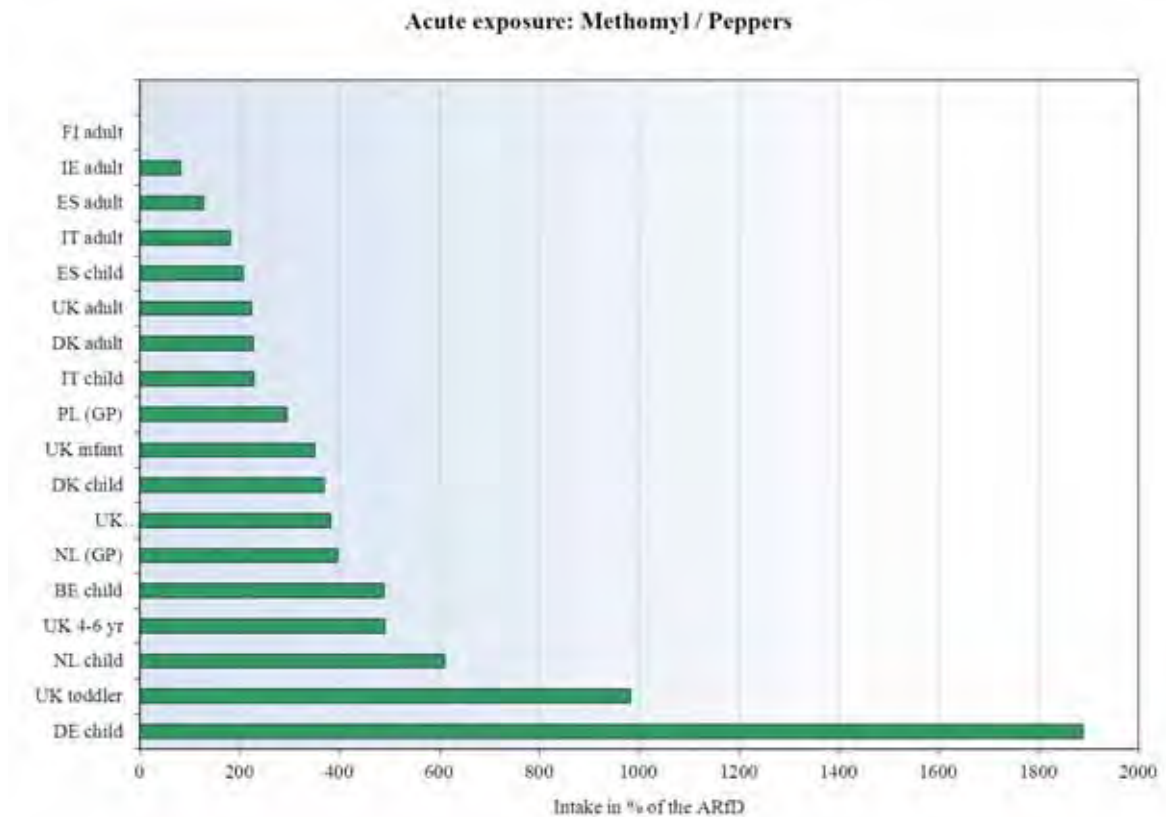
**Acute exposure: Thiodicarb/ Peppers**



**Figure 5-30:** Acute exposure of the European population to thiodicarb residues in peppers, expressed as percent of the ARfD set for thiodicarb.



**Figure 5-31:** Acute exposure of the European population to methomyl residues in table grapes, expressed as percent of the ARfD set for methomyl.



**Figure 5-32:** Acute exposure of the European population to methomyl residues in peppers, expressed as percent of the ARfD set for methomyl.

It is noted that the MRLs in place in 2009 for table grapes and peppers (0.05 mg/kg and 0.2 mg/kg, respectively) exceed the calculated threshold values for these crops on the basis of the ARfD of methomyl (0.038 mg/kg and 0.040 mg/kg). These MRLs were lowered in June 2010 (new MRL for pepper and grapes: 0.02 mg/kg)

For three of the four table grapes samples of concern, the identified acute risk was due to measured residue levels (0.02, 0.02 and 0.05 mg/kg) below or at the EU MRL (0.05 mg/kg).

In the fourth table grape sample, the MRL was also exceeded; the residue measured was related to methomyl only (0.11 mg/kg). All table grape samples of concern were produced outside Europe (Australia and Chile).

For two of the four pepper samples of concern, the identified acute risk was due to measured residue levels (0.21 and 0.75 mg/kg) above the MRL of 0.2 mg/kg. For the two remaining pepper samples of concern, the analytical results were not only reported as the sum of methomyl and thiodicarb, but were also reported for methomyl and thiodicarb separately. In these two samples, all summed residue measured was due to methomyl (0.21 and 0.19 mg/kg).

All pepper samples of concern were produced outside Europe (Turkey and Marocco).

As a general recommendation, EFSA proposes the setting of separate EU MRLs for active substances like methomyl and thiodicarb for which different toxicological reference values have been established. Furthermore, EFSA recommends the continued monitoring of residues of these two substances, in particular on imported food products.

#### 5.2.1.15. Monocrotophos

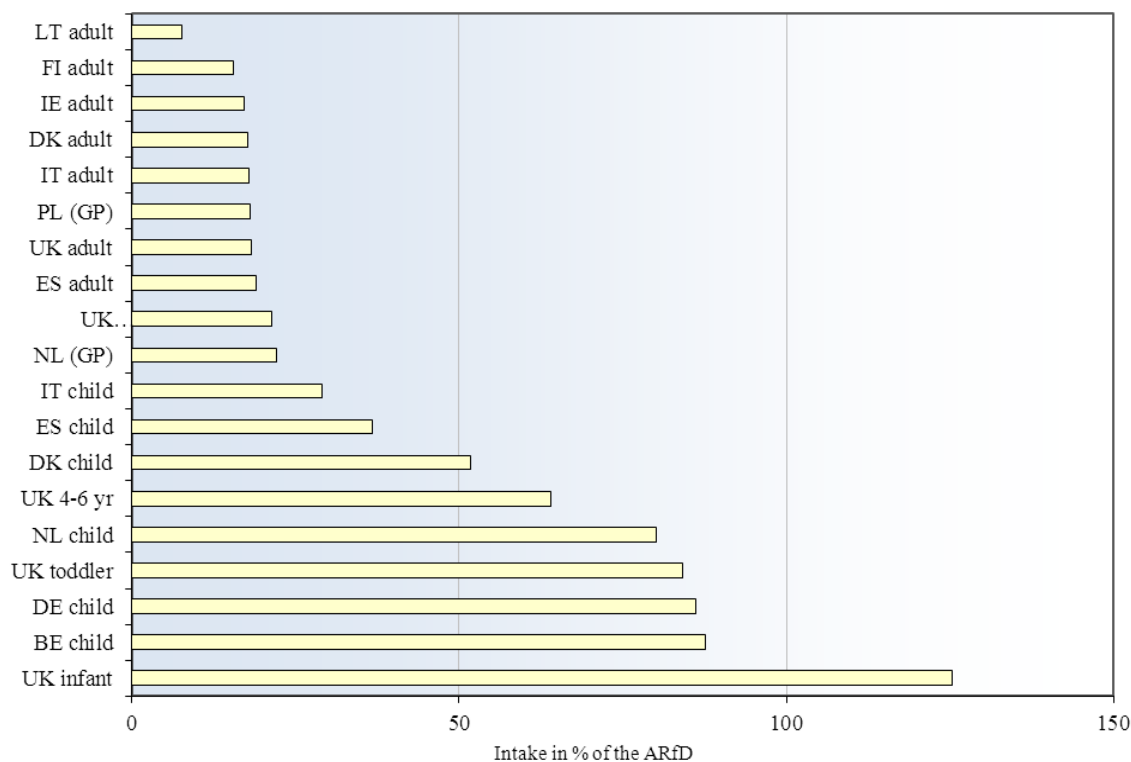
In 2009, for one banana sample (HRM 0.03 mg/kg) and two samples of peppers (HRM 2.4 mg/kg) the maximum estimated IESTI (Figure 5-33 and Figure 5-34) exceeded 100% of the ARfD (125% and 7,557%, respectively). For the banana sample, refined assessment was not performed as the peeling factor was not available.

Taking into account the number of banana and pepper samples analysed in 2009 (1100 and 1369, respectively), the exceedances of the threshold residues were considered as exceptional and seldom events.

The uses of monocrotophos are not authorised in Europe. It was noted that the banana (0.03 mg/kg) and peppers (0.07 mg/kg and 2.40 mg/kg) samples of concern were produced outside Europe (Panama and India, respectively). For these two commodities EU MRLs are at the default MRL of 0.01 mg/kg applies. Thus, the samples of concern are considered also exceeding the MRLs.

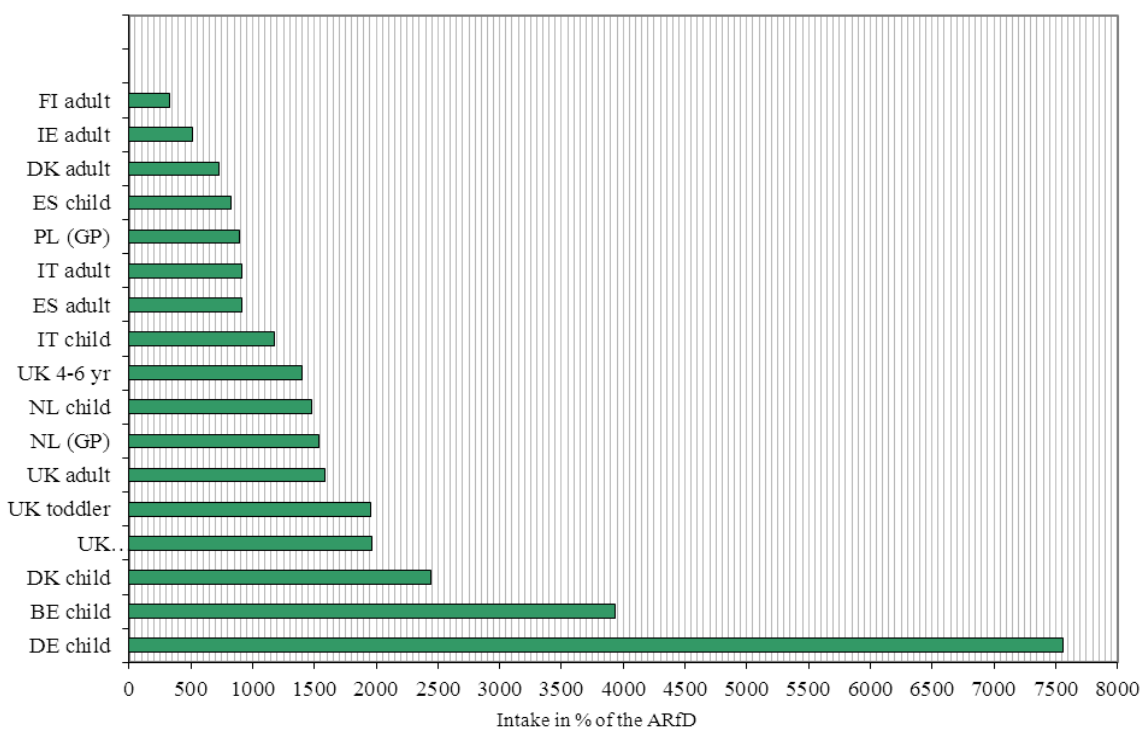
EFSA recommends continued monitoring of monocrotophos residues in future monitoring programmes, in particular in imported food.

**Acute exposure: Monocrotophos / Bananas**



**Figure 5-33:** Acute exposure of the European population to monocrotophos residues in banana, expressed as percent of the ARfD.

**Acute exposure: Monocrotophos / Peppers**



**Figure 5-34:** Acute exposure of the European population to monocrotophos residues in peppers, expressed as percent of the ARfD.

### 5.2.1.16. Oxamyl

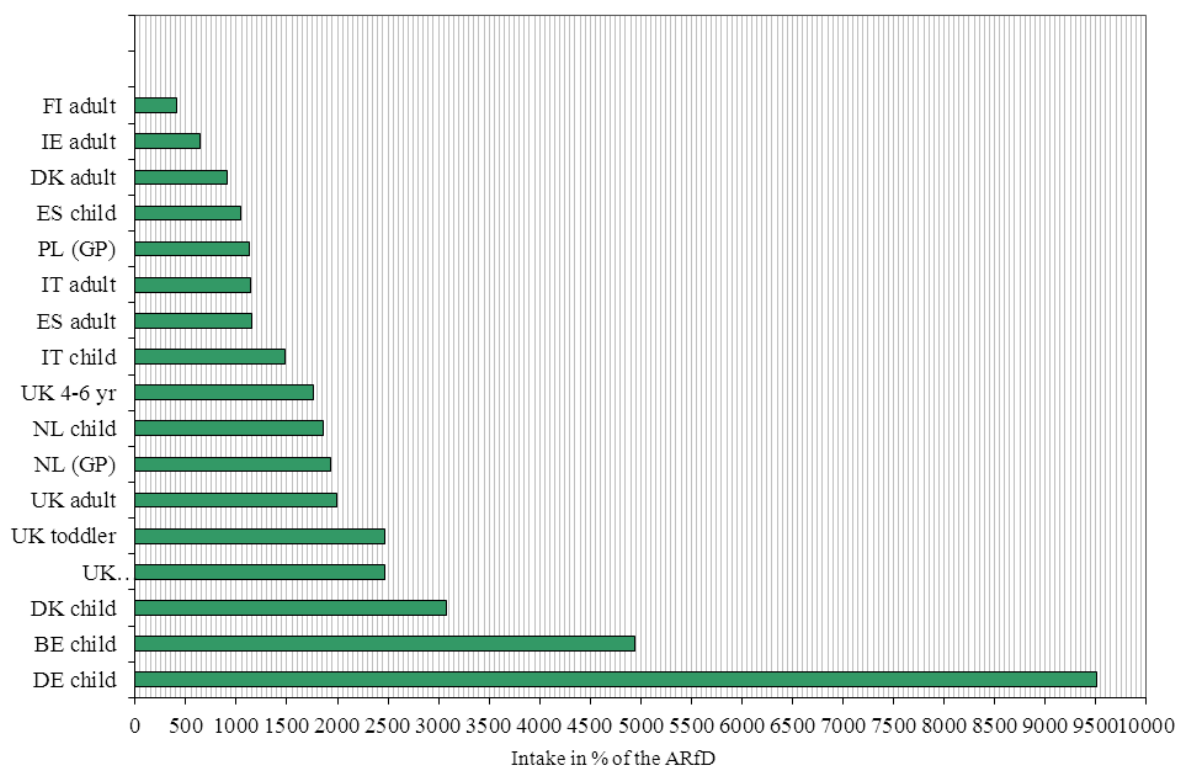
For five pepper samples (out of 1153 samples analysed) and four aubergine samples (out of 752 samples analysed) the residues measured (HRM: 1.51 mg/kg and 0.09 mg/kg, respectively) exceeded the threshold residue concentration. The occurrence of both events was considered seldom. The degree of exceedance of the ARfD is higher for peppers, amounting to 9,510% and lower for aubergines (215%) (Figure 5-35 and Figure 5-36). A refined risk assessment for aubergines could not be performed since no processing factor was available.

The nine samples of concern were also exceeding the MRL. The four aubergines samples of concern originated from within and outside Europe (the Netherlands, Poland, Spain and Turkey), while all pepper samples of concern were produced outside Europe (Morocco and Turkey).

In Europe, the use of products containing oxamyl is allowed. All nine samples, where a potential consumer risk was identified, exceeded the EU MRLs established in September 2008. It is noted that the MRL for peppers (0.02 mg/kg) is established slightly above the threshold residue levels corresponding to 0.016 mg/kg.

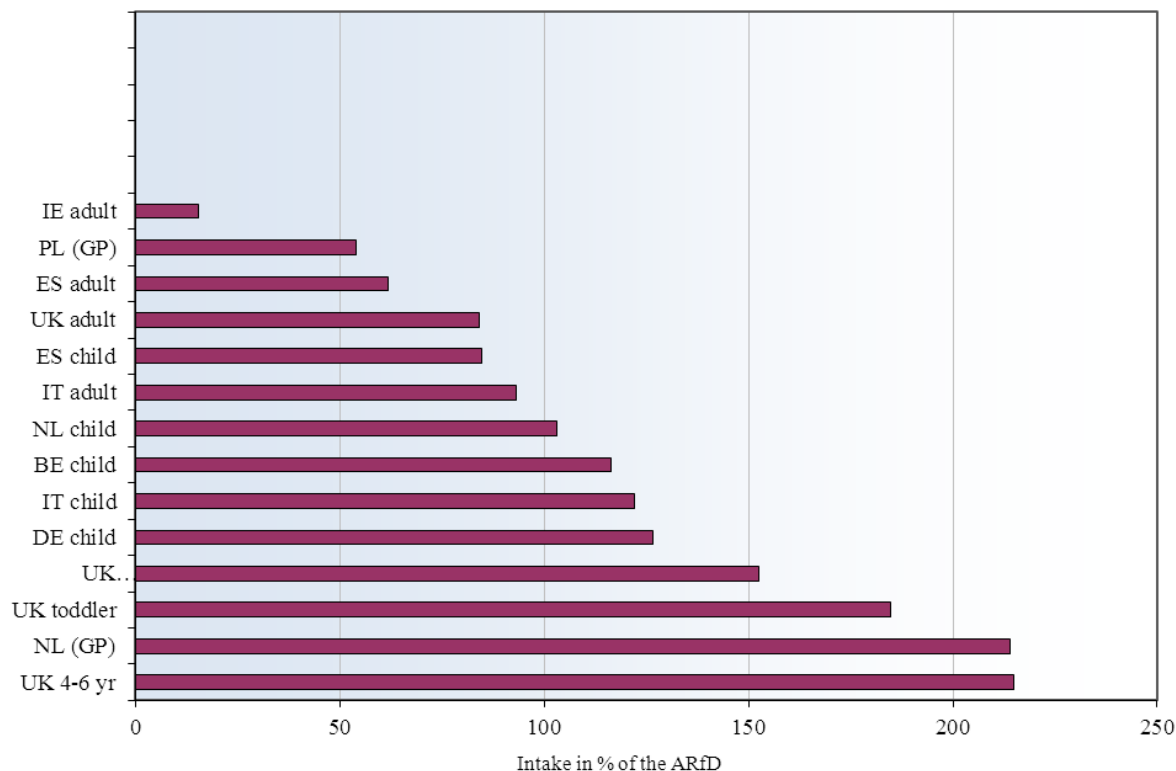
EFSA recommends continuing monitoring residues of oxamyl in food commodities in the future control programmes and reviewing the existing EU MRLs for pepper.

**Acute exposure: Oxamyl/ Peppers**



**Figure 5-35:** Acute exposure of the European population to oxamyl residues in peppers, expressed as percent of the ARfD.

Acute exposure: Oxamyl/ Aubergines



**Figure 5-36:** Acute exposure of the European population to oxamyl residues in aubergines, expressed as percent of the ARfD.

5.2.1.17. Procymidone

Since 1 January 2007, the use of procymidone in Europe has been restricted to cucumbers in greenhouses and plums (for processing). Since June 2008 all procymidone uses have been prohibited in Europe.

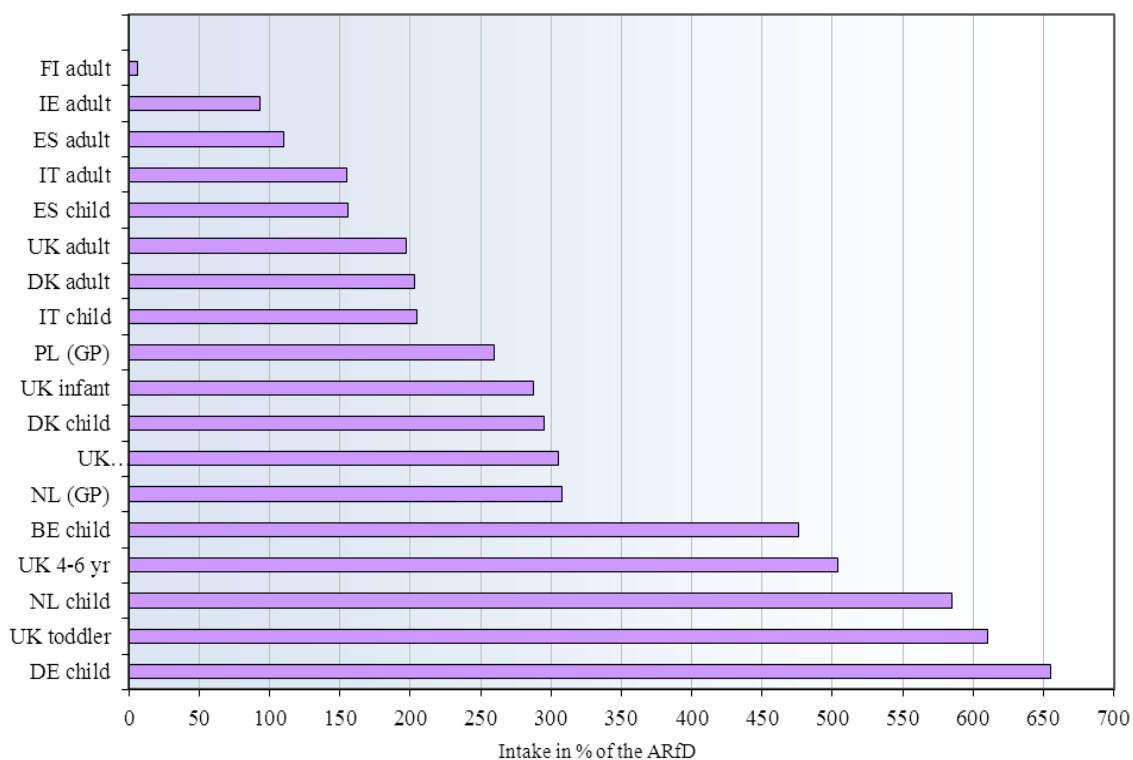
The assessment of the acute consumer exposure indicated a possible acute intake above the threshold value in two crops: table grapes (12 samples) and peppers (six samples). Considering the total number of samples taken for each of these crops (1568 and 1575, respectively), it was considered that the samples of concern are seldom events. The calculated IESTI for these two crops accounted for 655% and 430% of the ARfD (Figure 5-37 and Figure 5-38).

Except for two samples, the table grapes samples of concern (HRM 1.20 mg/kg) were produced in Europe (Italy, Spain and Romania) and did not exceed the MRL set for procymidone in this crop (5 mg/kg). The EU MRL applicable to table grapes has been lowered in June 2010 from 5 mg/kg to the LOQ of 0.02 mg/kg, a level lower than the residue threshold level (0.18 mg/kg).

Concerning the six pepper samples of concern (HRM 0.82 mg/kg), which were produced within and outside Europe (Egypt, Poland, Romania, and Turkey), none of them were found exceeding the MRL of 2 mg/kg applicable until June 2010. However, they all exceeded the threshold TRL of 0.19 mg/kg. The EU MRL applicable to peppers has been lowered in June 2010 from 2 mg/kg to the LOQ of 0.02 mg/kg, which is lower than the threshold residue level (0.19 mg/kg).

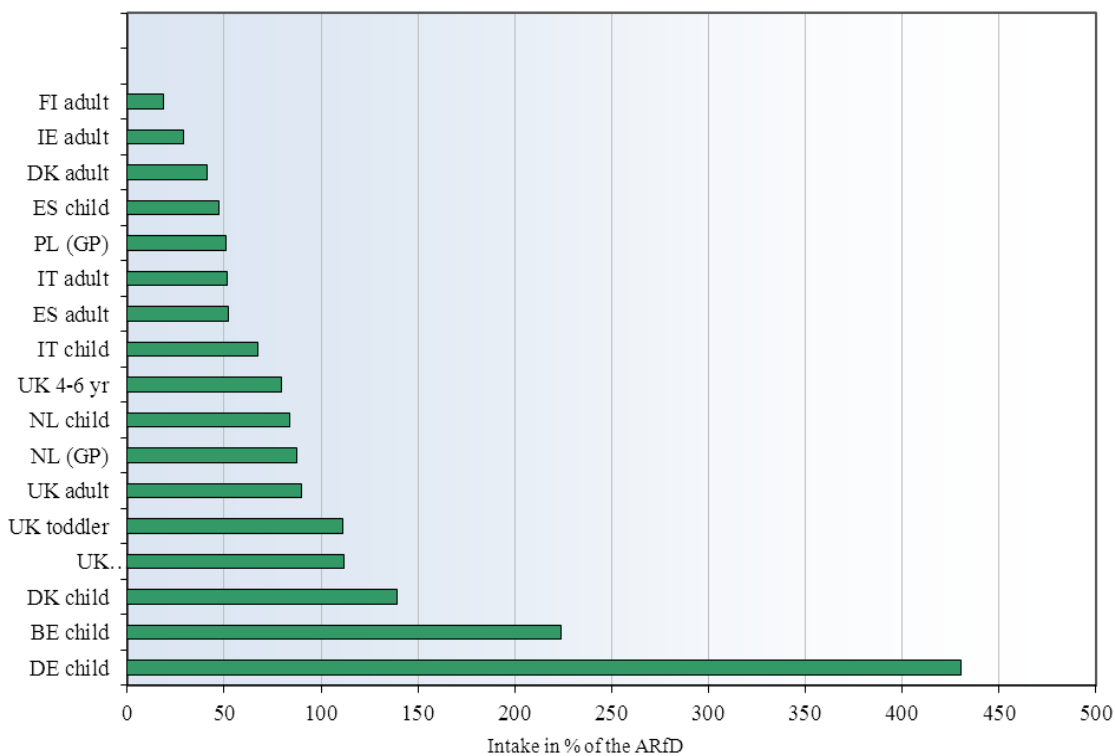
EFSA recommends the continued monitoring of procymidone residues in food crops in the future control plans and the investigations of possible misuses of this substance.

Acute exposure: Procymidone / Table grapes



**Figure 5-37:** Acute exposure of the European population to procymidone residues in table grapes, expressed as percent of the ARfD.

Acute exposure: Procymidone / Peppers



**Figure 5-38:** Acute exposure of the European population to procymidone residues in peppers, expressed as percent of the ARfD.

### 5.2.1.18. Tebuconazole

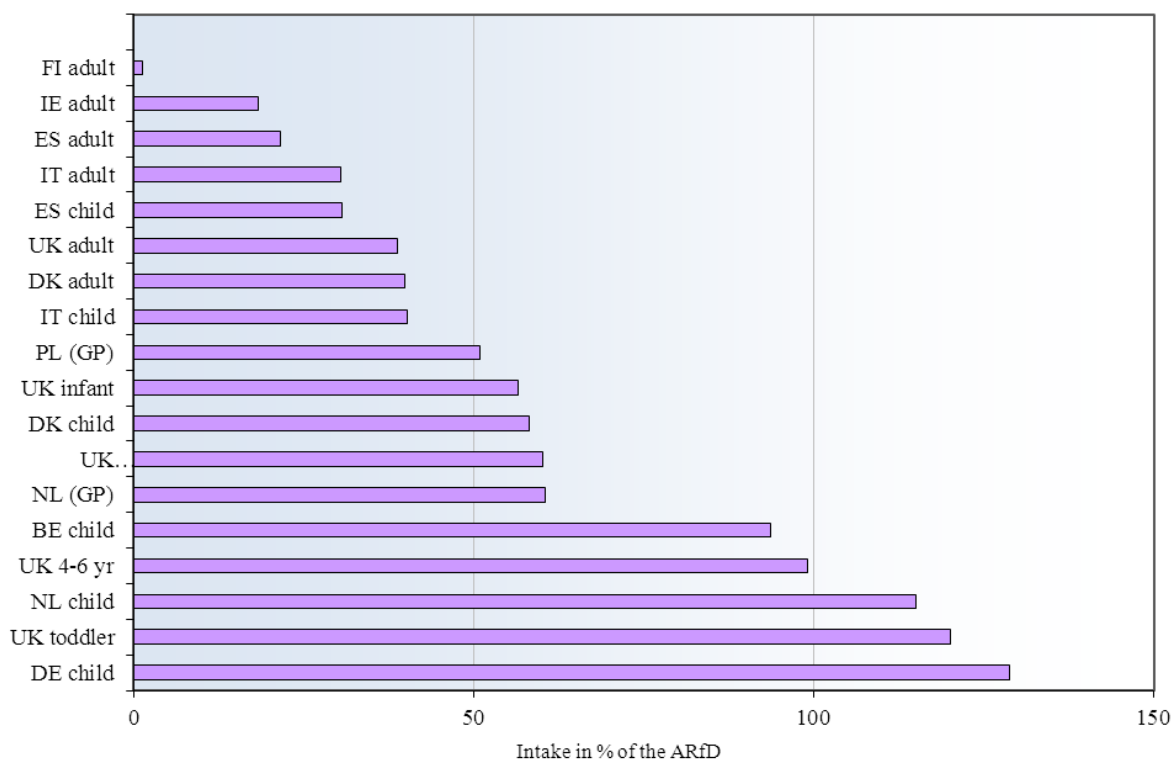
According to the IESTI calculation, potential acute risks to consumer health could not be excluded for two samples of table grapes out of the 1398 samples analysed. The occurrence of this event was therefore considered as seldom. The calculated exposure accounted for 129% of the ARfD (Figure 5-39).

The highest residue of tebuconazole measured in table grapes (0.59 mg/kg) did not exceed the MRL of 2 mg/kg, but exceeded the residue threshold of 0.46 mg/kg.

EU MRLs for tebuconazole were set for the first time in 2008, based on a risk assessment which was performed with a proposed ARfD of 0.1 mg/kg. The MRL set for table grapes (2 mg/kg) has not been changed since 2008. Since the ARfD has been lowered in the meantime to 0.03 mg/kg bw. The MRLs are currently reviewed under Article 12 of Regulation 396/2005.

EFSA recommends the continued monitoring of tebuconazole residues in food crops in the future control plans.

Acute exposure: Tebuconazole / Table grapes



**Figure 5-39:** Acute exposure of the European population to tebuconazole residues in table grapes, expressed as percent of the ARfD.

### 5.2.1.19. Thiacloprid

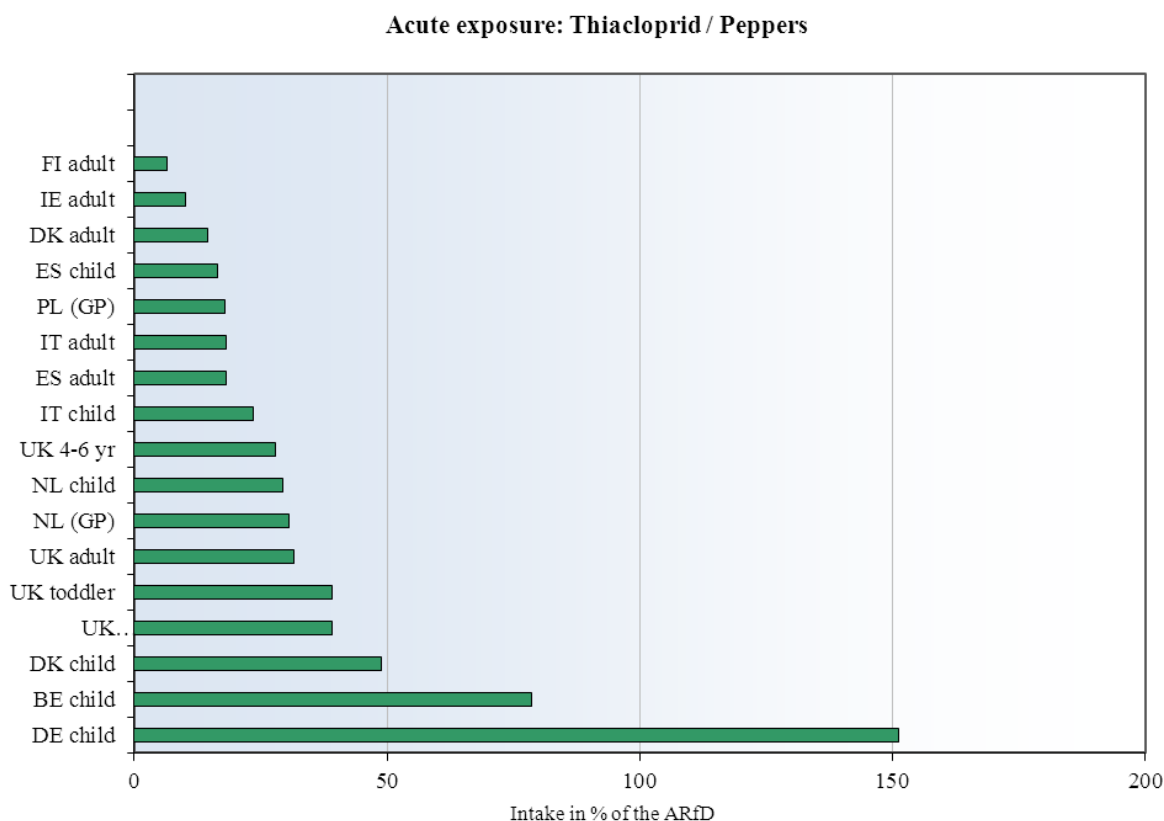
In 2009, exceedances of the threshold residue level were identified only for one pepper sample originated from Europe (the Netherlands); for this sample a potential consumer risk could not be excluded and the highest IESTI exhausted 151% of the ARfD (Figure 5-40). In 2009, the total number of pepper samples taken in 2009 amounted to 993. As a consequence, the occurrence of this event of concern was considered seldom.



The use of thiacloprid is authorised at European level. The EU MRLs for this substance have been amended several times since 2009; however, the MRL set for pepper (1 mg/kg) did not change.

The sample of concern (0.72 mg/kg) was not found exceeding the MRL. Considering the ARfD set for thiacloprid, the threshold MRL was calculated to be 0.476 mg/kg, thus lower the current MRL.

EFSA recommends to continue monitoring of thiacloprid residues and to consider lowering of the current thiacloprid MRL in place for peppers.



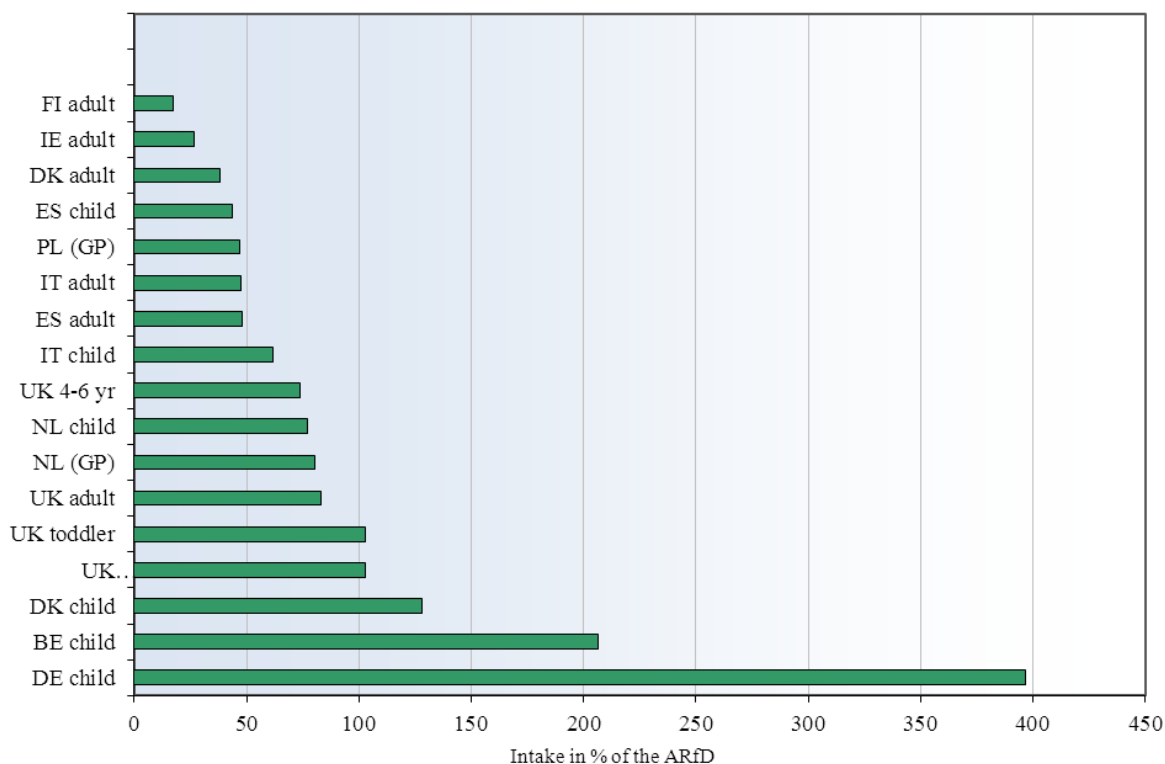
**Figure 5-40:** Acute exposure of the European population to thiacloprid residues in peppers, expressed as percent of the ARfD.

#### 5.2.1.20. Triazophos

The assessment of the acute consumer exposure indicated a potential acute intake above the threshold value for peppers (two samples). Considering the total number of samples taken (1470), it was considered that the samples of concern are seldom events. The highest calculated IESTI for peppers (HRM 0.06 mg/kg) accounted for 397% of the ARfD (Figure 5-41).

The uses of products containing triazophos are not authorised in Europe. The pepper samples of concern were produced outside Europe (India and Thailand) and were also found exceeding the MRL set at the LOQ (0.01 mg/kg).

EFSA recommends to continue monitoring triazophos residues in the future control plans and to check MRL compliance in imported food.

**Acute exposure: Triazophos / Peppers**


**Figure 5-41:** Acute exposure of the European population to triazophos residues in peppers, expressed as percent of the ARfD.

### 5.2.2. Pesticide/crop combinations for which the short-term risk assessment could not be performed

For a total of nine pesticide/crop combinations concerning six different pesticides included in the EU monitoring programme (dichlorvos, hexachlorobenzene, hexachlorocyclohexane-alpha isomer, hexachlorohexane-beta isomer, propargite and trichlorfon) - and for which samples with residues above the quantification level were reported - the risk assessment was not performed because no ARfD nor ADI were available. For those combinations EFSA only assessed the consumer's exposure. Should the toxicological reference values become available for the above pesticides, these can be compared with the estimated short-term exposure.

Details of the calculated exposures are provided in the following paragraphs.

#### 5.2.2.1. Dichlorvos

During the peer-review of this substance in the framework of Directive 91/414/EEC<sup>86</sup>, it was concluded that insufficient information was available to derive toxicological reference values<sup>87</sup>. Therefore, no acute risk assessment for dichlorvos could be performed.

<sup>86</sup> Council Directive 91/414/EEC of 15 July 1991 concerning the placing of plant protection products on the market. Official Journal L 230, 19.08.1991, p. 1.

<sup>87</sup> The tentative ARfD derived by the Rapporteur Member State and the EPCO experts (0.005 mg/kg bw) was not confirmed by the PPR Panel of EFSA who identified fundamental data gaps in the scientific dossier.

Dichlorvos is an active substance that is no longer authorised for use in plant protection products in Europe. Authorisations for plant protection products containing dichlorvos had to be withdrawn by 6 December 2007; any period of grace granted by Member States had to expire at the latest by December 2008.

It was noted that in the food commodities analysed in 2009 measurable residues of this substance were only quantified above the LOQ in three samples of cauliflower (originating from Poland) out of 842 samples analysed. In these samples, the HRM corresponded to 0.005 mg/kg (LOQ 0.002 mg/kg) and therefore it did not exceed the LOQ MRL which corresponds to the default MRL of 0.01 mg/kg.

The estimation of the short-term exposure amounted to 0.030 mg/kg bw.

EFSA recommends monitoring of dichlorvos residues in food and to take appropriate measures in case residues above the LOQ are detected.

#### 5.2.2.2. Hexachlorobenzene

This substance is considered as a persistent organic pollutant of the environment.

In Europe, the uses of hexachlorobenzene in plant protection products are not authorised since 1979. According to the 2009 monitoring results measurable residues of this substance were only quantified above the LOQ in food products of animal origin (eggs and butter samples).

Of the total 392 butter samples taken in 2009, 64 samples contained residues of hexachlorobenzene (originating from 10 different European countries) above the LOQ of 0.0005 mg/kg (HRM 0.00425 mg/kg – corresponding to 0.0002 mg/kg milk assuming a fat milk content of 4 %). None of those samples exceeded the MRL. The estimated highest consumer exposure amounted to 0.003 mg/kg bw.

In eggs, measurable residues of hexachlorobenzene were quantified above the LOQ of 0.001 mg/kg in only four samples (originated from Germany and Slovakia) out of 523 samples analysed. In these samples, the HRM corresponded to 0.0044 mg/kg eggs and therefore it did not exceed the MRL of 0.01 mg/kg. The estimated highest consumer exposure amounted to 0.003 mg/kg bw.

EFSA recommends monitoring of residues of hexachlorobenzene in food and to take appropriate measures in case residues above the LOQ are detected.

#### 5.2.2.3. HCH

Hexachlorocyclohexane (HCH) is classified by EU legislation as persistent organic pollutant of the environment and since 1979 both HCH isomers (alpha and beta) are not allowed for use in plant protection products in Europe.

According to the 2009 monitoring results, residues of HCH-alpha and HCH-beta above the LOQ were only reported in two and three samples of butter (originated from France, Lithuania and the Netherlands), respectively. The HRMs measured in butter for the two isomers amounted to 0.02 (alpha-isomer) and 0.001 (beta-isomer) mg/kg.

The MRL for HCH in milk products is set at 0.004 mg/kg milk. Considering a milk fat content of 4%, the MRL for butter corresponds to 0.1 mg/kg. As a result, it is considered that the HCH residues measured in butter did not exceed the legal limit.

HCH is a fat soluble substance and the residues reported in butter may have occurred because of environmental contamination rather than from actual uses.

The highest consumer short-term exposure was estimated to 0.248 and 0.0124 mg/kg bw for the alpha- and beta isomer, respectively.

EFSA recommends monitoring of residues of HCH in food and to take appropriate measures in case residues above the LOQ are detected.

#### 5.2.2.4. Propargite

The ARfD for propargite has not been set. In the framework of the peer-review of this substance EFSA could not finalise the setting of the ARfD due to data gaps.

It is noted that in 2009 the use of products containing propargite was no longer authorised in Europe. Any period of grace granted by Member States shall expire on December 2011 at the latest. Currently, some national authorisations for products containing propargite are still in place.

The analysis of the 2009 monitoring results, shows that residues of propargite were detected above the LOQ – but below the MRL – in three crops: table grapes (37 samples from Greece, Italy, Romania, Senegal, Spain and Turkey), peppers (3 samples from Bulgaria, Poland and Romania) and aubergines (3 samples from Italy and Spain). The total number of samples taken for these three food commodities was 1232, 1040 and 1291. The HRMs measured in these three crops corresponded to 1.3, 0.11 and 0.12 mg/kg, respectively.

The estimated short-term consumer exposure to propargite residues in table grapes, peppers and aubergines amounted to 8.5, 0.69 and 0.30 mg/kg bw, respectively.

EFSA recommends the continued monitoring of products containing propargite.

#### 5.2.2.5. Trichlorfon

In Europe, the use of products containing trichlorfon is no longer authorised since 2007. Any period of grace granted by Member States expired in November 2008.

During the peer-review of this substance in the framework of Directive 91/414/EEC, EFSA concluded that insufficient information was available to derive toxicological reference values<sup>88</sup> (EFSA, 2006c). Therefore, no acute risk assessment for trichlorfon could be performed. As a result, for this substance only the short-term exposure assessment was carried out.

According to the results of the 2009 EU monitoring programme, residues of trichlorfon above the LOQ were only measured in one single sample (unknown origin) of peas (without pods) out of the 357 pea samples taken. This sample (0.003 mg/kg) was not found exceeding the MRL of 0.5 mg/kg. For the trichlorfon/peas combination the highest consumer's short-term exposure was estimated to 0.0025 mg/kg bw.

EFSA recommends the continued monitoring of products containing trichlorfon.

#### 5.2.2.6. Orange juice

The calculation of the threshold consumptions (i.e. the consumption figures corresponding to 100% exhaustion of the ARfD) were calculated on the basis of a child with a body weight of 10 kg. Only those pesticides were considered for which the ARfD or the ADI was established and for which residues were measured above the LOQ.

<sup>88</sup> EFSA conclusion available at: <http://www.efsa.europa.eu/en/efsajournal/pub/76r.htm>

The residue definitions for the following groups of pesticides include two compounds with different toxicological reference values: benomyl/carbendazim, methomyl/thiodicarb and dimethoate/omethoate includes. For each of these couple of pesticides, two threshold consumption values were calculated. In the table below the calculated threshold consumptions are reported.

**Table 5-6:** Calculated threshold consumptions for orange juice based on a child body weight of 10 kilos.

Compound	HRM (mg/kg)		ARfD (mg/kg bw)	Threshold consumption (in kg) calculated for a child of 10 kg bw
Bromopropylate	0.029		0.03	10.3
Carbendazim	0.44		0.02	0.5
Benomyl	0.66 <sup>*)</sup>		0.03	0.5
Chlorpyrifos	0.02		0.1	50.0
Dicofol	0.105		0.15	14.3
Difenoconazole	0.032		0.16	50.0
Omethoate	0.00315		0.002	6.3
Dimethoate	0.00315		0.01	31.7
Dimethomorph	0.011		0.6	545.5
Fenitrothion	0.01		0.013	13.0
Imazalil	0.8		0.05	0.6
Imidacloprid	0.013		0.08	61.5
Methidathion	0.016		0.01	6.3
Methomyl	0.12		0.0025	0.2
Thiodicarb	0.12		0.01	0.8
Myclobutanil	0.019		0.31	163.2
Prochloraz	0.068		0.1	14.7

<sup>\*)</sup> The HRM was recalculated to benomyl, using the MW correction factor of 1.5.

The calculated threshold consumptions ranged from 0.2 to 545.4 kilograms. The lowest consumption threshold was estimated for methomyl. If a child of 10 kg would consume more than 0.2 kg orange juice containing the highest measured residue of methomyl (0.12 mg/kg) a potential acute risk could not be excluded.

### 5.3. Model assumptions for long-term risk assessment

The chronic or long-term exposure assessment calculates the expected exposure of an individual over its lifetime. According to JMPR, the long-term dietary intakes are calculated by multiplying the residue concentration on food by the average daily per capita consumption estimated for each commodity, on the basis of appropriate food consumption data, and summing the intakes for each food (FAO, 2009). Ideally, the long-term exposure assessment should be calculated by means of probabilistic modelling, using the distributions of the individual food consumption reported by the respondents of food surveys and the distribution of the measured residue concentration identified in the monitoring programmes. Since currently the necessary methodology for probabilistic calculations is not yet available, EFSA calculated the long-term exposure with a deterministic model, analogous to the calculation of the Theoretical Maximum Daily Intake (TMDI). The TMDI is calculated according to the following equation which was developed for the assessment of the long-term dietary intake in the framework of setting MRLs (WHO, 1997):

$$\text{TMDI} = \sum (MRL_i * F_i)$$

MRL<sub>i</sub>: Maximum residue level for food commodity i

F<sub>i</sub>: Food consumption of food commodity i

For the purpose of the risk assessment in the framework of this report, the MRL that is normally used in the TMDI calculation has been replaced with the mean residue concentration found in 2009 monitoring samples. If the calculated exposure, normalised by body weight, is below the toxicological reference value derived for long-term exposure, i.e. the Acceptable Daily Intake (ADI, see “Background information” section), the consumer is considered as adequately protected.

The following input values are required to calculate the actual exposure:

- Residue concentration to which the consumer is exposed (see section 5.3.1)
- Mean food consumption from the EFSA PRIMo (EFSA, 2007). These food consumption data were derived from national food surveys. Data for 27 diets in total, representing different food habits of European population sub-groups, including children, are available.
- Processing/peeling factors are used to perform more refined intake calculations (see section 5.3.2) for those crops that normally are not consumed raw/unprocessed<sup>89</sup>

As reported in section 2.1.1, the contribution of the food commodities of plant origin monitored in the 2009 EU coordinated programme represents 9 to 59% of the total dietary daily intake of the European consumers: aubergines, bananas, cauliflower, peas (without pods), peppers (sweet), table grapes and wheat. In order to be more representative for the total intake, the chronic risk assessment also included commodities of plant origin that have been included in the coordinated programme in

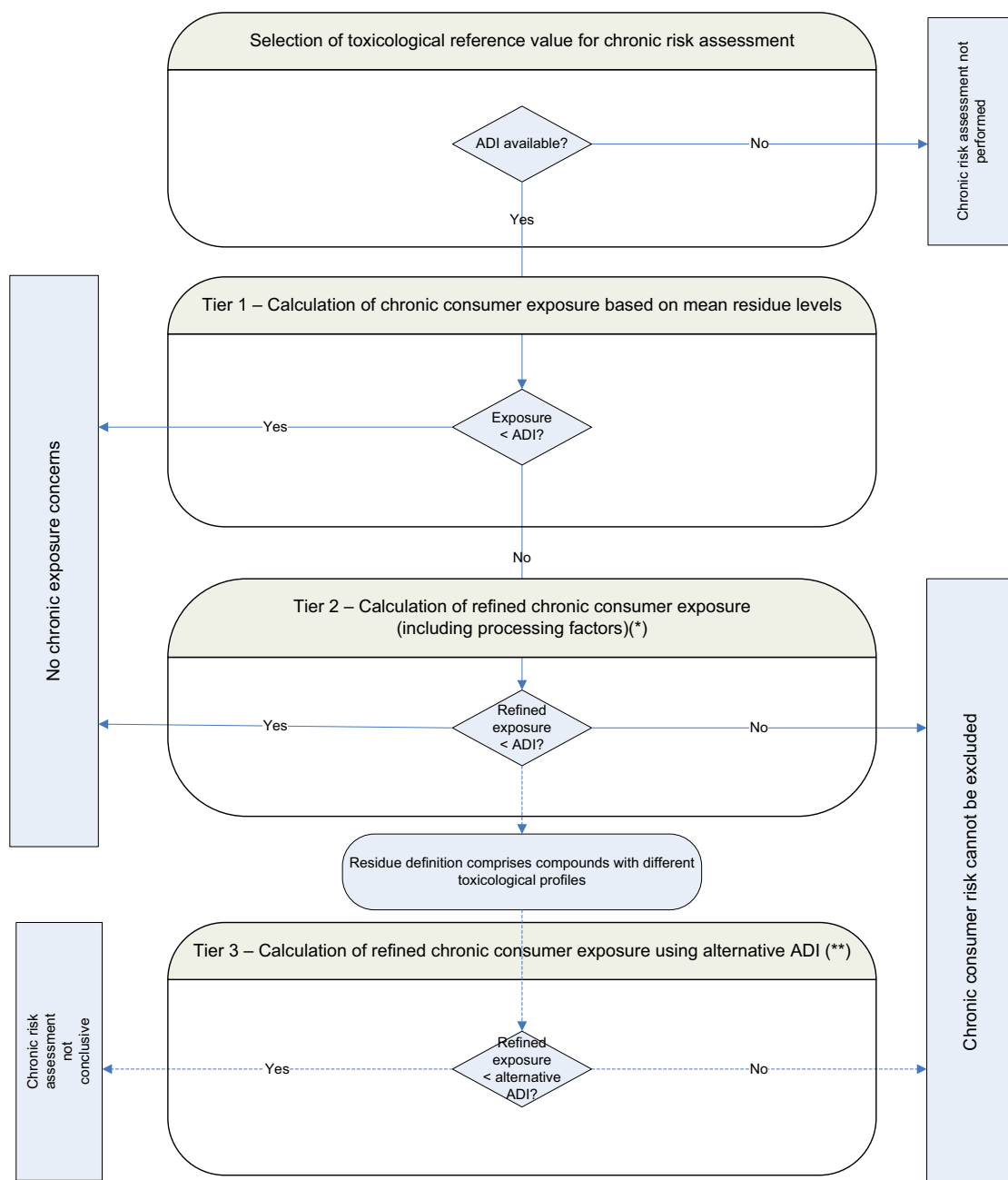
<sup>89</sup> The peeling /processing factors have been selected from the database developed by the Federal Institute for Risk Assessment (BfR), which includes a collection of processing factors from annually published reports and evaluations by the FAO/WHO Joint Meeting on Pesticide Residues (JMPR), from draft assessment reports (DAR) prepared in the European Pesticide Risk Assessment Peer Review Programme (PRAPeR) and from residue data which were submitted within the framework of national authorisation procedures. Additional data concerning pulp/peel distribution were provided for BfR by retailers and have been collected within the framework of national food monitoring programmes. The database is available at: : <http://www.bfr.bund.de/cd/579> (BfR compilation of 2009-07-01).

2010 and 2011 (see section 2.1.1)<sup>90</sup>. With this approach, 39% to 95% of the total dietary intake of food of plant origin is represented. For the estimation of the consumer exposure, residue levels measured in orange juices were not considered since specific consumption figures for juice are not available in the PRIMo model. However, residues of pesticides measured in unprocessed oranges in the framework of the national monitoring programmes are taken into account. EFSA took into account also the exposure to eggs and milk (including milk products). For milk, the residues measured in butter were recalculated to milk assuming a mean fat content of 4%.

If in the first tier assessment a potential chronic risk could not be excluded on the basis of the calculation performed as described above, EFSA tried to perform more refined calculations, taking into account processing/peeling factors. In Figure 5-42 the tiered approach used in assessing the chronic risk is represented.

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<sup>90</sup> Orange juice has not been included in the exposure calculations.



(\*) The processing/peeling factors are applied only to food commodities normally not consumed as raw (i.e. aubergines, bananas, cauliflower and wheat).

(\*\*) The 3<sup>rd</sup> tier of the risk assessment is only carried out for those pesticides for which the EU legal residue definition set for enforcement purposes includes more than one component characterised by different toxicological profiles.

**Figure 5-42:** Flow chart for the tiered approach used in assessing the chronic risk to consumer's health.



### 5.3.1. Residue levels

In order to perform an actual long-term exposure assessment, a residue concentration describing the long-term exposure of consumers to a certain pesticide has to be derived; the mean residue concentrations derived from the monitoring results for each of the commodities are considered a suitable input value for this purpose.

For each pesticide/crop combination, the mean residue level to be used as input value in the chronic exposure estimations is derived taking into account the following:

- For each pesticide/residue combination an overall mean value was calculated, using the actual values measured in the individual samples, without applying analytical determination uncertainty factors. However, for samples with residues below the LOQ, EFSA assumed the real value to be at the numerical value of the LOQ.
- The input residue level for the following food commodities were derived from the results of the EU monitoring programme: aubergines, bananas, cauliflower, egg, peas (without pods), peppers (sweet), table grapes and wheat.
- The results for butter reported under the EU monitoring programme were used to estimate the residues in milk. The measured residues in butter were recalculated to milk residue levels assuming a milk fat content of 4% by weight. The underlying assumption is that residues for fat soluble pesticides are completely transferred to butter. Since pesticides residues above the LOQ were found only for fat soluble pesticides, this recalculation is appropriate.
- For the remaining food commodities considered in the exposure assessment, the residue input figures were derived from the results of the 2009 national programmes (surveillance samples only).
- Samples for which the reporting levels (i.e. the LOQ) were not indicated were disregarded. Results concerning samples analysed with analytical methods for which the LOQ was greater than the corresponding EU MRL were also disregarded. In total, 0.25% of the results (35,896 determinations) were excluded.
- If for a given pesticide/crop combination no positive findings were reported by any of the reporting countries, then the contribution of these crops to the total dietary intake was not considered since a “no use/no residue” situation was assumed.
- The residue values reported according to the residue definition for enforcement (as in the EU MRL legislation) were not recalculated to the residue definition for risk assessment because no agreed conversion factors are available at the moment.

The residue levels used as input values for the calculation of the long-term exposure are reported in Table 5-7 and Table 5-8. Empty cells refer to pesticide/crop combinations for which all results were reported to be below the LOQ and therefore a “no use/no residue” situation was assumed.

**Table 5-7:** Mean residue level (mg/kg) for the 1<sup>st</sup> group of commodities (apples – oats) included in the 2009-2011 EU coordinated programmes used as input values for the long-term dietary exposure calculations.

Pesticide/residue definition <sup>(*)</sup> (1)	Apples	Aubergines (egg plants)	Bananas	Beans (with pods)	Milk/butter (5)	Carrots	Cauliflower	Cucumbers	Eggs	Head cabbage	Leek	Lettuce	Mandarins	Oats
Abamectin (sum)	-	-	-	-	-	-	-	-	-	-	0.0080	-	-	-
Acephate	0.0109	-	-	0.0112	-	-	-	-	-	-	-	-	-	-
Acetamiprid	0.0114	0.0124	-	0.0093	-	-	0.0092	0.0110	-	-	-	0.0182	0.0095	-
Aldicarb (sum)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Amitrole	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azinphos-ethyl	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Azinphos-methyl	0.0168	-	-	-	-	-	-	-	-	-	-	-	-	-
Azoxystrobin	0.0137	0.0167	0.0263	0.0138	-	0.0130	0.0156	0.0180	-	0.0136	0.0125	0.0432	0.0160	-
Benfuracarb	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bifenthrin	0.0149	0.0179	0.0177	0.0130	-	0.0132	0.0168	0.0141	-	0.0134	0.0123	0.0182	-	-
Boscalid	0.0238	0.0116	0.0119	0.0196	-	0.0177	0.0118	0.0151	-	0.0135	0.0255	0.0953	0.0114	0.0126
Bromopropylate	0.0141	-	0.0159	0.0131	-	0.0133	0.0152	0.0144	-	-	-	-	0.0145	-
Bromuconazole (sum)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bupirimate	0.0150	-	0.0146	-	-	0.0146	-	0.0153	-	-	-	-	-	-
Buprofezin	0.0144	0.0156	0.0148	0.0125	-	0.0130	-	0.0140	-	-	-	-	0.0152	-
Cadusafos	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Camphechlor	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Captan <sup>(2)</sup>	0.0855	-	-	-	0.0219	-	0.0126	-	-	-	-	0.0124	0.0123	-
Carbaryl	0.0158	-	-	0.0143	-	-	-	-	-	-	-	-	0.0166	-
Carbendazim and benomyl	0.0164	0.0170	0.0171	0.0216	-	0.0085	-	0.0117	-	0.0132	0.0136	0.0141	0.0113	-
Carbofuran (sum)	0.0097	-	-	0.0094	-	0.0098	-	0.0095	-	-	-	0.0100	0.0101	-
Carbosulfan	-	0.0141	-	-	-	-	-	-	-	-	-	-	-	-
Chlordane (sum animal products)	-	-	-	-	-	-	-	-	0.0035	-	-	-	-	-

Pesticide/residue definition <sup>(9),(1)</sup>	Apples	Aubergines (egg plants)	Bananas	Beans (with pods)	Milk/butter (5)	Carrots	Cauliflower	Cucumbers	Eggs	Head cabbage	Leek	Lettuce	Mandarins	Oats
Chlorfenvinphos	0.0114	-	-	-	-	0.0135	-	-	-	-	-	0.0105	0.0116	-
Chloromequat	-	0.0155	-	-	-	-	-	-	-	-	-	-	-	0.0759
Chlorobenzilate	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorothalonil	0.0200	0.0237	0.0160	0.0187	-	0.0219	0.0212	0.0215	-	0.0271	0.0201	0.0184	-	-
Chlorpropham (sum)	-	-	-	-	-	0.0134	2	-	-	-	-	-	0.0137	-
Chlorpyrifos	0.0194	0.0163	0.0303	0.0123	-	0.0148	0.0154	0.0129	0.0062	0.0160	0.0124	0.0141	0.0503	-
Chlorpyrifos-methyl	0.0135	-	-	-	-	0.0116	-	0.0120	-	0.0119	-	0.0117	0.0142	0.0252
Clofentezine	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyfluthrin (sum)	0.0222	0.0243	-	-	-	0.0123	-	-	-	-	-	0.0240	0.0134	-
Cypermethrin (sum)	0.0228	0.0231	-	0.0237	-	-	-	0.0195	0.0185	0.0197	0.0174	0.0250	0.0193	-
Cyproconazole	0.0155	-	-	0.0129	-	-	-	0.0154	-	-	-	0.0147	-	-
Cyprodinil	0.0149	0.0176	0.0148	0.0159	-	-	0.0139	0.0143	-	-	0.0113	0.0403	0.0119	-
DDT (sum)	-	-	-	-	-	-	-	-	0.0092	-	-	-	-	-
Deltamethrin	0.0200	0.0228	-	0.0160	-	-	0.0220	0.0198	-	0.0186	-	0.0214	-	-
Diazinon	0.0096	-	-	-	-	0.0090	0.0089	-	-	-	-	0.0093	-	-
Dichlofluanid	-	-	-	-	-	0.0152	9	-	-	-	-	-	-	-
Dichlorvos	-	-	-	-	-	-	0.0088	-	-	-	-	-	-	-
Dicofol (sum)	-	0.0150	-	0.0124	-	-	-	0.0232	-	-	-	0.0122	0.0391	-
Diieldrin (Aldrin and Diieldrin)	-	-	-	-	-	-	-	-	0.0068	-	-	-	-	-
Difenoconazole	0.0139	-	0.0153	0.0108	-	0.0141	0.0154	0.0145	-	0.0149	0.0140	0.0167	0.0127	-
Dimethoate (sum)	0.0104	0.0111	-	0.0158	-	0.0099	0.0148	0.0108	-	0.0156	-	0.0161	0.0108	-
Dimethomorph	0.0133	0.0135	-	0.0110	-	0.0141	0.0147	0.0162	-	-	0.0142	0.0449	0.0135	-
Diphenylamine	0.0787	-	-	-	-	0.0155	-	0.0155	-	-	-	0.0171	0.0172	-

Pesticide/residue definition <sup>(6),(1)</sup>	Apples	Aubergines (egg plants)	Bananas	Beans (with pods)	Milk/butter (5)	Carrots	Cauliflower	Cucumbers	Eggs	Head cabbage	Leek	Lettuce	Mandarins	Oats
Dithiocarbamates <sup>(3)</sup>	0.2061	0.0972	0.1117	0.2785	-	0.0910	0.206 3	0.2959	-	0.3022	0.4467	0.5315	0.4180	-
Dithiocarbamates <sup>(4)</sup>	0.2328	0.1098	0.1262	0.3145	-	0.1027	0.233 0	0.3342	-	0.3413	0.5044	0.6001	0.4721	-
Endosulfan (sum)	0.1098	0.0171	-	0.0128	-	0.0152	-	0.0124	-	0.0135	-	-	-	-
Endrin	0.1262	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethion	0.3145	0.0088	0.0086	0.0100	-	0.0083	0.008 7	-	-	-	-	-	0.0086	-
Ethoprophos	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fenamiphos (sum)	0.1027	-	-	-	-	-	-	-	-	-	-	-	-	-
Fenarimol	0.2330	0.0124	0.0135	0.0100	-	0.0109	-	-	-	-	-	-	-	-
Fenbuconazole	0.2867	-	-	-	-	-	-	-	-	-	-	-	-	-
Fenhexamid	0.3342	0.0177	0.0186	0.0147	-	-	0.017 3	0.0306	-	0.0202	-	0.0470	0.0157	-
Fenitrothion	-	-	-	-	-	-	-	-	-	-	-	-	0.0099	-
Fenoxycarb	-	-	-	-	-	-	0.012 2	-	-	-	-	-	-	-
Fenpropathrin	0.3413	0.0091	-	0.0094	-	-	-	-	-	-	-	-	-	-
Fenthion (sum)	0.5044	-	-	-	-	-	-	-	-	-	-	-	-	-
Fenvalerate/Esfenvalerate (sum)	0.6001	-	-	-	-	-	-	-	-	-	-	-	-	-
Fipronil (sum)	0.4721	-	-	-	-	0.0040	-	-	-	-	-	-	-	-
Fludioxonil	-	0.0140	-	0.0135	-	0.0127	-	0.0133	-	-	0.0112	0.0425	0.0128	-
Flufenoxuron	0.4115	-	-	0.0116	-	-	-	-	-	-	-	0.0103	-	-
Fluquinconazole	0.2544	-	-	-	-	-	-	-	-	-	-	-	-	-
Flusilazole	0.2586	-	-	0.0096	-	-	-	-	-	-	-	-	0.0121	-
Flutriafol	0.0714	0.0147	-	-	-	0.0150	-	-	-	-	-	0.0133	0.0144	-
Folpet <sup>(2)</sup>	0.1283	-	0.0112	-	-	-	-	-	-	-	-	0.0595	-	-
Formetanate (sum)	0.0737	0.0111	-	-	-	-	-	0.0115	-	-	-	-	-	-
Fosfiazate	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexachlorobenzene	-	-	-	-	0.0018	-	-	-	0.0059	-	-	-	-	-
Heptachlor	0.0804	-	-	-	-	-	-	-	-	-	-	-	-	-

Pesticide/residue definition <sup>(9),(1)</sup>	Apples	Aubergines (egg plants)	Bananas	Beans (with pods)	Milk/butter (5)	Carrots	Cauliflower	Cucumbers	Eggs	Head cabbage	Leek	Lettuce	Mandarins	Oats
HCH alpha	0.1845	-	-	-	0.0040	-	-	-	-	-	-	-	-	-
HCH beta	0.3499	-	-	-	0.0039	-	-	-	-	-	-	-	-	-
Lindane	0.1359	-	-	-	-	-	-	-	0.0051	-	-	-	-	-
Hexaconazole	0.0126	-	-	0.0102	-	-	-	-	-	-	-	-	-	-
Hexythiazox	0.0155	0.0183	0.0153	0.0145	-	0.0191	-	0.0196	-	-	-	-	0.0138	-
Imazalil	0.0177	-	0.1321	-	-	0.0114	-	0.0255	-	-	-	0.0106	1.0172	-
Imidacloprid	0.0104	0.0217	0.0133	0.0100	-	-	0.013	0.0133	-	0.0087	0.0098	0.0139	0.0107	-
Indoxacarb	0.0134	0.0172	0.0185	0.0101	-	0.0099	5	0.0153	-	0.0099	-	0.0162	-	-
Iprodione	0.0299	0.0215	0.0136	0.0284	-	0.0232	6	0.0316	-	0.0257	0.0121	0.3042	-	-
Iprovalicarb	-	-	-	-	-	-	-	-	-	-	-	0.0135	-	-
Kresoxim-methyl	0.0143	-	0.0158	0.0112	-	0.0131	0.016	0.0136	-	-	0.0123	0.0129	-	-
Lambda-Cyhalothrin	0.0133	0.0137	0.0128	0.0128	-	0.0107	0.013	0.0139	-	0.0148	0.0118	0.0168	0.0138	-
Linuron	-	-	-	-	-	0.0174	-	-	-	-	0.0133	0.0138	0.0132	-
Malathion (sum)	-	-	-	-	-	-	-	-	-	-	-	-	0.0178	-
Mepanipyrim (sum)	-	0.0155	-	-	-	-	-	-	-	-	-	-	-	-
Mepiquat	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Metalaxyl (sum)	0.0115	-	-	0.0114	-	0.0110	0.012	0.0135	-	0.0123	-	0.0129	0.0122	-
Metconazole	-	-	-	-	-	-	4	-	-	-	-	-	-	-
Methamidophos	-	0.0094	-	0.0124	-	0.0088	4	0.0094	-	-	-	-	-	-
Methidathion	0.0147	0.0123	0.0148	-	-	-	-	-	-	-	-	-	0.0176	-
Methiocarb (sum)	0.0105	0.0112	-	0.0105	-	-	-	0.0181	-	-	0.0108	0.0107	0.0118	-
Methomyl and Thiodicarb	0.0101	0.0115	-	0.0132	-	-	0.011	0.0119	-	-	-	0.0161	-	-
Methoxychlor	-	-	-	-	-	-	7	-	-	-	-	-	-	-
Monocrotophos	-	-	0.0183	0.0141	-	-	-	-	-	-	-	-	-	-
Myclobutamil	0.0179	0.0150	0.0173	0.0113	-	0.0165	-	0.0168	-	-	0.0096	0.0106	0.0233	-

Pesticide/residue definition <sup>(6),(1)</sup>	Apples	Aubergines (egg plants)	Bananas	Beans (with pods)	Milk/butter (5)	Carrots	Cauliflower	Cucumbers	Eggs	Head cabbage	Leek	Lettuce	Mandarins	Oats
Oxamyl	-	0.0098	-	0.0107	-	-	-	0.0098	-	-	-	-	-	-
Oxydemeton-methyl (sum)	0.0087	-	-	-	-	-	-	-	-	-	-	-	-	-
Paclobutrazol	0.0157	-	0.0153	-	-	-	0.0109	-	-	-	-	-	-	-
Parathion	-	-	-	-	-	0.0146	-	-	-	-	-	-	-	-
Parathion-methyl (sum)	-	-	-	-	-	0.0113	-	-	-	-	-	-	-	-
Penconazole	0.0137	0.0157	-	0.0110	-	0.0134	-	0.0143	-	-	-	-	-	-
Permethrin	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosalone	0.0150	-	0.0166	-	-	-	0.0157	0.0150	-	0.0167	0.0151	-	-	-
Phosmet (sum)	0.0147	-	-	-	-	-	0.0149	-	-	-	-	0.0136	0.0175	-
Phoxim	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pirimicarb (sum)	0.0154	0.0118	-	0.0100	-	0.0122	-	0.0119	-	-	-	0.0169	0.0126	-
Pirimiphos-methyl	0.0148	-	-	0.0127	-	0.0134	0.0154	-	-	-	-	0.0135	0.0145	0.0257
Prochloraz (sum)	0.0148	-	-	0.0123	-	-	0.0149	-	-	-	-	-	0.0727	-
Procymidone	0.0122	0.0170	-	0.0161	-	0.0125	0.0121	0.0145	-	0.0122	-	0.0230	0.0130	-
Profenofos	-	0.0155	-	0.0128	-	-	-	-	-	-	-	-	-	-
Propamocarb (sum)	-	0.0137	-	0.0104	-	0.0131	0.0161	0.0604	-	-	0.0177	0.2072	-	0.0303
Propargite	0.0340	0.0280	-	0.0123	-	-	-	-	-	-	-	-	0.0193	-
Prothioconazole	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrazophos	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyridaben	0.0131	0.0138	-	0.0113	-	-	-	0.0121	-	-	-	-	0.0130	-
Pyrimethanil	0.0245	0.0160	0.0152	0.0117	-	0.0128	0.0144	0.0142	-	-	0.0121	0.0157	0.0338	-
Pyriproxyfen	-	0.0146	0.0135	-	-	0.0124	-	0.0132	-	-	-	-	0.0144	-
Quinoxifen	-	-	-	-	-	-	-	-	-	-	-	0.0106	-	-
Resmethrin	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Pesticide/residue definition <sup>(*)</sup> , <sup>(1)</sup>	Apples	Aubergines (egg plants)	Bananas	Beans (with pods)	Milk/butter (5)	Carrots	Cauliflower	Cucumbers	Eggs	Head cabbage	Leek	Lettuce	Mandarins	Oats
Spiroxamine	0.0144	-	0.0204	0.0119	-	-	-	-	-	-	-	-	-	-
Tebuconazole	0.0161	0.0171	-	0.0132	-	0.0153	-	0.0149	-	0.0166	0.0226	0.0138	0.0142	-
Tebufenozide	0.0108	0.0104	-	-	-	-	-	0.0098	-	-	-	0.0095	-	-
Tebufenpyrad	0.0120	-	-	0.0108	-	-	0.012	0.0126	-	-	-	0.0115	0.0134	-
Teflubenzuron	0.0164	0.0155	-	-	-	-	5	0.0181	-	-	-	0.0137	-	-
Tefluthrin	-	-	-	-	-	0.0143	0.015	-	-	-	-	-	-	-
Tetraflifon	0.0116	0.0124	-	0.0135	-	-	2	0.0154	-	-	-	-	-	-
Thiabendazole	0.0615	0.0151	0.0846	0.0124	-	0.0157	-	0.0156	-	-	0.0124	0.0140	0.2943	-
Thiacloprid	0.0104	0.0120	-	0.0103	-	-	0.010	0.0110	-	0.0087	0.0090	0.0115	-	-
Thiophanate-methyl	0.0128	0.0123	0.0145	0.0171	-	-	1	0.0139	-	-	-	0.0158	-	-
Tolclofos-methyl	-	-	-	-	-	0.0136	-	-	-	-	-	0.0193	0.0128	-
Tolyfluanid (sum)	-	-	-	-	-	-	-	0.0154	-	0.0136	-	0.0188	-	-
Triadimefon (sum)	0.0195	0.0193	-	0.0169	-	-	-	0.0208	-	-	0.0197	-	-	-
Triazophos	0.0089	-	-	0.0096	-	-	-	0.0089	-	-	-	-	-	-
Trichlorfon	0.0230	-	-	-	-	-	-	-	-	-	-	-	-	-
Trifloxystrobin	0.0128	0.0112	-	0.0106	-	0.0112	0.014	0.0114	-	0.0106	0.0099	-	0.0111	-
Triticonazole	-	0.0100	-	-	-	-	6	-	-	-	-	-	-	-
Vinclozolin (sum)	0.0213	-	-	-	-	0.0231	-	0.0246	-	-	-	0.0165	-	-

\*) The residues measured refer to the legal residue definitions reported in the EU legislation.

(1) Where the term "sum" is used, the reported residue levels refer to the summed residue levels of the single components of the "complex" residue definitions, as set by European legislation.

(2) For folpet and captan, the residue levels reported in the table for the following crops refer to the sum of folpet and captan: apples, beans with pods, pears, strawberries and tomatoes.

(3) The residue levels of the dithiocarbamates (measured as CS2) were recalculated to mancozeb by applying a conversion factor of 1.78.

(4) The residue levels of the dithiocarbamates (measured as CS2) were recalculated to ziram by applying a conversion factor of 2.01.

(5) Butter: the residue levels were recalculated to milk considering milk fat content of 4%.

**Table 5-8:** Mean residue level (mg/kg) for the 2<sup>nd</sup> group of commodities (oranges – wheat) included in the 2009-2011 EU coordinated programmes used as input values for the long-term dietary exposure calculations.  
Empty cells refer to pesticide/crop combinations for which residues above the reporting level were not measured.

Pesticide/residue definition <sup>(*)</sup> (1)	Oranges	Peaches	Pears	Peas (without pods)	Peppers	Potatoes	Rice	Rye	Spinach	Strawberries	Table grapes	Tomatoes	Wheat
Abamectin (sum)	-	-	-	-	0.0175	-	-	-	-	0.0181	-	-	-
Acephate	-	-	-	-	-	-	-	-	-	-	-	-	-
Acetamiprid	0.0106	0.0101	0.0134	-	0.0123	-	0.0083	-	-	0.0087	0.0093	0.0108	-
Aldicarb (sum)	-	-	-	-	-	0.0096	-	-	-	-	-	-	-
Amitrole	-	-	-	-	-	-	-	-	-	-	-	-	-
Azinphos-ethyl	-	-	-	-	-	-	-	-	-	-	-	-	-
Azinphos-methyl	0.0172	0.0173	0.0165	-	-	-	-	-	-	-	0.0158	-	-
Azoxystrobin	0.0174	-	0.0133	0.0172	0.0191	0.0142	0.0151	-	0.0176	0.0276	0.0242	0.0163	-
Benfuracarb	-	-	-	-	-	-	-	-	-	-	-	-	-
Bifenthrin	-	0.0154	0.0149	-	0.0164	0.0149	-	-	0.0163	0.0133	0.0178	0.0158	0.0175
Boscalid	0.0117	0.0144	0.0349	0.0131	0.0157	0.0122	-	0.0094	0.0150	0.0589	0.0386	0.0185	0.0121
Bromopropylate	0.0158	-	0.0136	-	0.0160	0.0144	-	-	-	-	0.0159	0.0149	0.0168
Bromuconazole (sum)	-	-	0.0131	-	-	-	-	-	-	-	-	-	-
Bupirimate	-	0.0151	-	-	0.0162	0.0144	0.0134	-	-	0.0183	0.0149	0.0151	-
Buprofezin	0.0149	0.0166	0.0134	-	0.0150	0.0142	0.0153	-	-	0.0131	0.0138	0.0172	-
Cadusafos	-	-	-	-	-	0.0163	-	-	-	-	-	-	-
Camphechlor	-	-	-	-	-	-	-	-	-	-	-	-	-
Captan <sup>(2)</sup>	0.0122	0.0123	0.0676	-	-	-	-	-	-	0.0420	0.0130	0.0489	-
Carbaryl	-	0.0181	-	-	0.0167	-	-	-	-	-	0.0164	-	0.0395
Carbendazim and benomyl	0.0156	0.0129	0.0135	0.0161	0.0160	0.0110	0.0082	-	-	0.0123	0.0172	0.0120	-
Carbofuran (sum)	0.0098	-	-	-	0.0103	-	-	-	-	-	0.0101	-	-
Carbosulfan	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlordane (sum animal products)	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorfenvinphos	-	-	-	-	-	0.0112	0.0106	-	-	-	-	0.0113	-
Chlormequat	-	-	-	-	0.0119	-	-	0.0956	-	-	-	-	0.0937
Chlorobenzilate	-	-	-	-	-	-	-	-	-	-	-	-	-
Chlorothalonil	0.0092	0.0156	0.0168	-	0.0235	0.0089	-	-	0.0162	0.0191	0.0256	0.0270	0.0172



Pesticide/residue definition <sup>(6),(1)</sup>	Oranges	Peaches	Pears	Peas (without pods)	Peppers	Potatoes	Rice	Rye	Spinach	Strawberries	Table grapes	Tomatoes	Wheat
Chlorpropham (sum)	0.0110	-	0.0123	-	0.0120	0.2008	-	-	0.0115	-	-	-	0.0093
Chlorpyrifos	0.0317	0.0199	0.0175	-	0.0159	0.0129	0.0184	0.0123	0.0135	0.0134	0.0250	0.0151	0.0185
Chlorpyrifos-methyl	0.0134	0.0131	0.0130	-	0.0143	-	0.0162	0.0146	-	0.0113	0.0154	0.0137	0.0200
Clofentezine	-	-	-	0.0091	0.0097	-	-	-	-	-	-	-	-
Cyfluthrin (sum)	0.0127	0.0234	0.0198	0.0174	0.0311	-	-	-	-	-	0.0297	0.0180	-
Cypermethrin (sum)	0.0197	0.0228	0.0223	0.0227	0.0278	0.0233	-	-	0.0237	0.0201	0.0288	0.0196	-
Cyproconazole	0.0155	0.0166	-	-	0.0151	-	-	0.0173	-	0.0158	0.0149	0.0159	0.0194
Cyprodinil	0.0128	0.0200	0.0223	0.0142	0.0150	0.0138	-	-	-	0.0500	0.0540	0.0173	-
DDT (sum)	-	-	-	-	-	-	-	-	-	-	-	-	-
Deltamethrin	0.0209	0.0192	0.0189	-	0.0206	0.0202	0.0209	0.0129	0.0232	0.0202	0.0195	0.0225	0.0237
Diazinon	0.0095	-	-	-	0.0125	0.0092	-	-	-	-	-	-	0.0125
Dichlofluanid	-	-	-	-	-	-	-	-	-	-	-	-	-
Dichlorvos	-	-	-	-	-	0.0088	-	-	-	-	-	-	-
Dicofol (sum)	0.0343	-	-	0.0141	0.0149	0.0128	-	-	-	0.0118	-	0.0256	-
Dieldrin (Aldrin and Dieldrin)	-	-	-	-	-	-	-	-	-	-	-	-	-
Difenoconazole	0.0126	0.0265	0.0135	0.0145	0.0151	-	-	-	-	0.0135	0.0124	0.0150	0.0145
Dimethoate (sum)	0.0105	0.0101	0.0101	0.0099	0.0106	-	-	-	0.0130	0.0097	0.0113	0.0103	-
Dimethomorph	0.0143	-	0.0125	-	0.0131	0.0136	-	-	0.0146	0.0115	0.0183	0.0149	-
Diphenylamine	0.0188	0.0180	0.0469	0.0229	-	-	-	-	-	-	-	0.0186	0.0226
Dithiocarbamates <sup>(3)</sup>	0.3644	0.2253	0.2290	0.0632	0.1136	0.0653	-	-	0.0712	0.2539	0.1634	0.3099	0.1203
Dithiocarbamates <sup>(4)</sup>	0.4115	0.2544	0.2586	0.0714	0.1283	0.0737	-	-	0.0804	0.2867	0.1845	0.3499	0.1359
Endosulfan (sum)	0.0146	-	0.0137	0.0182	0.0187	0.0153	0.0146	-	-	0.0128	0.0160	0.0152	-
Endrin	-	-	-	-	-	-	-	-	-	-	-	-	-
Ethion	0.0089	-	-	-	-	-	-	-	-	0.0089	-	-	-
Ethoprophos	-	-	-	-	-	-	-	-	-	-	-	-	-
Fenamiphos (sum)	-	-	-	-	-	-	-	-	-	-	0.0105	-	-
Fenarimol	0.0115	-	-	0.0120	0.0138	0.0111	-	-	-	0.0118	0.0137	0.0136	-
Fenbuconazole	0.0170	0.0179	0.0172	-	-	-	-	-	0.0155	-	0.0147	-	-
Fenhexamid	0.0158	0.0211	0.0157	-	0.0179	-	0.0148	-	-	0.1084	0.1339	0.0239	-
Fenitrothion	0.0092	0.0091	-	-	-	-	-	-	-	-	0.0093	0.0090	0.0155
Fenoxycarb	-	0.0157	0.0164	-	-	-	-	-	-	-	0.0151	-	-

Pesticide/residue definition <sup>(9),(1)</sup>	Oranges	Peaches	Pears	Peas (without pods)	Peppers	Potatoes	Rice	Rye	Spinach	Strawberries	Table grapes	Tomatoes	Wheat
Fenpropathrin	0.0144	-	-	0.0082	-	-	-	-	-	0.0143	0.0093	-	-
Fenitoin (sum)	-	-	-	-	-	-	-	-	-	-	-	-	-
Fenvalerate/Esfenvalerate (sum)	-	-	-	-	-	-	-	-	-	-	-	-	-
Fipronil (sum)	0.0036	-	-	-	-	-	-	-	-	-	-	-	-
Fludioxonil	0.0135	0.0174	0.0197	0.0137	0.0150	-	-	-	-	0.0397	0.0316	0.0155	0.0158
Flufenoxuron	-	0.0116	0.0111	0.0118	0.0121	-	-	-	-	0.0106	0.0122	-	-
Fluquinconazole	-	-	0.0126	-	-	-	-	-	-	-	-	-	-
Flusilazole	-	0.0135	0.0097	-	0.0100	-	-	-	-	0.0093	0.0120	-	-
Flutriafol	-	-	-	-	0.0181	-	-	-	-	0.0169	-	0.0198	-
Folpet <sup>(2)</sup>	0.0120	0.0115	0.0676	-	0.0130	0.0228	-	-	0.0338	0.0420	0.0177	0.0489	-
Formetanate (sum)	-	0.0175	-	-	0.0121	-	-	-	-	-	-	0.0118	-
Fosthiazate	-	-	-	-	-	0.0096	-	-	-	-	-	-	-
Hexachlorobenzene	-	-	-	-	-	-	-	-	-	-	-	-	-
Heptachlor	-	-	-	-	-	-	-	-	-	-	-	-	-
HCH alpha	-	-	-	-	-	-	-	-	-	-	-	-	-
HCH beta	-	-	-	-	-	-	-	-	-	-	-	-	-
Lindane	-	-	-	-	-	-	-	-	-	-	-	-	-
Hexaconazole	-	0.0110	-	-	0.0113	-	0.0105	-	-	0.0117	0.0131	-	-
Hexythiazox	0.0126	0.0172	-	-	0.0191	-	-	-	-	0.0157	0.0191	0.0214	-
Imazalil	0.8751	0.0110	0.0345	-	0.0116	0.0239	-	-	-	0.0098	0.0115	0.0194	0.0123
Imidacloprid	0.0123	0.0111	0.0127	-	0.0130	0.0117	0.0140	-	0.0107	0.0106	0.0197	0.0129	-
Indoxacarb	0.0097	0.0117	0.0171	-	0.0165	-	-	-	0.0166	0.0099	0.0181	0.0189	-
Iprodione	0.0142	0.0595	0.0302	0.0229	0.0270	0.0135	0.0186	-	0.0143	0.0272	0.0630	0.0321	0.0195
Iprovalicarb	-	-	0.0126	-	-	-	-	-	-	-	0.0129	0.0151	-
Kresoxim-methyl	0.0153	-	0.0133	0.0154	0.0159	0.0144	-	-	-	0.0165	0.0149	0.0151	0.0157
Lambda-Cyhalothrin	0.0141	0.0141	0.0124	0.0146	0.0136	0.0110	0.0110	-	0.0171	0.0141	0.0138	0.0135	-
Linuron	-	-	-	-	-	-	-	-	0.0177	-	-	-	-
Malathion (sum)	0.0139	0.0126	0.0159	-	0.0143	-	0.0164	0.0126	-	-	0.0141	-	0.0147
Mepanipyrim (sum)	-	-	0.0090	-	-	-	-	0.0205	-	0.0247	0.0162	0.0160	-
Mepiquat	-	-	-	-	-	-	-	-	-	-	-	-	0.0239
Metalaxy1 (sum)	0.0120	0.0127	-	-	0.0125	0.0128	-	-	0.0112	0.0123	0.0147	0.0126	-

Pesticide/residue definition <sup>(9),(1)</sup>	Oranges	Peaches	Pears	Peas (without pods)	Peppers	Potatoes	Rice	Rye	Spinach	Strawberries	Table grapes	Tomatoes	Wheat
Metconazole	-	-	-	0.0125	-	-	-	-	-	-	-	-	0.0196
Methamidophos	0.0091	-	-	-	-	-	-	-	-	0.0090	-	-	-
Methidathion	0.0230	-	0.0147	0.0122	0.0125	-	-	-	-	-	-	0.0155	-
Methiocarb (sum)	-	-	-	-	0.0105	-	-	-	-	0.0096	0.0106	0.0108	-
Methomyl and Thiodicarb	-	0.0106	0.0104	-	0.0125	-	0.0124	-	-	0.0100	0.0111	0.0118	-
Methoxychlor	-	-	-	-	-	-	-	-	-	-	-	-	-
Monocrotophos	-	0.0182	-	-	0.0191	-	-	-	-	-	-	-	-
Myclobutanil	0.0236	0.0176	0.0131	0.0109	0.0179	-	-	-	-	0.0191	0.0227	0.0195	-
Oxamyl	-	0.0094	-	-	0.0115	0.0090	-	-	-	-	-	0.0093	-
Oxydemeton-methyl (sum)	-	-	-	-	-	-	-	-	-	-	-	-	-
Paclotrbutrazol	-	0.0202	0.0161	-	-	-	-	-	-	0.0162	-	-	-
Parathion	-	-	0.0136	0.0148	0.0162	-	-	-	-	-	-	0.0151	-
Parathion-methyl (sum)	-	-	-	-	-	-	-	-	-	-	-	-	-
Penconazole	0.0140	0.0136	-	-	0.0152	-	-	-	-	0.0142	0.0162	0.0154	-
Permethrin	-	-	-	-	-	-	-	-	-	-	-	-	-
Phosalone	0.0156	0.0159	0.0133	-	-	0.0144	-	-	-	-	-	-	0.0176
Phosmet (sum)	0.0185	0.0157	0.0172	-	-	-	-	-	-	-	0.0140	-	0.0192
Phoxim	-	-	-	-	-	-	-	-	-	-	-	-	0.0086
Pirimicarb (sum)	-	0.0140	0.0123	0.0097	0.0116	-	-	0.0090	0.0139	0.0115	-	-	0.0106
Pirimiphos-methyl	0.0169	-	-	-	0.0160	-	0.0210	0.0453	-	-	-	0.0164	0.0459
Prochloraz (sum)	0.0301	-	-	-	0.0149	-	-	-	-	0.0139	-	-	-
Procymidone	-	0.0181	0.0136	0.0151	0.0182	-	-	-	-	0.0155	0.0197	0.0169	-
Profenofos	0.0162	-	0.0144	0.0148	0.0153	0.0143	-	-	-	0.0136	0.0140	0.0158	0.0184
Propamocarb (sum)	-	-	-	-	0.0134	0.0109	-	-	0.0165	0.0108	0.0094	0.0187	-
Propargite	0.0212	0.0391	-	-	0.0320	-	-	-	-	0.0096	0.0296	0.0280	-
Prothioconazole	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyrazophos	-	-	-	-	-	-	-	-	-	-	-	-	-
Pyridaben	0.0134	0.0130	0.0123	-	0.0133	-	-	-	-	0.0115	0.0129	0.0136	-
Pyrimethanil	0.0201	0.0146	0.0262	0.0158	0.0167	0.0137	-	-	-	0.0240	0.0475	0.0190	-
Pyriproxyfen	0.0144	-	-	0.0129	0.0131	0.0140	-	-	-	-	0.0125	0.0147	-

Pesticide/residue definition <sup>(*)</sup> , <sup>(1)</sup>	Oranges	Peaches	Pears	Peas (without pods)	Peppers	Potatoes	Rice	Rye	Spinach	Strawberries	Table grapes	Tomatoes	Wheat
Quinoxifen	0.0109	-	-	-	-	-	-	-	-	0.0109	0.0128	0.0108	-
Resmethrin	-	-	-	-	-	-	-	-	-	-	-	-	-
Spiroxamine	-	-	-	-	-	-	-	-	-	-	0.0185	0.0156	0.0194
Tebuconazole	0.0145	0.0248	0.0149	-	0.0156	-	0.0209	0.0192	-	-	0.0185	0.0175	0.0193
Tebufenozide	-	0.0112	0.0128	-	0.0099	-	0.0184	-	-	-	0.0104	0.0107	-
Tebufenpyrad	0.0123	-	0.0119	-	0.0116	-	-	-	-	0.0112	0.0118	0.0136	-
Teflubenzuron	0.0135	0.0166	0.0184	-	0.0132	-	-	-	-	-	0.0114	0.0188	-
Tefluthrin	-	-	0.0122	-	-	-	-	-	-	-	-	0.0133	-
Tetradifon	0.0251	-	-	-	0.0128	-	-	-	-	-	-	0.0123	-
Thiabendazole	0.3123	0.0123	0.0487	-	0.0143	0.0242	-	0.0207	-	0.0137	0.0143	0.0157	0.0171
Thiacloprid	-	0.0101	0.0136	0.0090	0.0105	-	-	-	-	0.0120	-	0.0108	-
Thiophanate-methyl	-	0.0148	0.0129	0.0147	0.0127	-	0.0099	-	-	0.0173	0.0121	0.0160	-
Tolclofos-methyl	-	-	0.0128	-	-	0.0134	-	-	-	0.0119	-	-	0.0146
Tolyfluanid (sum)	-	-	-	-	-	0.0140	-	-	-	0.0138	0.0167	0.0194	-
Triadimefon (sum)	-	-	0.0202	0.0177	0.0235	0.0213	-	-	-	0.0187	0.0258	0.0229	-
Triazophos	-	-	-	-	0.0091	-	0.0097	-	-	-	-	-	-
Trichlorfon	-	0.0215	0.0221	0.0138	-	-	-	-	-	0.0276	-	-	-
Trifloxystrobin	0.0122	0.0117	0.0118	0.0106	0.0138	-	-	-	-	0.0132	0.0209	0.0115	-
Triticonazole	-	-	-	-	-	-	-	-	-	-	-	-	-
Vinclozolin (sum)	-	0.0177	-	0.0186	-	-	-	-	-	0.0160	0.0302	-	-

(\*) The residues measured refer to the legal residue definitions reported in the EU legislation.

(1) Where the term "sum" is used, the reported residue levels refer to the summed residue levels of the single components of the "complex" residue definitions, as set by European legislation.

(2) For folpet and captan, the residue levels reported in the table for the following crops refer to the sum of folpet and captan: apples, beans with pods, pears, strawberries and tomatoes.

(3) The residue levels of the dithiocarbamates (measured as CS2) were recalculated to mancozeb by applying a conversion factor of 1.78.

(4) The residue levels of the dithiocarbamates (measured as CS2) were recalculated to ziram by applying a conversion factor of 2.01.

### 5.3.2. Acceptable Daily Intake values (ADIs)

The long-term risk assessment requires a comparison between the exposure calculated with the mean pesticide residue levels consumed and the ADI. The list of the ADIs used for the assessment of the chronic exposure is reported in Table 5-9.

**Table 5-9:** ADI values used as input values for the long-term risk assessment.

Pesticide	ADI (mg/kg bw/d)	ADI evaluation year	ADI <sup>(1)</sup> source
Abamectin	0.0025	2008	EFSA
Acephate	0.03	2005	JMPR
Acetamiprid	0.07	2004	COM
Aldicarb	0.003	1995	JMPR
Amitrole	0.001	2001	COM
Azinphos-ethyl	No ADI allocated, no residues measured above the LOQ	1995	COM/Decision 95/76/EC
Azinphos-methyl	0.005	2008	DE
Azoxystrobin	0.2	2010	EFSA
Benfuracarb	0.01	2009	EFSA
Bifenthrin	0.015	2008	EFSA
Boscalid	0.04	2006	JMPR
Bromopropylate	0.03	1993	JMPR
Bromuconazole	0.01	2010	EFSA
Bupirimate	0.05	2010	EFSA
Buprofezin	0.01	2010	EFSA
Cadusafos (aka ebufos)	0.0004	2008	EFSA
Camphechlor	No ADI allocated		
Captan	0.1	2009	EFSA
Carbaryl	0.0075	2006	EFSA
Carbendazim/benomyl	0.02/0.03	2010	EFSA
Carbofuran	0.00015	2009	EFSA
Carbosulfan	0.005	2009	EFSA
Chlordane	0.0005	1994	JMPR
Chlorfenvinphos	0.0005	1994	JMPR
Chlormequat <sup>(2)</sup>	0.04	2008	EFSA
Chlorobenzilate	0.02	1980	JMPR
Chlorothalonil	0.015	2006	COM
Chlorpropham	0.05	2003	COM
Chlorpyrifos	0.01	2005	COM
Chlorpyrifos-methyl	0.01	2005	COM
Clofentezine	0.02	2009	EFSA
Cyfluthrin	0.003	2002	COM
Cypermethrin/alpha-cypermethrin	0.05/0.015	2005/2004	COM
Cyproconazole	0.02	2010	EFSA
Cyprodinil	0.03	2005	EFSA
DDT	0.01	2000	JMPR
Deltamethrin	0.01	2002	COM
Diazinon	0.0002	2006	EFSA
Dichlofluanid	0.007	2000	NL
Dichlorvos <sup>(3)</sup>	No ADI allocated	2006	EFSA
Dicofol	0.0022	2006	DAR <sup>(4)</sup>
Dieldrin	0.0001	1977	JMPR

Pesticide	ADI (mg/kg bw/d)	ADI evaluation year	ADI <sup>(1)</sup> source
Difenoconazole	0.01	2011	EFSA
Dimethoate/omethoate	0.001/0.0003	2006	EFSA
Dimethomorph	0.05	2006	EFSA
Diphenylamine	0.075	2008	EFSA
Dithiocarbamates: mancozeb/ziram	0.05/0.006	2005	COM
Endosulfan	0.006	2001	ECCO
Endrin	0.0002	1994	JMPR
Ethion (aka diethion)	0.002	1990	JMPR
Ethoprophos	0.0004	2006	EFSA
Fenamiphos (aka phenamiphos)	0.0008	2006	EFSA
Fenarimol	0.01	2007	COM
Fenbuconazole	0.006	2010	EFSA
Fenhexamid	0.2	1998	COM
Fenitrothion	0.005	2006	EFSA
Fenoxycarb	0.053	2010	EFSA
Fenpropathrin	0.03	2006	UK
Fenthion	0.007	2001	ECCO
Fenvalerate/esfenvalerate	0.0125/0.02	2005	EMEA/COM
Fipronil	0.0002	2006	EFSA
Fludioxonil	0.37	2007	EFSA
Flufenoxuron	0.01	2010	DAR
Fluquinconazole	0.002	2011	EFSA
Flusilazole (general population)	0.002	2007	COM
Flutriafol	0.01	2010	EFSA
Folpet	0.1	2009	EFSA
Formetanate	0.004	2006	EFSA
Fosthiazate	0.004	2003	COM
HCH - alpha	No ADI allocated		
HCH - beta	No ADI allocated		
HCH-gamma (Lindane)	0.001	1999	ECCO
Heptachlor	0.0001	1991	JMPR
Hexachlorobenzene	No ADI allocated		
Hexaconazole	0.005	1990	JMPR
Hexythiazox	0.03	2010	EFSA
Imazalil	0.025	2010	EFSA
Imidacloprid	0.06	2008	EFSA
Indoxacarb	0.006	2005	COM
Iprodione	0.06	2002	COM
Iprovalicarb	0.015	2002	COM
Kresoxim-methyl	0.4	2010	EFSA
lambda-Cyhalothrin	0.005	2001	COM
Linuron	0.003	2002	COM
Malathion	0.03	2009	EFSA
Mepanipyrim	0.02	2004	COM
Mepiquat	0.2	2008	EFSA
Metalaxyl	0.08	2002	COM
Metconazole	0.01	2006	EFSA
Methamidophos	0.001	2007	COM
Methidathion	0.001	1992	JMPR
Methiocarb (aka mercaptodimethur)	0.013	2006	EFSA
Methomyl/thiodicarb	0.0025/0.01	2008/2005	EFSA

Pesticide	ADI (mg/kg bw/d)	ADI evaluation year	ADI <sup>(1)</sup> source
Methoxychlor	No ADI allocated		
Monocrotophos	0.0006	1993	JMPR
Myclobutanil	0.025	2010	EFSA
Oxamyl	0.001	2005	EFSA
Oxydemeton-methyl	0.0003	2006	EFSA
Paclobutrazol	0.022	2010	EFSA
Parathion	0.0006	2001	ECCO
Parathion-methyl	0.001	2002	ECCO
Penconazole	0.03	2008	EFSA
Permethrin	0.05	1999	JMPR
Phosalone	0.01	2006	EFSA
Phosmet	0.003	2006	EFSA
Phoxim	0.004	1999	JECFA
Pirimicarb	0.035	2006	EFSA
Pirimiphos-methyl	0.004	2005	EFSA
Prochloraz	0.01	2007	DAR
Procymidone	0.0028	2007	DAR
Profenofos	0.03	2007	JMPR
Propamocarb	0.29	2006	EFSA
Propargite	No ADI allocated	2011	EFSA
Prothioconazole/desthio prothioconazole	0.05/0.01	2007	EFSA
Pyrazophos	0.001	1999	ECCO
Pyridaben	0.01	2010	EFSA
Pyrimethanil	0.17	2006	EFSA
Pyriproxyfen	0.1	2009	EFSA
Quinoxifen	0.2	2003	COM
Resmethrin	0.03	1991	JMPR
Spiroxamine	0.025	2010	EFSA
Tebuconazole	0.03	2008	EFSA
Tebufenozide	0.02	2010	EFSA
Tebufenpyrad	0.01	2008	EFSA
Teflubenzuron	0.01	2008	EFSA
Tefluthrin	0.005	2010	EFSA
Tetradifon	0.015	2001	DE
Thiabendazole	0.1	2001	COM
Thiacloprid	0.01	2004	COM
Thiophanate-methyl	0.08	2005	COM
Tolclofos-methyl	0.064	2005	EFSA
Tolyfluanid	0.1	2005	EFSA
Triadimefon/triadimenol	0.03/0.05	2004/2008	JMPR/EFSA
Triazophos	0.001	2002	JMPR
Trichlorfon	No ADI allocated	2006	EFSA
Trifloxystrobin	0.1	2003	COM
Triticonazole	0.025	2006	EFSA
Vinclozolin	0.005	2006	COM

(1) For the long-term risk assessment, the most recent ADIs available were used. It should be mentioned that some of the ADI values were derived recently and were not in place in 2009 when the monitoring results were generated. The ADIs have been selected among the reference values established in the framework of toxicological evaluations carried out by European and international organisations (e.g. EFSA, European Commission and JMPR); where those were not available, the ADIs set by national competent organisations have been selected.

- (2) ADI value derived for chlormequat chloride was recalculated by applying a molecular weight correction factor to chlormequat.
- (3) A tentative ADI was derived in an EPCO meeting. However, EFSA concluded that based on the available opinion of the PPR Panel, as there are still uncertainties and data requirement identified, neither the reference values nor the safety factor(s) are possible to be confirmed in the light of uncertainties on the overall picture of the toxicological properties and the data requirement for a long-term study.
- (4) DAR = Draft Assessment Report prepared in the framework of the active substance peer-review under Directive EEC/91/414.

### **5.3.3. Presentation of the results of the long-term consumer exposure**

For each pesticide, the chronic risk assessment was performed for all 27 diets included in the EFSA PRIMo model. The results of the TMDI calculations are reported separately for each pesticide in an exposure assessment summary report. The summary reports can be found in Appendix IV of this report. For each of the 27 diets, the three commodities representing the largest proportion of the ADI exhaustion are reported, together with the total dietary intake for that commodity as a proportion of the ADI. If the ADI was not exceeded in any diet, a chronic consumer risk can be excluded. In addition, in the calculation spread sheets a chart is included for each pesticide which presents the contribution of the residues on individual crops to the overall dietary exposure in the individual diets included in the EFSA PRIMo.

### **5.4. Results of the long-term risk assessment**

The 2009 EU coordinated monitoring programme included 138 active substances or groups of substances.

In Table 5-10, the highest estimated exposure for each pesticide assessed, expressed in percent of the ADI, is reported.



**Table 5-10:** Summary results of the long-term risk assessment.

Pesticide	TMDI max (% ADI)	Pesticide	TMDI max (% ADI)
Abamectin (sum <sup>(1)</sup> )	1.00	Endosulfan (sum)	5.80
Acephate	0.40	Endrin	no exposure(*)
Acetamiprid	0.30	Ethion	3.20
Aldicarb (sum)	1.90	Ethoprophos	no exposure(*)
Amitrole	no exposure(*)	Fenamiphos (sum)	1.70
Azinphos-ethyl	no ADI available, no exposure (*)	Fenarimol	3.00
Azinphos-methyl	6.10	Fenbuconazole	5.00
Azoxystrobin	0.20	Fenhexamid	0.30
Benfuracarb	no exposure(*)	Fenitrothion	4.70
Bifenthrin	2.70	Fenoxycarb	0.40
Boscalid	1.50	Fenpropathrin	0.60
Bromopropylate	1.50	Fenthion (sum)	no exposure(*)
Bromuconazole (sum)	0.10	Fenvalerate/Esfenvalerate (sum)	no exposure(*)
Bupirimate	0.60	Fipronil (sum)	9.00
Buprofezin	3.80	Fludioxonil	0.10
Cadusafos	24.00	Flufenoxuron	1.70
Camphechlor	no exposure(*) no ADI available	Fluquinconazole	7.50
Captan <sup>(7)</sup>	1.20	Flusilazole	8.00
Carbaryl	5.20	Flutriafol	0.90
Carbendazim and benomyl <sup>(2)</sup>	2.00	Folpet	1.30
Carbofuran (sum)	127.20	Formetanate (sum)	4.50
Carbosulfan	0.10	Fosthiazate	1.40
Chlordane (sum, animal products)	0.90	Hexachlorobenzene	no ADI available
Chlorfenvinphos	39.80	Heptachlor	no exposure(*)
Chlormequat	2.40	HCH alpha	no ADI available
Chlorobenzilate	no exposure(*)	HCH beta	no ADI available
Chlorothalonil	3.50	Lindane	0.70
Chlorpropham (sum)	2.60	Hexaconazole	3.70
Chlorpyrifos	6.60	Hexythiazox	1.20
Chlorpyrifos-methyl	4.00	Imazalil	17.50
Clofentezine	0.00	Imidacloprid	0.50
Cyfluthrin (sum)	14.00	Indoxacarb	5.30
Cypermethrin (sum) <sup>(3)</sup>	3.70	Iprodione	1.30
Cyproconazole	2.00	Iprovalicarb	0.40
Cyprodinil	1.50	Kresoxim-methyl	0.10
DDT (sum)	0.10	Lambda-Cyhalothrin	7.10
Deltamethrin	5.90	Linuron	2.30
Diazinon	120.90	Malathion (sum)	0.60
Dichlofluanid	0.60	Mepanipyrim (sum)	0.30
Dichlorvos <sup>(4)</sup>	no ADI available	Mepiquat	0.10
Dicofol (sum)	11.10	Metalaxyl (sum) <sup>(8)</sup>	0.40
Dieldrin (Aldrin and Dieldrin)	9.20	Metconazole	1.70
Difenoconazole	3.90	Methamidophos	5.40
Dimethoate (sum) <sup>(5)</sup>	78.80	Methidathion	32.50
Dimethomorph	0.70	Methiocarb (sum)	1.40
Diphenylamine	1.60	Methomyl and Thiodicarb <sup>(9)</sup>	7.20
Dithiocarbamates <sup>(6)</sup>	115.90	Methoxychlor	no exposure(*)
		Monocrotophos	6.80

Pesticide	TMDI max (% ADI)
Myclobutanil	1.80
Oxamyl	7.00
Oxydemeton-methyl (sum)	35.10
Paclobutrazol	1.10
Parathion	10.60
Parathion-methyl (sum)	3.00
Penconazole	1.00
Permethrin	no exposure(*)
Phosalone	4.00
Phosmet (sum)	12.30
Phoxim	1.80
Pirimicarb (sum)	0.80
Pirimiphos-methyl	13.40
Prochloraz (sum)	3.40
Procymidone	8.90
Profenofos	1.00
Propamocarb (sum)	0.10
Propargite	no ADI available
Prothioconazole	no exposure(*)
Pyrazophos	no exposure(*)
Pyridaben	2.70
Pyrimethanil	0.30

Pesticide	TMDI max (% ADI)
Pyriproxyfen	0.20
Quinoxifen	0.00
Resmethrin	no exposure(*)
Spiroxamine	1.30
Tebuconazole	1.50
Tebufenozide	0.90
Tebufenpyrad	2.50
Teflubenzuron	3.10
Tefluthrin	1.10
Tetradifon	1.70
Thiabendazole	2.40
Thiacloprid	1.70
Thiophanate-methyl	0.30
Tolclofos-methyl	0.30
Tolyfluanid (sum)	0.10
Triadimefon (sum) <sup>(10)</sup>	1.30
Triazophos	11.80
Trichlorfon	no ADI available
Trifloxystrobin	0.30
Triticonazole	0.00
Vinclozolin (sum)	7.00

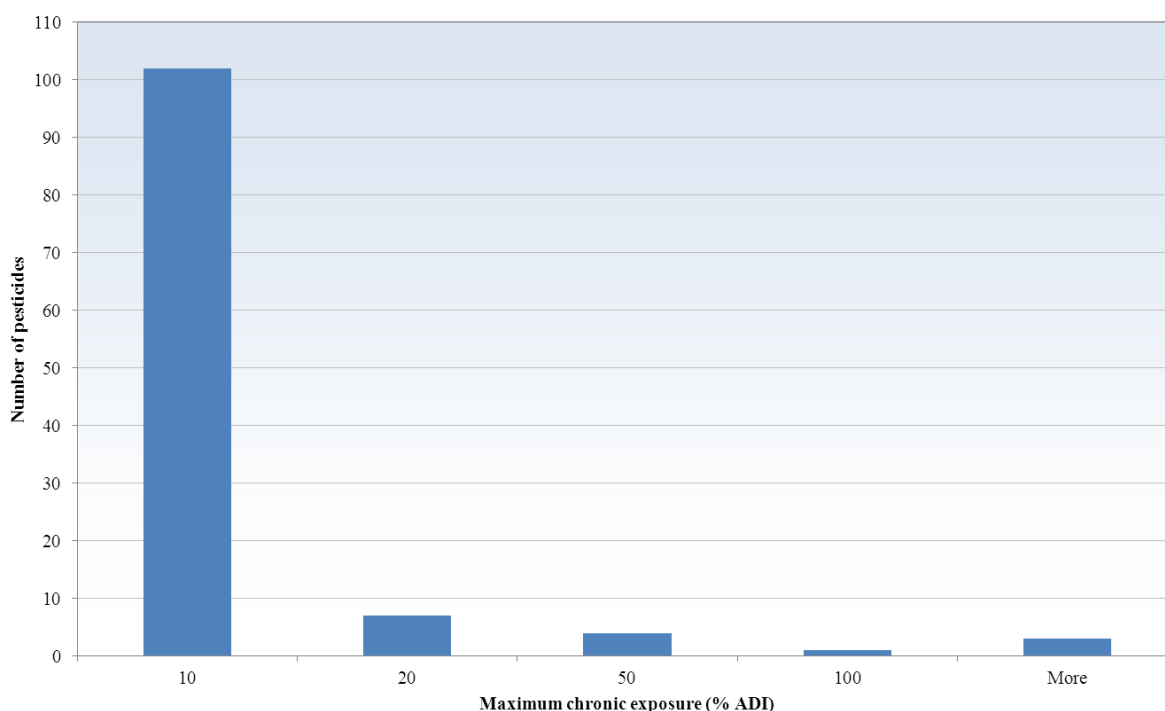
(\*) no exposure. = no quantifiable residues were measured above the LOQ in all crops among all samples analysed; a “no residue” or “no use” situation was assumed.

- (1) Where the term “sum” is used, the reported residue levels refer to the summed residue levels of the single components of the “complex” residue definitions, as set by European legislation.
- (2) The toxicological reference values used for carbendazim.
- (3) Toxicological reference values for alpha-cypermethrin.
- (4) Toxicological reference values not derived as EFSA could not conclude on the reference values due to insufficient data.
- (5) Due to the residue definition set for dimethoate and omethoate and the format used to report the residue level data the long-term exposure assessment was not conclusive.
- (6) Toxicological reference values for ziram.
- (7) Toxicological reference values for folpet.
- (8) Toxicological reference values for metalaxyl-M.
- (9) Toxicological reference values for methomyl.
- (10) Toxicological reference values for triadimenol.

For 15 substances or groups of substances, no measurable residues above the LOQ were reported in all crops. Thus, it is concluded that the consumer exposure was negligible for these pesticides.

Of the remaining pesticides, 123 pesticides for which positive measurements above the LOQ were reported at least in one sample, the ADI was not established for 6 pesticides (dichlorvos, HCH-alpha, HCH-beta, hexachlorobenzene, propargite and trichlorfon); therefore, no chronic risk assessment could be performed for these substances.

With the exception of 3 pesticides or groups of pesticides (carbofuran, diazinon and dithiocarbamates), for all 114 remaining substances or groups of substances the estimated exposure calculated as tier 1 was below the ADI value. Based on the current scientific knowledge, a long-term consumer health risk can be excluded for these compounds. Furthermore, it is noted that for 93% of the 117 substances assessed (109 pesticides), the estimated maximum exposure accounts for less than 20% of the ADI and for the largest majority of the pesticides (102 pesticides; 87%) the estimated exposures amounted to less of 10% of the ADI (Figure 5-45).



**Figure 5-43:** Breakdown of the total number of pesticides for which the long-term risk assessment was performed (117) according to the results of the chronic risk assessment, expressed as percentage of the ADI exhaustion.

#### 5.4.1. Pesticides for which a chronic risk could not be excluded

##### 5.4.1.1. Carbofuran

The maximum estimated TMDI for carbofuran, calculated under the assumptions reported in section 5.3, was equivalent to 127% of the ADI (Figure 5-44); the ADI was slightly exceeded in only one diet (German child population).

It is noted that the exposure is mainly related to carbofuran residues on apples (78% of the ADI). Since in apples only one out of 2,039 samples contained a result above the LOQ (highest residue

reported 0.02 mg/kg) the calculated exposure is driven by the LOQ value (between 0.001 and 0.02 mg/kg). Taking the above into account, it is concluded that the actual exposure via apples is significantly lower than 78% of the ADI).

In February 2006, the carbofuran EU MRL for apples was lowered to the LOQ of 0.02 mg/kg. Furthermore, the authorisations for plant protection products containing carbofuran had to be withdrawn by 13 December 2007. Any period of grace granted by Member States had to expire on 13 December 2008 at the latest. Therefore, apple samples lawfully treated in 2008 may still have been on the market in 2009.

EFSA concludes that the long-term consumer exposure to carbofuran residues estimated by EFSA is affected by uncertainties which are mainly related to the conservative model assumptions. The real exposure situation of the European population is therefore less critical. However, because of the high toxicity of the active substance, EFSA recommends further monitoring the residue situation in food at EU level and considering to lower the MRLs which are currently set at the LOQ of 0.02 mg/kg.

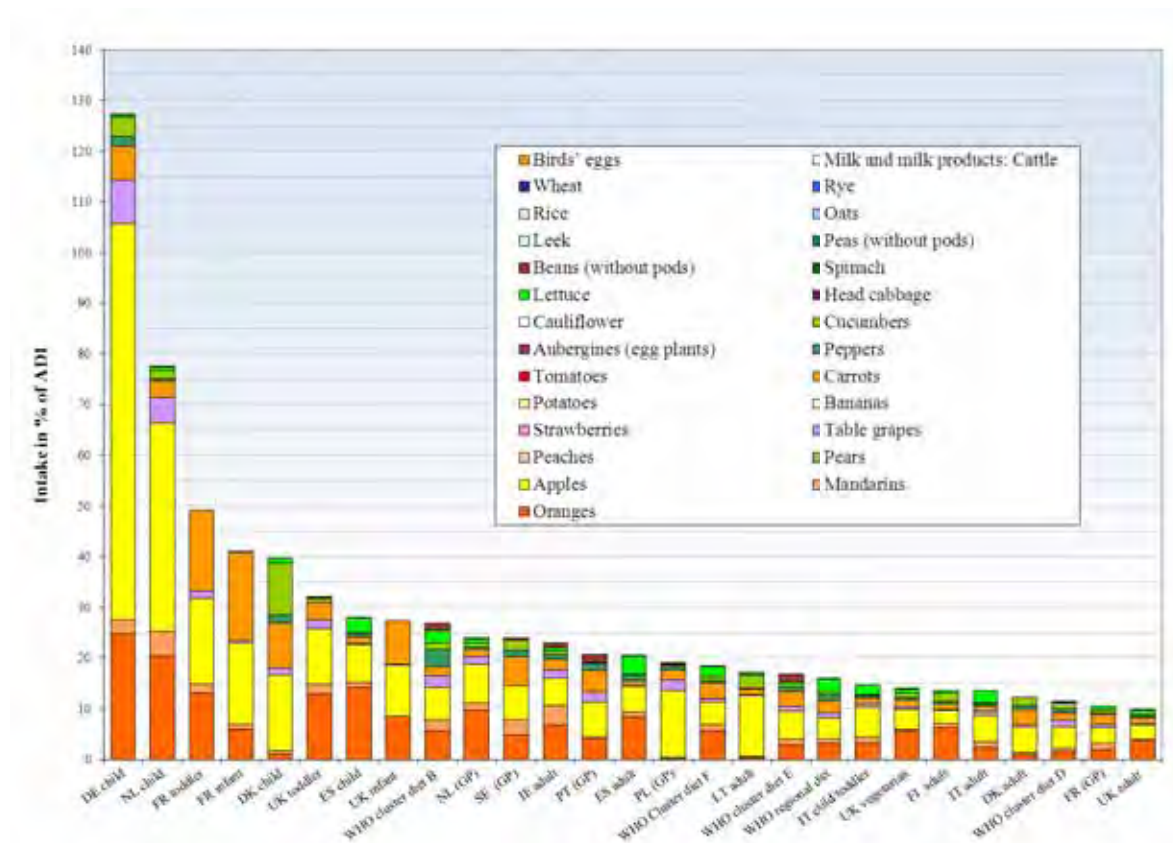


Figure 5-44: Estimated long-term exposure (TMDI) for carbofuran, expressed in percent of the carbofuran ADI.

### 5.4.1.2. Diazinon

The maximum estimated TMDI for diazinon, calculated under the assumptions reported in section 5.3, was equivalent to 121% of the ADI; the ADI was exceeded in only one diet (German child population).

It is noted that the major contributor to the German child total exposure is due to residues of diazinon measured in apples and that the intake from apples alone amounted to 58% of the ADI (the calculated mean residue was 0.0096 mg/kg). It is noted that the exposure is mainly driven by the residues on apples, combined with the German apple consumption data used for the long-term exposure calculation which comprise processed and unprocessed apples. 80% of the reported apple consumption refers to processed apple products, mainly apple juice (BfR, 2009). Processing studies demonstrated that the processing of apples to juice significantly reduces the diazinon residues (processing factors for raw and pasteurised apple juice: 0.02 and 0.01, respectively, EFSA, 2006a).

Furthermore, it is noted that in 2009 2,450 apple samples were taken and that only 1 sample (0.04%) contained quantifiable diazinon residues above or at the LOQ (0.01 mg/kg). As a result, it is considered that the approach used to estimate the chronic exposure is conservative, and that the risk assessed due to apple consumption has been overestimated.

The authorisations for plant protection products containing diazinon had to be withdrawn by 6 December 2007 at European level. Any period of grace granted by Member States had to expire on 6 December 2008 at the latest. In December 2007, new lower EU MRLs entered into force.

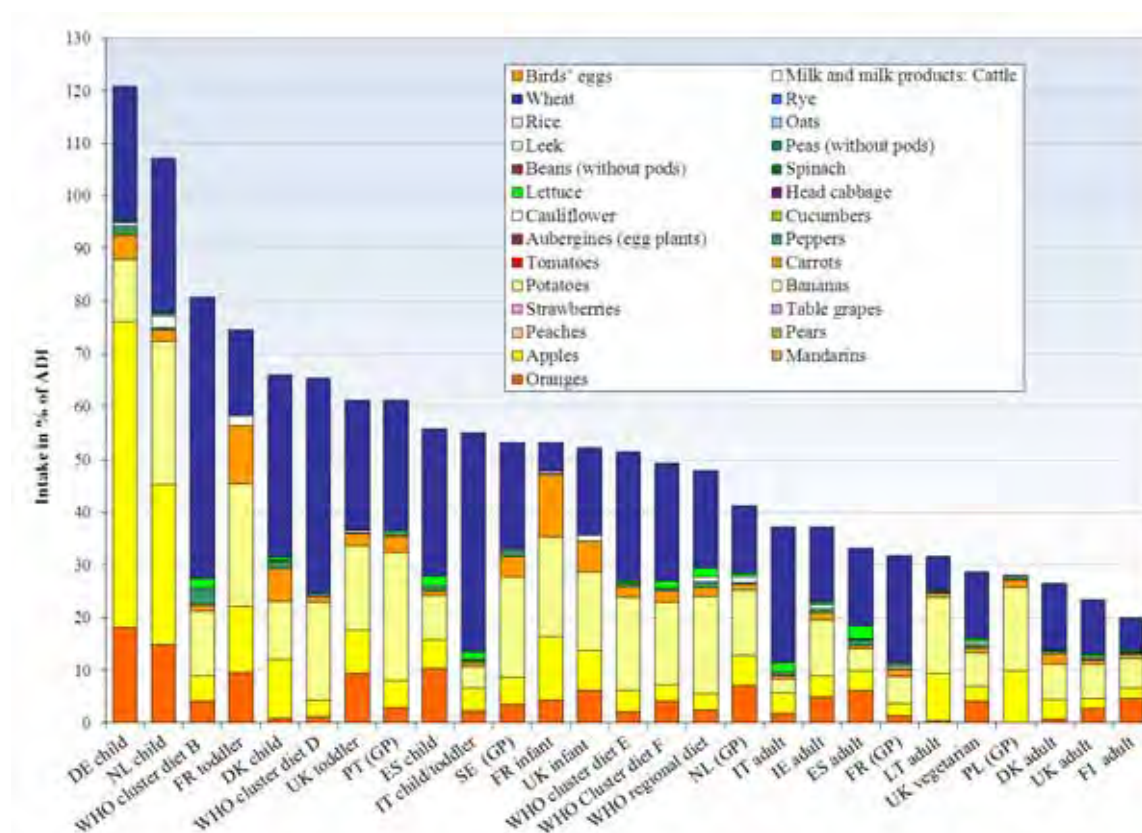


Figure 5-45: Estimated long-term exposure (TMDI) for diazinon, expressed in percent of the diazinon ADI.

Due to the change in the authorisation status of products containing diazinon in Europe it is assumed that crops treated lawfully in 2008 with diazinon, may still have been on the European market in 2009.

The only sample analysed in 2009 that contained a quantifiable residue of diazinon did not exceed the MRL and originated from outside Europe.

In 2008, out of the 1,423 apple samples taken in national control programmes, 18 samples (1.3%) contained quantifiable diazinon residues above the reporting level. In 2008, the MRL was exceeded in 13 samples (0.9%); six of them were of European origin. The exposure decreased from 151% in 2008 to 121% in 2009.

EFSA concludes that the long-term consumer exposure to diazinon residues estimated by EFSA is affected by uncertainties which are mainly related to the conservative model assumptions. The real exposure situation of the European population is therefore probably less critical. However, because of the high toxicity of the active substance, EFSA recommends further monitoring the residue situation in food at EU level.

#### 5.4.1.3. Dithiocarbamates

The maximum estimated TMDI for the dithiocarbamates group calculated in tier 1 calculation assumed that all reported residue of CS<sub>2</sub> were due to residues of ziram; ziram is the dithiocarbamate for which the lowest ADI has been set among all the compounds of the dithiocarbamate group. Under this assumption the estimated exposure was equivalent to 112% of the ADI (Figure 5-46); the ADI was slightly exceeded in only one diet (German child population) and the major contribution to the total exposure were residues measured in apples.

An alternative assessment of the chronic exposure was performed (tier 3 calculation) comparing the estimated exposure to the ADI set for mancozeb, a compound of the dithiocarbamates group for which the lowest ADI was set; in this case, only 12.3% of the mancozeb ADI was exhausted. This situation does not pose a potential risk for the consumer (Figure 5-47).

Considering that the German apple consumption data used for the long-term exposure calculation comprise processed and unprocessed apples, 80% of the reported apple consumption refers to processed apple products, mainly apple juice (BfR, 2009) and that the main contributor to the German child exposure is due to residues on apples, it is considered that the long-term consumer exposure to dithiocarbamates residues is not likely to exceed the ADI. Thus, also for the dithiocarbamates group, no long-term consumer risk is expected.

EFSA recommends that reporting countries report the measurements of the single dithiocarbamates ziram, propineb and thiram in addition to the total CS<sub>2</sub> measurements.

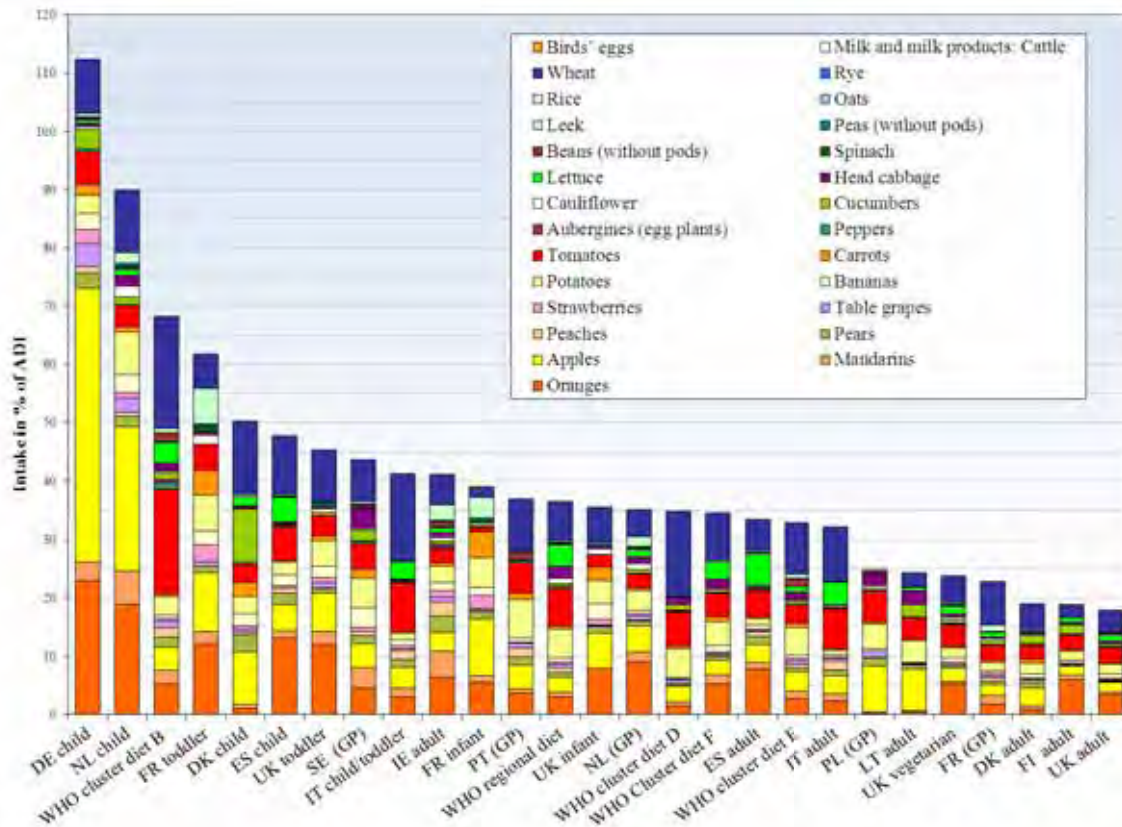


Figure 5-46: Estimated long-term exposure (TMDI) for the dithiocarbamate group, expressed in percent of the ziram ADI.

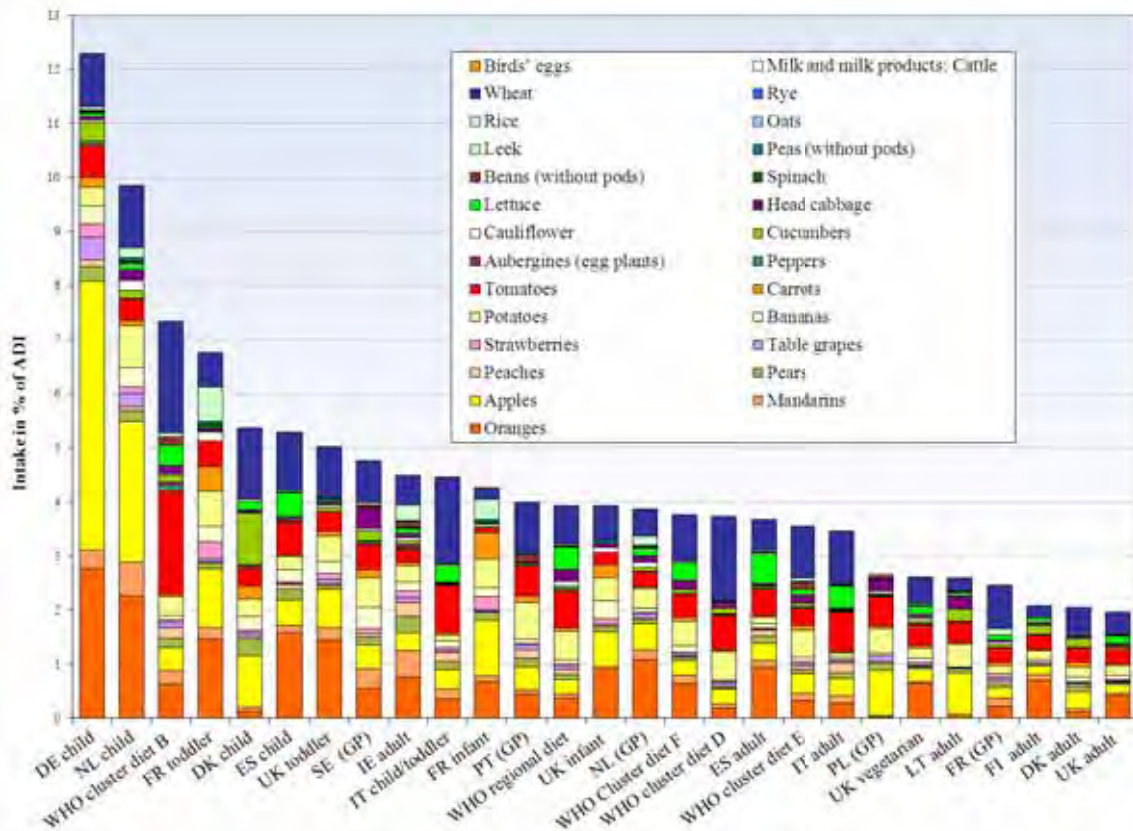


Figure 5-47: Estimated long-term exposure (TMDI) for the dithiocarbamate group, expressed in percent of the mancozeb ADI.

#### 5.4.2. Pesticides for which the chronic risk assessment could not be performed

No ADI was not established for six pesticides for which residues were quantified above the LOQ: dichlorvos, HCH-alpha, HCH-beta, hexachlorobenzene, propargite and trichlorfon; therefore, no chronic risk assessment could be performed for these substances. Considerations about the findings of these 6 pesticides are reported in the paragraphs below.

##### 5.4.2.1. Dichlorvos

For dichlorvos a tentative ADI was derived in an EPCO meeting. However, EFSA concluded that based on the available opinion of the PPR Panel, as there are still uncertainties and data requirement identified, neither the reference values nor or the safety factor(s) are possible to be confirmed in the light of uncertainties on the overall picture of the toxicological properties and the data requirement for a long-term study. Therefore, no long-term risk assessment was performed.

From the 2009 monitoring data available it is noted that quantifiable residues were measured only in three cauliflowers and in three potatoes samples. All samples with measurable residues of dichlorvos originated from the EU (Poland). On the basis of these findings, the maximum estimated long-term exposure amounted to 0.0004 mg/kg body weight.

As the use of dichlorvos is not authorised in Europe on any crop and dichlorvos residues were measured in products originating from Europe, EFSA recommends continuing to monitor this substance of concern.

##### 5.4.2.2. HCH

Hexachlorocyclohexane (HCH) is classified by EU legislation as a persistent organic pollutant of the environment and since 1979 the use of both HCH isomers (alpha and beta) has been banned in Europe.

According to the 2009 monitoring results, residues of HCH-alpha and HCH-beta above the LOQ were only reported in two and three samples of butter, respectively. These samples originated from Europe (France, Germany, Lithuania and the Netherlands). HCH is a persistent fat soluble substance and the residues measured in butter may have occurred because of environmental contamination.

As no ADI is available for HCH, only the consumer's exposure was assessed. The highest consumer long-term exposure was estimated at 0.0157 and 0.0155 mg/kg bw for the alpha- and beta isomer, respectively.

EFSA recommends monitoring of residues of HCH in food and taking appropriate measures in case residues above the LOQ are detected.

##### 5.4.2.3. Hexachlorobenzene

In Europe, the authorisations for use of products containing hexachlorobenzene had to be withdrawn by 1979.

From the 2009 monitoring data it is noted that quantifiable residues were measured only in the two food commodities of animal origin included in the 2009 EU monitoring programme: 64 samples of butter (originated from several EU countries) and four eggs samples (from Slovakia and Germany). No residues were quantified in other commodities of animal or plant origin included in the rolling EU programme.



The maximum chronic exposure calculated for hexachlorobenzene amounted for up to 0.0076 mg/kg bw/d.

Hexachlorobenzene is a pesticide that has been used in the past and is known as a persistent organic pollutant with a tendency to accumulate in fat food matrices. From the low residue levels reported in 2009 (highest residue measured to 0.0044 mg/kg) it is likely that the residues measured are rather due to environmental contamination because of past uses than to misuses.

EFSA recommends continuing to monitor hexachlorobenzene residues in animal origin samples.

#### 5.4.2.4. Propargite

The ADI for propargite has not been set. In the framework of the peer-review of this substance EFSA could not finalise the setting of the toxicological reference values due to data gaps (EFSA, 2011).

It is noted that in 2009 the use of products containing propargite was no longer authorised in Europe. Any period of grace granted by Member States shall expire on December 2011 at the latest. Currently, some national authorisations for products containing propargite are still in place.

The analysis of the 2009 monitoring results shows that residues of propargite were detected above the LOQ – but below the MRL – in several crops: apples, aubergines, peaches, pears, strawberries, peppers and table grapes. It is noted that the samples containing measurable residues of propargite originated from inside and outside the EU.

The estimated long-term consumer exposure to propargite residues amounted to 0.3124 mg/kg bw/d.

EFSA recommends the continued monitoring of products containing propargite.

#### 5.4.2.5. Trichlorfon

In Europe, the authorisation for plant protection products containing trichlorfon had to be withdrawn by November 2007. Any period of grace granted by Member States expired on November 2008. As a result, some food products lawfully treated with trichlorfon may still have been on the EU market in 2009.

Residues of trichlorfon were quantified above the LOQ in five food commodities of plant origin: apples (1 sample from Spain), pears (1 sample from Portugal), peaches (1 sample from South Africa), peas without pods (1 sample of unknown origin) and strawberries (11 samples originated from Morocco and Spain). None of the above samples exceeded the EU MRL.

The maximum estimated long-term exposure amounted to 0.0312 mg/kg bw/d.

Since some of the samples in which quantifiable residues above the LOQ were produced in Europe, EFSA recommends continuing to monitor trichlorfon residues in samples of plant origin.

## SUMMARY CHAPTER 5

The **long-term exposure assessment** was based on the residue findings for the most prominent food commodities in the human diet. For all except three pesticides, the calculations demonstrated that even under conservative assumptions the **chronic (long-term) exposure** does not exceed the toxicologically acceptable limits. For carbofuran, diazinon and the dithiocarbamate pesticides a potential consumer health risk could not be excluded. However, it is noted that for these pesticides the estimated long-term exposure assessment was affected by uncertainties, which are mainly related to the conservative data model assumptions. Taking into account that pesticide residues are lower in food commodities that are consumed after processing (e.g. in apple juice), EFSA concluded that the long-term consumer exposure to carbofuran, diazinon and dithiocarbamates residues is not likely to exceed the Acceptable Daily Intake (ADI). Thus, also for these three pesticides no long-term consumer risk is expected.

The assessment of the **acute (short-term) consumer exposure** was performed for nine of the ten food commodities which were analysed under the 2009 EU coordinated monitoring programme. The assessment was based on worst-case scenarios: the consumption data for consumers who eat a large portion size of the food item under consideration were combined with the highest residue measured in the coordinated programme. In order to accommodate for a possible non-homogeneous distribution of residues in an analysed food lot, a variability factor was introduced. Assuming a coincidence of these events (high food consumption, high residue concentration and inhomogeneous residue distribution in a lot), a potential consumer risk could not be excluded for 32 pesticide/commodity combinations.

The highest potential exceedances of the toxicological reference value was indicated for carbofuran residues in peppers (14,275% of the ARfD), oxamyl residues in peppers (9,510% of the ARfD), monocrotophos residues in peppers (7,557% of the ARfD), methomyl/thiodicarb residues in peppers (1,889% of the ARfD) and dimethoate/omethoate residues in table grapes (1,342% of the ARfD). However, the critical intake events identified in the acute risk assessment calculations were considered very unlikely, taking into account the frequency of critical residues and the frequency of extreme consumption events. For 11 of the pesticide/commodity combinations for which a critical intake situation could not be excluded, risk management actions have already been taken by withdrawing authorisations or by lowering the MRLs.

### Recommendations

On the basis of the results of the risk assessment, EFSA recommends to the European Commission and the Member States the following:

- To continue monitoring of food covered by the EU coordinated monitoring programmes for the pesticides for which a potential consumer risk could not be excluded or where the risk assessment was not conclusive: carbendazim/benomyl, carbofuran, cypermethrin, cyproconazole, deltamethrin, diazinon, dichlorvos, dimethoate/omethoate, dithiocarbamates, endosulfan, flusilazole, formetanate, hexaconazole, imazalil, methiocarb, methomyl/thiodicarb, monocrotophos, oxamyl, procymidone, tebuconazole, thiacloprid, triazophos;
- Also the active substances where no ADI is allocated because appropriate scientific information is lacking – and for which quantifiable residues above the LOQ were reported – should be further monitored: dichlorvos, HCH, hexachlorobenzene, propargite and trichlorfon.

- To report separately the individual compounds measured in the samples or to change the enforcement residue definition and establish separate MRLs for the pesticides and metabolites which are included in the same residue definition and which have different toxicological potencies (cypermethrin/alpha-cypermethrin, dimethoate/omethoate, methomyl/thiodicarb, triadimenol/triadimefon).
- To use specific analytical methods for the analysis of the dithiocarbamate pesticides, which are not likely to give false positive results for commodities which are rich in secondary metabolism sulphur compounds, such as brassica vegetables.
- It would be desirable that the results for residues of veterinary medicinal products in animal products are reported in a less aggregated way to retrieve the necessary information needed to perform the exposure assessment as required in Regulation (EC) No 396/2005.

## 6. Recommendations

In addition to the specific recommendations listed in Table 5-4 and Table 5-5, EFSA derived recommendations to the Commission, the reporting countries, the EURLs and EFSA.

On the basis of the analysis and evaluations of the 2009 monitoring data EFSA recommends to the European Commission the following:

- To continue monitoring of food covered by the EU coordinated monitoring programmes for the pesticides for which a potential consumer risk could not be excluded or where the risk assessment was not conclusive: carbendazim/benomyl, carbofuran, cypermethrin, cyproconazole, deltamethrin, diazinon, dichlorvos, dimethoate/omethoate, dithiocarbamates, endosulfan, flusilazole, formetanate, hexaconazole, imazalil, methiocarb, methomyl/thiodicarb, monocrotophos, oxamyl, procymidone, tebuconazole, thiacloprid and triazophos;
- Also the active substances where no ADI is allocated because appropriate scientific information is lacking – and for which quantifiable residues above the LOQ were reported – should be further monitored: dichlorvos, HCH, hexachlorobenzene, propargite and trichlorfon.
- To report separately the individual compounds measured in the samples or to change the enforcement residue definition and establish separate MRLs for the pesticides and metabolites which are included in the same residue definition and which have different toxicological potencies (cypermethrin/alpha-cypermethrin, dimethoate/omethoate, methomyl/thiodicarb, triadimenol/triadimefon);
- Because of the complex nature of the residue legislation for dithiocarbamates and the lack of specific analytical screening methods for the individual dithiocarbamates, EFSA recommends the following approach to be followed in MRL enforcement. If the CS<sub>2</sub> residue concentration exceeds the threshold residue for a specific commodity calculated for the most critical dithiocarbamate pesticide (i.e. ziram), the Member States should re-analyse the samples with specific methods to ensure that the MRLs established for thiram, ziram or propineb are not exceeded. The residue results should be reported separately for these three pesticides to allow a refined risk assessment. In general, it is recommended to use more specific analytical methods which are not likely to give positive detections for CS<sub>2</sub> in crops containing sulphur compounds which mimic false positive results for dithiocarbamates;
- To revise the general design of the EU-coordinated multiannual control programme, taking into account the increased number of reporting countries. In particular, a new calculation of the total number of necessary samples to be analysed for each commodity and the allocation to the individual Member States and reporting countries should be performed. The policy to include certain pesticides as non-mandatory in the monitoring programme should be reconsidered because it hampers the comparability of results and leads to situations where the number of results reported might not be sufficient to draw statistically valid conclusions.

In addition, EFSA recommends the following to the reporting countries:

- To make effort in recording and reporting the production method (e.g. conventional and organic) of the samples analysed;
- To implement more sensitive analytical methods that would allow enforcement of EU MRLs set at specified LOQ; this would also allow the performance of more accurate long-term consumer exposure assessment. If the level of the MRLs cannot be achieved analytically, this should be notified;

- To ensure pesticide residues are analysed according to the residue definitions set in the European legislation;
- To report if difficulties are encountered in analysing the sample for the full enforcement residue definition. EFSA, the Commission and the EURLs should follow-up on such problems identified and reconsider if modifications of the residue definitions are necessary;
- To encourage investing and reporting of the possible reasons for the high number of multiple residue findings in single samples. Since a possible reason for multiple residues is the mixing of lots originating from different producers using different pesticides, the description of the samples submitted to the enforcement laboratories should clearly state whether the sample was obtained from one lot or whether it is a composite sample of different lots;
- To report the possible reasons for the observed EU MRL exceedances;
- To clearly indicate if, as a consequence of a sample exceeding the MRLs, the lot was not put on the market and therefore was not available for consumption;
- To ensure that the scope of the analytical methods used is compatible and includes as far as possible all residues included in the EU coordinated programme;

Furthermore, the European Reference Laboratories (EURLs) are recommended:

- To provide the reporting countries with more guidance in implementing analytical methods sufficiently sensitive for checking sample residue levels against the MRLs, in particular LOQ MRLs;
- To provide the reporting countries with more guidance on reporting the results of the baby and infant-food analysis and in the enforcement of the relevant residue definitions;
- To provide guidance on the expression of the analytical results in line with the legal residue definition, in particular for residue definitions made up of more than one component;
- To develop specific, robust and affordable analytical methods for the most critical dithiocarbamates;
- To investigate possible solutions to identify the isomers of cypermethrin contributing to the total cypermethrin measured in food samples, as requested by the current legal enforcement residue definition.

Finally, EFSA is recommended:

- To investigate possible improvements for the reporting of the results of the monitoring of the veterinary medical product residues to allow the consideration of additional exposure sources;
- To establish a database of the conversion factors for the enforcement residue definitions to the risk assessment residue definitions;
- To provide guidance regarding the reporting of residue results for animal products, in particular for pesticides which are classified as fat soluble, and the results of baby-food samples.

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## 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>CI</b>	Confidence interval
<b>COM</b>	European Commission
<b>CY</b>	Cyprus
<b>CZ</b>	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 Reference Laboratory
<b>FAO</b>	Food and Agricultural Organization
<b>FI</b>	Finland
<b>FR</b>	France
<b>GAP</b>	Good Agricultural Practice
<b>GR</b>	Greece



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<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>IS</b>	Island
<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>LOQ</b>	Analytical 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>NCP</b>	National control programmes for pesticide residues
<b>NL</b>	the Netherlands
<b>NO</b>	Norway
<b>NRL</b>	National Reference Laboratory
<b>PL</b>	Poland
<b>PRIMo</b>	Pesticide Residue Intake Model
<b>PT</b>	Portugal
<b>RAC</b>	Raw Agricultural Commodity
<b>RASFF</b>	Rapid Alert System for Food and Feed
<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>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 commodity)
<b>UCL</b>	Upper Confidence Limit
<b>UK</b>	the United Kingdom
<b>WHO</b>	World Health Organization

**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
AT	Lebensmittelsicherheit und Verbraucherschutz, rechtliche Angelegenheit Koordination der Kontrolle Bundesministerium für Gesundheit, Familie und Jugend	<a href="http://www.bmgfj.gv.at/cms/site/standard.html?channel=CH0837&amp;doc=CMS1201038808074">http://www.bmgfj.gv.at/cms/site/standard.html?channel=CH0837&amp;doc=CMS1201038808074</a> <a href="http://www.bmgfj.gv.at/cms/site/standard.html?channel=CH0837&amp;doc=CMS1201038808018">http://www.bmgfj.gv.at/cms/site/standard.html?channel=CH0837&amp;doc=CMS1201038808018</a>
AT	Österreichische Agentur für Gesundheit und Ernährungssicherheit GmbH	<a href="http://www.ages.at/ages/ernaehrungssicherheit/rueckstaende-kontaminanten/pflanzenschutzmittel-rueckstaende-in-lebensmittel/pestizidmonitoring/">http://www.ages.at/ages/ernaehrungssicherheit/rueckstaende-kontaminanten/pflanzenschutzmittel-rueckstaende-in-lebensmittel/pestizidmonitoring/</a>
BE	Federal Agency for the Safety of the Food Chain	<a href="http://www.afsca.be/publications-en/">http://www.afsca.be/publications-en/</a>
CY	State General Laboratory – Pesticide Residues Laboratory	<a href="http://www.moh.gov.cy/moh/sgl/sgl.nsf/All/8304FD6522FEAA82C225768E005646B9?OpenDocument&amp;highlight=CY_2008_National%20Monitoring%20Pesticides%20Residues%20Plant%20Origin%20Products">http://www.moh.gov.cy/moh/sgl/sgl.nsf/All/8304FD6522FEAA82C225768E005646B9?OpenDocument&amp;highlight=CY_2008_National%20Monitoring%20Pesticides%20Residues%20Plant%20Origin%20Products</a>
CY	Medical and Public Health Services	
CZ	Czech Agriculture and Food Inspection Authority	<a href="http://www.szpi.gov.cz/en/lstDoc.aspx?nid=11452">http://www.szpi.gov.cz/en/lstDoc.aspx?nid=11452</a>
DE	Federal Office of Consumer Protection and Food Safety (BVL) Department Food, Feed and Commodities Unit Data Management and Data Analysis	<a href="http://www.bvl.bund.de/berichtpsm">http://www.bvl.bund.de/berichtpsm</a>
DE	Bundesministerium für Ernährung, Landwirtschaft und Verbraucherschutz / Federal Ministry of Agriculture, Food and Consumer Protection	
DK	Danish Veterinary and Food Administration	<a href="http://www.foedevarestyrelsen.dk/Publikationer/Alle_publicationer/2009/006.htm">http://www.foedevarestyrelsen.dk/Publikationer/Alle_publicationer/2009/006.htm</a>
DK	National Food Institute Technical University of Denmark	
EE	Veterinary and Food Board	<a href="http://www.vet.agri.ee/static/files/598.Taimekaitsevahenditej22gid2009.pdf">http://www.vet.agri.ee/static/files/598.Taimekaitsevahenditej22gid2009.pdf</a>
EFTA	Food Safety Unit/IMA Directorate EFTA Surveillance Authority	
ES	Agencia Española de Seguridad Alimentaria y Nutrición SG de Coordinación de Alertas Alimentarias y Programación del Control Oficial Pesticide data	<a href="http://www.aesa.msc.es/AESAN/web/control_oficial/seccion/planes_nacionales_especificos.shtml">http://www.aesa.msc.es/AESAN/web/control_oficial/seccion/planes_nacionales_especificos.shtml</a>

Country	National authority/institution	Web addresses for published national monitoring reports
FI	Finnish Food Safety Authority	<a href="http://www.evira.fi/portal/en/evira/publications/?a=category&amp;cid=20">http://www.evira.fi/portal/en/evira/publications/?a=category&amp;cid=20</a>
FR	Ministère de l'Economie, de l'industrie et de l'Emploi DGCCRF Direction générale de la concurrence, de la consommation et de la répression des fraudes	<a href="http://www.dgccrf.bercy.gouv.fr/securite/produits_alimentaires/index.htm">http://www.dgccrf.bercy.gouv.fr/securite/produits_alimentaires/index.htm</a>
GR	Hellenic 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/greek/2.2.5.8.1b.html">http://www.minagric.gr/greek/2.2.5.8.1b.html</a>
HU	Hungarian Food Safety Office	<a href="http://www.mgszh.gov.hu">www.mgszh.gov.hu</a>
IE	Pesticide Control Service, Department of Agriculture and Food	<a href="http://www.pcs.agriculture.gov.ie">www.pcs.agriculture.gov.ie</a>
IS	The Food and veterinary Authority	<a href="http://www.mast.is/flytileidir/matvaeli/adskotaefni/varnar_efnaleifar">http://www.mast.is/flytileidir/matvaeli/adskotaefni/varnar_efnaleifar</a>
IT	Ministro del Lavoro, della Salute e delle Politiche Sociali Dipartimento per la Sanità Pubblica Veterinaria, la Nutrizione e la Sicurezza degli Alimenti Direzione Generale della Sicurezza degli Alimenti e della Nutrizione	<a href="http://www.ministerosalute.it/fitosanitari/paginaInternaMenuFitosanitari.jsp?id=1105&amp;lingua=italiano&amp;menu=vegetali">http://www.ministerosalute.it/fitosanitari/paginaInternaMenuFitosanitari.jsp?id=1105&amp;lingua=italiano&amp;menu=vegetali</a>
LT	State Food and Veterinary Service of the Republic of Lithuania	<a href="http://www.nmvrvi.lt">www.nmvrvi.lt</a>
LT	Food Department of State Food and Veterinary Service	
LT	National Food and Veterinary Risk Assessment institute	
LU	Laboratoire National de Santé	<a href="http://www.securite-alimentaire.public.lu/organisme/pcnp/rpt/rpt9/pesticides_2009.pdf">http://www.securite-alimentaire.public.lu/organisme/pcnp/rpt/rpt9/pesticides_2009.pdf</a>
LV	Veterinary and Food Department Ministry of Agriculture of Latvia	<a href="http://www.zm.gov.lv/index.php?sadala=1669&amp;id=8616">http://www.zm.gov.lv/index.php?sadala=1669&amp;id=8616</a>
MT	Regulatory Affairs Directorate Malta Standards Authority	
MT	Market Surveillance Directorate Malta Standards Authority	<a href="http://www.msa.org.mt/marketsurveillance/pesticide%20residue%20monitoring/2008%20-%20Results%20of%20national%20residue%20monitoring.pdf">http://www.msa.org.mt/marketsurveillance/pesticide%20residue%20monitoring/2008%20-%20Results%20of%20national%20residue%20monitoring.pdf</a>

Country	National authority/institution	Web addresses for published national monitoring reports
NL	Food and Consumer Product Safety Authority (VWA)	<a href="http://www.vwa.nl/onderwerpen/inspectieresultaten/bestand/2200506/rapport-t-bestrijdingsmiddelresiduen-in-levensmiddelen-2009">http://www.vwa.nl/onderwerpen/inspectieresultaten/bestand/2200506/rapport-t-bestrijdingsmiddelresiduen-in-levensmiddelen-2009</a>
NO	The Norwegian Food Safety Authority - NFSA	<a href="http://www.mattilsynet.no/mat/mattrygghet/plantevernmiddelester/_rsrapporter_for_overvking_av_plantevernmiddelester_i_mat_23932">http://www.mattilsynet.no/mat/mattrygghet/plantevernmiddelester/_rsrapporter_for_overvking_av_plantevernmiddelester_i_mat_23932</a>
PL	Chief Sanitary Inspectorate	<a href="http://www.pis.gov.pl/?dep=266&amp;artlang=2">http://www.pis.gov.pl/?dep=266&amp;artlang=2</a> <a href="http://www.pis.gov.pl/?dep=155&amp;artlang=2">http://www.pis.gov.pl/?dep=155&amp;artlang=2</a> <a href="http://www.pis.gov.pl/?dep=156&amp;artlang=2">http://www.pis.gov.pl/?dep=156&amp;artlang=2</a>
PT	Directorate-General of Agriculture and Rural Development (DGADR)	<a href="http://www.dgadr.pt">www.dgadr.pt</a> following the next links: Produtos fitofarmacêuticos » Divulgação » Relatórios de controlo - resíduos de pesticidas.
RO	Central Laboratory for Pesticides Residues Control in Plants and Vegetable Products (CLPRCPVP)	<a href="http://www.ansvsa.ro/?pag=18">http://www.ansvsa.ro/?pag=18</a>
SE	National Food Administration	<a href="http://www.slv.se">www.slv.se</a>
SI	Ministry of Agriculture, Forestry and Food  Ministry of Health Republic of Slovenia	<a href="http://www.mkgp.gov.si/si/o_ministrstvu/direktorati/direktorat_za_varno_hrano/starasektor_za_varnost_in_kakovost_hrane_in_krme/varnost_hrane_in_zascita_potrošnikov/">http://www.mkgp.gov.si/si/o_ministrstvu/direktorati/direktorat_za_varno_hrano/starasektor_za_varnost_in_kakovost_hrane_in_krme/varnost_hrane_in_zascita_potrošnikov/</a>  <a href="http://www.furs.si/svn/ffs/">http://www.furs.si/svn/ffs/</a>  <a href="http://www.mz.gov.si/si/delovna_podrocja/javno_zdravje/sektor_za_varnost_in_zdravstveno_ustreznost_hrane/novosti/">http://www.mz.gov.si/si/delovna_podrocja/javno_zdravje/sektor_za_varnost_in_zdravstveno_ustreznost_hrane/novosti/</a>
SK	Ministry of Agriculture of the Slovak republic	
SK	State Veterinary and Food Administration of Slovak republic	<a href="http://www.svsr.sk/sk/pdf/spotrebitel/Kontrola_rezidui_pesticidov_v_potravinach_2009.pdf">http://www.svsr.sk/sk/pdf/spotrebitel/Kontrola_rezidui_pesticidov_v_potravinach_2009.pdf</a>
UK	Pesticides Safety Directorate Consumer Safety and European Policy Branch	<a href="http://www.pesticides.gov.uk/prc.asp?id=2536">http://www.pesticides.gov.uk/prc.asp?id=2536</a> (Reports of the UK's Pesticide Residues Committee)



**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 “Guidance for Reporting the Results of the 2009 National and Community Monitoring Programmes to the European Food Safety Authority and the European Commission”.

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. Summary of Results
  - 1.2. Organisation of monitoring programmes and Sampling
    - 1.2.1. Responsibilities
    - 1.2.2. Design of Programmes (priorities, targeting, criteria for the percentage of samples to be taken from the organic sector)
    - 1.2.3. Sampling: personnel, procedures, sampling points
    - 1.2.4. Enforcement action
  - 1.3. Quality assurance
    - 1.3.1. Status of accreditation of laboratories, number of laboratories
    - 1.3.2. Analytical methods used
    - 1.3.3. Participation in proficiency tests
    - 1.3.4. Implementation of EU quality control procedures
    - 1.3.5. Analytical uncertainty
  - 1.4. Other information

The information in the following sections 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 often reflects 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 the data and 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 between reporting countries. Especially Iceland had an agreed reduced scope in the coordinated multiannual Community control (EEA Decision 127/2009).



In the reference monitoring period 2009 the pesticide MRLs were fully harmonised among the EU member states. Due to these harmonised pesticide residues a much better comparison of MRL compliance rates between the reporting countries is possible.

The only exemption is the comparison with Norway and Iceland, because in these countries partly other MRLs were in place. 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 Iceland and Norway is delayed in comparison to the application data in the Member States.

## 2. Austria

### 2.1. *Summary of Results*

In 2009 a total of 1359 samples of fresh fruits and vegetables were analysed under the coordinated program, the national pesticide monitoring program and as routine samples. Beside that other products like cereals (54 samples), processed products (499 samples), animal products (36 samples) and baby food (123 samples) were analyzed. In sum 2071 samples were examined for pesticide residues.

40 % of all samples were from Austria, 36 % from the European market, 18 % from third countries and the rest from unknown origin. The percentage of samples with residues above the MRL were 1,4 %, 1,1 %, 4,0 % and 0,8 % respectively.

In 50 % of the samples of fruits and vegetables no pesticide-residues could be detected. 48 % of the samples had residues under or at the Maximum Residue Limits (MRL). In sum 98 % of these samples were in compliance with the regulations. 2,1 % of the samples of fruits and vegetables contained one or more pesticide(s) above MRL (28 samples).

In 535 samples (27 %) more than one pesticide was analysed. Up to 11 pesticides were found (11 in one sample table grapes, 10 in two samples (table grapes, parsley), 9 in two samples (peppers, pears))

Even if an increased number of substances was analysed in the samples, the number of non-compliances clearly decreased in comparison to the last years. This seems to be an effect because of the harmonized MRLs laid down by the European legislative in the year 2008.

### 2.2. *Organisation of monitoring programmes and Sampling*

#### 2.2.1. **Responsibilities**

The national pesticide monitoring is done according to a nation-wide sampling plan designed by the Austrian Agency for Health and Food Safety, Area Data, Statistics and Risk Assessment in co-operation with the Federal Minister of Health and Women. The plan was based on data concerning dietary consumption, production and import of fruits and vegetables and results of former measurements. Furthermore the results of earlier monitoring-programs and the analytical possibilities were taken into account, too. The co-ordinated programme of the European Commission was of course also done. In addition routine samples were taken from the Austrian market by the responsible staff.

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

Due to the fact, that there were some commodities for the national programme isolated, of which higher risk for residues was identified in the last years, these specific data are representative for the Austrian market, but the monitoring has to be seen partially as „targeted monitoring“. It was the aim, to reflect to the results of the last years and to choose special commodities of interest for further examination. This type of monitoring is foreseen for the next years. One special part of the national programme was sampling of fruits and vegetables from organic farming.

#### 2.2.3. **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 on the retail or wholesale level.

#### 2.2.4. **Enforcement action**

140 samples were taken as enforcement samples, of which 3 samples contained pesticide residues above the MRL.

### 2.3. *Quality assurance*

#### 2.3.1. **Status of accreditation of laboratories, number of laboratories**

The analysis of the co-ordinated programme, the national monitoring programme and routine samples were made 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 there located 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 got the accreditation in the year 1998 and the methods for pesticide analyses are still accredited.

#### 2.3.2. **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 439 substances. The methods used were a GC multimethod with ECD-, NPD- and FPD-detection. GC/MS-methods are primarily applied for confirmation purposes of the other GC methods. In addition the methodology of LC/MS was established 2006 and is used more frequently since that time.

#### 2.3.3. **Participation in proficiency tests**

The Laboratories participated at the following Proficiency tests:

*CC RANA*: EUPT-C3/SRM4, EUPT-AO04, FAPAS 02132, EUPT-FV11, EUPT-FV-SM01

*CC PSMR*: EUPT-C3/SRM4, EUPT-FV11, EUPT-FV-SM01, CVUA Stuttgart Ad hoc Mini PT on Nicotin in mushrooms, FV Ring Test pears 09 (Amitraz)

*LUA3*: FAPAS PT 1990, FAPAS PT 1994

#### 2.3.4. **Implementation of EU quality control procedures**

The Guidelines of the EU have been fully implemented.

#### 2.3.5. **Analytical uncertainty**

The laboratories took the European-wide committed uncertainty factor of 50 % into account. Therefore some of the residues above the MRL did not lead to a non-compliance and therefore administrative actions.

### 3. Belgium

#### 3.1. Summary of Results<sup>1</sup>

In 2009, a total number of 2112 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 in application of Regulation (CE) N° 396/2005.

Food products analysed (table 1):

Table 2: Main products showing MRL exceeding

**1871** samples were analysed in the framework of the control programme. 95,6% were conform to the MRL set in the legislation. Main products showing MRL exceeding are listed in table 2.

Products	Main origin
Passion fruits	Kenya
Chilipepers	Thailand and Ouganda
Strawberries	Egypt
Lauki	The Dominican Republic
Currants, celery, leek, spinach and parsley	Belgium

**241** samples were analysed in the case of suspicion about the safety of a product (products from Thailand and the Dominican Republic, nicotine in wild mushrooms, ...), complaints and follow-up of violations found previously. 73,9% were conform to the MRL set in the legislation. Main MRL exceeding were observed on chilipeppers from Thailand and Ouganda and on lauqi from the Dominican Republic.

Table 1: Food products analysed for pesticides residues in 2009 by sampling strategy

Sampling strategy	Samples	Analysed	without residues	with residues at or below MRL	> MRL <sup>2</sup>
Control programme	Fruit, vegetables & cereals	1668	29,4%	65,7%	4,7%
	Processed products	98	75,5%	23,5%	1%
	Animal products	15	100%	0	0
	Baby food	90	97,8%	0	2,2%
		<b>1871</b>	<b>35,8%</b>	<b>59,8%</b>	<b>4,4%</b>
Enforcement	Fruit, vegetables & cereals	217	30%	41%	29%
	Processed products	24	16,7%	83,3%	0
		<b>241</b>	<b>28,7%</b>	<b>45,2%</b>	<b>26,1%</b>
	<b>TOTAL</b>	<b>2112</b>	<b>35%</b>	<b>58,1%</b>	<b>6,9%</b>

Origin of the products: 42% of the products analysed were grown in Belgium, 21% came from the EU and 31% were imported from third countries. The origin of 2,9% of the products was not known. Like previous years, products imported from third countries (12%) showed proportionally more MRL violations than products grown in BE (5,2%) or in the EU (3,3%).

<sup>1</sup> 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 the comparable. Differences in the data published separately by the FASFC and the data reported in the present report may occur due to this recoding.

<sup>2</sup> In the context of this report the term MRL exceedance refers to the numerical exceedance of the legal limit without considering the measurement uncertainty of 50%, according to SANCO/3131/2007.

### 3.2. *Organisation of monitoring programmes and Sampling*

#### 3.2.1. **Responsibilities**

The Federal Agency for the Safety of the Food Chain (FASFC), under the responsibility of the Minister of Agriculture, is the competent authority for the control of pesticides residues in foodstuffs (<http://www.afsca.be>).

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

The control programme does not provide for a total random analysis but is risk based. The programme is drawn up following the general statistical approach employed within the FASFC<sup>3</sup>. Several factors were taken into account: toxicity of pesticides, exceeding observed in previous years in Belgium and in other Member States, RASFF messages, food consumption figures and all other useful informations. All groups of fruits and vegetables are included in the programme and a rolling programme is applied for less important commodities.

The coordinated control programme of the European Commission and some targeted sampling (mainly on products from Thailand and the Dominican Republic) were also included in the national programme.

The FASFC stipulates the target pesticides for each sample type, and allocates samples to the different laboratories.

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

Samples are taken by trained officers according to Directive 2002/63/EG, mainly at auctions, import points, wholesalers and processors.

#### 3.2.4. **Enforcement action**

When non-compliant samples are identified, the lot is seized, if available, and prevented from entering the market. An assessment of risk to the consumer is performed on all non-compliant samples and the appropriate measures such as recall and RASFF notification are taken<sup>4</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 made 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 .

### 3.3. *Quality assurance*

#### 3.3.1. **Status of accreditation of laboratories, number of laboratories**

Five ISO 17020 accredited laboratories take part to the national control programme in 2009.

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<sup>3</sup> Maudoux J-P., Saegerman C., Rettigner C., Houins G., Van Huffel X. & Berkvens D., 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.* 2006, 28(4): 140-154. <http://www.favv-afsca.fgov.be/publicationsthematiques/food-safety.asp>

<sup>4</sup> The actions to be taken in case a MRL is exceeded are described in a procedure available on the website of the FASFC ([http://www.favv-afsca.fgov.be/autocontrole/util/doc\\_util\\_fr.asp](http://www.favv-afsca.fgov.be/autocontrole/util/doc_util_fr.asp)).

### 3.3.2. **Analytical methods used**

Samples were analysed by means of multi- and single-residue methods covering more than 375 pesticides residues.

### 3.3.3. **Participation in proficiency tests**

Laboratories took part to proficiency test organised by the EU (EUPT-AO4, EUPT-FV11, EUPT-C3, EUPT-SRM4) or other organisations like FAPAS.

### 3.3.4. **Implementation of EU quality control procedures**

All laboratories applied the quality control procedures specified in the guidelines document No. SANCO/3131/2007.

### 3.3.5. **Analytical uncertainty**

As specified in document SANCO/3131/2007, a default expanded uncertainty figure of 50% on the results was used by the FASFC in cases of enforcement decisions (MRL-exceedences).

### 3.4. ***Other information***

<http://www.favv-afsc.fgov.be/productionvegetale/pesticides/>

## 4. Bulgaria

### 4.1. *Summary of Results*

This report summarizes the results of the EU coordinated and the National pesticide monitoring program in fruits, vegetables, cereals and baby food products on the Bulgarian market in 2009. This report has been prepared according to the recommendation of the EU as far as technically possible.

In 2009 were analyzed totally 951 samples: 812 of fruits, vegetables; 108 cereals and 31 baby food - products of domestic and non-domestic origin according the national and co-coordinated monitoring program. Pesticide residues in the LOQ were found in 249 samples. In 23 of them levels of pesticide residues above the EU MRLs were found.

### 4.2. *Organisation of Monitoring programmes and Sampling*

#### 4.2.1. **Responsibilities**

The Ministry of Health (MoH) is the competent authority for control of pesticide residues in foodstuffs of non animal origin placed on the market of the country. The Regional inspections for Public Health Protection and Control /RIPHPC/ are the regional structures under the MoH which performs the control of pesticide residues on regional level.

The Ministry of Agriculture and Food (MAF) by the National Plant Protection Service (NPPS) is responsible for the control of pesticide residues in products of plant origin at the site of production (greenhouses or fields) immediately after harvesting.

#### 4.2.2. **Design of Programmes**

The National pesticide residues monitoring program in fruits, vegetables, cereals, processed products and baby foods is prepared jointly by the Ministry of Health and the Ministry of Agriculture and Food. The elaborated program settles the number of samples for whole country and sample distribution by RIPHPC and NPPS. The program also determines the selected pesticide/commodity combinations.

The annual plan is designed taking into account the following factors:

- The current consumption data for Bulgarian population;
- Volume of production and imports;
- Analysis of results from previous years;
- Applicability of multi-component methods of analysis;
- Technological and budgetary capacity of the official laboratories.

#### 4.2.3. **Sampling**

Sampling is performed in accordance with sampling procedures referred to in Commission Directive No. 2002/63/EC. The procedures were transposed into the national legislation.

Samples are taken by authorized and trained employees, inspectors of the regional structures - RIPHPC and NPPS. The main sampling points are importers, wholesalers and retail shops for domestic and non-domestic products, as well as the site of production (greenhouses or fields), during harvesting and before the products are marketed

#### 4.2.4. **Enforcement action**

The laboratories submit the laboratory protocol with the results of analysis to the inspectors in charge. The inspectors are responsible for the evaluation of the analysis results. Where MRLs are exceeded, enforcement action may be taken by the RIPHPC or the NPPS - the trade of the product is prohibited, retailers and consumers are informed and procedures are put in place for product withdrawal and recall.

#### 4.3. *Quality Assurance*

##### 4.3.1. **Status of accreditation of laboratories; number of laboratories**

The laboratory under the NPPS holds an Accreditation Certificate as per Bulgarian State Standard (BSS) EN ISO/IEC 17025 issued by the Executive Agency Bulgarian Accreditation Service (EA BAS).

All six RIPHPC laboratories of the Ministry of Health in 2009 were in the accreditation procedure, which ended with a Certificate of accreditation for BSS EN ISO/IEC 17025 issued by EA BAS in December 2009.

##### 4.3.2. **Analytical methods used**

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

- BSS EN 12393:2001 “Non-fatty foods. Multiresidue methods for the gas chromatographic determination of pesticide residues” with GC-MS and GC-ECD determination of most of the pesticides.
- Food of plant origin – Determination of pesticide residues using GC-MS and/or LC-MS(MS) following acetonitrile extraction/partitioning and cleanup by dispersive SFE – QuEChERS method

The methodology used in analysis includes:

- sample homogenization;
- pesticide extraction using a suitable organic solvent;
- purification of 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/

##### 4.3.3. **Participation in proficiency tests**

In 2009 laboratories participated in proficiency tests organized by the CRL-CF, CRL-SRM and the CRL-FV:

- EUPT-C3/SRM4 R
- EUPT-FV 11
- AMITRAZ RING TEST



#### 4.3.4. **Implementation of EU quality control procedures**

The EC guidelines SANCO/2007/3131 "Quality Control Procedures for Pesticide Residue Analysis", have been implemented as far as practicable.

#### 4.3.5. **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 correction were mathematically above the MRL, the sample is defined as an exceeding. However, before any enforcement actions are taken the analytical uncertainty is subtracted from the measured value. If the corrected analytical results still exceed the MRL, enforcement actions could be taken.

### 4.4. ***Other Information***

#### 4.4.1. **Background on legislation**

Bulgaria has implemented all EC-MRLs.

In this report are presented the results of the monitoring of pesticides for the products of non animal origin only. We received information from the colleagues of the National Veterinary Service that the results of the monitoring of pesticides for the products of animal origin were sent to the Commission by the end of March 2010, which were the deadline for those reports.

## 5. Cyprus

### 5.1. *Interpretation of results*

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 a multisectoral program for local market, including imports and exports. 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 data especially by children and the needs of exports control.

The increase of the number of compounds monitored is a continues process. Therefore the number of compounds of the MRM method for the plant origin products increased within 2009 from 168 to 247. The SRM method for the determination of Chlormequat and Mepiquat in plant origin products has been validated and introduced in the scope of the Laboratory.

The evaluation of the results indicated 4.6 % overall legal violations of the plant origin products including the processed samples (baby food, olive oils, juices), the violation percentage of the plant products, fresh and dry, is 5%. As legal violations are considered, the samples still exceeding the MRL taking in to account the uncertainty.

The percentage of the plant products, fresh and dry, with residues above MRLs for the year 2009 is 7.1% in relation to the 11.0% of the year 2008.

### 5.2. *MRL exceedances and non compliant results*

Within 2009 twenty five (25) samples of plant origin were consider as legal violations. Relevant information and the actions taken are summarised in table 1.

**Table 1: Non Compliant Results (Legal Violations) of Plant Origin Products, 2009**

Product	Residue	Sample Codes	Risk of consumer exposure / Action taken	RASSF notif reference
APPLES	Dicofol	09085/2009	Yes* , the sample was taken from a supermarket	
CARROTS	Methamidophos	04105/2009	No, the lot did not enter to the local market	2009.AXQ
CAULIFLOWER	Chlorpyrifos	13930/2009	Yes* , the sample was taken from a supermarket	
CUCUMBERS	Methamidophos	02358/2009	Yes partially, the lot was withdrawn and destroyed by the MPHS	2009.03.68
CUMIN SEEDS	Profenofos	03882/2009	No, the lot did not enter to the local market	
FLOUR	Diazinon	08060/2009	Yes** , the sample was taken from a supermarket	
LETTUCE	Chlorothalonil	00336/2009	Yes* , the sample was taken from a supermarket	
LETTUCE	Chlorothalonil	00338/2009	Yes* , the sample was taken from a supermarket	
MANDARINS	Malathion	13484/2009	Yes* , the sample was taken from a supermarket	
MANDARINS	Malathion	13504/2009	Yes* , the sample was taken from a fruitmarket	
MINT	Chlorpyrifos	13284/2009	No, the sample was taken from the packaging point, the ministry of agriculture was informed	
MINT - DRY	Chlorpyrifos	13366/2009	No***, the sample was taken from packaging point, legal actions were taken	
MINT - DRY	Chlorpyrifos	13830/2009	Yes* , the sample was taken from a supermarket	
POTATOES	Cypermethrin	09088/2009	Yes* , the sample was taken from a supermarket	
RUNNER BEANS	Propargite	05801/2009	Yes* , the sample was taken from a fruitmarket	
	Tetradifon			
RUNNER BEANS	Clofentezine	05802/2009	Yes* , the sample was taken from a fruitmarket	
	Propargite			
RUNNER BEANS	Fluvalinate	05839/2009	Yes * the sample was taken from vegetable merchants	

RUNNER BEANS	Propargite	05896/2009	Yes , the sample was taken from a supermarket, the competent authority of MPHS was informed	
RUNNER BEANS	Clofentezine	05898/2009	Yes* , the sample was taken from a fruitmarket	
SPAGHETTI	Diazinon	09056/2009	Yes** , the sample was taken from the market	
SPINACH	Azoxystrobin	00590/2009	No, the sample was taken from the packaging point, the ministry of agriculture was informed	
SPINACH	Azoxystrobin	13282/2009	No, the sample was taken from the packaging point, the ministry of agriculture was informed	
	Cypermethrin			
STRAWBERRIES	Cyproconazole	02438/2009	Yes* , the sample was taken from a fruitmarket	
STRAWBERRIES FROZEN	Ethion	10851/2009	No, the lot did not enter to the local market	2009.BTY
TABLE GRAPES	Captan	07000/2009	Yes* , the sample was taken from a fruitmarket	

\* The competent authority of Ministry of Agriculture was informed to contact with the grower and legal actions have been taken by the competent authority MPHS of Ministry of Health

\*\* The following actions have been taken by the MPHS:

- 1) Legal actions were taken,
- 2) the lot was withdrawn from the market and the consumers were informed by the media,
- 3) enforcement samples of various products from the market were taken and analysed for Diazinon and
- 4) samples from the manufacturer also were taken for further investigation

\*\*\* The producer and the grower were informed by the competent authority MPHS of Ministry of Health and the lot was destroyed. For further investigation and consumer protection enforcement samples of dry mint were taken from the market.

### 5.3. *Illegal and unauthorised uses*

**Table 2: Illegal and unauthorised uses**

Product	Residue	Description of unauthorised or illegal use
CARROTS	Endosulfan	Found in products from Israel - illegal use in Europe, the lot did not enter to the local market
CARROTS	Methamidophos	Found in products from Israel - illegal use in Europe, the lot did not enter to the local market
CARROTS	DDT	Found in product from Israel-low concentrations, residues possible caused by environmental pollution
CORRIANDER	Profenofos	Found in products from Egypt- illegal use in Europe, the found concentration was lower the MRL
CUCUMBERS	Methamidophos	Found in products from Israel - illegal use in Europe, the lot was withdrawn and destroyed
CUMIN SEEDS	Ethion	Found in product from India - illegal use in Europe, the lot did not enter to the local market
CUMIN SEEDS	Profenofos	Found in product from India- illegal use in Europe, the lot did not enter to the local market
MANDARINS	Malathion	Found in products from Cyprus - use not authorised in Cyprus, legal actions taken, the ministry of agriculture was informed
OKRA	Profenofos	Found in products from Egypt- illegal use in Europe, the found concentration was lower than the MRL
ORANGES	Bromopropylate	Found in product from Cyprus - use not authorised in Cyprus, one case only with low concentration,
PARSLEY	Oxadixyl	Found in products from Cyprus - illegal use in Europe, the ministry of agriculture was informed to contact with the grower
PEARS	Azinphos methyl	Found in product from Argentina - illegal use in Europe, the found concentration was lower than the MRL
PEPPERS GREEN	Profenofos	Found in products from Egypt- illegal use in Europe, the found concentration was lower the MRL
POTATOES	DDT	Found in products from Cyprus, very low concentrations, residues are caused by environmental pollution
RUNNER BEANS	Tetradifon	Found in products from Cyprus - illegal use in Europe, legal action taken, the ministry of agriculture was informed
STRAWBERRIES	Ethion	Found in products from Egypt- illegal use in Europe, the lot did not enter to the local market
STRAWBERRIES	Fenpropathrin	Found in products from Egypt- illegal use in Europe, the lot did not enter to the local market
STRAWBERRIES	Profenofos	Found in products from Egypt- illegal use in Europe, the found concentration was lower the MRL
WHEAT PRODUCTS	Diazinon	Found in products from Cyprus - illegal use in Europe, products withdrawn and destroyed

### 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 the provisions of "Method validation and Quality Control Procedures for Pesticides Residues Analysis in Food and Feed".

Laboratory Name	Laboratory Code	Date of Accreditation	Accreditation Body	Participation in proficiency tests or interlaboratory tests
<b>State General Laboratory of Ministry of Health</b>	SGL_CYPRUS_FP	2002	ESYD	EUPT FV11 EUPTC03/SRM4 EUPT A004

## 6. Czech Republic

### 6.1. Summary of Results

In 2009 the total of 1106 samples were taken. The major part comprised of samples of fresh fruits and vegetables (894 samples), than cereals (86 samples), processed products (44 samples), baby food (52 samples), animal products (30 samples). From the total amount of taken samples according to the country of origin samples from the Czech Republic represented 28 %, samples originating in the EU countries represented 48,0 % and samples from the third countries represented 21 %.

The maximum residue levels were exceeded in 20 surveillance samples (1,8 %), of which 6 were from third countries, 8 from other member states and 6 from the Czech Republic. Results of seven samples were not compliant with the legislation.

From animal products 15 samples of butter and 15 samples of eggs were taken in 2009. All samples were originating from the Czech Republic and were tested for 32 prescribed substances/pesticide residues. All results were compliant with the legislation and MRLs were not exceeded. Nevertheless, residues of DDT and HCB were found in all of 15 butter samples.

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

Samples	Total	Without residues	With residues below MRL	With residues exceeding MRL	With residues exceeding MRL (%)
Animal Products	30	15	15	0	0,0
Babyfood	52	42	9	1	1,9
Cereals	86	60	25	1	1,2
Processed products	44	14	30	0	0,0
Sum (fruit, vegetables, other plant origin)	894	185	691	18	2,0
<b>Total</b>	<b>1106</b>	<b>331</b>	<b>755</b>	<b>20</b>	<b>1,8</b>

In total, 306 various active substances were monitored in samples of plant origin in the framework of national and coordinated monitoring of pesticide residues. A positive finding was revealed in case of 158 various active substances. The most 10 frequently found pesticide residues, in decreasing order of frequency (found/sought) were imazalil, chlorpyrifos, thiabendazole, chlormequate, boscalid, dithiocarbamates, azoxystrobin, propamocarb, cyprodinil and imidacloprid.

### 6.2. Organisation of monitoring programmes and Sampling

#### 6.2.1. Responsibilities

Czech Agriculture and Food Inspection Authority (CAFIA) is the competent authority for controls of pesticide residues in foodstuffs of plant origin and provides the national and EU coordinated monitoring programmes in co-operation with the Ministry of Agriculture. State Veterinary Administration (SVA) is the competent authority for controls of pesticide residues in raw materials and foodstuffs of animal origin.

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

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.

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

Sampling is performed in accordance with sampling procedures referred to in Commission Directive No. 2002/63/EC that has been incorporated into the national regulation for sampling for determination of pesticides in and on fruit and vegetables.

Samples are taken by authorized and for this purpose trained employees of the CAFIA/SVA, i.e. inspectors of the CAFIA regional inspectorates. The main sampling points are food producers, importers, wholesalers and retail shops for domestic and non-domestic products.

### 6.2.4. **Enforcement action**

In case of whichever overrun of maximal residual limit a legal step follows from the side of the controlling body. The controlled person is imposed the measure to insure the withdrawal of the unsatisfactory batch from the market and announce further steps that were taken with the unsatisfactory batch, e.g. liquidation or adaptation. In the framework of administrative procedure a fine is imposed to the controlled person.

## 6.3. *Quality assurance*

### 6.3.1. **Status of accreditation of laboratories, number of laboratories**

All analyses in foodstuffs of plant origin were carried out in the laboratory of Czech Agriculture and Food Inspection Authority (CAFIA) in Prague. All analysis in foodstuffs of animal origin were carried out in the laboratory of State Veterinary Institute Prague (SVI Prague). Both laboratories are accredited by Czech Accreditation Institute (CAI) according to the ISO/IEC 17025 standard for all methods used for monitoring and/or enforcement analysis.



### 6.3.2. Analytical methods used

During the year 2009 two multiresidual method based on QUECHERS with GC×GC-TOF/MS and LC-MS/MS detection were applied to analysis of fresh fruit and vegetable and baby and infant food as well in CAFIA laboratory. Beside the QUECHERS method 3 single-residue methods were carried out in the 2009 (GC-MSD for dithiocarbamates, GC-ECD for inorganic bromine, LC-MS/MS for chlormequate and mepiquate). In the 2009 two new single-residue methods (GC-MSD for nicotine and GC-MSD for amitraz) were accredited.

Two dimensional capillary (with different polarity columns) GC-ECD and GC-NPD methods were used in laboratory of SVI in the year 2009. These methods covered most analytes (95%) according Commission Regulation (EC) 1213/2008 and 901/2009 respectively. For analysis of remaining compounds (5%) LC-MS/MS method was used.

### 6.3.3. Participation in proficiency tests

In the year 2009 laboratory of CAFIA took part in 2 EU proficiency tests focused on pesticide residues (EUPT FV 11, EUPT C3/SRM4) with satisfactory results.

Laboratory of SVA took part in EU proficiency test (PT) focused on pesticide residues and PT in FAPAS scheme with satisfactory results.

### 6.3.4. Implementation of EU quality control procedures

Most of requirements from the EU quality control guidelines (Document N° SANCO/2007/3131, resp. SANCO/10684/2009) have been fully implemented in the CAFIA laboratory, only chapter 3 (pesticide standards, calibration, solutions, etc.) has been implemented only partly. Substantial improvement of QC procedures has been achieved since the year 2008 and the process will continue also in the future.

Parts of above mentioned QC requirements have been implemented in the SVI Prague laboratory. Most of requirements of the new document will be fully implemented by the end of this year (2010).

### 6.3.5. Analytical uncertainty

Since the end of the year 2007 the harmonised “50% uncertainty” approach recommended in the SANCO guidelines has been applied to all results.

## 6.4. Other information

Health risk assessment is in the Czech Republic performed by the Ministry of Health. Non-complying samples are ceded to the MH and if they are relevant for transmission via RASFF (Rapid Alert System for Food and Feed), they are notified.

In 2009 we notified 3 findings of pesticide residues in fruit and vegetables, two of which were classified as Information notification (2009.1004, 2009.1074), one of which was classified as Alert notification (2009.0364).

2009.0364 – OXAMYL IN FRESH GREEN PEPPERS FROM THE SLOVAK REPUBLIC

2009.1004 – AZINPHOS-METHYL IN PEARS FROM ARGENTINA, VIA AUSTRIA

2009.1074 – METHAMIDOPHOS AND ACETAMIPRID IN FROZEN SUGAR PEA PODS FROM GERMANY

## 7. Denmark

### 7.1. *Summary of results*

In 2009 a total of 2294 surveillance samples of fruit, vegetables, cereals, processed products (including baby food) and animal products were analysed. Of these samples, 825 were produced in Denmark, 846 samples were produced in EU, 587 samples were produced outside the EU and 36 of the samples were of unknown origin (non domestic). The samples included 1622 samples of fruit and vegetables, 283 samples of cereals, 78 samples of processed foods including 21 samples of baby foods and 311 samples of animal origin.

105 (6.5%) of the fruit and vegetable samples and 43 (15.2%) of the cereal samples were organically produced.

Pesticide residues were found in 53% of the conventionally grown fruit and vegetables and in 30% of the conventionally grown cereal samples. Residues exceeding the MRL were found in 2.5% of the conventionally grown fruit and vegetables samples (38 samples). No exceedances of the MRLs were found in cereals, baby food or processed commodities.

The frequency of residues was higher in samples of fruits (73%) compared to samples of vegetables (26%). For fruits, pesticide residues were found in 75% and 77% of the samples produced in EU and outside EU, respectively, whereas pesticide residues only was found in 39% of the samples from Denmark. For vegetables, residues were found in 40% and 30% of the samples produced in EU and outside EU, respectively, while residues were found in 10% of the samples from Denmark.

The frequency of samples exceeding the MRLs was 1%, 2% and 3% for fruit produced in Denmark, EU and outside the EU, respectively. For vegetables the frequency of samples exceeding the MRL was 1%, 2% and 8% for vegetables originating from Denmark, EU and outside the EU, respectively.

The most frequently found pesticides in conventionally grown samples of fruit and vegetables were imazalil (16.5%), chlorpyrifos (10.3%), thiabendazole (8.6%), and ortho-phenylphenol (4.4%). In cereals, the most frequently found pesticides were chlormequat (21%), pirimiphos-methyl (7.1%), and malathion (4.2%). Multiple residues were found in 484 samples (21% of all samples). In samples from Denmark multiple residues were found in 24 samples (2.9%) while multiple residues were found in 460 samples (31.3%) of the non domestic samples. The highest numbers of pesticide residues, was 10 different pesticides found in a sample of chilli from Thailand and nine pesticides in a sample of grapes from Italy.

In organic fruit and vegetables, residues were found in two samples. One sample was grapes from South Africa with residues of fenhexamid and the other sample was tomatoes from Spain with residues of the two pesticides azoxystrobin and dichlorothalonil. In organic cereals, residues were found in two samples. One sample was from Denmark and one was from Canada. Both samples contained chlormequat. In all cases the residues in organic samples were very low and therefore not considered originating from an intended illegal use.

### 7.2. *Organisation of Monitoring programmes and Sampling*

#### 7.2.1. **Responsibilities**

The Danish Veterinary and Food Administration under the Ministry of Food, Agriculture and Fisheries have the responsibilities for the control of pesticide residues in foodstuffs (<http://www.fvst.dk>).

### 7.2.2. Design of 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 [1], which analysed monitoring data from 1998-2003. This report showed that 25 commodities were responsible for more than 98% of the intake of pesticide residues (Top25 commodities). These commodities were included in the sampling plan along with commodities suggested by the Commission (monitoring plan 2009). 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. All samples included in the centrally coordinated monitoring in 2008 were designed as surveillance and control samples.

### 7.2.3. Sampling

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.

### 7.2.4. Enforcement action

The control authorities receive the result from the laboratory. If there is any significant exceeding, the lot is regarded as illegal and should be withdrawn if it is still on the market. Furthermore, the control authorities follow up at the responsible companies. If the dietary intake calculations indicate an acute risk for the consumer a rapid alert is issued to RASFF.

### 7.3. Quality assurance

The analytical methods have been developed and validated by the National Food Institute, Technical University of Denmark. All samples were analysed at the laboratory of the Regional Veterinary and Food Control in Ringsted. The laboratory is accredited to pesticide analysis in compliance with EN45001/ISO17025 by the Danish Accreditation body, DANAK (certificate numbers 315 and 350). Furthermore, the laboratory participated in the relevant FAPAS proficiency test scheme and in the EU-proficiency tests.

All samples of fruit and vegetables were analysed for about 250 pesticides including isomers and metabolites. In addition, part of the samples were analysed for dithiocarbamates. Due to the methodology applied it was not possible to distinguish between the specific dithiocarbamates included in the MRL definition. All cereal samples were analysed for 185 pesticides, including isomers and metabolites.

"Guidelines concerning Quality Control Procedures for Pesticide Residue Analysis" has been applied for all methods. 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.

### 7.4. Other information

All findings above MRL were evaluated by toxicologists at the National Food Institute. For all samples in 2009 it was concluded that the exceedances were not expected to result in any toxicological effects.

## References

[1] M.E. Poulsen, J.H. Andersen, A. Petersen, H. Hartkopp (2005). Pesticide Food Monitoring, 1998-2003 Part 2. ISBN 87-91569-54-0.

<http://www.foedevarestyrelsen.dk/FDir/Publications/2005002/Rapport.pdf>

## 8. Estonia

### 8.1. *Summary of Results*

In 2009, a total of 397 samples of fruits, vegetables, cereals and baby food were analyzed for 326 residues. Samples are following: 336 samples of fruits and vegetables, 21 samples of cereals and 10 samples of baby food and 10 samples of eggs and 15 samples of butter.

132 samples of aubergines, bananas, cauliflower, table grapes, orange, butter, eggs, peppers (sweet), wheat, butter and eggs were analyzed according to the Commission Regulation nr 1213/2008 concerning the year 2009 coordinated multiannual Community control programme.

Pesticide residues exceeded MRL in 9 cases (2,3% of all samples), all of which were not of domestic origin. In 8 cases the origin of the product was a country from European Union.

One of the samples exceeded the MRLs for the residues which were included in the EU coordinated programme and 8 were included in the national programme.

Exceedings were detected in apricot, broccoli, cauliflower, radish and tea.

The results are available on website of Veterinary and Food Board:

<http://www.vet.agri.ee/static/files/598.Taimekaitsevahenditej22gid2009.pdf>

### 8.2. *Organisation of monitoring programmes and Sampling*

#### 8.2.1. **Responsibilities**

In 2009, the Veterinary and Food Board (VFB) was the competent authority for the control of pesticide residues and planning the monitoring programme.

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

Since the year 2007 VFB is responsible for drawing up the coordinated multiannual monitoring programme and it provides a sampling plan including the commodities and pesticides required. The design of the monitoring programme is based on the Commission Regulation nr 1213/2008 concerning the year 2009 coordinated multiannual Community control programme and on the results of the previous year sampling activities and on the Rapid Alert Systems in place. Results of samples taken for pesticide use surveillance by Plant Protection Inspectorate (PPI) at primary production level are also included in the report. Samples taken from organic food form 5,8% of all samples in year 2009.

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

Sampling was carried out by trained inspectors according to Directive 2002/63/EC. Inspectors of the county centres of VFB carry out sampling for residues of foodstuffs in the context of food control activity according to the provisions of the law and by the monitoring plan and guide prepared by VFB. Samples are taken from domestic commodities of plant origin at wholesale and production level but also retail level and non-domestic commodities of plant origin at wholesale and retail level. Samples taken for pesticide use surveillance by PPI at primary production level are only from domestic commodities. The samples (including organic food samples) are taken by the inspectors of the county centres of the PPI. Samples are taken according to the sampling plan and guide prepared by PPI.

#### 8.2.4. **Enforcement action**

The laboratories do not compare the results of analysis with the MRL, only submit the laboratory certificate to the inspector in charge. The evaluation of the analysis results is the responsibility of the surveillance inspector. Where MRLs are exceeded, usually follow-up samples are not taken, but enforcement action will be taken by the inspectors of VFB and PPI – the marketing of the product is prohibited, retailers are informed and procedures are put in place for product recall. In 2009 four RASFF notifications were issued, all were information notifications.

### 8.3. *Quality assurance*

#### 8.3.1. **Status of accreditation of laboratories, number of laboratories**

Two laboratories analyze the samples: Health Protection Inspectorate Tartu laboratory (HPI) and Agricultural Research Centre Laboratory for Residues and Contaminants in Saku (ARC). The laboratories are accredited by the Estonian Accreditation Centre (EAK) for all analytical methods used for official control of pesticide residues in food. All certificates of the accreditation can be found on the website of the EAK (<http://www.eak.ee>).

#### 8.3.2. **Analytical methods used**

The ARC laboratory used QuEChERS-method EN 15662:2008 for analysis of pesticide residues in food of plant origin with LC-MS/MS, GC-ECD/NPD/MSD determination and a single residue method EN 12396-2:1998 for determination of dithiocarbamates (maneb-group) by GC-ECD, GC-MSD. A single residue method for analysis of glyphosate residues J Food Additives and Contaminants, Vol.20 No. 8, 2003 in cereals by LC-MS.

The HPI used T26a-GC/MSD and T81-LC/MS multi-residue methods for analysis of pesticide residues in food of plant origin and baby food and T25a-GC/MSD method for analyzing samples of animal origin. A single residue method T45-GC/MSD was used for determination of dithiocarbamates (maneb-group) in food.

#### 8.3.3. **Participation in proficiency tests**

ARC have participated several times in the proficiency tests organised by FAPAS in 2009 (FAPAS 1989, FAPAS 1990) and in the European Commission's Proficiency Test (EUPT C3 SRM4 and EUPT FV 11). HPI participated several times in the proficiency tests in 2009 - the European Commission's Proficiency Test (EUPT AO 04 and EUPT C3 SRM4 and EUPT FV 11).

#### 8.3.4. **Implementation of EU quality control procedures**

The EC guidelines SANCO/10232/2006 “Quality Control Procedures for Pesticide Residue Analysis” and its revision SANCO/2007/3131 “Method Validation and Quality Control procedures for Pesticide Residues” have been implemented as far as practicable.

#### 8.3.5. **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. The sample was defined as an exceeding if the analytical results with correction by analytical uncertainty were above the MRL. In these cases also enforcement actions were taken.

#### 8.4. *Other information*

##### 8.4.1. **Background on legislation**

Estonia has implemented all EC-MRLs.

## 9. Finland

### 9.1. *Summary of Results*

In 2009, a total of 2053 surveillance samples of fruit, vegetables, cereals, processed products and baby foods were analysed for residues of 264 pesticides. 328 samples were of domestic origin, 733 from other EU countries, 983 from third countries, and 9 samples had unknown origin. Animal products were part of the control program for the first time and 27 domestic samples were analysed for residues of 47 pesticides.

No detectable pesticide residues were found in 41% of the surveillance samples. The frequency of samples with residues above LOQ was 77% for fruits and nuts, 49% for vegetables, 42% for cereals and 4% for animal products. Baby food samples had not detectable residues. The number of samples taken from organic products was 145, and residues were detected in 3 samples (2%). One herb-flavoured butter sample had residues originating most likely from the herbs, not from the butter.

Pesticide residues were found in 27% of the domestic samples, in 60% of the samples from other EU member states, and in 68% of the third country samples.

The maximum residue levels (MRLs) were exceeded in 184 surveillance samples (9%), of which 150 were from third countries, 1 from Finland and 33 from other EU member states. However, only 89 surveillance samples (4%) were non compliant when measurement uncertainty was taken into consideration. Out of that, 83 were from third countries, non from Finland and 6 from other EU member states.

233 enforcement samples were collected as follow-up of violations. Residues exceeding the MRLs were found in 111 enforcement samples (48%). When measurement uncertainty (50%) was considered, 73 enforcement samples (31%) were non compliant.

### 9.2. *Organisation of monitoring programmes and Sampling*

#### 9.2.1. **Responsibilities**

Finnish Food Safety Authority Evira is the central competent authority for the control of pesticide residues and planning of the monitoring programme. The control of non-domestic foodstuffs has been assigned to Customs administration while municipalities and Evira are responsible for the control of all domestic and animal products. The control of pesticide residues in alcoholic beverages is the responsibility of National Supervisory Authority for Welfare and Health (Valvira). The city of Helsinki is participating into the programme by collecting and analysing samples from the market area of Helsinki. Samples are both domestic and non-domestic.

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

The annual monitoring programme is worked out in co-ordination under Evira, and it provides a sampling plan for the residue control of fruit and vegetables, cereals, processed products of plant origin, baby-food, animal products and organic products including the commodities and pesticides required in the EU co-ordinated programme. Control is designed to cover all important dietary commodities. The sampling frequency of different commodities is determined taking into consideration food consumption figures and the results of previous monitoring



programmes. Priorities are also set according to known residue problems. The number of organic samples (7%) is higher than the share of organic production area in Finland.

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

Domestic samples are collected by local health inspectors from wholesalers, packing companies, retail shops or farms according to the annual sampling plan and guide prepared by Evira. The samples of non-domestic foodstuffs are collected by customs inspectors from wholesalers. Samples of alcoholic beverages are collected by inspectors of the Valvira. Inspectors have theoretical and practical training in sampling organised by Evira, the Customs or the Valvira. The sampling directive 2002/63/EEC is followed.

### 9.2.4. **Enforcement action**

For surveillance samples exceeding the MRL, the holder of the product is requested to prevent further distribution and selling of the lot. On subsequent lots of the same origin, follow-up samples are taken (enforcement samples). In case of enforcement sampling, the lots are detained for the duration of the investigation, and lots confirmed to exceed the MRLs are to be destroyed. Under certain conditions and by permission of the authorities, a non-complying lot may be returned to the seller or to a third country or rendered compliant to regulations (e.g. aeration to decrease the level of fumigant residues). With domestic samples the reason for the exceedance is inspected at the farm level.

## 9.3. *Quality assurance*

### 9.3.1. **Status of accreditation of laboratories, number of laboratories**

The analyses were carried out in three accredited (FINAS) laboratories: Finnish Customs Laboratory (93 % of samples), MetropoliLab (6 % of samples) and Evira (1%). All laboratories have accreditation according to ISO17025.

### 9.3.2. **Analytical methods used**

Virtually all samples were analysed by the multiresidue methods. Both Customs laboratory and MetropoliLab are using the acetonitrile extraction method (QuEChERS). In the beginning of the year 2009 MetropoliLab used the Luke method, but changed the method for QuEChERS. Gas chromatographic analysis of the extracts is based on detection by GCEC, GCNP, GCMS or GCMSMS. In Customs laboratory the sample extracts were analysed by LCMSMS as well. Evira is using liquid extractions and dispersive SPE for the purification of fatty animal products for pesticide residues. Residues are detected by GC-MS/MS or LC-HRMS. The number of pesticides monitored for by the multiresidue method is 264 in Customs laboratory, 58 in the MetropoliLab and 47 in the Evira laboratory. In addition, chlormequat and mepiquat, inorganic bromides, hydrogen phosphide, nicotine and dithiocarbamates were analysed from selected samples in the Customs Laboratory.

### 9.3.3. **Participation in proficiency tests**

MetropoliLab participated in the proficiency tests organised by EU (FV10 and FV11). Customs Laboratory participated into the following proficiency tests: EUPT-FV11, EUPT-C3, EUPT-SRM4 and BIBEA tests 0519, 2619, 1919 (dithiocarbamates) and BIBEA tests 0519, 2019, 2719 (bromides). Evira participated into EUPT-AO-04 organised by EU.

#### 9.3.4. **Implementation of EU quality control procedures**

The EU quality control guidelines (SANCO/3131/2007) have been implemented in laboratories, albeit only partly for some elements.

#### 9.3.5. **Analytical uncertainty**

The estimation of analytical uncertainty is based on the daily quality control samples and results of the proficiency tests. Only results subtracted by the uncertainty value (50%), still exceeding the MRL are defined in this report as exceedances.

#### 9.4. ***Other information***

Possible health risk in case of MRL exceedance was estimated using the PRIMO 2 or the UK short term intake calculation model. Rasff notification was released in 23 cases where the ARfD was exceeded.

## 10. France

### 10.1. Responsibilities

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 focus mainly on local production. The other five analyse all types of plant commodities available on the French market, including both unprocessed and processed products.

### 10.2. Organisation of the control programmes and Sampling

#### 10.2.1. Programme design

The plant pesticide residue sampling scheme is developed with support of the ANSSAET (French Agency for Food, Environmental and Labour Safety). It takes in account the requirements of the European Union coordinated programme, the dietary proportion of plant products in French consumption and the results of former monitoring plans.

The programme distinguishes two sampling strategies called “surveillance” for random samples (including the EU coordinated programme) and “control” for targeted samples (based on high probability of non-compliance, e.g. winter salad, or specific problems, e.g. nicotine in mushrooms or chlordecone in root vegetables). The follow-up samples are included in the “control” scheme, but the database didn’t allow to recognize them in 2009.

A specific programme is established for organic products (ca. 7.5% of the total samples)

4953 various samples (including 489 samples for the coordinated program) were taken in 2009.

Tab. 1 summarises the breakdown of the samples by commodity groups and strategies.

Groups of commodities	EFSA codes	SURVEILLANCE		CONTROL		TOTAL	
		non-organic	organic	non-organic	organic	sum	ratio
<b>UNPROCESSED</b>							
Fruits	P0110010A to P0163990A	779	26	308	61	1174	23,7%
Vegetables	P0211000A to P0270990A	1681	43	799	52	2575	52,0%
Cereals	P0500010A to P0500990A	276	15	0	54	345	7,0%
Others	P0280010A to P0402990A & P0610000A to P0900990A	123	6	81	23	233	4,7%
<b>PROCESSED</b>							
From fruit and vegetables		318	37	11	10	376	7,6%
From cereals		104	9	0	24	137	2,8%
Baby-foods	PX100001A to PX100003A	14	4	0	0	18	0,4%
Animal feeds	P1200000A	20	5	0	1	26	0,5%
Miscellaneous		21	1	45	2	69	1,4%
<b>TOTAL</b>							
sum		3336	146	1244	227	4953	
ratio		67,4%	2,9%	25,1%	4,6%		

49% of the samples were from French origin, 16% from other EU countries and 32% from third countries. 3% were from undetermined origin (mainly for processed and/or composite samples).

### 10.2.2. **Sampling : personnel and procedure**

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 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.

### 10.3. *Quality assurance*

#### 10.3.1. **Participation in proficiency tests**

All five metropolitan labs, each in its own activity range, participate in the proficiency tests organised by the CRL (EUPT). In 2009, four tests were achieved :

- EUPT FV 11 Test for multiresidue methods in fruit and vegetables,
- EUPT FV SM 01 Test for qualitative (screening) methods in fruit and vegetables,
- EUPT C-SMR 03 Test for multi and monoresidue methods in cereals,
- EUPT Test for nicotine in dried mushrooms.

These participations are mandatory. The results and, if necessary, the corrective actions, are checked out by the NRLs of Montpellier (for fruit and vegetables) and Massy (for cereals).

The oversea labs didn't participate in the EUPT in 2009, mainly due to their remoteness, their poor number of samples and, for Guadeloupe's laboratory, its specific action on chlordecone. If possible, Reunion's laboratory will participate in 2010.

On a voluntary basis, most of the labs have an extra effort with proficiency tests organised by independent suppliers (BIPEA and FAPAS).

#### 10.3.2. **Implementation of EU quality control procedure**

The EC guidelines SANCO/10232/2006 have been implemented as far as possible in 2009.

#### 10.3.3. **Status of accreditation of the laboratories**

All five metropolitan labs, handling 94% of the samples, are accredited by the French Committee for Accreditation (COFRAC), but for a part of their activities only. The obviousness is that 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.

Oversea laboratories are not accredited, for the same reasons as above and for their low participation in monitoring programmes.

#### 10.3.4. **Analytical methods used**

When published, laboratories apply CEN methods. Norms EN 12393-1,2,3:2009 and EN 15662:2009 describe the methods for multiresidue research. Some specific monoresidue methods are also employed (EN 12396-1:1998, EN14133-1/3:2004, EN15055:2006). If no normalized method exists, laboratories use "in-house" methods, sometimes issued from A.O.A.C.

For multiresidue methods, the identification and quantification are carried out by chromatography coupled to mass-spectrometry (GC-MS(MS) and/or LC-MS/MS).

#### 10.4. *Possible reasons for EC MRL exceedences*

In 2009, 35,9% of the samples contained quantifiable pesticide residues. 2,3% of the samples were not compliant regarding on the MRLs, and 1,1% at the border of non-compliance (after integrating uncertainty following Horwitz formula). Ca. the quarter of the anomalies is due to illegal use of substances (either substances drawn out from Directive 91/414, either misuses on other cultivations than authorized). The other part results probably from bad agricultural practices, particularly too late treatments.

#### 10.5. *Actions taken for samples exceeding the EC MRLs*

When the analysis induces bordering conclusion because of the measurement uncertainty, the operator is warned by the local service of the DGCCRF. When a proved non-compliance is detected, an enquiry is initiate to determine causes and responsibilities in the chain of operators, possibly with follow-up sampling. This enquiry may lead to various graduate consequences, up to recall of the product and/or contentious actions.

In the same time, each non-compliance gives rise to a systematic information of the central administration of the DGCCRF by the laboratories, in order to initiate risk assessment and, if necessary, RASFF alert. Non-compliances in french crops are also communicated to Ministry of Agriculture, which is in charge to conduct actions at growing level.

#### 10.6. *Other information*

Despite of the EC harmonization of MRLs, some cases are still relevant of national matters:

A few substances (i.e. orthophenylphenol and piperonyl butoxide) are not integrated in the field of Directive 91/414 and, consequently, are not liable for their MRL to the default value of 0.01 mg/kg. Although unpublished, administrative french tolerances are applied for these substances, because of their regular and totally legal use.

Annex VI of the Regulation EC 396/2005 – relating to processing factors – is still unpublished. All factors used for calculation of MRLs in processed products are therefore not harmonized and, consequently, issued MRLs no more.

## 11. Germany

### 11.1. *Summary of Results*

In 2009 in the Federal Republic of Germany a total of 16,866 samples (16,373 surveillance and 493 follow-up enforcement samples) were tested for pesticide residues. Of these samples, 7,095 were produced in Germany, 5,250 samples were produced in EU, 3,300 samples were produced outside the EU and 1,221 of the samples were of unknown origin. The samples included 14,968 samples of fruit, vegetables and other plant origin, 374 samples of cereals, 962 samples of animal products, 194 samples of baby food and 368 samples of processed products.

The participating laboratories reported a total of 4,727,811 analyses for the food samples. The samples were analysed for a total of 804 different pesticides (excluding isomers and metabolites) from which 341 were detected at least in one sample. Residues of 154 individual pesticides exceeded MRLs.

In 6,541 (39.9 %) surveillance samples no residues of pesticides could be quantified. In 9,349 (57.1 %) surveillance samples residues of pesticides were quantified but in compliance with MRLs. 483 (2.9 %) surveillance samples contained residues of pesticides exceeding MRLs.

In 167 (33.9 %) follow-up enforcement samples no residues of pesticides could be quantified. In 259 (52.5 %) follow-up enforcement samples residues of pesticides were quantified but in compliance with MRLs. 67 (13.6 %) follow-up enforcement samples contained residues of pesticides exceeding MRLs.

Multiple residues were found and quantified in 39.8 % of all samples.

### 11.2. *Organisation of monitoring programmes and Sampling*

#### 11.2.1. **Responsibilities**

In Germany the Federal States are responsible for the control of pesticide residues in foodstuffs. The “Federal Office of Consumer Protection and Food Safety, BVL” is responsible for the publishing of all results of national residue monitoring on the Internet (according Article 30 (3) of Regulation (EC) No 396/2005) and for the submission of the results of the official controls to the EFSA (according Article 31 (1) of Regulation (EC) No 396/2005).

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

In Germany there is a difference between the Food Monitoring Programme and the official food control. The data generated in both programmes correspond with the provisions of Regulation (EC) No 396/2005 and the Commission Regulation (EC) No 1213/2008 of 5 December 2008 concerning a coordinated multiannual Community control programme. Therefore, the report includes the respective data from both programmes:

- Monitoring programme 2,568 samples
- Official food controls 14,298 samples.

The monitoring is based on a representative collection of data. With regard to bio-statistical aspects, the samples are taken randomly according to defined sampling plans. The sampling plans to be used for this purpose are laid down every year by the Federal Government together with the Federal States.

In the framework of official residue control, the samples are taken in a risk-oriented manner in order to check if there are any infringements against food legislation (e.g. surpassing of MRLs). The kind and extend of the sampling are decided on by the Federal States.

1,260 samples of 16,866 (7.5 %) were from products produced under the rules of organic farming. In 285 (22.6 %) samples residues of pesticides could be quantified. Only 3 (0.2 %) 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.

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

The Federal States are responsible for the sampling, which is carried out by correspondingly trained official inspectors according to Commission Directive 2002/63/EC. Samples were taken on the level of producers, manufacturers, wholesalers and retailers.

### 11.2.4. **Enforcement action**

The local control authorities of the Federal States receive the results from the laboratories. When infringements are stated, the local authorities apply adequate measures (e. g. follow-up examinations, warnings, fines, withdrawal from market (if the lot is still on it), and transfer of the case to public prosecution). Furthermore, the control authorities follow up at the responsible companies. If the dietary intake calculations indicate an acute toxicological risk to the consumer a rapid alert is issued to RASFF (in 2009 there were 26 notifications about pesticide residues from Germany).

## 11.3. *Quality assurance*

### 11.3.1. **Status of accreditation of laboratories, number of laboratories**

All the 32 laboratories involved in the monitoring exercise have been accredited by the German accreditation authorities AKS and SAL.

### 11.3.2. **Analytical methods used**

Samples of fruits and vegetables were analysed using multi-residue methods like QuEChERS. The main detection methods were HPLC-MS/MS and GC-MSD. In some cases, if mass spectrometric detection was not sensitive enough, GC detection with ECD was performed. Single-residue methods were used for analytes, which are not detectable by multi-residue methods.

Samples of animal origin were analysed using a modular multi-residue method based on fat extraction, gel permeation chromatography and if necessary, further purification, e.g. with silica gel. Detection was performed mainly by GC-MSD or GC-ECD, and to some extent HPLC-MS/MS.

In total 804 analytes were determined using multi- and single-residue methods.

### 11.3.3. **Participation in proficiency tests**

The German Laboratories participated in four proficiency tests organized by EU: EUPT-AO4, EUPT-FV11, EUPT-C3 and EUPT-SRM4.

#### **11.3.4. Implementation of EU quality control procedures**

The EC guidelines SANCO/2007/3131 “Method validation and Quality Control Procedures for Pesticide Residue Analysis in food and feed” have been fully or partly implemented by the different laboratories.

#### **11.3.5. Analytical uncertainty**

The analytical uncertainty is not considered in this report. The numerical measured values of residues are compared to the MRLs, only. However, food control authorities in Germany take into account the analytical uncertainty before administrative consequences follow. In these cases they use the subsequent procedure. If measured residues indicate that maximum residue levels are exceeded, the analytical uncertainty is considered. An over-all reduction of 50% of the measured value is generally applied. It is taken for sure that maximum residue levels are exceeded when measured values, reduced by the respective deviation, are still above the respective limit value.



## 12. Greece

### 12.1. Summary of Results 2009

Category	Total number of samples	Number of samples without detectable residues	Number of samples with residues not exceeding EU-MRL	Number of Samples with residues exceeding EU-MRL
Fruits and Vegetables	1959	1459 (74.48%)	431 (22.00%)	69 (3.52%)
Cereals	38	36 (94.74%)	2 (5.26%)	0 (0%)
Plant Origin Processed products	223	194 (87%)	29 (13%)	0 (0%)
Baby Food	17	17 (100%)	0 (0%)	0 (0%)
Food of Animal origin	41	39 (95.12%)	0 (0%)	2 (4.88%)
Feed	8	4 (50%)	4 (50%)	0 (0%)
<b>Total</b>	<b>2286</b>	<b>1749 (76.51%)</b>	<b>466 (20.38%)</b>	<b>71 (3.10%)</b>

### 12.2. Organisation of monitoring programmes and Sampling

#### 12.2.1. Responsibilities

The multi-annual and annual monitoring programmes were designed and organised by the central competent authority. Monitoring programme for olive oil is foreseen through a Ministerial Decision. 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 is carried out by the responsible for sampling regional and local authorities.

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

The program was designed 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, pesticides used in practice by the farmers, community control programme, relevant RASFF notifications for pesticide residues, personnel and analytical capacity of the official laboratories.

#### 12.2.3. Sampling: personnel, procedures, sampling points

The responsible for sampling authorities, with the designated personnel, follow the methods of sampling according to Commission Directive 2002/63/EC. Samples were taken from "the farm to the fork" (points of entry, wholesalers, retailers, farm gates etc.).

#### 12.2.4. Enforcement action

In the case of an MRL exceedance, the relevant to the case enforcement actions specified by national law are taken.

### 12.3. Quality assurance

ISO/IEC 17025:2005, SANCO/2007/3131, SANCO/10684/2009.

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

The official laboratories involved in the pesticide monitoring program of 2009 are nine (9) which are all accredited under the terms of the ELOT EN ISO/IEC 17025:2005.

### 12.3.2. Analytical methods used

Dutch multi-residue method, MA-01, MA-02, Dithiocarbamates UV-determination, ELOT EN 12396-1:1999, Lentza-Rizos and E.J. Avramides, Analyst 1990-vol. 115., Lentza-Rizos, J. AOAC, 1994, vol 77, QuEChERS method of AOAC 2007.01, pr EN 15662 2007-10-24.

### 12.3.3. Participation in proficiency tests

EUPT-FV06, EUPT-FV07, EUPT-FV08, EUPT-FV09, EUPT-FV10, EUPT-FV11, EUPT-FV12, EUPT-C4 2010, COIPT 09-olive oil IOCC, EUPT-AO-4, EUPT-C3-SRM4, EUPTSM-01, EUPT-FV-amitraz

### 12.3.4. Implementation of EU quality control procedures

The EC guidelines of the quality control procedures for pesticide residue analysis are followed as close as possible.

### 12.3.5. Analytical uncertainty

The pesticide residues figures found are compared with the MRLs. In a case of an exceedance of the MRL, 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.

## 12.4. *Other information*

In all cases of MRL exceedances, risk assessment for acute exposure is conducted, using the ARfD value. In the cases of pesticides that an ARfD has not been set, the ADI is used.

### 13. Hungary

#### 13.1. *Summary of results*

The reported period includes samples which were taken from 1 January 2009 to 31 December 2009. The date of analysis is not corresponding with the reporting period.

The official pesticide residue monitoring programme for commodities of plant and animal origin was carried out by 6 and 1 laboratories of the Central Agricultural Service, respectively.

Altogether 309 pesticide residues and metabolites were looked for in plant and 14 in animal products.

The main figures of the programme follow:

Number of samples taken from:

1. raw agricultural commodities of plant origin:
  - domestic products: 1418
  - EU monitoring: 106
  - imported products from EU and 3rd countries: 1047
  - pre-export: 274
2. processed products of plant origin: 277
3. baby food: 111
4. raw agricultural commodities of animal origin:
  - domestic products: 205
  - imported products from EU and 3rd countries: 2

The 46.3 % of the samples of plant origin did not contain residues above the LOQ values. While, the residues exceeded the MRL only in about 1% of the samples. Only two out of 111 baby food samples contained detectable residues, but they did not exceed the MRLs.

The pesticides found most frequently in fruit and vegetable samples were dithiocarbamates, chlorpyrifos, azoxystrobin, imazalil, captan, and in cereals chlormequat, pirimiphos - methyl and chlorpyrifos-methyl.

#### 13.2. *Organisation of Monitoring programmes and Sampling*

##### 13.2.1. **Responsibilities**

Central Agricultural Office Directorate of Plant Protection, Soil Conservation and Agri-environment (CAO DPPSCA) is responsible for supervising the regional laboratories and 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.

##### 13.2.2. **Design of Programmes**

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 baby-food products. In addition, some other crops of concern are also included. The

sampling frequency of different commodities is determined taking in to 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.

### 13.2.3. Sampling

Sampling is carried out in accordance with 34/2004 order issued by Ministry of Health based on the order 2002/63/EC for pesticide residues, and the original Decree 5/2002 (II.22) MARD-MH.

*Sampling points:* Border Station Offices, wholesale and retail markets, places of production.

*Personal:* border and plant protection inspectors within the country.

## 13.3. Quality assurance

### 13.3.1. Status of accreditation of laboratories:

All 6 laboratories analysing pesticide residues in commodities of plant origin have GLP accreditation. Three of them also accredited according to MSZ EN ISO 17025. The laboratory testing animal products has MSZ EN ISO 17025 accreditation. 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 31/1999 (VIII.6.) MH- MARD and 9/2001 (III.30.) MH- MARD.

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 QuEChERS-method, which is European and Hungarian standard method: MSZ EN 15662:2009.

### 13.3.2. International proficiency tests

In 2009, 151 laboratories in Europe took part in the 11th European Proficiency test, including all the 6 Analytical Laboratories of CAO DPPSCA.

The Hungarian Analytical Laboratories obtained very good results (A) with Z-scores of  $\leq 1$  (5) and 1.7 (1).

### 13.3.3. Analytical uncertainty

The laboratories establish their own values for measurement uncertainty, but apply the larger default value of 50% (ref. SANCO/3131/2007) in the decision making process.

### 13.3.4. Other Information

In 2009, Hungary did not carry out the homogeneity exercise.

**Details of risk assessment:** are carried out by Hungarian Food Safety Office (HFSO) in cooperation with CAO DPPSCA.

MARD – Ministry of Agriculture and Rural Development

MH – Ministry of Health

## 14. Iceland

### 14.1. *Summary of Results*

In 2009 a total of 300 samples were taken of fruits and vegetables in Iceland's surveillance programme and analyzed for residues of 62 pesticides. 73 samples or 24% were from Iceland, 1 sample of fruit (strawberries) and 72 of vegetables. 45% were from the European market and 30% from third countries. The percentage of samples with residues above the EU harmonized maximum Residue Limits (EC-MRLs) were 0,0%, 0,7%, and 1,1% respectively.

No residues were found in 209 samples, 89 samples (29,7%) had residues of one or more pesticides. 2 samples (0,7%) exceeded EU harmonized maximum Residue Limits (EC-MRLs). In 55 samples (18%) more than one pesticide was analyzed. Up to 5 pesticides were found (5 in two samples, oranges and apples).

Iceland has a limited number of substances analyzed. The number of non-compliances decreased in comparison to the last few years in spite of an increased number of substances analyzed (44 substances in 2007 to 62 in 2009). This seems to be an effect of the EU harmonized MRLs laid down in the year 2008.

### 14.2. *Organization of monitoring programmes and Sampling*

#### 14.2.1. **Responsibilities**

Matvælastofnun, The Icelandic Food and Veterinary Authority is the responsible authority for the monitoring of pesticide residues in foods.

#### 14.2.2. **Programme design (priorities, sampling strategies, criteria for the percentage of organic samples, etc.)**

A multi-annual sampling plan is revised every year. It is based on information on import volumes and domestic production. Experience of residues found in prior samples is also taken into account. The co-ordinated EU programme in Regulation (EC) no. 1213/2008 is also taken into consideration.

#### 14.2.3. **Sampling: personnel and procedures**

The Environmental and Public Health office in Reykjavik collects most of the samples and is responsible for enforcement action when necessary.

Samples were collected 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.

12 samples were taken from organic product, they were taken at retailer's level, equal from imported and national produce. More samples might have been taken from organic product but could not be distinguished from the data.

#### 14.2.4. **Enforcement action**

When a pesticide residue exceeds MRL, a new sample is analysed to confirm the results. Enforcement actions are taken if the pesticide residues are over MRL after analytical uncertainty has been subtracted. Enforcement actions are, warning, monitoring of next two shipments from the violating producer/grower and if deemed necessary, recall of product from the market.

### 14.3. *Quality assurance*

#### 14.3.1. **Status of accreditation of laboratories, number of laboratories**

Matis ohf is accredited since May 2007 by SWEDAC on behalf of ISAC, but not all pesticides measured have been validated in accordance with ISO 17025. The laboratory had the analysis of 29 out of 62 pesticide residues accredited at the end of year 2008.

#### 14.3.2. **Analytical methods used:**

Extraction with organic solvents followed by GC-MS analysis. Matis screened for residues of a total of 62 pesticides in 2009.

#### 14.3.3. **Participation in proficiency tests**

An Icelandic laboratory, Matis ohf carried out the analysis of fruit and vegetable samples. Matis ohf. participates in CRL European Proficiency Test.

#### 14.3.4. **Implementation of EU quality control procedure**

The following parts of EU quality control procedures were followed: Sampling, transport, processing and storage of samples, pesticide standards, calibration, solutions etc., extraction and concentration, contamination and interference, analytical calibration and chromatographic integration, and proficiency testing and analysis of reference material. Analytical methods and analytical performance are only partly followed as methods were not all accredited in the year.

#### 14.3.5. **Analytical uncertainty**

Analytical uncertainty estimation is applied on results. If the residue figures found are above the MRL the sample is defined as an exceeding. Before any enforcement actions are taken the analytical uncertainty is subtracted from the measured value. If the corrected figure exceeds the MRL, enforcement actions are taken.

### 14.4. *Other relevant information*

Iceland only participated partly in the co-ordinated program.

## 15. Ireland

### 15.1. *Summary of Results*

This report provides the results of the national and the EU coordinated monitoring programmes on compliance of products listed in Annex I of Regulation (EC) No 396/2005 with Annex II and Annex III of that Regulation. It is submitted in accordance with Article 31 of Regulation (EC) No 396/2005.

A total of 1324 monitoring and 5 enforcement samples of fruit and vegetables cereal and food of animal origin were analysed for up to 315 pesticides (334 analytes) using a combination of multi-residue and single residue methods. The MRLs were exceeded in 10 samples. In addition, 1 sample of ovine fat, while compliant with the MRL set for diazinon in Council Regulation (EEC) No 2377/1990, when used as a veterinary medicine product, was non-compliant with the MRL for diazinon set in Regulation (EC) No 396/2005.

The 787 samples of plant origin in the monitoring programme comprised of 12.7% of domestic origin, 43.8% from other countries in the EEA, 34.4% from countries outside the EEA while the remainder were of unknown origin. Of the 787 samples, 41% contained no detectable residue, 59% contained one or more detectable residues including 10 samples (1.3%) with residues in excess of the statutory MRLs.

A total of 75 cereal samples were analysed in 2009, of which 56% were of Irish origin, and 44% were imported. The majority of the cereal samples, (61%), contained no detectable residue and the remainder (39%) had detectable residues, none of which exceeded MRLs.

A total of 462 samples of animal origin (including processed) were analysed, with almost all samples (461) being of domestic origin. The majority of the samples of food of animal origin (97.4%) contained no detectable residue and 12 samples (2.6%) contained residues which complied with the relevant MRL legislation. The residues detected were mostly organochlorines and probably resulted from environmental contamination from past use.

Overall, despite a continuing increase in the number of analytes sought, there has been a significant decrease in the number of non-compliances detected compared to previous years. Also, based on Irish consumption data, none of the monitoring samples which exceeded the MRLs resulted in an exceedance of the acute reference dose (ARfD) set by the EU or WHO.

### 15.2. *Organisation of monitoring programmes and Sampling*

#### 15.2.1. **Responsibilities**

The Pesticide Registration & Control Division (PRCD) of the Department of Agriculture, Fisheries and Food was responsible for the implementation of the 2009 monitoring programme for food of plant origin.

#### 15.2.2. **Design of Programmes**

The programme was designed by taking account of the current consumption data for Irish adults and children; the EU co-ordinated monitoring programme for 2009; the percentage of crops containing residues in monitoring programmes from previous years; the capacity of the laboratory to implement the programme and targeting of samples that gave rise to MRL breaches in 2008.

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

Samples were taken according to the agreed plan. Samples of fruit, vegetable and cereal samples were taken by officers from the PRCD, in accordance with the Commission Directive 2002/63/EC. Fruit and vegetable samples were normally taken at wholesale level and occasionally at retail level, while cereal samples were mostly taken at the milling plants.

Samples of food of animal origin were taken by officers from other Divisions in the Department of Agriculture in accordance with Directive 96/23EC and were sampled mainly at meat and dairy plants.

### 15.2.4. **Enforcement action**

Arising from the MRL breaches detected in 2008, 5 enforcement samples were analysed in 2009. No further follow up action was required as there was no MRL breach or illegal use associated with these samples.

## 15.3. *Quality assurance*

### 15.3.1. **Status of accreditation of laboratories, number of laboratories**

The Pesticide Control Laboratory of the Department of Agriculture, Fisheries and Food is the only Irish laboratory involved in the analysis of pesticide residues in this programme. The laboratory is accredited to ISO 17025 standard.

### 15.3.2. **Analytical methods used**

The modified mini Luke and the QUeChERS<sup>5</sup> extraction methods were used to extract the fruit, vegetable and cereal samples. Cereal samples were also extracted using the Dutch ethyl acetate method and fat samples were extracted using a modified German method with acetonitrile and acetone, followed by gel permeation cleanup. Samples were mainly analysed using gas and liquid chromatography. Mass spectrometry is the primary method used for the detection and identification of residues present with the selective ion monitoring mass detection used in gas chromatography and MS/MS method used in liquid chromatography. In addition, dithiocarbamates, mepiquat and chlormequat were analysed in a selected number of samples using single residue methods.

### 15.3.3. **Participation in proficiency tests**

The Pesticide Control Laboratory participated in all of the EU Proficiency tests, which were organised by the Community Reference Laboratories (CRL) in the pesticide area as well as in a number of FAPAS schemes for fruit, vegetables and cereals.

### 15.3.4. **Implementation of EU quality control procedures**

All of the QC procedures set out in the EC guideline SANCO/2008/7840 were implemented for the majority of analytes.

### 15.3.5. **Analytical uncertainty**

When the residue in a sample mathematically exceeded a MRL, it was defined as an exceedance. However, the Laboratory applied an uncertainty factor of 50% to results, which was agreed at EU level, when enforcing the legislation.

<sup>5</sup> Quechers QUick Easy Cheap Easy Rugged Safe. A rapid method using solid phase extraction



#### 15.4. *Other information*

Insufficient linkage exists between the monitoring programmes conducted under Regulation (EC) No 396/2005 and the import controls required under Commission Regulation (EC) No 669/2009. While no sampling was carried out under Regulation (EC) No 669/2009 in 2009, it is envisaged that there may be a significant impact on the capacity of the laboratory to fulfil the entire monitoring programme for 2010, due to uncertainty regarding the number of the consignments for targeted sampling.

## 16. Italy

### 16.1. Summary of results

Of a total of **6932 samples** (Tab.1 e 2), **1210** samples (17.4%) with residues not exceeding permitted levels were found, while **47** (0.7 %) were found with residues exceeding permitted levels; no residues were detected in **5675** samples (81.9%). The percentage of irregular samples is equal to **0.7%** of which **0.9%** for fruit and vegetables and other plant origin; **0.3 %** for cereals; **0.1%** for processed product, **0.0%** for animal product and **0.0 %** for baby food (Infant formulae/follow-on formulae and baby food).

SUMMARY OF DATA - YEAR 2009						
	Fruit and Vegetable and other plant origin	Cereals	processed product	animal product	all baby food	Total
Nr. Of samples	5.091	346	1378	14	103	6.932
Regular samples	5.046	345	1377	14	103	6.885
Irregular samples	45	1	1	0	0	47
Irregular samples %	0,90	0,30	0,10	0,0	0,0	0,70

Tab. 1

PESTICIDE RESIDUES IN REGULAR SAMPLES						
	Fruit and Vegetable and other plant origin	Cereals	Processed products	animal product	all baby food	Total
Nr. Of samples without residues	4.082	277	1200	14	102	5675
Nr. Of samples without residues %	80,2	80,0	87,1	100,0	99,0	81,9
Nr. Of samples with residues within legal limits	964	68	177	0	1	1210
Nr. Of samples with residues within legal limits %	18,90	19,7	12,8	0,0	1,0	17,4

Tab. 2

### 16.2. Organisation of monitoring programmes and Sampling

#### 16.2.1. Responsibilities

The Ministry of Health – General Directorate for Food Safety and Nutrition – coordinates and defines Italian official control programmes on foodstuffs, including the annual plans regarding pesticide residues.

#### 16.2.2. Structure of the plan

The annual official control plans on residues of plant protection products are defined by Ministerial Decree 23 December 1992, transposing Directive 90/642/EEC, integrated by the

Ministerial Decree 30 July 1993 regarding the programming of official controls for importation from Third Countries.

The National Program Pesticide Residues (P.N.R.A.) foresees a detailed programme implementing the checks to be carried out by the Regions and Autonomous Provinces of Trento and Bolzano, with indication of the minimum number and the typology of samples to be analysed. The division 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 Region or autonomous Province concerned. The Decree contains some tables reporting the number of samples to be taken for each Region/Province for the following foodstuffs: vegetables, fruits, cereals, wine, oils. The plan foresees also priority of a research of residues of plan protection products in vegetable origin foodstuffs.

As regards products of vegetable origin imported from Third Countries, the sampling is performed by Uffici di Sanità Marittima, Aerea e di Frontiera (USMAF) of Ministry of Health, in at least 3% of a lot present at importation with a priority given to fruit and vegetable origin products.

### 16.2.3. Sampling: personnel, procedures, sampling spots

Based on the programmes of the Regions and Autonomous Province, inspectors of a Local Health Units provides for implementation of sampling of foodstuffs to be tested for PPP residues.

The sampling spots indicated in P.N.R.A concerning products of plant origin are the collection centers and cooperatives for products coming from within the Region or Autonomous Province, specialised and non-specialised wholesale markets, wholesale stores, hypermarkets and supermarkets for products coming from outside the Region or Autonomous Province.

The sampling methods are those established by the Decree of the Ministry of Health of 23 July 2003, transposing Directive 2002/63/EC of 11 July 2002 regarding the methods of sampling for the Official control for pesticide residues in plant and animal origin products.

### 16.2.4. Measures taken

In case of irregular samples, the administrative or criminal sanctions are applied which are foreseen by the Law n° 283 of 30 April 1962, by the Legislative Decree of 3 March 1993, n° 123 (transposing Directive 89/397/CE on official control of foodstuffs), and by the Regulation (EC) 882/2004. Contaminated foodstuffs are confiscated on a precautionary basis and/or destroyed.

## 16.3. *Quality assurance*

### 16.3.1. Accreditation

Official control public laboratories participating in 2009 in the national programme on pesticide residues in vegetables were **29**.

Of 29 laboratories **22** are accredited in accordance with norm **EN 17025**.

### 16.3.2. Analytical methods

Analytic methods used mainly include GC multi-residue methods, associated with selective detectors (ECG, NPD, MS) and HPLC-UV.

### 16.3.3. Participation in proficiency tests

During the 2009, 17 Italian Laboratories attended :

CRL European Proficiency FV11 Test of Incurred residues of pesticides in Cauliflower homogenate organized by Community Reference Laboratory - Pesticides in fruit and Vegetables (University of Almeria );

Some of laboratories attended FAPAS proficiency test and national ring tests.

## 17. Latvia

### 17.1. *Summary of Results*

In 2009 a total of 127 samples of fruit, vegetables, cereals, animal products and baby food were analyzed for the pesticide residues: 49 samples of domestic origin; 60 samples from other European countries; 18 samples from non - European countries.

The most frequently found pesticide residues are dithiocarbamates, pyrimethanil, triadimefon sum, azoxystrobin.

In two vegetables samples pesticides residues exceeded MRLs – cauliflower (chlorpyrifos) and aubergines (fenpropathrin). Both non compliant samples were taken in retail, origin of products were EU countries.

In the samples of organic pesticide residues have not been found.

Samples were taken only within the EU coordinated program but within the national program sampling has not been carried out.

### 17.2. *Organisation of monitoring programmes and Sampling*

The monitoring programme was designed by Ministry of Agriculture, sampling plan was elaborated and sampling was performed by Food and Veterinary Service.

Sampling was carried out by trained inspectors and samples are taken in 11 district offices of the Food and Veterinary Service.

Samples are taken from domestic and non-domestic commodities on the level of manufacturing, wholesalers, retailers and market.

#### 17.2.1. **Responsibilities**

The Food and Veterinary Service is responsible for implementation of the sampling plans and the competent authority for the control of pesticides residues in foodstuffs.

Inspectors are responsible for a correct foodstuffs selection and delivery to the laboratory.

All samples were analyzed by the Institute of Food Safety, Animal Health and Environmental “BIOR”.

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

Coordinated Program is implemented according to priorities set by EC.

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

Samples are taken by FVS inspectors 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 and repealing Directive 79/700/EEC. Sampling points are following: retailers, wholesalers, producers.

#### 17.2.4. **Enforcement action**

In both cases of non compliant results the inspections were performed in retail establishments. Contaminated batches were already consumed.

### 17.3. *Quality assurance*

The Food and Veterinary Service of Latvia is competent to carry out inspections of the group A inspection institution in accordance with LVS EN ISO / IEC 17020 standard requirements in the following area: the company's food safety assurance systems official check (inspections) and to assess compliance with health and welfare requirements, the official veterinary surveillance controls facilities and objects (inspections).

In accordance with 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 the competent authority shall designate laboratories that may carry out the analysis of samples taken during official controls.

Accordingly The Food and Veterinary service has triangular agreement with Institute of Food Safety, Animal Health and Environmental “BIOR” and Ministry of Agriculture.

#### 17.3.1. **Status of accreditation of laboratories, number of laboratories**

All analysis in frame of the pesticide monitoring program were performed in the Institute of Food Safety, Animal Health and Environmental “BIOR” (previously - the National Diagnostic Centre of the Food and Veterinary Service) Laboratory is accredited by the Latvian National Accreditation Bureau (LATAK) and by German Accreditation Body DAKKS according to the ISO/IEC 17025 standard. Certificates of accreditation can be found on the website of the Latvian National Accreditation Bureau (<http://www.latak.gov.lv>) and German Accreditation Body DAKKS (<http://www.dakks.de>)

#### 17.3.2. **Analytical methods used**

QuEChERS samples preparation procedure was applied for the sample preparation in analysis of main part of pesticides. Detection of pesticides in the extract was performed using liquid chromatography – tandem massspectrometry (HPLC-MS-MS) and gas chromatography – massspectrometry (GC-MS). Pesticides not easily detectable with GC-MS technique were analysed using GC with ECD detector. Single methods were applied for analyses of chlormequat and mepiquat (HPLC-MS-MS), abamectine (HPLC-FLD) and dithiocarbamate. Dithiocarbamates are analysed as CS<sub>2</sub> using GC-ECD after decomposing with tin chloride solution

#### 17.3.3. **Participation in proficiency tests**

During the year 2009 the laboratory participated in the EU Proficiency Tests EUPT-AO-04 (EU-RL Freiburg), EUPT-FV-11 (Spain) and EUPT-C3/SRM4 (Denmark).

#### 17.3.4. **Implementation of EU quality control procedures**

The laboratory has implemented the most of requirements from the EU Quality Control Procedures for Pesticide Residue Analysis (SANCO 10684/2009).

#### 17.3.5. **Analytical uncertainty**

Calculation of the analytical uncertainty of results is based on relative standard deviation of recovery rates and results of proficiency testing if available. The estimated range of uncertainty is from 15 to 40%

## 18. Lithuania

### 18.1. *Summary of Results*

310 samples of fruit, vegetables, cereal, processed and baby food were analysed for pesticide residues in accordance with the EU and national monitoring programme (surveillance sampling). Of the samples taken, 81 samples (26 %) was of domestic origin, 127 samples (41 %) were from other EU countries, 102 (33 %) samples were imports from third countries.

**Fruit and vegetables:** Total number of samples tested was 251, Fruits and nuts – 138, infusions – 4, Oil plants -4, vegetables -105. 36 Samples (14,4 %) were of domestic origin, 118 samples (47,0 %) were from other EU countries, 97 (38,6 %) samples were from third countries. Samples were analysed for up to 274 analytes (pesticides and metabolites). Pesticide residues were not detected in 121 samples (48,2 %), 119 samples (4,74 %) contained residues in level below or at the level of MRL; in 11 samples (4,4 %) the EU MRLs were exceeded.

**Cereals:** Total number of samples tested was 21. Of the samples taken, 17 samples (81 %) were of domestic origin, 4 samples (19 %) were imports from third countries. Samples were analysed for up to 250 analytes. Pesticide residues were not detected in 17 samples (81 %), 3 samples (14,2 %) contained residues in level below MRL; in 1 sample (4.8 %) the EU MRL was exceeded.

**Animal products.** Total number of samples tested was 28. All samples domestic origin. Samples were analysed for 48 residues. Pesticide residues were not detected in 26 samples, above MRL were determined in 2 samples (7.1 %)

**Baby food:** 10 samples of baby food were tested for pesticide residue. 9 samples (90 %) were from EU countries and 1 (10 %) from third countries. No pesticide residues were detected

**Organic products:** 12 samples were tested. No pesticides residues were detected.

### 18.2. *Organisation of monitoring programmes and Sampling*

#### 18.2.1. **Responsibilities**

State Food and Veterinary Service (hereinafter – SFVS) is responsible for the implementation of the monitoring programme and sampling. SFVS is accredited by EN ISO/ICE 17020:2004 standard. National Food and Veterinary Risk Assessment Institute (NFVRAI) is responsible for analysis of samples, data collection, and preparing report.

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

- the co-ordinated EU monitoring programme for 2009,
- the capacity of the NFVRAI laboratory to implement the programme,
- results of the previous year sampling activities,
- food groups consumed in Lithuania,

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

Sampling was done by trained official inspectors of the 10 county centres according to Directive 2002/63, which has been transposed into a national legal act. Most of the samples were normally

taken at wholesale and retail levels, some domestic samples were taken from farms and imported from third countries within the customs area, at the place of unloading.

#### 18.2.4. **Enforcement action**

The laboratory submits reports with results of analysis to the inspector in charge. The evaluation of the analysis results is responsibility of the inspector. When MRLs are exceeded action may be taken by inspectors of counties SFVS, who sends information on action taken to SFVS.

### 18.3. *Quality assurance*

#### 18.3.1. **Status of accreditation of laboratories, number of laboratories**

Most of analyses were carried out in the laboratory of the NFVRAI. This laboratory is accredited according to EN ISO/IEC 17025 by German Accreditation Body DAP for main methods used for official control of pesticide residues in food of plant origin. Food of animal origin (28 samples) was analysed in accredited GALAB laboratory, Germany.

#### 18.3.2. **Analytical methods used**

Samples were mainly analysed by multi-residue method EN 12393-(1-3):2000. The samples were extracted with or acetone, cyclohexane/ethyl acetate, cleaned up on gel permeation column, and determined by capillary gas chromatography and extraction with methanol cleaned up on diatomaceous earth and analysis by liquid chromatography with LC-MS/MS. The QuEChers extraction methods was implemented and used in the last three months EN 15637: ChemElut. Dithiocarbamates were determined by method EN 12396-1:2000. Pesticides surveyed: - Maneb group and Thiuram.

#### 18.3.3. **Participation in proficiency tests**

EUPT-C3-SRM4, Pesticides in oat matrix, CRL, Denmark; EUPT-AO-04, Pesticides in butter, CRL, Germany; EUPT-FV-11, Pesticides in cauliflower, CRL, Spain; VIO 23 and VIO 24, Pesticides in water, the Netherlands; C1010, Pesticides in water, Fapas, UK

#### 18.3.4. **Implementation of EU quality control procedures**

Quality control procedures include daily checks of instruments sensitivity, possible matrix effects by injection of test solution. Most of EU Quality control procedures for pesticide residues analysis (SANCO/3131/2007) have been implemented. No. SANCO/3131/2007

#### 18.3.5. **Analytical uncertainty**

Laboratory uses the MU = 50 % figure to take consideration inter-laboratory variations for MRL breaches. Uncertainties of analytical results were estimated in process of in-house validation at the level of MRL.



## 19. Luxembourg

### 19.1. Summary of Results

In 2009, in Luxembourg a total of 161 samples (133 samples under the coordinated community control programme 1213/2008/CE and 28 samples under the national programme) were tested for pesticide residues. 30% of these samples were of domestic origin, 35% from other EU member states, 12% from third countries and 22% had unknown origin (mainly for juice and baby food). The samples included 99 samples of fruits and vegetables (with 293 pesticides analysed), 17 samples of cereals flour (with 270 pesticides analysed), 15 of eggs (with 59 pesticides analysed), 15 samples of baby food (with 294 pesticides analysed) and 15 of orange juice (with 293 pesticides analysed).

No detectable pesticide residue was found in 63 non organic surveillance samples (48.5%). In 64 (49%) non organic surveillance samples residues of pesticides were quantified but in compliance with MRLs. The maximum residue level (MRLs) were exceeded in 4 non organic surveillance samples (3%), of which 3 were from Luxembourg and 1 from France, but this one was in compliance when measurement uncertainty was taken into consideration (50%). Baby food and egg samples had no detectable residues. The number of samples taken from organic products was 31 and a residue was detected in 1 sample (pymetrozine (0.01mg/Kg) in cauliflower).

Details of summary

Sampling strategy	Samples	Analysed	Without residues	With residues at or below MRL	Result >MRL <sup>(1)</sup>
			Non organic		
Coordinated community control Programme 1213/2009/CE	Fruits and vegetables	71	30.4%	69.4%	4.2% (3éch)
	Processed products (juice/flour)	32	39.3%	60.7%	0%
	Baby food	15	100%	0%	0%
	Eggs	15	100%	0%	0%
National programme	Fruits and vegetables	28	60.7%	39.3%	3.6% (1éch)
<b>Total</b>		<b>161</b>	<b>48.5%</b>	<b>51.5%</b>	<b>2.5% (4éch)</b>

<sup>(1)</sup> In the context of this report the term MRL exceedance refers to the numerical exceedance of the legal limit without considering the measurement uncertainty of 50% according to SANCO/3131/2007

### 19.2. Organisation of monitoring programmes and sampling

#### 19.2.1. Responsibilities

In Luxembourg, the Food Safety Service of the Direction for Public Health under the Ministry of Health is the competent Authority for the control of the pesticide residues in foodstuff except for the food of animal origin, for which the Veterinary Service Administration is competent. [http://www.securite-alimentaire.public.lu/organisme/pcnp/sc/cs9\\_prod\\_phyto/cs9\\_prod\\_phyto\\_decembre2009.PDF](http://www.securite-alimentaire.public.lu/organisme/pcnp/sc/cs9_prod_phyto/cs9_prod_phyto_decembre2009.PDF)

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

The pesticides monitoring in Luxembourg includes two different programmes:

The Coordinated community control programme based on the Commission Regulation (EC) N° 1213/2008 of 5 December 2008 concerning a coordinated multiannual community control programme and

The national programme based on a risk assessment where several factors were taken into account: toxicity of pesticides, MRL exceedings observed in previous years in Luxembourg, RASFF notifications, food consumption data.

[http://www.securite-alimentaire.public.lu/professionnel/denrees\\_alimentaires/mycotoxines/memoire\\_N\\_Denis.pdf](http://www.securite-alimentaire.public.lu/professionnel/denrees_alimentaires/mycotoxines/memoire_N_Denis.pdf)

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

Samples are taken by trained official inspectors according to Directive 2002/63/EG, mainly at wholesalers and retailers level.

### 19.2.4. **Enforcement action**

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 examination, warnings, withdrawal from market). Furthermore, the competent authorities follow up at the responsible companies. If the risk assessment indicates an acute toxicological risk to the consumer a rapid alert is issued to RASFF (following the draft document SANCO/3346/2001 rev7).

## 19.3. *Quality assurance*

### 19.3.1. **Status of accreditation of laboratories, number of laboratories**

All laboratories involved in the coordinated community control programme 1213/2008/CE are accredited according to ISO17025. The national laboratory involved in the national programme is accredited but not for the pesticides analyses.

### 19.3.2. **Analytical methods used**

Samples of fruits and vegetables were analysed using multi-residue methods. The main detection methods were liquid chromatography LCMS/MS and gas chromatography GC/MS. Single residue methods were used for pesticides, which are not detectable by multi-residue methods like dithiocarbamates.

### 19.3.3. **Participation in proficiency tests**

The laboratory for the coordinated community control programme 1213/2009/CE took part to proficiency test organized by the EU (EUPT FV11, EUPT AO04) or other organizations like FAPS, TESTQUAL.

### 19.3.4. **Implementation of EU quality control procedures**

The EC guideline SANCO/2007/3131 “Method validation and quality control procedures for pesticides residue analysis in food and feed” have been fully or partly implemented by the different laboratories.

#### 19.3.5. **Analytical uncertainty**

The competent authorities take into account the analytical uncertainty before enforcement of administrative actions. If measured residues indicate that maximum residue levels are exceeded, the analytical uncertainty is considered.

An over-all analytical uncertainty of 50% of the measured value is generally applied according to SANCO/3131/2007.

By this, competent authorities make sure that legal maximum residue levels are exceeded taking into account measurement uncertainty.

#### 19.4. ***Other information***

[http://www.securite-alimentaire.public.lu/organisme/pcnp/sc/cs9\\_prod\\_phyto/index.html](http://www.securite-alimentaire.public.lu/organisme/pcnp/sc/cs9_prod_phyto/index.html)

## 20. Malta

### 20.1. Interpretation of results

The National Monitoring Programme for pesticide residues in produce of plant and animal origin 2009 was based on a number of factors which determined the type and frequency of monitoring for the particular produce. These factors included:

- Commission Regulation 1213/2008/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

In 2009 a total of 170 products have been analysed for pesticide residues compared to a total of 97 in 2008. Out of the 170 products, 167 samples were surveillance samples whereas 3 samples were enforcement samples. These 3 enforcement samples included two samples of tomatoes which were tested following public complaints and 1 sample of grapes which was re-sampled and tested due to high pesticide residue in the first sample taken.

In 2009 the percentage of domestic samples amounted to 52% compared to 57% in 2008. Samples from other Member States amounted to 35% compared to 31% in 2008 and the amount of samples from Third Countries amounted to 13% compared to 2% in 2008. The main reason why samples analysed from Third Countries increased in 2009 was because some of the produce included in the EU/National Coordinated Programme originated mainly from Third Countries such as bananas.

In 2009, 1.8% of the samples had pesticide residues exceeding the EC-MRL compared to the 8.3% of samples which exceeded the EC-MRL in 2008.

#### 20.1.1. MRL exceedances and non compliant results

Product	Residue			Sample codes	Reason for exceedance	Risk of consumer exposure	RASFF notification reference	Action Taken
	Residue name	Result	EC-MRL					
Grapes	Dimethoate	<b>0.41</b>	<b>0.02</b>	0510.08.09	Incorrect plant protection product used on grapes	Yes – product was placed on the market	2009.1223	Re-sampling and re-testing done
	Cyprodinil	0.2	5					
	Fludioxonil	0.19	2					
	Luferon	0.044	1					
Grapes	Chlorpyrifos	0.19	0.5	0910.08.09	Time from application and harvest time was not respected	Yes – product was placed on the market	2009.1224	Warning issued to the farmer
	Cyproconazole	<b>0.33</b>	<b>0.2</b>					
Grapes	Dimethoate	<b>0.22</b>	<b>0.02</b>	2009.09.09	Incorrect plant protection product used on grapes	No – product was not placed on the market		Warning issued to the farmer and whole lot destroyed
	Cyprodinil	0.35	5					
	Fludioxonil	0.2	2					
	Lufenuron	0.025	1					

### 20.1.2. Illegal and unauthorized uses

Product	Residue	Sample Code	Description of unauthorized or illegal use
Peppers	Procymidone	3716.03.09	Active ingredient Procymidone is not included in Annex 1 therefore its status under Directive 91/414/EC is not authorized. Thus no plant protection product in Malta with active ingredient Procymidone is authorized or registered which makes the presence of this residue as illegal.

### 20.2. *Quality Assurance*

Laboratory Name	Laboratory Code	Last of Accreditation	Accreditation Body	Participation in proficiency tests or interlaboratory tests
CE.FI.T S.r.l	Cefit	October 2009	ACCREDIA	Yes

## 21. The Netherlands

### 21.1. Summary of Results

Also in 2009 the percentage of non-compliances in European products decreased. Although the Food and Consumer product Safety Authority (VWA) applied EU-MRLs already in 2008, in 2009 awareness about this complete harmonization probably facilitated trade in compliance. No specific country/product/pesticide can be indicated as a main problem. However, products from third countries continue to show pesticide residue problems (table 1). In 2009 less RASFF notifications have been issued than in 2008. Again these concern mainly products from Asia, especially high amounts of triazophos in curry leaves were notable. In 2009 the scope of the coordinated program has been extended considerably. The scope of the coordinated program accounted for 85 % of the residues found, compared to 75 % in 2008, showing the increased effectiveness of the program (table 2). Again the number of residues per sample decreased slightly. In total about 3900 samples were analysed.

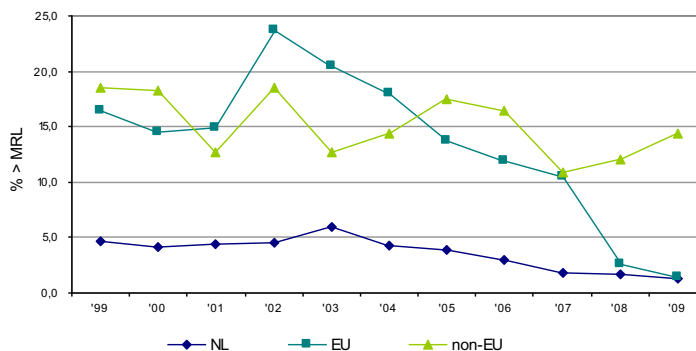


Figure 1. Percentage of MRL violations not including incidents

Table 1. Main products with high percentages of non-compliances, with corresponding pesticides and countries of origin.

Product	Pesticides	%>MRL	Countries
Various herbs	triazophos, dimethoate, omethoate, chlorpyrifos, carbofuran, various	24,1	India, Thailand
Pepper	profenofos, carbaryl, cypermethrin, carbendazim, carbofuran	40,8	India, Thailand, Egypt, Uganda
Yard long bean, black-eyed pea	dimethoate, methomyl	39,6	Thailand, Dominican Rep.
Other spinach and similar (leaves)	carbofuran, etofenprox, cypermethrin	38,9	Thailand, Surinam
Pomelo	triazophos, parathion methyl	38,9	China

Table 2. Pesticide residues found in the EU-coordinated and Dutch monitoring program.

Program	active substances	number of residues of pesticides in samples			
		with ARfD	no ARfD needed	ARfD unknown	total
EU-coordinated	91	3508	2002	2	5512
Dutch national	62	651	291	10	952
Total	153	4159	2293	12	6464

### 21.2. Organisation of monitoring programmes and Sampling

#### 21.2.1. Responsibilities

In the Netherlands, VWA is the competent authority for the control of food and feed. The official control program of pesticide residues is part of this general food and feed control.

#### 21.2.2. Design of Programmes

The two main criteria in the national control program are consumption data and the violation rate in previous years. The samples are taken without prior information about the presence of

pesticides in the individual sample. Therefore, they represent the situation on the market for the product at that time. As sampling is directed relatively more to products that need attention because of the violation rate in previous years, high violation rates can indicate both an efficient sampling strategy and problems in the agricultural practice. Samples of products of animal origin were taken according to the coordinated EU program.

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

Inspectors of the five regional inspectorates are taking samples. The Dutch Food and Commodity Law regulates the sampling procedure, i.e. the number of subsamples taken from a lot. This regulation is the implementation of the EC-directive 2002/63/EC.

The main sampling points are the distribution centres of retail chains, importers, warehouses for both domestic and non-domestic products, the premises of the auction system for Dutch products and at ports of EU-entry. 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. In 2009 again a number of samples was taken in retail shops as part of a pilot project to provide public information on samples, results and responsible companies.

### 21.2.4. **Enforcement action**

In case of non-compliances administrative fines are issued in general. When the violation may lead to an ARfD exceedance, a RASFF is issued and a recall is required at the trade chain level. Public recalls are considered not to be necessary because of the general positive health effect of fruits and vegetables.

## 21.3. *Quality assurance*

### 21.3.1. **Status of accreditation of laboratories, number of laboratories**

All samples of plant origin are analysed in the laboratory of the Food and Consumer product Safety Authority in Amsterdam under ISO17025 accreditation. Products of animal are analysed in the laboratory in Zutphen of the same organization. These analyses have not been accredited yet.

### 21.3.2. **Analytical methods used**

The general strategy for products of plant origin is detecting as many pesticides as possible in one analysis by using Multi-Residue-Methods (MRMs). The Dutch method consists of an acetone extraction, followed by a partition step of the residues into dichloromethane/petroleum ether. The extracts are analysed by a chromatographic separation and selective detection of residues. The main detection methods are Gas Chromatography (GC) - Ion-Trap Mass Spectrometric Detection (GC-ITD) and Liquid Chromatography – tandem Mass Spectrometry (LC-MS/MS). Only for some analytes that are not detectable sensitively enough by ITD, additionally GC with Electron Capture Detection (ECD) is used.

For some pesticides not amenable to the MRM, Single Residue Methods based on LC-MS/MS detection are used. In the 2008 program this was only the case for chlormequat.

Dithiocarbamates are analysed as CS<sub>2</sub> using GC-FPD and GC-ITD after decomposing with acidic tin-chloride solution and extraction into iso-octane.

Together the scope of the methods is about 480 analytes. However, in a number of samples scopes of 400 and 230 have been applied, depending equipment availability and matrix properties.

A scope of 44 analytes has been applied to products of animal origin, based on acetonitrile extraction followed by GC-MS for organochlorine compounds and LC-MS/MS for organophosphates and pyrethroids.

#### **21.3.3. Participation in proficiency tests**

The VWA Laboratory participated in all of the EU Proficiency tests, which were organised by the Community Reference Laboratories (CRL) in the pesticide area as well as in a number of FAPAS schemes for fruit, vegetables and cereals.

#### **21.3.4. Implementation of EU quality control procedures**

All of the QC procedures set out in the EC guideline SANCO/2007/3131 were implemented for the majority of analyses.

#### **21.3.5. Analytical uncertainty**

When the residue in a sample mathematically exceeded a MRL, it was defined as an exceedance. However, the Laboratory applied an uncertainty factor of 50% to results, which was agreed at EU level, when enforcing the legislation. If a residue value, numerically above the MRL, gave a possible exceedance of the ARfD, enforcement action was taken, like sending out a RASFF-notification and when possible recall and destruction of the lot.



## 22. Norway

### 22.1. *The monitoring Programme for pesticide residues - Summary*

In 2009, a total of 1499 samples of fruit and vegetables, baby food, juices, cereal grains and eggs were analysed, 66% imported and 34 % domestic produced samples. The imported samples came from 66 countries and included 94 different commodities.

The monitoring programme covers 272 pesticides including some isomers and breakdown products/metabolites. For fresh fruit and vegetables 54 % were without detectable residues. National or EU MRLs were exceeded in 0.8 % of the samples (none in domestic and 1.2 % in imported samples).

Of a total of 126 samples of cereals, 71 % contained no pesticide residues. Organic samples (103 samples - 23 domestic and 80 imported) and baby food (30 samples - 2 domestic and 28 imported) were also analysed. No residues were found in the organic samples or in the samples of baby food.

Twelve samples had residues above the national or the EU-MRLs. Illegal use of pesticides in Norway were found in one sample; pyraklostrobin, boscalid and cypermetrin in spinach.

In 2009 there were four follow-up samples, all from Thailand. Residues were not found in these samples.

### 22.2. *Responsibilities*

The Norwegian Food Safety Authority (NFSA), department of Controls, section for Plant Health and Foods of Plant Origin, is main responsible for the monitoring programme. Inspectors at the NFSA district offices are responsible for the sampling.

### 22.3. *Organisation of the control programmes and sampling*

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 was responsible for the analyses of the samples of animal origin.

#### 22.3.1. **Programme design (priorities, sampling strategies, criteria for the percentage of organic samples, etc.)**

The sampling plan was based on Commission Regulation (EC) No 1213/2008, national three years plan and different projects. The plan specifies the foods to be sampled, the number of samples to be taken for each commodity, and the pesticides for which they are to be tested.

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 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 Nordic countries have annual common projects which focuses on residues in fruit and vegetables from different areas. The Asian countries India and China were chosen for the 2009 project.

### 22.3.2. **Sampling: personnel and procedures**

Trained inspectors from the NSFA were responsible for taking samples in accordance with the sampling plan and the official guidelines for sampling based on Commission Directive 2002/63/EC. The samples were mainly taken at importers' and wholesalers' warehouses in different parts of Norway. Some samples were collected at retailers, farms or at market places. The inspectors are responsible for sending the samples to the laboratory.

There are guidelines for how to follow-up violations. Where pesticide residues are found in food at level higher than the MRL, NFSFA follow an instruction procedure for considering if the residue level is a risk to the consumer.

### 22.4. *Quality assurance*

#### 22.4.1. **Participation in proficiency tests**

##### **Bioforsk:**

The laboratory has participated in three EU proficiency tests organized by CRL's for Pesticide Residues: EUPT-FV11 (cauliflower), EUPT-FV-SM-01 (orange extract) and EUPT-C3/SRM4 (oat).

##### **Norwegian School of Veterinary Science:**

The laboratory has participated in one EU proficiency test organized by CRL for Pesticides in food of animal origin and commodities with high fat content: EUPT-AO 04 (butter fat) and one proficiency test organized by FAPAS (UK): 02132 Pyrethroids in sheep fat. In addition the laboratory participated in the AMAP ring test for persistent organic pollutants in human serum (round 1-3), the Northern contaminants interlaboratory quality assurance programme (NCP III - phase 4) and the 1st UNEP QA/QC study on persistent organic pollutants in human milk and dried fish.

#### 22.4.2. **Implementation of EU quality control procedure**

##### **Bioforsk:**

The EC guideline SANCO/2007/3131 "Method Validation and Quality Control Procedures for Pesticide Residue Analysis in Food and Feed" is nearly fully implemented with the exception that routine recoveries are performed at 0.025 mg/kg (LC) and 0.05 mg/kg (GC).

##### **Norwegian School of Veterinary Science:**

The EC guideline SANCO/2007/3131 "Method Validation and Quality Control Procedures for Pesticide Residue Analysis in Food and Feed" and the EC Commission Decision 657/2002 "PERFORMANCE CRITERIA, OTHER REQUIREMENTS AND PROCEDURES FOR ANALYTICAL METHODS" are implemented for routine residue analyses of pesticides in food commodities of animal origin.

#### 22.4.3. **Status of accreditation of laboratories, number of laboratories (ex table G in the previous Excel Workbook)**

##### **Bioforsk:**

The laboratory at Bioforsk, Plant Health and Plant Protection Division, Pesticide Chemistry section has been accredited for pesticide residue analysis since April 1st 1997. The majority of the analysing methods, including the GC-MS and LC-MS/MS multi-methods, are accredited. The laboratory also holds a flexible scope of accreditation for organic analyses.

**Norwegian School of Veterinary Science:**

The Laboratory of Environmental Toxicology, Department of Food Safety and Infection biology has been accredited according to the requirements in ISO/IEC 17025.

The laboratories at the Norwegian School of Veterinary Science, Department of Food Safety and Infection biology, have been accredited for analysis of residues from veterinary medicinal product and pesticides in food commodities of animal origin according to the requirements in ISO/IEC 17025. The majority of methods used for surveillance purposes are accredited. The analytical techniques are HPLC, LC-MS/MS and GC-MS.

**22.4.4. Analytical methods used****Bioforsk:**

All samples were analysed using a GC-MS multi-residue method covering 204 pesticides including some metabolites and breakdown products for fruit and vegetables, and 119 compounds for cereals. QuEChERS method was applied for sample preparation. An LC-MS/MS multi-residue method (covering 81 pesticides in positive mode and 3 pesticides in negative mode) using Mini-Luke extraction (for fruit and vegetables) and dichloromethane: light petroleum (for cereals), were applied on selected samples. LC-MS/MS was also used for analysis of diquat and paraquat. Chlormequat, mepiquat, dithianon and propamocarb were determined using single residue methods on LC-MS. Phenoxyacid herbicides and glyphosate/AMPA were analysed by GC-MS after derivatization. The dithiocarbamates were determined with a spectrophotometric method after distillation of CS<sub>2</sub>. The reporting levels are the limit of quantification for all methods.

During 2009 method development and validation were performed testing a new LC-MS/MS multi-residue method based on QuEChERS extraction. The method covered 158 compounds including some new compounds in the EU coordinated monitoring programme 2009 and pesticides earlier analysed on GC. This method was applied on tea samples in the national programme at the end of 2009.

When a pesticide residue exceeds the MRL, quantitative determination is carried out on three replicate samples (including one representative reference sample) using three-level calibration. Recovery is checked and the identity of the pesticide confirmed by use of GC-MS or LC-MS/(MS).

**Norwegian School of Veterinary Science:**

All organochlorines were analysed using a GC/MS multi-residue method that covers 58 pesticides in NCI positive mode. All organophosphorous pesticides (10 pesticides) were analysed using a GCMS multi-residue method in EI positive mode. Prior to the analyses, internal standards were added all samples. Samples were then extracted with cyclohexane and acetone. The amount fat was determined gravimetrically. Clean-up procedure was done by GPC.

Camphechlor (sum of parlar No 26, 50 and 62) were analysed using a GC/MS method in NCI positive mode. Cleaning up step was done by adding ultra pure concentrated sulphuric acid.

Pyrethroids (8 components) are analysed by GC-MS followed by an LC-MS/MS analysis of the same samples in order to cover all pyrethroids in the program. The extraction and clean-up procedures are based on acidification, extraction with acetonitrile and Celite 545, liquid-liquid clean-up and solid phase clean-up (silica). Residues are either dissolved in cyclohexane (for GC-MS) or mobile phase (for LC-MS/MS).

### 22.5. *Possible reasons for EC MRL exceedences*

NSFA has non comments to possible reasons for EC MRL exceedings.

### 22.6. *Actions taken for samples exceeding the EC MRLs*

The pesticide residues found are compared with the MRLs. If the results are above the MRLs, the sample is defined as an exceeding. As a general rule, the default expanded uncertainty figure of 50 % is applied for enforcement decisions.

The NFSA estimates short-time intake for all pesticides with an acute reference dose (ARfD) set by EC/EFSA or WHO, when findings are higher than the MRLs. The calculations are based on the residues found in the surveillance samples and consumption data from UK, RASFF and WHO.

In 2009 NFSA found 15 exceeding of MRLs in 12 samples. After interpretation of the analyses uncertainty figure, five of these samples did not exceed the EC MRLs. The remaining ten exceedings were divided into nine samples. After short-time intake estimation none of these exceedings were considered as acute health risk. Some of the products were already consumed, but the remaining products/consignments were withdrawal from the marked.

### 22.7. *Other relevant information*

The NFSA have not been able to allocate resources for butter samples for the EU coordinated programme in 2009.

## 23. Poland

### 23.1. *Summary of Results*

In 2009 under the co-ordinated and national monitoring program, a total of 1816 food samples were analyzed for presence of pesticide residues. This was composed of 1226 samples (67,5%) of fruit, vegetables, and other plant origin (FV), 133 samples (7,3%) of cereals (C), 269 samples (14,8%) of processed products (PP), 135 samples (7,4%) of baby food (BF) and 53 samples (2,9%) of animal origin food (AO). Above numbers include 16 samples of ecological products. The majority of samples taken were produced in Poland (76%), 15% of the samples were from other EU countries and 8% were from non-EU countries. For 1,3% of the samples the origin was not reported.

No residues were found in 81% of all samples (including organic products). For the particular groups of food this percentage was equal to: FV 74%, C 93%, PP 91%, and BF 98% and animal origin food 100%. The residue level at or below the MRL was found in 19% of samples. The level exceeding MRL was found out in 9 samples (0,5%).

In 2009 the number of pesticides sought by each laboratory varied from 39 to 146. The total number of substances covered was 200.

### 23.2. *Organisation of monitoring programmes and Sampling*

#### 23.2.1. **Responsibilities**

The State Sanitary Inspection (SSI), subordinated to the Ministry of Health, is the competent authority responsible for the organization and supervision of monitoring of pesticide residues in foodstuffs of plant and animal origin present on the market. The monitoring programmes for 2009 year were developed in the National Institute of Public Health – National Institute of Hygiene (NIPH-NIH), and then forwarded to the SSI, which authorises and distributes these programmes to all 16 Voivodship Sanitary-Epidemiological Stations (VSES).

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

The monitoring programmes include Commission Recommendations as well as a national monitoring and official control of foodstuffs for compliance with MRLs. The national programmes are based on specific conditions of Polish agriculture, production and import figures, consumption data, and results of earlier measurements. These plans constantly include products for infants and babies.

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

All 16 VSES are involved in realization of the monitoring. Authorized and specially trained inspectors of Poviats Sanitary-Epidemiological Stations collect food samples from the market (retail, wholesale), border, and sometimes directly from producers. The sampling is performed in accordance to Commission Directive 2002/63/EC which is fully implemented into Polish law.

#### 23.2.4. **Enforcement action**

The VSES laboratories reported monitoring results on -line. In case of MRLs infringement, the relevant enforcement action may be taken by the inspectors.

### 23.3. *Quality assurance*

#### 23.3.1. **Status of accreditation of laboratories, number of laboratories**

All 16 laboratories of VSES involved in monitoring and official food control are accredited according to PN-EN ISO/IEC 17025 by the Polish Centre for Accreditation (PCA). The scope of accreditation covers different number of matrix/pesticide combinations. The VSES laboratories use multiresidue methods (MRM) published in European Standards and in some cases in-house validated methods with GC-ECD/NPD/MS, LC-MS/MS and HPLC-UV/FL determination. In addition to MRM, single residue methods were used. The improvement of the analytical performance of the laboratories has been achieved last year. More pesticides were analysed with a higher sensitivity of detection.

#### 23.3.2. **Participation in proficiency tests**

In 2009, 15 of 16 VSES laboratories participated in the proficiency test for fruit and vegetables organized by EU (EUPT FV-11). Additionally some laboratories participated in other EU proficiency tests (C3/SRM4 – 3 labs and butter AO-04 – 1 lab).

#### 23.3.3. **Implementation of EU quality control procedures**

All methods used by the VSES laboratories have been validated. Laboratories implemented the most of requirements of EU on the Quality Control Procedures guideline (SANCO/2007/3131).

#### 23.3.4. **Analytical uncertainty**

The analytical uncertainty of the results is calculated on the basis of relative standard deviation of recovery rates during in-house validation procedure. In case of MRL exceedances, the default expanded uncertainty of 50% is subtracted from the measured value. The sample is defined as non-compliant if this figure is still above the MRL. When the exceeding of MRL is within the analytical uncertainty a warning is issued.

### 23.4. *Other information*

In all cases of MRL exceedances, risk assessment for acute exposure is conducted by the toxicologists at the NIPH-NIH (according to SANCO/3346/2001 rev.6). When the dietary intake calculations indicate a risk for consumer, a national and an international rapid alerts are issued by RASFF National Contact Point located in SSI and measures are taken to protect consumers.

Because of the differences in methods applied and equipment used by 16 laboratories involved in official control of foodstuffs, as well as because of numerous changes of MRLs in 2009, a different reporting levels for some pesticides have been used.

## 24. Portugal

### 24.1. *Summary of Results*

In 2009, a total of 969 samples were analysed for residues of up to 165 pesticides and two groups (benomyl and maneb) and relevant metabolites, amounting to near 210 analytes. This number of samples comprised 818 fruits and vegetables, 30 cereals not processed, 12 baby foods and 109 other processed products, especially tomato products and wines. The total number above includes 2 follow up enforcement samples, apples and dry beans. The majority of the samples of fruits, vegetables and cereals were analysed in the framework of the EU co-ordinated monitoring programme. Residues of at least one of the pesticides sought were found in about 30% of the fruits and vegetables of the surveillance samples. In total, 35 different pesticide residues have been found in fruits and vegetables. The two most frequent residues detected were the thiabendazole (48 occurrences in bananas) and the fungicides dithiocarbamates (22 occurrences in cauliflower), which were followed by fenhexamid (19 occurrences in table grapes and 10 in kiwi) acrinathrin (18 occurrences in bananas), chlorpyrifos and imazalil (16 occurrences in bananas) and cyprodinil (14 occurrences in table grapes). For cereals the most frequent pesticide found was pirimiphos-methyl, followed by azoxystrobin, chlorpyrifos-methyl and malathion. For cereals no infringements to the respective MRL occurred. Infringements to EC MRLs were reported for 2.9 % fruits and vegetables sampled. For the 12 samples of baby food analysed one infringement occurred. Multiple residues occurred in 103 samples of fruits, vegetables and cereals and in one sample of infant food. The maximum number of residues found was six, in one sample of table grapes.

### 24.2. *Organisation of monitoring programmes and Sampling*

#### 24.2.1. **Responsibilities**

Directorate-General of Agriculture and Rural Development (DGADR) is the National Competent Authority for the monitoring programmes. Sampling was carried out over the territory by inspectors of ASAE, the National Authority for Food and Economical Safety, in Madeira by the Agricultural Department for Markets and Food Safety and by the Regional Inspectorate of Economical Activities (IRAE) and in Açores by the Department of Agriculture and Veterinary and by the respective IRAE.

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

Monitoring programmes are elaborated in a meeting with the participation of DGADR, Office for Planning and Policies and representatives of the intervening central and regional bodies, including sampling inspectors and analysts. The national programme for 2009 was based on the EU coordinated monitoring programme, which was extended to other pesticides/commodities 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 crops or no longer approved at all.

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

Sampling was carried out by trained officers, according to the procedures laid down in directive 2002/63/EC. The samples were taken both at wholesale commerce, wholesaler's warehouses and retail.

### 24.2.4. **Enforcement action**

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, according to the severity of infringements. Administrative consequences were applied to all infringements cases occurred in 2009 samples. In the import control, the infringement reported to dry beans led to the batch rejection.

## 24.3. *Quality assurance*

### 24.3.1. **Status of accreditation of laboratories, number of laboratories**

The following pesticide residue laboratories contributed to the national monitoring programme: the INIA Pesticide Residues Laboratory (LRP), referred as Lab. 1), the Agricultural Quality Laboratory of the Regional Agricultural Directorate of Madeira (Lab. 2), the Northern Regional Agricultural Directorate (Lab. 3), and the Regional Agricultural Directorate of Algarve (Lab. 4). Lab. 1 is accredited, since June 2005, for the majority of compounds analyzed and holds flexible accreditation since May 2008. Lab. 2 and Lab. 3 have already request the Accreditation and so has submitted to the Portuguese accreditation body (IPAC) all the necessary documentation. The audit of the Lab 2 is already scheduled. Lab 4 is accredited for dithiocarbamates method since 2006.

### 24.3.2. **Analytical methods used**

The GC multi-residue methods used are method P (Lab. 1 and 3) and method M (Lab. 2), according to European Standard 12393. The determination of maneb group is based in European Standards 12396-1 (Lab. 1, 2 and 3) and 12396-2 (Lab 2). Due to the lack of LC-MS/MS instrumentation at Lab. 1, several pesticides which can be analysed through MRM are still analysed using SRM. This is the case of the benomyl group and thiabendazole which are determined by HPLC-DAD after ethyl acetate extraction and pH adjustment and the N-methylcarbamates group, which are determined by HPLC-FLD with on-line OPA derivatization post-column, after extraction and clean-up identical to method P or M above (Lab. 1 and Lab. 2). Lab. 2 has already available a LC-MS/MS and began to report some results by this method. Organophosphorus insecticides precursors of sulphoxides and sulphones are analysed by oxidation of the cleaned extract obtained according to method P (Lab. 1).

### 24.3.3. **Participation in proficiency tests**

All these laboratories have participated in the EU proficiency tests promoted by CRL.

Lab. 3 and 4 have also participated in the Testqual proficiency tests, for dithiocarbamates.

### 24.3.4. **Implementation of EU quality control procedures**

All laboratories have implemented their quality control procedures according to SANCO guidelines and the requests of the NP EN ISO/IEC 17025.



#### 24.3.5. **Analytical uncertainty**

Values detected above MRL (mean of at least 2 separate analyses) are reported as infringements, if the achieved value minus the respective estimated uncertainty (confidence level of 95%) exceeds the MRL. Nevertheless, every time the uncertainty does not allow to ensure 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.

#### 24.4. ***Other information***

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. These changes were direct consequences of the EC review program of the old active substances and of the MRLs harmonization in the EU.

## 25. Romania

### 25.1. *Responsibilities*

Romanian Agriculture and Rural Development Ministry (MARD) and National Sanitary Veterinary and Food Safety Authority (NSVFSA) have the responsibility for national monitoring plan of pesticides residues in fruits, vegetables and cereals. Each competent authority draws up one independent annual plan for control pesticide residues in food of plant origin. Implementation of monitoring plans is performed by Agriculture and Rural Development Ministry through Central Laboratory for Pesticides Residues Control in Plants and Vegetable Products, which analyses the samples taken by Counties and Bucharest Phytosanitary Units and Food Safety Departments within Sanitary Veterinary and Food Safety County Division.

Ministry of Health is responsible for baby food analysis and food for special nutritional purposes. Within the National Prophylaxis Program -Public Health Subprogram, MH realizes monitoring and control of pesticide residues from processed cereal based foods and baby foods for infants and young children.

### 25.2. *Organisation of the control programmes and sampling*

Agriculture and Rural Development Ministry through Central Laboratory for Pesticides Residues Control in Plants and Vegetable Products, which analyses the samples taken by Phytosanitary Units in districts and Bucharest city, according to actual regulations transposed from EU legislation. The samples have been also taken by the inspectors involved in food safety field within Sanitary Veterinary and Food Safety County Division according to annual surveillance program in the field of food safety.

The sampling procedure including processed cereal based foods and baby foods samples is according to the EU Directive no. 2002/63/EEC which has been transposed in national legislation. The priorities of planning the programme of the NSVFSA are fresh commodities imported from third countries and intra-community trade, the place of sampling are warehouses of importers, frequency of sampling is minimum 12 samples/product.

#### 25.2.1. **Programme design**

The following criterions were taken into account:

- a. The number of inhabitants per district and city Bucharest;
- b. Consumption of fruits, vegetables and cereals per district and per season;
- c. Internal production and import volume of fruits, vegetables and cereals;
- d. Experience from the previous years concerning MRL-exceedings for agricultural products;
- e. Applicability of multi-residue methods (MRMs).

#### 25.2.2. **Sampling: personnel and procedures**

Samples are taken by phytosanitary inspectors from the frame of Phytosanitary Units in districts and Bucharest city, inspectors involved in food safety field within Sanitary Veterinary and Food Safety County Division and

The sampling proceeding is according to the Order of Agriculture and Rural Development Ministry, no.1256/2005, order of National Sanitary Veterinary and Food Safety Authority no. 147/2005 that transposed EU directive 2002/63 from EU legislation. It also has been drawn up

an „Sampling guide on determination of pesticide residues concentration in products of non-animal origin”, by the General Food Safety Directorate.

### 25.3. *Quality assurance.*

Central Laboratory for Pesticides Residues Control in Plants and Vegetable Products is accredited to EN ISO/IEC 17025 for GC-MS multiresidues method for analysis of vegetable products since 16.01.2006 with accreditation number 387-L

The validity of the analytical results is governed by a quality assurance system under ISO 17025 accreditation. The multi-residues methods are within scope the accreditation of the Laboratory. The central laboratory, has implemented the EU Guideline of Quality Control Procedure SANCO 10232/2006 and it had taken a FAPAS test.

Under the MH there are 6 laboratories (4 regional labs in Bucharest, Iasi, Cluj Napoca and Targu Mures and 2 county laboratories in Arges and Sibiu). Only one laboratory is accredited for pesticide residues analyses (National Institute of Public Health of Bucharest) and 2 laboratory are in progress accreditation for pesticide residues analyses ( Regional Center of Public Health of Iasi and Regional Center of Public Health of Cluj Napoca). The analyses of pesticide residues had been performed according to the analyse methods from currently Romanian Standards Analytical methods ( SR EN 12393-1:2009, SR EN 12393-2:2009 and SR EN 12393-3:20093). The implementation of DG SANCO document 2007/3131 and document SANCO 10684/2009 - Method validation and quality control procedures for pesticide residues in food and feed is on going. The implementation of procedure according to „ Guideline for analytical uncertainty” is on going.

#### 25.3.1. **Participation in proficiency tests.**

Central Laboratory for Pesticides Residues Control in Plants and Vegetable Products took part to the proficiency tests EUPT-C3 and EUPT-FV11.

Bucharest Sanitary Veterinary Laboratory took part in 2 proficiency test organized by European Reference Laboratory for Vegetables and Fruits (EUPT –FV11) and European Reference Laboratory for Cereals and Feedingstuff (EUPT- C3). Iasi Sanitary Veterinary Laboratory took part in FAPAS test.

#### 25.3.2. **Implementation of EU quality control procedure.**

The laboratory implemented EU Quality control procedures for pesticides residues analysis food and feed – Document Nr. SANCO/10684/2009.

Analytical uncertainty is calculated for GC-MS accredited method according to „EA guidelines on the expression of uncertainty in quantitative testing”.

#### 25.3.3. **Status of accreditation of laboratory.**

Central Laboratory for Pesticides Residues Control in Plants and Vegetable Products is accredited to EN ISO/IEC 17025 for GC-MS multiresidues method for analysis of vegetable products since 16.01.2006 with accreditation number 387-LI. The laboratory was reaccredited in 2010.

From 6 laboratories of NSVFSA (Bucharest, Calarasi, Iasi, Galati, Dolj, Cluj) that are involved in official controls only 3 of them are accredited under ISO 17025 (Bucharest, Calarasi, and Iasi) and all laboratory are conducted under 3131/2007DG Sanco Validation Guidelines.

#### 25.3.4. Analytical methods use.

Central Laboratory for Pesticides Residues Control in Plants and Vegetable Products uses 3 MRMs to analyse pesticides residue: GC-MS, LC-MS and GC-ECD method.

The general strategy is to detect as many pesticides as possible in one analyses by using Multi-Residue-Methods (MRMs). The extracts are analyzed by chromatographic separation and selective detection of residues. The detection methods are Gas Chromatography (GC) with Electron Capture Detection (ECD) and Gas Chromatography with Nitrogen Phosphorus Detection (NPD). The scope of the methods is to detect about 53 analytes. The validity of the analytical results is governed by a quality assurance system under ISO 17025 accreditation. The multi-residues methods are within scope the accreditation of the Laboratory. The central laboratory, has implemented the EU Guideline of Quality Control Procedure SANCO 3131/2007

Analytical method used is based on acetone dichloromethane and petroleum ether extraction, liquid-liquid clean-up step, follow-up by the gas chromatographic detection with specific detector GC-ECD/NPD

The residues pesticides from Processed cereal based foods samples were extracted by organic solvents and then detection as many pesticides by using Multi-Residue-Methods (MRMs). The extracts are analyzed by chromatographic separation and selective detection of residues. The detection methods were Gas Chromatography (GC) with Electron Capture Detection (ECD) and Gas Chromatography with Nitrogen Phosphorus Detection (NPD). The scope of the methods was to detect about 20 analytes (organochlorine pesticides) and about 55 analytes (organophosphoric pesticides- Mix 154, Mix 155 and Mix 168) .

#### 25.4. *Possible reasons EC MRL exceedences*

Violation of pesticides application.

#### 25.5. *Actions taken for samples exceeding the EC MRLs.*

The cases of MRL-exceeding will be notified to National Sanitary Veterinary and Food Safety Authority, in the frame of the Rapid Alert System for Food and Feed and also it will be applied the legislation that foresees penalties.

## 26. Slovakia

### 26.1. *Summary of results*

In 2009, monitoring of pesticide residues was carried out under the National Pesticide Residue Food Monitoring Program, implementing Commission Regulation (EC) 1213/2008 concerning a Community control program for 2009. A total of 725 samples were analyzed; thereof 508 of fresh or frozen fruit and vegetables. No pesticide residues were detected in 404 samples, what means 55,7% of all analyzed samples (values under the limit of quantification - LOQ). 314 samples were found positive (43,5%) in respect of one or more pesticide residues, but all with the values below the MRL. The MRL was exceeded in 6 samples (3 fruit and 3 vegetable samples), taking into account a 50% uncertainty of measurement. In accordance with the abovementioned Regulation also 60 samples of baby food and infant formulae were analyzed.

Multiple pesticide residues were detected in 157 samples, thereof 132 samples of fresh or frozen fruit. The highest number of pesticide multiresidues, as many as 11 different residues, was detected in strawberries originating from Italy.

### 26.2. *Organization of monitoring programmes and sampling*

The competencies in food pesticide residue controls are governed by the Slovak national food legislation. The responsibilities are divided between the Ministry of Agriculture of the SR (MA SR) that is responsible for monitoring food, except for foods for infant and young children and the Ministry of Health of the SR (MH SR) that is responsible only for foods for infant and young children. The State Veterinary and Food Administration of the SR (SVFA SR) under the MA SR perform pesticide residue control in foodstuffs except for foods for infant and young children. The Public Health Authority of the SR (PHA SR) under the MH SR performs pesticide residue control in baby food and infant formulae.

#### 26.2.1. **Responsibilities**

The SVFA SR is responsible for methodical organization and assessment of pesticide residue control in foodstuffs except for foods for infant and young children where PHA SR is responsible. The Regional Veterinary and Food Administrations (RVFAs) coordinate activities within the scope of their powers and the District Veterinary and Food Administrations (DVFAs) conduct sampling and perform controls of food business operators and producers. The analyses of samples are conducted by the State Veterinary and Food Institute (SVFI) in Bratislava. Based on the Agreement, the VÚP Food Research Institute conducts a risk analysis of all samples being found to exceed the MRL. The overall results of food safety risk analysis are delivered immediately to the SVFA SR that decides about the next steps. The sampling of baby food is conducted by the Regional Public Health Authorities (RPHAs). These samples are analyzed within the official laboratory operating under the PHA SR.

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

In respect of drafting the national plan, we focussed on several priorities. For selection of commodities as well as the number of samples there were identified certain criteria as consumption and production of commodity in Slovakia, results from sample analyses being conducted in the previous year and information from the RASSF system. In the selection process for commodities, fresh fruit and vegetables enjoyed priorities. The number of drawn

samples was limited by the capacity of analytical labs and budgetary possibilities. In compliance with the current legislation also 13 samples of organic foods had been collected.

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

The sampling methods being used were in compliance with Commission Directive 2002/63/EC that is implemented into the Slovak food legislation. The sampling was done by qualified trained inspectors from 40 District Veterinary and Food Administrations. The samples of foods for infant and young children were drawn by inspectors from 36 Regional Public Health Authorities. The samples from domestic production were collected preferentially, directly at producer sites, other samples were collected mainly at retail level, in wholesale warehouses as well as within the controls of food import from third countries at points of entry.

### 26.2.4. **1.2.4. Enforcement action**

In the event of a MRL violation (after considering measurement uncertainty) inspectors acted in accordance with the Slovak legislation. After forwarding a notification of non-compliant samples to the National RASFF Contact Point a risk analysis was performed. A risk analysis conducted in case of 6 over the limit samples did not refer to the risk for consumer. One notification was sent to the RASFF system in respect of pomegranates originating from Egypt where unauthorized substances as ethion and fenpropathrine were detected.

## 26.3. *Quality assurance*

### 26.3.1. **Status of accreditation of laboratories, number of laboratories**

The National Reference Laboratory for Pesticide Residues in Food of Plant Origin – The State Veterinary and Food Institute (SVFI) in Bratislava – was authorized to perform sample analyses. This laboratory analyzed all collected samples, except for 58 baby food samples that were analyzed by the laboratory operating under the Public Health Authority of the SR. Both official laboratories have been accredited for several years and they are regularly re-accredited by the Slovak National Accreditation Service (SNAS).

### 26.3.2. **Analytical methods used**

A general analytical strategy has been employed for analyzing the widest possible spectrum of pesticides by a multi-residue method (MRM). The principal of the method is extraction into ethylacetate, followed by purification and gel permeation chromatography in ethylacetate/cyclohexane system. The detection is performed by GC/ECD, FPD and NPD. The positive findings are confirmed with MSD. Another part of residue spectrum be due for monitoring was analyzed by a MRM, where QUECHERS-method for sample extraction and purification was used, followed by GC/MSMS. For analysis of maneb group a separate method of derivatization to CS<sub>2</sub>, followed by GC/ECD detection was used. The samples for analysis of quaternary ammonium salts (mepiquat, chlormequat) are firstly extracted into a suitable organic solvent and then analyzed by a separate method using LC/MS/MS. There are another “single” analytical methods using LC/MS/MS technique: the method for analysis of amitraz in pears and the method for analysis of acidic pesticides. In addition, there had been introduced a GC/ECD method for determination of bromide ion residues and a GC/MS method for nicotine determination in mushrooms. The samples of animal origin were analyzed by a GC method for the determination of organophosphorus and pyrethroid pesticides.

### **26.3.3. Participation in proficiency tests**

In 2009, the National Reference Laboratory for Pesticide Residues (SVFI Bratislava) participated in 4 EUPTs organized by the EURLs and in 1 FAPAS proficiency test. The official laboratory working under the Public Health Authority of the SR participated in 2 EUPTs organized by the EURL.

### **26.3.4. Implementation of EU quality control procedures**

In both official laboratories the quality of analytical methods is in compliance with the requirements of Document SANCO/2007/3131 (new Document SANCO/10684/2009).

### **26.3.5. Analytical uncertainty**

A 50% “uncertainty factor” is applied to the measured results of pesticide residues that are above the MRL.

## 27. Slovenia

### 27.1. *Summary of Results*

In 2009 totally 1391 samples of food were analysed, out of it 9 enforcement and 1382 surveillance samples. Enforcement samples included: 7 samples of fruit and 2 samples of vegetables. Surveillance samples included: 60 samples of animal products, 61 samples of baby food, 104 samples of cereals, 517 samples of fruit, 617 samples of vegetables and 23 samples of other products of plant origin (infusions, oil plants, pulses, sugar plants). There were 738 samples without detectable residues, 621 samples with residues below or at EU-MRL and 32 samples with residues exceeding the EU-MRL. 567 samples were originated from domestic produce, 560 from other EU Member States, 257 from Third Countries and 7 were of unknown origin. Samples of animal products were analysed for the presence of up to 31 pesticides. From 60 surveillance samples 53 (88,3%) samples were without detectable residues and 7 (11,7%) with residues below or at EU-MRL. Samples of baby food were analysed for the presence of up to 198 pesticides. From 61 surveillance samples all (100%) samples were without detectable residues. Samples of cereals were analysed for the presence of up to 217 pesticides. From 104 surveillance samples 65 (62,5%) samples were without detectable residues and 39 (37,5%) with residues below or at EU-MRL. Samples of fruit were analysed for the presence of up to 217 pesticides. From 517 surveillance samples 138 (26,7 %) samples were without detectable residues, 360 (69,6%) with residues below or at EU-MRL and 19 (3,7%) with residues exceeding the EU MRL. Samples of vegetables were analysed for the presence of up to 217 pesticides. From 617 surveillance samples 400 (64,8%) samples were without detectable residues, 206 (33,4%) with residues below or at EU-MRL and 11 (1,8%) with residues exceeding the EU MRL. Samples of other products of plant origin were analysed up to 217 pesticides. From 23 surveillance samples 22 (95,7%) samples were without detectable residues and 1 (4,3%) with residues exceeding the EU MRL.

### 27.2. *Organisation of Monitoring programmes and Sampling*

#### 27.2.1. **Responsibilities**

The competent authorities for the preparation of legislation in the area of pesticide residues in foodstuffs is the Ministry of Health (MH) in cooperation with Ministry of Agriculture, Forestry and Food (MAFF).

There are two authorities competent in the field of official control of pesticide residues in products of plant origin:

- Inspectorate for Agriculture, Forestry and Food (IRSAFF) is responsible for the control at the very first step of placing on the market of primary products of plant origin by the primary producers. Trade with registered pesticides and their use is also a part of official control of IRSAFF and
- Health Inspectorate of the Republic of Slovenia (HIRS) is responsible for the control of all foodstuffs, including baby food and infant formulae, in all other stages of the production chain, including importation.

The national monitoring programme covers also some food of animal origin and the competent authorities for the control of pesticide residues in animal products are:



Veterinary Administration of Republic of Slovenia (VARŠ) is responsible for the control of production, processing, packing, marketing and retail trade of non-pre-packed raw meat, aquaculture, milk and eggs and

HIRS is responsible for the control of pre-packed foodstuffs of animal origin at the retail level.

A detailed national pesticide monitoring plan for 2009, incorporating the EU co-ordinated monitoring programme, was prepared by the MH and MAFF and was given in discussion, evaluation and confirmation to the Panel (established by the Minister of Health and the Minister of Agriculture, Forestry and Food). The Panel comprises of representatives from MH, MAFF, and Phytosanitary Administration of the Republic of Slovenia, governmental and non-governmental consumer associations, official laboratories, National Chemicals Bureau, risk assessors and official control bodies.

#### 27.2.2. **Designing of Programmes (priorities, targeting)**

Commodities included into the monitoring programme are selected each year covering staple food, food included in EU coordinated programme, food offered on the Slovenian market, as part of national rolling programme and non-compliant commodities of previous year. The selection of pesticides to be sought is primarily influenced by pesticide use; potential for residues based on use pattern; toxicological profile of the pesticide; analytical capabilities.

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

Samples were taken in accordance with Commission Directive 2002/63/EC by IRSAFF inspectors, HIRS inspectors and contracting institution at different stage of the production, processing and distribution chain, but mainly at wholesale / retail.

#### 27.2.4. **Enforcement action**

Follow-up activities were carried out always when infringements were found (additional inspection including sampling when sample available, taking proper official measures to prevent public health, including communication of information, RASFF...).

### 27.3. *Quality assurance*

#### 27.3.1. **Status of accreditation of laboratories; number of laboratories**

In Slovenia three official laboratories are nominated for performing the analyses of samples.

- National Institute of Public Health of Republic Slovenia (accreditation; August 2003),
- Institute of Public Health Maribor (accreditation; November 2001) for HIRS and IRSAFF and
- Agricultural Institute of Slovenia (accreditation; June 2005) for IRSAFF.

#### 27.3.2. **Analytical methods used**

Samples were analysed using:

- mainly multiresidue methods based on gas and liquid chromatographic techniques employing mass-selective detection systems,
- single residue methods for determination of dithiocarbamates, chlormequat / mepiquat, fentin and benzimidazoles were used.

### 27.3.3. **Participation in proficiency test**

All three laboratories participated in proficiency testing schemes. Basic ones were FAPAS and EUPT (EU Commission's Proficiency Test on Pesticide Residues for different matrices).

### 27.3.4. **Implementation of EU quality control procedure**

With respect to quality of data generated in the frame of the EU residue coordinated programme, the results of the analysis of foodstuffs were obtained in compliance with the requirements of Directive 1993/99/EEC, its Article 3, applying Quality Control Procedures for Pesticide Residue Analysis and accreditation according to the ISO17025.

### 27.3.5. **Analytical uncertainty**

All three laboratories applied an uncertainty factor to results used in enforcement of the legislation. The used factor for samples of plant origin is 50%, which is agreed at EU level.

### 27.4. ***Other information***

In all cases where pesticide residues with consideration the uncertainty factor were above MRL, a risk assessment was carried out to quantify the risk to consumers.

## 28. Spain

### 28.1. *Summary of Results*

The total number of samples in the Co-ordinate Programme and the National Spanish Programme **2009** was **1568**, including samples as from surveillance as from enforcement strategy; 961 (61.3 %) samples were taken from fruits and vegetables, 15 (0,96 %) from cereals, 143 (9,1 %) from baby food, 304 (19.4 %) from animal products and 145 (9,25 %) samples from other processed products. For fruits, vegetables and other vegetables the number of samples that exceeded the MLRs was 23 (1.5 %) and no samples for cereals, baby food, animal products and processed products were above the MRL. Pesticides found above the MLRs were: **For fruit fresh or frozen:** tetradifon, bifenthrin, amitraz, azinphos-methyl, dimetoathe, captan, phosmet, lambda- cyalothrin, malathion, imazalil, indoxacarb, propiconazole. **For vegetables fresh or frozen:** acrinathrin, chlorpyrifos ethyl, iprodione, endosulfán, benalaxyl, oxamyl, methomyl.. Among the possible reasons for MRL exceedences the most frequent are firstly bad practice, followed by change in EC MRLs and incorrect use, e.g. use of too concentrated solution and incorrect dosage.

### 28.2. *Organisation of monitoring programmes and Sampling*

#### 28.2.1. **Responsibilities**

The Spanish Pesticide Monitoring Programme for pesticide residues in food was carried out by the Autonomous Communities. The sampling in origin is coordinated by the Spanish Ministry of the Environment and Rural and Marine Affairs (MERMA). The results of consumption's sampling, including baby food sampling, animal food products and processed products were gathered by the Spanish Nutrition and Food Safety Agency (SNFSA). The SNFSA is the contact point between Spain and the European Commission. In case of samples taken on imported products, this sampling is done by the *Dirección General de Salud Pública y Sanidad Exterior*, belonging to the Spanish Ministry of Health and Social Policy, as well as the SNFSA.

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

There are two subprograms (“in origin” and “in market”, including when sampling happens when importation takes place) mainly distinguished for the place where samples are taken. The responsible of the coordination for the “in origin” subprogram is the *Subdirección General de Medios de Producción* from the MERMA. The responsible of the coordination for the “in market” subprogram is the SNFSA.

The programme takes into account: Proportion of the crops accordingly with the production, requirements from EU co-ordinated programme, some special actions concerning problems with certain crops, more products consumed, alerts regarding exceeding of MRLs and results of previous years.

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

The responsible personal of the sampling are the inspectors from the Autonomous Communities. Samples are taken from wholesales, in farm gate and retail. Inspectors from agricultural departments take samples following the Manual Proceeding made at national level and co-ordinated by *S. G. Medios de Produccion*. In the moment of importation the sampling is done by staff depending functionally on *Dirección General de Salud Pública y Sanidad Exterior*.

#### 28.2.4. **Enforcement action**

For surveillance samples exceeding the MRL, different enforcement action was undertaken: the producer or competent Authority were informed, research of possible reason why the MRLs were exceeded, follow-up enforcement sample was taken from the same product and the same origin to analyze the detected residue, administrative measures. When the information is transferred to RASFF, the document SANCO/3346/2001 is taken into account.

#### 28.3. *Quality assurance*

##### 28.3.1. **Status of accreditation of laboratories, number of laboratories**

22 laboratories carried out the analyses of the monitoring programme. 11 of them are accredited and some others are in very advance phase to obtain the accreditation. The accreditation can be occurred only if methods are validated by collaborative studies. The validation "in house" requires a lot of investigation. For the new molecules the accreditation seems difficult to obtain. The eleven laboratories accredited assumed approximately the 73.8 % of the determinations of residues of pesticides. It is important to emphasize that requirements for accreditation of ENAC (organism responsible of accreditation in Spain) are very hard and it is only awarded for each pesticide and food item.

##### 28.3.2. **Analytical methods used**

Most of the samples was analyzed by multiresidue's methods. The methods used are: Colorimetry, Spectroscopy (Spectrometry) and Photometry, High Performance Liquid Chromatography (HPLC)/Liquid Chromatography (LC), Mass Spectroscopy and hyphenated methods without chromatography, Gaschromatography (GC), GC-(P)FPD, GC with standard detection methods, GC-ECD, GC-FID, GC-MS, GC-MS-MS, GC-PND, HPLC/LC hyphenated methods, HPLC with standard detection methods, HPLC-ICP-MS, HPLC-MS, HPLC-MS-MS, HPLC-UV, LC-MS, LC-MS/MS, Traditional analytical techniques (wet chemical tests) and others methods not included in EFSA catalogues.

##### 28.3.3. **Participation in proficiency tests**

10 laboratories took part in Proficiency EUPT from European Commission , 13 laboratories are participating in the Spanish proficiency Test (Test-Qual) and 17 laboratories have made several exercises of intercalibration organized by FAPAS.

##### 28.3.4. **Implementation of EU quality control procedures**

The majority of the laboratories implemented EU Quality control procedures, either for all or only some elements.

##### 28.3.5. **Analytical uncertainty**

All different laboratories have procedures to estimate analytical uncertainty which is taken into account to decide any enforcement action. In addition the documents SANCO 10232/2006 is considered.

## 29. Sweden

### 29.1. *Summary of Results*

In 2009, a total of 1 713 surveillance samples of fruits, vegetables, baby food, juices, wine, cereal grains, vegetable oils, eggs and butter were analysed for residues of 316 pesticides (386 analytes). National or EU harmonized Maximum Residue Limits (EC-MRLs) were exceeded by 93 samples (5.4 %).

In the 2009 EU co-ordinated programme 444 samples were analysed and 10 of these samples exceeded EC-MRLs.

A total of 247 samples of cereal grains were analysed. Most of the samples (73 %) contained no residues but eight samples exceeded the MRLs.

No residues were found in the 42 samples of foods for infants and young children.

In the enforcement sampling 71 samples of fruits, vegetables and cereals were collected and 22 of these samples exceeded 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 surveillance (composite) sample and EFSA calculation model PRIMO was used.

### 29.2. *Organisation of monitoring programmes and Sampling*

#### 29.2.1. **Responsibilities**

The National Food Administration (NFA) is the responsible authority for the monitoring of pesticide residues in foods.

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

The number of samples to be collected of each food is risk related and partly linked to the foods consumption rate and takes into account both the amount of domestic production and the amount of imports from EU-countries and third countries. However, the number is also based on the importance of the foodstuff in the diets of infants and young children as well as residues found in prior samples. The number of samples from the organic sector was roughly dependent on its share of the market and availability on the market.

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

Samples collected in accordance with the monitoring programme were defined as surveillance samples i.e. there were no suspicions about excessive amounts of pesticide residues in the lots prior to sampling

*Personnel:* Plant inspectors from the National Board of Agriculture collected most of the samples in accordance with instructions from NFA.

*Procedures:* The sampling was done according to Commission Directive 2002/63/EEC. Each sample was sealed and labeled with a unique sample identity.

*Sampling points:* Fresh fruit 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.

#### 29.2.4. **Enforcement action**

When a surveillance sample contained a pesticide residue above national or EC-MRL (see uncertainty), the National Food Administration prescribed a condition for the offering for sale or other handling of the food or lot to which the food belonged. The remaining part of the lot, if any, was prohibited for being put on the market. As a follow-up, next lots of the commodity from the grower/exporter were detained and enforcement samples were collected.

### 29.3. *Quality assurance*

#### 29.3.1. **Status of accreditation of laboratories, number of laboratories**

Both laboratories, National Food Administration (NRL) and Eurofins Food & Agro AB (Official laboratory) are accredited by the Swedish accreditation authority SWEDAC for all analytical methods used for the NFA's official control of pesticide residues in food of plant origin.

#### 29.3.2. **Analytical methods used**

All samples of fruit and vegetables were analysed by the multi-residue method M200, replaced by M300. By this method, the samples were extracted with ethyl acetate after addition of sodium hydrogen carbonate. The uncleaned extracts were determined by LC-MS/MS and GC-MS/MS.

In all, by using both multi-residue methods and single residue methods it was possible to determine 316 pesticides corresponding to 386 analytes.

#### 29.3.3. **Participation in proficiency tests**

National Food Administration has participated in four proficiency tests (PTs) organised by EU. Eurofins Food & Agro AB has participated in four PTs organised by EU and 13 PTs organised by FAPAS, UK.

#### 29.3.4. **Implementation of EU quality control procedures**

The EC guidelines SANCO/2007/3131 "Method validation and Quality Control Procedures for Pesticide Residue Analysis in food and feed" have been fully implemented.

#### 29.3.5. **Analytical uncertainty**

The residue figures found are compared with the MRLs. If the figures, without any correction, are mathematically above the MRL, the sample is defined as an exceeding. However, before any enforcement actions are taken the analytical uncertainty is subtracted from the measured value (95 percent confidence interval). If the corrected figure still exceeds the MRL, enforcement actions could be taken. As a general rule, the figure 50% is used as a default uncertainty for enforcement purposes.

### 29.4. *Other information*

Sweden has implemented all EC-MRLs.

## 30. United Kingdom

### 30.1. *Summary of Results*

The 2009 Annual Report of the Pesticide Residues Committee was published on 8 October 2009 and can be downloaded at [www.pesticides.gov.uk/prc.asp?id=2791](http://www.pesticides.gov.uk/prc.asp?id=2791).

### 30.2. *Organisation of monitoring programmes and Sampling*

#### 30.2.1. **Responsibilities**

The UK monitoring programme is overseen by the independent Pesticide Residues Committee (PRC). The Chemicals Regulation Directorate of the Health and Safety Directorate is responsible for managing the UK's monitoring programme for pesticide residues on behalf of the Department of Environment, Food and Rural Affairs (for England), Welsh Assembly, Scottish Government and Government for Northern Ireland. The Food Safety Agency is responsible for risk management and is the UK's contact point for the RASFF.

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

The purpose of the UK monitoring is to:

back up the statutory approvals process for pesticides by checking that no unexpected residues are occurring;

check that residues do not exceed statutory EU and UK MRLs; and

check that human dietary intakes of residues are at acceptable levels.

A detailed justification of the UK's programme for 2009 on this basis was submitted to EFSA during 2008. Within each survey the percentage of organic samples collected was broadly in line with the percentage market share of that food in the UK.

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

Around 87 % of samples were purchased by shoppers employed by a leading market research company at retail outlet in 24 locations spread throughout the twelve regions of the UK (18 towns/cities in England, and 2 each in Scotland, Wales and Northern Ireland). The locations selected are changed each year.

Official inspectors from Department for Environment, Food and Rural Affairs (Defra) also collected samples at non-retail sources for: table grapes, pears, (sweet) peppers, potatoes and tomatoes.

Samples were taken, prepared and analysed according to Commission Directive 2002/63/EC.

#### 30.2.4. **Enforcement action**

The UK's programme is a monitoring (surveillance) programme. No enforcement activity relating to breaches of MRLs has therefore arisen from these results. Brand name details are published for all samples.

Where residues detected in UK produce are indicative of unapproved use, this is followed up by enforcement officers. Where residues are detected in organic produce the relevant UK government department and organic registration body are informed. Local authorities are

responsible for enforcing MRLs and for border controls and may organise their own testing in the light of local intelligence and priorities.

### 30.3. *Quality assurance*

#### 30.3.1. **Status of accreditation of laboratories, number of laboratories**

Four laboratories are commissioned to carry out the analysis underlying this return. (One further laboratory analysed animal products only and therefore is not listed in Table G of the UK return). All of the laboratories meet the requirements of a recognised accreditation scheme, such as the United Kingdom Accreditation Service (UKAS) or the requirements of Good Laboratory Practice (GLP).

#### 30.3.2. **Analytical methods used**

Methods are validated in accordance with ISO 17025 or IUPAC harmonised guidelines. The residues data provided were not corrected for recovery and are expressed on the basis of the fresh weight of the sample and as defined by the MRL.

#### 30.3.3. **Participation in proficiency tests**

All laboratories carrying out work have taken part in proficiency testing exercises, including European Union Proficiency Testing (EU PT) and also the Food Analysis Performance Assessment Scheme (FAPAS) which is a UK independent proficiency testing programme.

#### 30.3.4. **Implementation of EU quality control procedures**

All of the official laboratories involved in the UK's pesticide residue monitoring follow the same European analytical quality control guidance "Method Validation and Quality Control Procedures for Pesticide Residue Analysis in Food and Feed" (Document no SANCO2007/3131).

#### 30.3.5. **Analytical uncertainty**

Results provided for this return by the UK have not been corrected for analytical measurement uncertainty. Measurement uncertainty is taken into account when results are published and brand named in order to determine which are highlighted as containing residues above the relevant MRL. Full details of this policy are at <http://www.pesticides.gov.uk/prc.asp?id=2535>

### 30.4. *Other information*

Results, including brand name details, for table grapes and pears were also reported and published monthly on the PRC website. Full details are at <http://www.pesticides.gov.uk/prc.asp?id=2659> (for grapes) and <http://www.pesticides.gov.uk/prc.asp?id=2657> (for pears)



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**TABLE A: EU+NCP – SURVEILLANCE SAMPLING: PESTICIDES FOUND IN ANIMAL PRODUCTS, CEREALS, FRUIT AND NUTS, VEGETABLES - 2009**
**ANIMAL PRODUCTS**

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
Aldrin and Dieldrin	2211	23	1.0	0.7	1.6	17	Y
Amitraz (sum)	97	3	3.1	1.1	8.7	1	
Azoxystrobin	464	1	0.2	0.1	1.2	6	Y
Boscalid	381	1	0.3	0.1	1.4	5	Y
Bromocyclen	921	1	0.1	0.0	0.6	1	
Bromopropylate	515	1	0.2	0.0	1.1	8	Y
Camphechlor (sum animal products)	695	1	0.1	0.0	0.8	4	Y
Carbendazim (sum animal products)	207	3	1.4	0.5	4.2	1	
Chlordane (sum animal products)	2020	3	0.1	0.1	0.4	10	Y
Chlorpyrifos	2968	5	0.2	0.1	0.4	19	Y
Coumaphos	861	11	1.3	0.7	2.3	7	
Cypermethrin (sum)	2205	2	0.1	0.0	0.3	17	Y
DDD, p,p-	426	1	0.2	0.1	1.3	12	
DDE, p,p-	448	24	5.4	3.6	7.8	12	
DDT (sum)	2408	396	16.4	15.0	18.0	21	Y
DDT, p,p-	1423	24	1.7	1.1	2.5	13	
Deltamethrin	2971	4	0.1	0.1	0.3	23	Y
Diazinon	2444	2	0.1	0.0	0.3	19	Y
Dieldrin	1644	3	0.2	0.1	0.5	17	
Dimoxystrobin	5	1	20.0	4.3	64.1	2	
Endosulfan (sum)	2920	14	0.5	0.3	0.8	23	Y
Fluazifop	214	3	1.4	0.5	4.0	2	
Flumethrin	41	4	9.8	4.0	22.6	2	
HCH alpha	3339	5	0.1	0.1	0.3	22	Y
HCH beta	2985	10	0.3	0.2	0.6	20	Y
Heptachlor (sum)	2421	4	0.2	0.1	0.4	20	Y
Hexachlorobenzene	3093	336	10.9	9.8	12.0	23	Y
Iprodione	297	1	0.3	0.1	1.9	8	Y
Kresoxim-methyl	357	1	0.3	0.1	1.5	7	Y
Lindane	3486	29	0.8	0.6	1.2	22	Y
Metamitron	230	1	0.4	0.1	2.4	2	
Methoxychlor	215	4	1.9	0.8	4.7	24	Y
Nonachlor-Trans	368	2	0.5	0.2	1.9	4	
Permethrin (sum)	2898	3	0.1	0.0	0.3	23	Y
Phosalone	839	1	0.1	0.0	0.7	9	Y
Pirimiphos-methyl	2880	14	0.5	0.3	0.8	22	Y
Thiacloprid	323	15	4.6	2.8	7.5	4	Y
tau-Fluvalinate	188	1	0.5	0.1	2.9	5	
<b>Total</b>	<b>52408</b>	<b>958</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

**CEREALS**

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
2,4-D	738	1	0.1	0.0	0.8	8	
AMPA	72	2	2.8	0.9	9.5	3	
Acetamiprid	1901	10	0.5	0.3	1.0	25	Y
Azoxystrobin	3238	7	0.2	0.1	0.4	28	Y
Bifenthrin	3563	4	0.1	0.0	0.3	28	Y
Biphenyl	737	6	0.8	0.4	1.8	12	
Boscalid	1885	36	1.9	1.4	2.6	24	Y
Bromide ion	254	43	16.9	12.8	22.0	9	
Bromopropylate	2994	4	0.1	0.1	0.3	26	Y
Bupirimate	2531	1	0.0	0.0	0.2	25	Y
Buprofezin	2755	2	0.1	0.0	0.3	26	Y
Captan	2755	1	0.0	0.0	0.2	25	Y
Carbaryl	3199	8	0.3	0.1	0.5	28	Y
Carbendazim	1039	1	0.1	0.0	0.5	19	
Carbendazim and benomyl	1906	9	0.5	0.3	0.9	19	Y
Chlorfenvinphos	2635	2	0.1	0.0	0.3	25	Y
Chlormequat	1309	470	35.9	33.4	38.5	18	Y
Chlorothalonil	3176	1	0.0	0.0	0.2	28	Y
Chlorpropham	2455	1	0.0	0.0	0.2	19	
Chlorpropham (sum)	959	1	0.1	0.0	0.6	11	Y
Chlorpyrifos	3116	44	1.4	1.1	1.9	27	Y
Chlorpyrifos ethyl	599	2	0.3	0.1	1.2	5	
Chlorpyrifos-methyl	3706	114	3.1	2.6	3.7	28	Y
Cypermethrin	1185	1	0.1	0.0	0.5	13	
Cypermethrin (sum)	2493	2	0.1	0.0	0.3	21	Y
Cyproconazole	2420	2	0.1	0.0	0.3	24	Y
Cyprodinil	2813	1	0.0	0.0	0.2	26	Y
DDT (sum)	2094	2	0.1	0.0	0.3	20	Y
Deltamethrin	3620	40	1.1	0.8	1.5	28	Y
Desmethyl pirimicarb	677	1	0.1	0.0	0.8	9	
Diazinon	3708	3	0.1	0.0	0.2	28	Y
Difenoconazole	2688	1	0.0	0.0	0.2	25	Y
Diiflufenican	604	1	0.2	0.0	0.9	7	
Diniconazole	942	3	0.3	0.1	0.9	13	
Diphenylamine	2542	2	0.1	0.0	0.3	26	Y
Dithiocarbamates	636	8	1.3	0.6	2.5	19	Y
Endosulfan (sum)	3531	5	0.1	0.1	0.3	26	Y
Epoconazole	2666	4	0.2	0.1	0.4	25	
Fenhexamid	2812	1	0.0	0.0	0.2	27	Y
Fenitrothion	3553	5	0.1	0.1	0.3	26	Y
Fenobucarb	282	2	0.7	0.2	2.5	5	
Fenoxaprop	266	1	0.4	0.1	2.1	1	
Fenpropidin	1345	1	0.1	0.0	0.4	13	
Fenpropimorph	2255	4	0.2	0.1	0.5	21	
Fensulfthion	682	1	0.1	0.0	0.8	10	
Fenvalerate and Esfenvalerate (sum of	1160	2	0.2	0.1	0.6	11	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
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Flucythrinate	1198	1	0.1	0.0	0.5	16	
Fludioxonil	2641	1	0.0	0.0	0.2	25	Y
Fluroxypyr (sum)	505	1	0.2	0.0	1.1	3	
Flusilazole	2347	1	0.0	0.0	0.2	24	Y
Glyphosate	462	42	9.1	6.8	12.1	5	
HCH delta	819	1	0.1	0.0	0.7	12	
Hexaconazole	2324	1	0.0	0.0	0.2	24	Y
Hydrogen phosphide	157	14	8.9	5.4	14.4	2	
Imazalil	3014	4	0.1	0.1	0.3	28	Y
Imazapyr	162	2	1.2	0.4	4.4	3	
Imidacloprid	1898	8	0.4	0.2	0.8	25	Y
Iprodione	3497	4	0.1	0.0	0.3	28	Y
Kresoxim-methyl	3320	2	0.1	0.0	0.2	28	Y
Lambda-Cyhalothrin	3029	2	0.1	0.0	0.2	25	
MCPA	542	1	0.2	0.0	1.0	9	
Malathion	2110	43	2.0	1.5	2.7	20	
Malathion (sum)	2472	36	1.5	1.1	2.0	24	Y
Mecarbam	2142	1	0.0	0.0	0.3	21	
Mepiquat	1178	43	3.7	2.7	4.9	16	Y
Metalaxyl	1394	1	0.1	0.0	0.4	14	
Metconazole	2069	1	0.0	0.0	0.3	21	Y
Methomyl and Thiodicarb	1687	3	0.2	0.1	0.5	22	Y
Methyl bromide	40	1	2.5	0.6	12.9	1	
Orthophenylphenol	1134	7	0.6	0.3	1.3	13	
Parathion-methyl	1927	1	0.1	0.0	0.3	19	
Pencycuron	1187	3	0.3	0.1	0.7	15	
Permethrin (sum)	3655	4	0.1	0.0	0.3	26	Y
Phosalone	3117	1	0.0	0.0	0.2	26	Y
Phosmet (sum)	1530	1	0.1	0.0	0.4	19	Y
Phosphines and phosphides	106	7	6.6	3.3	13.0	1	
Phoxim	1311	1	0.1	0.0	0.4	11	Y
Pirimicarb (sum)	2197	2	0.1	0.0	0.3	20	Y
Pirimiphos-Ethyl	1391	1	0.1	0.0	0.4	19	
Pirimiphos-methyl	3671	509	13.9	12.8	15.0	28	Y
Procymidone	3524	1	0.0	0.0	0.2	28	Y
Profenofos	2496	4	0.2	0.1	0.4	26	Y
Propamocarb	105	2	1.9	0.6	6.6	2	
Propamocarb (sum)	900	3	0.3	0.1	1.0	14	Y
Propargite	2120	1	0.0	0.0	0.3	23	Y
Propiconazole	3080	4	0.1	0.1	0.3	24	
Pyraclostrobin	2380	6	0.3	0.1	0.5	18	
Quinmerac	339	2	0.6	0.2	2.1	4	
Spiroxamine	2353	4	0.2	0.1	0.4	28	Y
Tebuconazole	3305	25	0.8	0.5	1.1	28	Y
Tebufenozide	1488	11	0.7	0.4	1.3	21	Y

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
Tetramethrin	602	1	0.2	0.0	0.9	10	
Thiabendazole	2589	3	0.1	0.0	0.3	28	Y
Thiophanate-methyl	1527	4	0.3	0.1	0.7	24	Y
Tolclofos-methyl	2993	1	0.0	0.0	0.2	26	Y
Triazophos	3391	3	0.1	0.0	0.3	28	Y
Trinexapac	359	10	2.8	1.5	5.0	3	
Trinexapac-Ethyl	572	1	0.2	0.0	1.0	6	
<b>Total</b>	<b>186852</b>	<b>1700</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

**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 testing	Included in the EU programme
1-naphthylacetamide	1914	1	0.1	0.0	0.3	1	
2,4,6-Tribromoanisole	1630	2	0.1	0.0	0.4	3	
2,4,6-Trichlorophenol	939	29	3.1	2.2	4.4	2	
2,4-D	6366	146	2.3	2.0	2.7	9	
2,4-D (sum)	1542	86	5.6	4.5	6.8	7	
2,4-D-Methylester	166	1	0.6	0.1	3.3	1	
3,5-Dichloroaniline	1560	10	0.6	0.4	1.2	5	
3-hydroxy -carbofuran	6016	5	0.1	0.0	0.2	13	
4,4`-Dichlorobenzophenone	2212	14	0.6	0.4	1.1	5	
5-Hydroxy-Thiabendazole	103	5	4.9	2.1	10.9	2	
Abamectin (sum)	8346	17	0.2	0.1	0.3	13	Y
Acephate	21459	9	0.0	0.0	0.1	29	Y
Acetamiprid	18965	447	2.4	2.2	2.6	28	Y
Acrinathrin	20383	79	0.4	0.3	0.5	24	
Alachlor	6708	1	0.0	0.0	0.1	12	
Alphamethrin	7029	14	0.2	0.1	0.3	11	
Ametryn	7234	1	0.0	0.0	0.1	10	
Amitraz	2244	2	0.1	0.0	0.3	10	
Amitraz (sum)	3344	13	0.4	0.2	0.7	9	
Anthraquinone	2462	2	0.1	0.0	0.3	5	
Atrazine	15858	4	0.0	0.0	0.1	23	
Azadirachtin	978	1	0.1	0.0	0.6	1	
Azinphos-ethyl	19159	1	0.0	0.0	0.0	24	Y
Azinphos-methyl	23437	122	0.5	0.4	0.6	29	Y
Azocyclotin and Cyhexatin	540	1	0.2	0.0	1.0	2	
Azoxystrobin	23034	846	3.7	3.4	3.9	28	Y
Benalaxyl	8449	6	0.1	0.0	0.2	15	
Benalaxyl (sum)	12604	4	0.0	0.0	0.1	11	
Benomyl	432	5	1.2	0.5	2.7	5	
Beta-cypermethrin	401	3	0.7	0.3	2.2	2	
Bifenazate	4497	4	0.1	0.0	0.2	5	
Bifenox	8793	2	0.0	0.0	0.1	9	
Bifenthrin	23404	375	1.6	1.4	1.8	28	Y
Binapacryl	9325	2	0.0	0.0	0.1	16	
Biphenyl	8340	3	0.0	0.0	0.1	19	
Bitertanol	19952	135	0.7	0.6	0.8	26	
Boscalid	18133	2206	12.2	11.7	12.7	26	Y
Bromide ion	241	31	12.9	9.2	17.7	6	
Bromopropylate	23328	89	0.4	0.3	0.5	29	Y
Bromuconazole (sum)	14371	3	0.0	0.0	0.1	21	Y
Bupirimate	20877	135	0.6	0.5	0.8	28	Y
Buprofezin	22092	107	0.5	0.4	0.6	29	Y
Captan	18713	511	2.7	2.5	3.0	28	Y
Captan/Folpet (sum)	7674	636	8.3	7.7	8.9	14	Y

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
Carbaryl	22468	36	0.2	0.1	0.2	29	Y
Carbendazim	7115	238	3.3	3.0	3.8	18	
Carbendazim and benomyl	15676	1115	7.1	6.7	7.5	21	Y
Carbofuran	9912	8	0.1	0.0	0.2	19	
Carbofuran (sum)	16828	13	0.1	0.0	0.1	25	Y
Chinomethionat	12228	1	0.0	0.0	0.0	15	
Chlorantranilipole	89	19	21.3	14. 1	31.0	1	
Chlorfenapyr	10203	9	0.1	0.0	0.2	15	
Chlorfenvinphos	20445	3	0.0	0.0	0.0	28	Y
Chlormequat	1348	84	6.2	5.1	7.7	14	Y
Chlorobenzilate	11299	2	0.0	0.0	0.1	21	Y
Chlorothalonil	23702	111	0.5	0.4	0.6	29	Y
Chlorpropham	11122	12	0.1	0.1	0.2	20	
Chlorpropham (sum)	11903	7	0.1	0.0	0.1	15	Y
Chlorpyrifos	22224	2701	12.2	11. 7	12.6	27	Y
Chlorpyrifos ethyl	2167	221	10.2	9.0	11.5	8	
Chlorpyrifos-methyl	24530	320	1.3	1.2	1.5	29	Y
Chlozolinate	15593	2	0.0	0.0	0.0	19	
Cinidon-ethyl	2450	1	0.0	0.0	0.2	2	
Clofentezine	15224	109	0.7	0.6	0.9	24	
Clofentezine (sum animal products/cereals)	1131	1	0.1	0.0	0.5	3	Y
Clopyralid	3443	1	0.0	0.0	0.2	6	
Clothianidin	5443	9	0.2	0.1	0.3	15	
Copper	40	9	22.5	12. 4	37.6	1	
Cyazofamid	9434	25	0.3	0.2	0.4	12	
Cycloxydim	3670	4	0.1	0.0	0.3	2	
Cyfluthrin	3377	13	0.4	0.2	0.7	13	
Cyfluthrin (sum)	18325	34	0.2	0.1	0.3	22	Y
Cyhalothrin	765	13	1.7	1.0	2.9	4	
Cymoxanil	12845	5	0.0	0.0	0.1	16	
Cypermethrin	6852	107	1.6	1.3	1.9	15	
Cypermethrin (sum)	17671	276	1.6	1.4	1.8	22	Y
Cyproconazole	18352	42	0.2	0.2	0.3	25	Y
Cyprodinil	22692	2256	9.9	9.6	10.3	29	Y
Cyromazine	10089	4	0.0	0.0	0.1	14	
DDE, p,p-	7920	3	0.0	0.0	0.1	18	
DDT (sum)	15882	4	0.0	0.0	0.1	22	Y
DMSA	3610	2	0.1	0.0	0.2	7	
Daminozide (sum)	232	1	0.4	0.1	2.4	1	
Deltamethrin	23836	71	0.3	0.2	0.4	28	Y
Demeton-S-Methylsulfone	6746	1	0.0	0.0	0.1	15	
Desethyl-Terbuthylazine	1556	4	0.3	0.1	0.7	2	
Desmethyl pirimicarb	3323	60	1.8	1.4	2.3	8	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
Desmethylformamido-Pirimicarb	5781	40	0.7	0.5	0.9	7	
Diafenthiuron	1733	1	0.1	0.0	0.3	3	
Diazinon	24594	15	0.1	0.0	0.1	29	Y
Dichlofluanid	22944	2	0.0	0.0	0.0	28	Y
Dichlorprop incl. Dichlorprop-P	6350	14	0.2	0.1	0.4	11	
Dichlorvos	23231	4	0.0	0.0	0.0	28	Y
Dicloran	18362	1	0.0	0.0	0.0	23	
Dicofol (sum)	19515	155	0.8	0.7	0.9	27	Y
Dicofol p, p'	2806	12	0.4	0.2	0.7	9	
Diethofencarb	17428	6	0.0	0.0	0.1	21	
Difenoconazole	21177	184	0.9	0.8	1.0	28	Y
Diflubenzuron	13275	86	0.6	0.5	0.8	16	
Dimethoate	14775	98	0.7	0.5	0.8	25	
Dimethoate (sum)	18725	316	1.7	1.5	1.9	25	Y
Dimethomorph	19512	293	1.5	1.3	1.7	27	Y
Dimethylaminosulfotoluidide	3252	11	0.3	0.2	0.6	7	
Diniconazole	12435	9	0.1	0.0	0.1	15	
Dinocap (sum)	4314	1	0.0	0.0	0.1	10	
Dioxacarb	4020	1	0.0	0.0	0.1	3	
Diphenylamine	21250	416	2.0	1.8	2.2	29	Y
Dithianon	3943	205	5.2	4.5	5.9	6	
Dithiocarbamates	5831	813	13.9	13.1	14.9	25	Y
Diuron	5373	5	0.1	0.0	0.2	2	
Diuron (sum)	4935	2	0.0	0.0	0.1	10	
Dodine	5151	147	2.9	2.4	3.3	8	
Endosulfan (sum)	24623	45	0.2	0.1	0.2	27	Y
Endosulfansulfate	5062	10	0.2	0.1	0.4	18	
Epoxiconazole	18671	6	0.0	0.0	0.1	26	
Esfenvalerate	5796	9	0.2	0.1	0.3	11	
Ethephon	687	67	9.8	7.8	12.2	2	
Ethiofencarb-Sulfoxid	6404	1	0.0	0.0	0.1	10	
Ethion	21886	26	0.1	0.1	0.2	29	Y
Ethirimol	6139	46	0.7	0.6	1.0	11	
Ethoprophos	18033	1	0.0	0.0	0.0	24	Y
Ethoxyquin	9640	14	0.1	0.1	0.2	14	
Etofenprox	14608	201	1.4	1.2	1.6	18	
Etoxazole	6030	15	0.2	0.2	0.4	8	
Etridiazole	10069	1	0.0	0.0	0.1	11	
Famoxadone	14667	70	0.5	0.4	0.6	18	
Fenamidone	11511	19	0.2	0.1	0.3	18	
Fenamiphos	7965	2	0.0	0.0	0.1	18	
Fenamiphos (sum)	9544	2	0.0	0.0	0.1	13	Y
Fenarimol	21765	31	0.1	0.1	0.2	28	Y
Fenazaflor	236	1	0.4	0.1	2.3	1	
Fenazaquin	17455	46	0.3	0.2	0.4	21	



Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
Fenbuconazole	16184	105	0.6	0.5	0.8	22	Y
Fenbutatin oxide	2568	98	3.8	3.1	4.6	3	
Fenhexamid	22071	1956	8.9	8.5	9.2	28	Y
Fenitrothion	23834	24	0.1	0.1	0.2	28	Y
Fenoxycarb	17844	161	0.9	0.8	1.1	25	Y
Fenpropathrin	20483	48	0.2	0.2	0.3	27	Y
Fenpropidin	11517	1	0.0	0.0	0.0	15	
Fenpropimorph	16499	41	0.2	0.2	0.3	21	
Fenpyroximate	14640	82	0.6	0.5	0.7	17	
Fenthion	10835	14	0.1	0.1	0.2	19	
Fenthion (sum)	13646	21	0.2	0.1	0.2	14	Y
Fenthion-Oxon	405	1	0.2	0.1	1.4	3	
Fenthion-Sulfon	3849	3	0.1	0.0	0.2	7	
Fenthion-Sulfoxide	5373	8	0.1	0.1	0.3	13	
Fenvalerate	6263	6	0.1	0.0	0.2	13	
Fenvalerate and Esfenvalerate (sum of RR and SS isom)	11962	9	0.1	0.0	0.1	15	
Fenvalerate and Esfenvalerate (sum of RS and SR isom)	9711	11	0.1	0.1	0.2	15	
Fenvalerate/Esfenvalerate (sum)	3124	2	0.1	0.0	0.2	9	Y
Fipronil	8612	1	0.0	0.0	0.1	19	
Fipronil (sum)	8200	5	0.1	0.0	0.1	9	Y
Fipronil-Desulfinyl	1639	3	0.2	0.1	0.5	2	
Flonicamid (sum)	2790	11	0.4	0.2	0.7	4	
Fluacrypyrim	622	1	0.2	0.0	0.9	2	
Fluazifop	6548	16	0.2	0.2	0.4	10	
Fluazifop-Butyl	2913	1	0.0	0.0	0.2	10	
Fluazifop-P-butyl (sum)	5145	7	0.1	0.1	0.3	7	
Flucythrinate	14406	1	0.0	0.0	0.0	18	
Fludioxonil	22118	1738	7.9	7.5	8.2	28	Y
Flufenacet	4405	1	0.0	0.0	0.1	2	
Flufenoxuron	16293	138	0.8	0.7	1.0	25	Y
Fluopicolide	3990	4	0.1	0.0	0.3	5	
Fluoxastrobin	6916	2	0.0	0.0	0.1	7	
Fluquinconazole	16172	29	0.2	0.1	0.3	22	Y
Fluroxypyr	552	3	0.5	0.2	1.6	5	
Fluroxypyr (sum)	5263	12	0.2	0.1	0.4	3	
Flusilazole	19679	43	0.2	0.2	0.3	26	Y
Flutolanil	10387	2	0.0	0.0	0.1	13	
Flutriafol	12454	8	0.1	0.0	0.1	19	Y
Fluvalinate	2656	2	0.1	0.0	0.3	7	
Folpet	19025	148	0.8	0.7	0.9	29	Y
Forchlorfenuron	1417	4	0.3	0.1	0.7	2	
Formetanate (sum)	7572	6	0.1	0.0	0.2	15	Y
Fosetyl-Al	433	22	5.1	3.4	7.6	1	
Gibberellic acid	1109	6	0.5	0.3	1.2	1	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
Haloxyfop	8273	2	0.0	0.0	0.1	10	
Haloxyfop including haloxyfop-R	5018	1	0.0	0.0	0.1	8	
Hexaconazole	20375	9	0.0	0.0	0.1	27	Y
Hexythiazox	17684	147	0.8	0.7	1.0	27	Y
Hydrogen phosphide	61	6	9.8	4.7	19.9	2	
Imazalil	22641	3175	14.0	13.6	14.5	29	Y
Imidacloprid	19543	670	3.4	3.2	3.7	27	Y
Indoxacarb	18772	413	2.2	2.0	2.4	26	Y
Iprobenfos	4254	2	0.0	0.0	0.2	3	
Iprodione	24111	1254	5.2	4.9	5.5	29	Y
Iprovalicarb	19242	127	0.7	0.6	0.8	27	Y
Isocarbophos	7672	3	0.0	0.0	0.1	10	
Isofenphos-Methyl	15588	2	0.0	0.0	0.0	20	
Isoprocab	6013	1	0.0	0.0	0.1	8	
Isoproturon	12361	1	0.0	0.0	0.0	16	
Isoxaben	3182	2	0.1	0.0	0.2	4	
Kresoxim-methyl	22345	290	1.3	1.2	1.5	28	Y
Lambda-Cyhalothrin	22058	552	2.5	2.3	2.7	26	
Lambda-cyhalothrin (sum animal products)	614	1	0.2	0.0	0.9	4	Y
Linuron	17813	2	0.0	0.0	0.0	25	Y
Lufenuron	12305	33	0.3	0.2	0.4	16	
MCPA	1830	3	0.2	0.1	0.5	9	
MCPA and MCPB	4208	5	0.1	0.1	0.3	3	
Malathion	11249	133	1.2	1.0	1.4	21	
Malathion (sum)	18508	164	0.9	0.8	1.0	27	Y
Mandipropamid	2716	4	0.1	0.1	0.4	5	
Maneb	66	2	3.0	0.9	10.4	2	
Mecarbam	18423	1	0.0	0.0	0.0	24	
Mecoprop (sum)	1692	1	0.1	0.0	0.3	5	
Mepanipyrim	2975	28	0.9	0.7	1.4	4	
Mepanipyrim (sum)	17608	147	0.8	0.7	1.0	23	Y
Mepiquat	774	1	0.1	0.0	0.7	12	Y
Meptyldinocap (sum)	4	4	100.0	54.9	100.0	1	
Metalaxyl	8108	83	1.0	0.8	1.3	15	
Metalaxyl (sum)	16403	207	1.3	1.1	1.4	22	Y
Metalaxyl-M	1120	13	1.2	0.7	2.0	4	
Metamitron	10879	1	0.0	0.0	0.1	13	
Methamidophos	22191	15	0.1	0.0	0.1	29	Y
Methidathion	24158	205	0.8	0.7	1.0	29	Y
Methiocarb	8873	7	0.1	0.0	0.2	22	
Methiocarb (sum)	16064	28	0.2	0.1	0.3	24	Y
Methiocarb-Sulfon	5925	1	0.0	0.0	0.1	14	
Methiocarb-Sulfoxid	6187	11	0.2	0.1	0.3	15	
Methomyl	10918	35	0.3	0.2	0.4	23	
Methomyl and	15465	69	0.4	0.4	0.6	23	Y

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
Thiodicarb							
Methoxyfenozide	13460	700	5.2	4.8	5.6	15	
Metrafenone	7030	38	0.5	0.4	0.7	10	
Monocrotophos	19877	5	0.0	0.0	0.1	28	Y
Monolinuron	6124	1	0.0	0.0	0.1	12	
Myclobutanil	23186	951	4.1	3.9	4.4	29	Y
N-2,4-Dimethylphenyl-N-methylformamidine	2743	6	0.2	0.1	0.5	4	
Novaluron	2046	7	0.3	0.2	0.7	3	
Omethoate	11428	69	0.6	0.5	0.8	21	
Orthophenylphenol	9923	661	6.7	6.2	7.2	21	
Oxamyl	18277	3	0.0	0.0	0.0	27	Y
Oxamyl-Oxime	3648	13	0.4	0.2	0.6	7	
Oxydemeton-methyl	7531	1	0.0	0.0	0.1	19	
Oxydemeton-methyl (sum)	15063	6	0.0	0.0	0.1	19	Y
Oxyfluorfen	5524	1	0.0	0.0	0.1	7	
Pacloutrazol	11708	22	0.2	0.1	0.3	16	Y
Parathion	20613	4	0.0	0.0	0.1	26	Y
Parathion-methyl	10214	6	0.1	0.0	0.1	19	
Parathion-methyl (sum)	16197	9	0.1	0.0	0.1	23	Y
Penconazole	23309	327	1.4	1.3	1.6	29	Y
Pendimethalin	20723	13	0.1	0.0	0.1	23	
Pentachloroaniline	7569	1	0.0	0.0	0.1	9	
Permethrin (sum)	22778	17	0.1	0.0	0.1	27	Y
Phenmedipham	10763	14	0.1	0.1	0.2	13	
Phenthoate	13212	4	0.0	0.0	0.1	19	
Phosalone	24377	37	0.2	0.1	0.2	29	Y
Phosmet	6730	108	1.6	1.3	1.9	13	
Phosmet (sum)	17327	213	1.2	1.1	1.4	24	Y
Phosmet oxon	3290	7	0.2	0.1	0.4	6	
Phosphamidon	17448	1	0.0	0.0	0.0	23	
Phoxim	7628	1	0.0	0.0	0.1	10	Y
Picoxystrobin	13700	1	0.0	0.0	0.0	16	
Pirimicarb	7329	121	1.7	1.4	2.0	15	
Pirimicarb (sum)	18247	430	2.4	2.1	2.6	23	Y
Pirimiphos-methyl	23853	47	0.2	0.1	0.3	29	Y
Prochloraz	9471	282	3.0	2.7	3.3	5	
Prochloraz (sum)	12056	294	2.4	2.2	2.7	24	Y
Procymidone	24148	196	0.8	0.7	0.9	29	Y
Profenofos	20532	34	0.2	0.1	0.2	28	Y
Propamocarb	1478	8	0.5	0.3	1.1	3	
Propamocarb (sum)	12634	31	0.2	0.2	0.3	19	Y
Propargite	19739	288	1.5	1.3	1.6	28	Y
Propiconazole	21789	19	0.1	0.1	0.1	25	
Propoxur	16919	1	0.0	0.0	0.0	22	
Propyzamide	21565	12	0.1	0.0	0.1	25	
Proquinazid	3181	12	0.4	0.2	0.7	5	
Prosulfocarb	9485	3	0.0	0.0	0.1	9	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
Prothioconazole	7093	1	0.0	0.0	0.1	8	Y
Prothiofos	15547	12	0.1	0.0	0.1	19	
Pymetrozine	14136	3	0.0	0.0	0.1	18	
Pyraclostrobin	16526	1098	6.6	6.3	7.0	22	
Pyrazoxyfen	312	1	0.3	0.1	1.8	1	
Pyrethrins	7545	3	0.0	0.0	0.1	14	
Pyridaben	18912	65	0.3	0.3	0.4	27	Y
Pyridate (sum)	5904	4	0.1	0.0	0.2	8	
Pyrifenoxy	14573	1	0.0	0.0	0.0	19	
Pyrimethanil	22514	997	4.4	4.2	4.7	29	Y
Pyriproxyfen	18471	444	2.4	2.2	2.6	27	Y
Quinalphos	20905	12	0.1	0.0	0.1	24	
Quinoxifen	18351	286	1.6	1.4	1.7	25	Y
Quizalofop (including Quizalofop-P)	5127	1	0.0	0.0	0.1	4	
Resmethrin (sum)	2781	2	0.1	0.0	0.3	7	Y
Spinosad (sum)	14590	278	1.9	1.7	2.1	19	
Spinosyn A	452	6	1.3	0.6	2.9	3	
Spinosyn D	452	6	1.3	0.6	2.9	3	
Spirodiclofen	9294	101	1.1	0.9	1.3	13	
Spirotetramat	407	1	0.2	0.1	1.4	1	
Spiroxamine	19092	177	0.9	0.8	1.1	28	Y
Sulphur	1994	44	2.2	1.6	3.0	4	
Tebuconazole	21854	661	3.0	2.8	3.3	29	Y
Tebufenozide	17080	106	0.6	0.5	0.8	25	Y
Tebufenpyrad	19001	133	0.7	0.6	0.8	25	Y
Tecnazene	18108	1	0.0	0.0	0.0	24	
Teflubenzuron	13728	122	0.9	0.7	1.1	22	Y
Tefluthrin	12977	2	0.0	0.0	0.1	16	Y
Terbufos (sum)	1400	1	0.1	0.0	0.4	4	
Terbufos Sulfoxide	1525	1	0.1	0.0	0.4	5	
Terbuthylazine	13411	25	0.2	0.1	0.3	16	
Tetraconazole	19732	105	0.5	0.4	0.6	23	
Tetradifon	20703	13	0.1	0.0	0.1	28	Y
Tetrahydrophthalimide	281	3	1.1	0.4	3.1	2	
Tetramethrin	9359	3	0.0	0.0	0.1	11	
Thiabendazole	20944	2158	10.3	9.9	10.7	29	Y
Thiacloprid	16229	798	4.9	4.6	5.3	25	Y
Thiametoxam	7025	13	0.2	0.1	0.3	11	
Thiametoxam (sum)	11691	25	0.2	0.1	0.3	14	
Thiodicarb	7510	1	0.0	0.0	0.1	18	
Thiofanox	4525	4	0.1	0.0	0.2	7	
Thiophanate-Ethyl	1096	2	0.2	0.1	0.7	2	
Thiophanate-methyl	15995	229	1.4	1.3	1.6	26	Y
Tolclofos-methyl	23311	3	0.0	0.0	0.0	29	Y
Tolylfluanid	7233	6	0.1	0.0	0.2	14	
Tolylfluanid (sum)	17458	26	0.1	0.1	0.2	22	Y
Tri-allate	6713	3	0.0	0.0	0.1	9	
Triadimefon	11702	101	0.9	0.7	1.0	22	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
Triadimefon (sum)	18646	412	2.2	2.0	2.4	24	Y
Triadimenol	11131	230	2.1	1.8	2.3	22	
Triazamate	4728	6	0.1	0.1	0.3	7	
Triazophos	22375	24	0.1	0.1	0.2	28	Y
Trichlorfon	13251	16	0.1	0.1	0.2	19	Y
Triclopyr	3441	4	0.1	0.0	0.3	3	
Trifloxystrobin	21246	1093	5.1	4.9	5.5	28	Y
Trifloxysulfuron	1113	1	0.1	0.0	0.5	2	
Triflumizole	12572	5	0.0	0.0	0.1	11	
Triflumuron	10974	197	1.8	1.6	2.1	13	
Trifluralin	17878	2	0.0	0.0	0.0	22	
Trinexapac-Ethyl	2694	1	0.0	0.0	0.2	4	
Vinclozolin	12822	24	0.2	0.1	0.3	23	
Vinclozolin (sum)	11905	21	0.2	0.1	0.3	14	Y
Zeta-Cypermethrin	2	2	100.0	36.8	100.0	1	
Zoxamide	11328	36	0.3	0.2	0.4	15	
alpha-Endosulfan	5218	7	0.1	0.1	0.3	18	
beta-Cyfluthrin	1762	2	0.1	0.0	0.4	6	
beta-Endosulfan	5436	35	0.6	0.5	0.9	18	
tau-Fluvalinate	14419	24	0.2	0.1	0.2	20	
<b>Total</b>	<b>3703292</b>	<b>45444</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

VEGETABLES

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
1-naphthylacetamide	2070	17	0.8	0.5	1.3	1	
2,4,6-Trichlorophenol	669	3	0.4	0.2	1.3	2	
2,4-D	6265	9	0.1	0.1	0.3	9	
2,4-D (sum)	1432	6	0.4	0.2	0.9	6	
2,6-Dichlorobenzamide	1346	5	0.4	0.2	0.9	2	
3,5-Dichloroaniline	1280	5	0.4	0.2	0.9	5	
3-Chloroaniline	2738	9	0.3	0.2	0.6	4	
3-hydroxy -carbofuran	6665	18	0.3	0.2	0.4	13	
4,4`-Dichlorobenzophenone	2553	1	0.0	0.0	0.2	5	
4-Chlorophenoxy acetic acid	2579	3	0.1	0.0	0.3	4	
Abamectin (sum)	8440	8	0.1	0.0	0.2	13	Y
Acephate	22688	39	0.2	0.1	0.2	29	Y
Acetamiprid	20277	334	1.6	1.5	1.8	28	Y
Aclonifen	12412	32	0.3	0.2	0.4	14	
Acrinathrin	21758	24	0.1	0.1	0.2	24	
Aldicarb (sum)	17377	1	0.0	0.0	0.0	25	Y
Aldrin and Dieldrin	16965	28	0.2	0.1	0.2	18	Y
Alphamethrin	7031	77	1.1	0.9	1.4	10	
Ametryn	7992	1	0.0	0.0	0.1	10	
Atrazine	16987	4	0.0	0.0	0.1	23	
Azadirachtin	1144	1	0.1	0.0	0.5	1	
Azinphos-methyl	25299	3	0.0	0.0	0.0	29	Y
Azoxystrobin	24955	1096	4.4	4.1	4.7	28	Y
Benalaxyl	8104	3	0.0	0.0	0.1	15	
Benalaxyl (sum)	13895	14	0.1	0.1	0.2	11	
Benfluralin	9159	3	0.0	0.0	0.1	7	
Benomyl	461	2	0.4	0.1	1.6	5	
Bentazone	6388	6	0.1	0.0	0.2	6	
Bifenazate	5397	11	0.2	0.1	0.4	6	
Bifenthrin	25439	241	0.9	0.8	1.1	28	Y
Biphenyl	9280	2	0.0	0.0	0.1	18	
Bitertanol	21108	35	0.2	0.1	0.2	26	
Boscalid	20251	1401	6.9	6.6	7.3	26	Y
Bromide ion	705	332	47.1	43.4	50.8	8	
Bromophos-ethyl	18340	1	0.0	0.0	0.0	23	
Bromopropylate	25252	20	0.1	0.1	0.1	29	Y
Bromoxynil	5964	1	0.0	0.0	0.1	4	
Bromuconazole (sum)	16192	1	0.0	0.0	0.0	21	Y
Bupirimate	22827	54	0.2	0.2	0.3	28	Y
Buprofezin	24460	83	0.3	0.3	0.4	29	Y
Cadusafos	17098	2	0.0	0.0	0.0	22	Y
Captan	21453	24	0.1	0.1	0.2	28	Y
Captan/Folpet (sum)	6636	6	0.1	0.0	0.2	14	Y
Carbaryl	23582	39	0.2	0.1	0.2	29	Y
Carbendazim	7432	59	0.8	0.6	1.0	18	
Carbendazim and	16570	431	2.6	2.4	2.9	21	Y

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
benomyl							
Carbetamide	4153	2	0.0	0.0	0.2	5	
Carbofuran	11313	35	0.3	0.2	0.4	19	
Carbofuran (sum)	17859	62	0.3	0.3	0.4	25	Y
Carbosulfan	12261	8	0.1	0.0	0.1	19	Y
Carboxin	7852	1	0.0	0.0	0.1	9	
Carfentrazone-ethyl (sum)	4754	2	0.0	0.0	0.2	3	
Chlorbromuron	6906	1	0.0	0.0	0.1	9	
Chlordecone	2644	15	0.6	0.3	0.9	2	
Chlorfenapyr	11094	20	0.2	0.1	0.3	15	
Chlorfenvinphos	22583	24	0.1	0.1	0.2	28	Y
Chlorfluazuron	5488	1	0.0	0.0	0.1	7	
Chlormequat	1965	64	3.3	2.6	4.1	16	Y
Chlorothalonil	25521	492	1.9	1.8	2.1	29	Y
Chloroxuron	4555	1	0.0	0.0	0.1	8	
Chlorpropham	12517	392	3.1	2.8	3.5	22	
Chlorpropham (sum)	12725	86	0.7	0.5	0.8	15	Y
Chlorpyrifos	23910	417	1.7	1.6	1.9	28	Y
Chlorpyrifos ethyl	2985	14	0.5	0.3	0.8	8	
Chlorpyrifos-methyl	26691	37	0.1	0.1	0.2	29	Y
Chlorthal	1274	6	0.5	0.2	1.0	3	
Chlorthal-dimethyl	13453	24	0.2	0.1	0.3	14	
Clofentezine	16622	13	0.1	0.0	0.1	24	
Clofentezine (sum animal products/cereals)	999	1	0.1	0.0	0.6	2	Y
Clomazone	9812	4	0.0	0.0	0.1	10	
Clopyralid	3896	3	0.1	0.0	0.2	6	
Clothianidin	6105	26	0.4	0.3	0.6	15	
Cyazofamid	10155	3	0.0	0.0	0.1	12	
Cyfluthrin	3682	1	0.0	0.0	0.2	13	
Cyfluthrin (sum)	19529	28	0.1	0.1	0.2	21	Y
Cyhalothrin	849	15	1.8	1.1	2.9	3	
Cymoxanil	14867	14	0.1	0.1	0.2	16	
Cypermethrin	6232	89	1.4	1.2	1.8	15	
Cypermethrin (sum)	20681	420	2.0	1.8	2.2	22	Y
Cyproconazole	19522	50	0.3	0.2	0.3	25	Y
Cyprodinil	24503	700	2.9	2.7	3.1	29	Y
Cyromazine	10810	67	0.6	0.5	0.8	15	
DDD, p,p-	4558	1	0.0	0.0	0.1	14	
DDE, o,p-	5127	2	0.0	0.0	0.1	13	
DDE, p,p-	9150	16	0.2	0.1	0.3	18	
DDT (sum)	16813	33	0.2	0.1	0.3	23	Y
Deltamethrin	25994	250	1.0	0.9	1.1	28	Y
Demeton-S-Methyl	12892	1	0.0	0.0	0.0	17	
Demeton-S-Methylsulfone	7298	3	0.0	0.0	0.1	16	
Desethyl-Terbuthylazine	1846	3	0.2	0.1	0.5	2	
Desmethyl pirimicarb	4056	40	1.0	0.7	1.3	8	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
Desmethylformamido-Pirimicarb	6977	19	0.3	0.2	0.4	7	
Diafenthuron	1927	1	0.1	0.0	0.3	3	
Diazinon	26849	19	0.1	0.0	0.1	29	Y
Dichlofluanid	24899	2	0.0	0.0	0.0	28	Y
Dichlorvos	25531	16	0.1	0.0	0.1	28	Y
Diclofop (sum)	1382	2	0.1	0.0	0.5	1	
Dicloran	19233	33	0.2	0.1	0.2	23	
Dicofol (sum)	20809	45	0.2	0.2	0.3	27	Y
Dicofol p, p'	2952	1	0.0	0.0	0.2	9	
Dicrotophos	14116	2	0.0	0.0	0.1	16	
Dieldrin	11354	11	0.1	0.1	0.2	22	
Diethofencarb	18386	16	0.1	0.1	0.1	21	
Difenoconazole	22838	418	1.8	1.7	2.0	28	Y
Diflubenzuron	13503	19	0.1	0.1	0.2	16	
Dimethenamid-p (sum)	2298	1	0.0	0.0	0.2	4	
Dimethoate	15945	89	0.6	0.5	0.7	25	
Dimethoate (sum)	20799	252	1.2	1.1	1.4	26	Y
Dimethomorph	20972	437	2.1	1.9	2.3	27	Y
Dimoxystrobin	10309	1	0.0	0.0	0.1	11	
Diniconazole	13474	8	0.1	0.0	0.1	15	
Dinocap (sum)	4425	1	0.0	0.0	0.1	10	
Dinotefuran	1404	1	0.1	0.0	0.4	1	
Diphenylamine	22846	20	0.1	0.1	0.1	29	Y
Diquat	74	9	12.2	6.6	21.6	4	
Disulfoton (sum)	10716	1	0.0	0.0	0.1	11	
Dithiocarbamates	6536	915	14.0	13.2	14.9	24	Y
Diuron (sum)	5646	1	0.0	0.0	0.1	11	
Dodine	5375	4	0.1	0.0	0.2	9	
EPN	13216	13	0.1	0.1	0.2	15	
Endosulfan (sum)	26121	98	0.4	0.3	0.5	27	Y
Endosulfansulfate	5500	19	0.3	0.2	0.5	18	
Epoxiconazole	19766	15	0.1	0.0	0.1	26	
Ethephon	439	17	3.9	2.4	6.1	2	
Ethion	23998	27	0.1	0.1	0.2	29	Y
Ethirimol	7200	8	0.1	0.1	0.2	10	
Ethofumesate (sum)	12853	4	0.0	0.0	0.1	13	
Etofenprox	15318	60	0.4	0.3	0.5	18	
Etridiazole	10851	3	0.0	0.0	0.1	11	
Famoxadone	15303	29	0.2	0.1	0.3	18	
Fenamidone	13168	6	0.0	0.0	0.1	18	
Fenamiphos	8156	1	0.0	0.0	0.1	17	
Fenarimol	23638	26	0.1	0.1	0.2	28	Y
Fenazaquin	17879	16	0.1	0.1	0.1	21	
Fenbuconazole	17120	3	0.0	0.0	0.1	22	Y
Fenbutatin oxide	2827	27	1.0	0.7	1.4	3	
Fenhexamid	23774	205	0.9	0.8	1.0	28	Y
Fenitrothion	25937	5	0.0	0.0	0.0	28	Y
Fenobucarb	4634	2	0.0	0.0	0.2	6	



Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
Fenoxaprop	6700	1	0.0	0.0	0.1	2	
Fenoxycarb	18448	3	0.0	0.0	0.0	25	Y
Fenpropathrin	21550	9	0.0	0.0	0.1	27	Y
Fenpropidin	13162	3	0.0	0.0	0.1	15	
Fenpropimorph	18072	17	0.1	0.1	0.2	21	
Fenpyroximate	15607	9	0.1	0.0	0.1	17	
Fenthion	12554	1	0.0	0.0	0.0	20	
Fenthion (sum)	14603	1	0.0	0.0	0.0	14	Y
Fenthion-Sulfoxide	6419	1	0.0	0.0	0.1	13	
Fenvalerate	6570	2	0.0	0.0	0.1	13	
Fenvalerate/Esfenvalerate (sum)	3367	4	0.1	0.0	0.3	10	Y
Fipronil	9729	7	0.1	0.0	0.1	19	
Fipronil (sum)	8625	5	0.1	0.0	0.1	9	Y
Fipronil-Sulfide	1240	1	0.1	0.0	0.4	2	
Flonicamid (sum)	3026	4	0.1	0.1	0.3	4	
Fluazifop	6484	50	0.8	0.6	1.0	10	
Fluazifop-Butyl	3419	1	0.0	0.0	0.2	10	
Fluazifop-P-butyl	4191	2	0.0	0.0	0.2	2	
Fluazifop-P-butyl (sum)	6384	25	0.4	0.3	0.6	8	
Fluazinam	9577	1	0.0	0.0	0.1	15	
Flucythrinate	15017	2	0.0	0.0	0.0	18	
Fludioxonil	23646	500	2.1	1.9	2.3	28	Y
Flufenacet	5116	4	0.1	0.0	0.2	2	
Flufenoxuron	17113	9	0.1	0.0	0.1	25	Y
Fluopicolide	5009	8	0.2	0.1	0.3	4	
Fluotrimazole	1713	1	0.1	0.0	0.3	2	
Flusilazole	20635	15	0.1	0.0	0.1	26	Y
Flutolanil	11413	11	0.1	0.1	0.2	13	
Flutriafol	14490	102	0.7	0.6	0.9	19	Y
Fluvalinate	2603	1	0.0	0.0	0.2	7	
Folpet	22790	70	0.3	0.2	0.4	29	Y
Formetanate	448	1	0.2	0.1	1.2	1	
Formetanate (sum)	8365	14	0.2	0.1	0.3	15	Y
Formothion	14280	2	0.0	0.0	0.1	22	
Fosetyl-Al	261	11	4.2	2.4	7.4	2	
Fosthiazate	10565	5	0.0	0.0	0.1	11	Y
Furathiocarb	13527	1	0.0	0.0	0.0	18	
Gibberellic acid	1088	1	0.1	0.0	0.5	1	
HCH (sum)	10031	1	0.0	0.0	0.1	18	
HCH delta	3604	1	0.0	0.0	0.2	14	
Haloxyfop	8022	13	0.2	0.1	0.3	10	
Haloxyfop including haloxyfop-R	5852	5	0.1	0.0	0.2	8	
Heptachlor	9184	1	0.0	0.0	0.1	19	
Heptachlor (sum)	11220	3	0.0	0.0	0.1	17	Y
Heptachlor epoxide	3379	1	0.0	0.0	0.2	8	
Heptenophos	17240	2	0.0	0.0	0.0	23	
Hexachlorobenzene	18058	2	0.0	0.0	0.0	25	Y

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
Hexaconazole	22088	19	0.1	0.1	0.1	27	Y
Hexythiazox	19089	36	0.2	0.1	0.3	27	Y
Hydrogen phosphide	9	3	33.3	12.2	65.2	1	
Imazalil	24766	150	0.6	0.5	0.7	29	Y
Imazapyr	2137	1	0.0	0.0	0.3	3	
Imazosulfuron	2417	1	0.0	0.0	0.2	2	
Imidacloprid	20717	844	4.1	3.8	4.4	27	Y
Indoxacarb	19431	312	1.6	1.4	1.8	26	Y
Ioxynil (sum)	5613	1	0.0	0.0	0.1	7	
Iprobenfos	5071	1	0.0	0.0	0.1	3	
Iprodione	25984	1180	4.5	4.3	4.8	29	Y
Iprovalicarb	20544	8	0.0	0.0	0.1	27	Y
Isofenphos-Methyl	17925	1	0.0	0.0	0.0	20	
Isoproturon	12378	3	0.0	0.0	0.1	16	
Karbutilate	1	1	100.0	22.4	100.0	1	
Keto-Endrin	2249	1	0.0	0.0	0.2	3	
Kresoxim-methyl	24512	67	0.3	0.2	0.3	28	Y
Lambda-Cyhalothrin	24157	441	1.8	1.7	2.0	26	
Lambda-cyhalothrin (sum animal products)	704	1	0.1	0.0	0.8	4	Y
Lenacil	8644	2	0.0	0.0	0.1	10	
Lindane	23941	3	0.0	0.0	0.0	27	Y
Linuron	18852	435	2.3	2.1	2.5	25	Y
Lufenuron	12617	20	0.2	0.1	0.2	16	
MCPA	1761	2	0.1	0.0	0.4	10	
MCPA and MCPB	4865	3	0.1	0.0	0.2	3	
Malaoxon	6263	3	0.0	0.0	0.1	18	
Malathion	12079	3	0.0	0.0	0.1	20	
Malathion (sum)	20528	14	0.1	0.0	0.1	27	Y
Maleic hydrazide	337	22	6.5	4.4	9.7	3	
Mandipropamid	2690	74	2.8	2.2	3.4	6	
Maneb	153	20	13.1	8.6	19.3	2	
Mecarbam	19688	4	0.0	0.0	0.1	24	
Mepanipyrim	2892	4	0.1	0.1	0.4	4	
Mepanipyrim (sum)	18796	22	0.1	0.1	0.2	23	Y
Mepiquat	1430	40	2.8	2.1	3.8	15	Y
Mepronil	14100	1	0.0	0.0	0.0	16	
Meptyldinocap (sum)	1	1	100.0	22.4	100.0	1	
Metalaxyl	8134	114	1.4	1.2	1.7	15	
Metalaxyl (sum)	18116	484	2.7	2.4	2.9	22	Y
Metamitron	11572	8	0.1	0.0	0.1	13	
Metazachlor	12375	1	0.0	0.0	0.0	16	
Metconazole	16369	2	0.0	0.0	0.0	21	Y
Methabenzthiazuron	5747	4	0.1	0.0	0.2	5	
Methamidophos	24216	43	0.2	0.1	0.2	29	Y
Methidathion	26204	9	0.0	0.0	0.1	29	Y
Methiocarb	9372	14	0.1	0.1	0.3	22	
Methiocarb (sum)	17685	43	0.2	0.2	0.3	23	Y
Methiocarb-Sulfon	7044	3	0.0	0.0	0.1	15	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
Methiocarb-Sulfoxid	7218	16	0.2	0.1	0.4	16	
Metholachlor	8287	4	0.0	0.0	0.1	10	
Methomyl	11717	68	0.6	0.5	0.7	22	
Methomyl and Thiodicarb	16500	100	0.6	0.5	0.7	23	Y
Methoxychlor	15481	1	0.0	0.0	0.0	21	
Methoxyfenozide	14713	227	1.5	1.4	1.8	15	
Metobromuron	11831	13	0.1	0.1	0.2	13	
Metoxuron	6757	1	0.0	0.0	0.1	11	
Metrafenone	8250	1	0.0	0.0	0.1	10	
Metribuzin	17470	13	0.1	0.0	0.1	22	
Monocrotophos	21898	17	0.1	0.0	0.1	28	Y
Myclobutanil	25084	194	0.8	0.7	0.9	29	Y
Napropamide	10255	6	0.1	0.0	0.1	12	
Naptalam	1088	1	0.1	0.0	0.5	1	
Nereistoxin	1087	1	0.1	0.0	0.5	1	
Nicotine	504	99	19.6	16.4	23.3	8	
Omethoate	13072	101	0.8	0.6	0.9	21	
Orthophenylphenol	11112	23	0.2	0.1	0.3	19	
Oxadixyl	22127	51	0.2	0.2	0.3	26	
Oxamyl	19195	36	0.2	0.1	0.3	27	Y
Oxamyl-Oxime	4158	21	0.5	0.3	0.8	7	
Oxydemeton-methyl	8532	3	0.0	0.0	0.1	20	
Oxydemeton-methyl (sum)	15946	7	0.0	0.0	0.1	19	Y
Oxyfluorfen	5685	1	0.0	0.0	0.1	7	
Paclobutrazol	13429	2	0.0	0.0	0.1	16	Y
Parathion	22238	10	0.0	0.0	0.1	25	Y
Parathion-methyl	11549	10	0.1	0.0	0.2	20	
Parathion-methyl (sum)	18024	1	0.0	0.0	0.0	23	Y
Penconazole	25136	48	0.2	0.1	0.3	29	Y
Pencycuron	16228	60	0.4	0.3	0.5	19	
Pendimethalin	22911	170	0.7	0.6	0.9	23	
Pentachloroaniline	8183	12	0.1	0.1	0.3	9	
Permethrin (sum)	24728	22	0.1	0.1	0.1	27	Y
Phenmedipham	12105	10	0.1	0.0	0.2	13	
Phenothrin	2934	1	0.0	0.0	0.2	5	
Phenthoate	13926	1	0.0	0.0	0.0	19	
Phorate	9659	1	0.0	0.0	0.1	17	
Phorate (sum)	15220	1	0.0	0.0	0.0	14	
Phorate-Sulfon	2333	1	0.0	0.0	0.2	8	
Phorate-Sulfoxid	4853	1	0.0	0.0	0.1	10	
Phosalone	26320	7	0.0	0.0	0.1	29	Y
Phosmet (sum)	18100	6	0.0	0.0	0.1	23	Y
Picolinafen	6507	1	0.0	0.0	0.1	8	
Pirimicarb	8440	69	0.8	0.6	1.0	14	
Pirimicarb (sum)	19591	178	0.9	0.8	1.1	23	Y
Pirimiphos-methyl	26170	25	0.1	0.1	0.1	29	Y
Prochloraz	9852	51	0.5	0.4	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 testing	Included in the EU programme
Prochloraz (sum)	12986	46	0.4	0.3	0.5	24	Y
Procymidone	26143	275	1.1	0.9	1.2	29	Y
Profenofos	22407	110	0.5	0.4	0.6	28	Y
Prohexadione	1088	1	0.1	0.0	0.5	1	
Prometryn	14292	3	0.0	0.0	0.1	19	
Propamocarb	1328	124	9.3	7.9	11.0	3	
Propamocarb (sum)	13381	914	6.8	6.4	7.3	21	Y
Propamocarb hydrochloride	624	20	3.2	2.1	4.9	1	
Propaquizafop	4144	1	0.0	0.0	0.1	6	
Propargite	21841	53	0.2	0.2	0.3	28	Y
Propham	19140	2	0.0	0.0	0.0	25	
Propiconazole	23473	32	0.1	0.1	0.2	25	
Propoxur	17908	18	0.1	0.1	0.2	22	
Propyzamide	24101	154	0.6	0.5	0.7	25	
Prosulfocarb	10946	28	0.3	0.2	0.4	10	
Prothioconazole-Desthio	204	3	1.5	0.5	4.2	1	
Prothiofos	16123	11	0.1	0.0	0.1	19	
Pymetrozine	15621	185	1.2	1.0	1.4	19	
Pyraclostrobin	18306	383	2.1	1.9	2.3	21	
Pyraflufen-ethyl	1333	1	0.1	0.0	0.4	4	
Pyrazophos	21838	1	0.0	0.0	0.0	26	Y
Pyrethrins	8484	5	0.1	0.0	0.1	14	
Pyridaben	20483	74	0.4	0.3	0.5	27	Y
Pyridalyl	1293	1	0.1	0.0	0.4	2	
Pyrimethanil	24579	338	1.4	1.2	1.5	29	Y
Pyriproxyfen	20818	96	0.5	0.4	0.6	27	Y
Quinalphos	22974	3	0.0	0.0	0.0	24	
Quinoxifen	19956	9	0.0	0.0	0.1	25	Y
Quintozene	15477	4	0.0	0.0	0.1	20	
Quintozene (sum)	10630	13	0.1	0.1	0.2	14	
Quizalofop (including Quizalofop-P)	6072	12	0.2	0.1	0.3	4	
Quizalofop-Ethyl	3433	1	0.0	0.0	0.2	4	
Rotenone	5272	2	0.0	0.0	0.1	7	
Spinosad (sum)	15338	196	1.3	1.1	1.5	19	
Spinosyn A	304	1	0.3	0.1	1.8	3	
Spirodiclofen	10380	2	0.0	0.0	0.1	13	
Spiromesifen	7611	60	0.8	0.6	1.0	8	
Spiroxamine	20743	6	0.0	0.0	0.1	28	Y
Sulfotep	14447	1	0.0	0.0	0.0	17	
Sulphur	2682	52	1.9	1.5	2.5	4	
Tebuconazole	24001	352	1.5	1.3	1.6	29	Y
Tebufenozide	18038	47	0.3	0.2	0.3	25	Y
Tebufenpyrad	19583	15	0.1	0.0	0.1	25	Y
Tecnazene	19558	1	0.0	0.0	0.0	24	
Teflubenzuron	14127	55	0.4	0.3	0.5	22	Y
Tefluthrin	14504	9	0.1	0.0	0.1	16	Y
Tepraloxydim	4037	6	0.1	0.1	0.3	5	

Compound	Sought <sup>(a)</sup>	Found	% of samples with quantifiable residues	LCL <sup>(b)</sup>	UCL <sup>(c)</sup>	Number of countries testing	Included in the EU programme
Terbutylazine	14533	23	0.2	0.1	0.2	16	
Terbutryn	11620	2	0.0	0.0	0.1	13	
Tetraconazole	21129	24	0.1	0.1	0.2	23	
Tetradifon	23013	20	0.1	0.1	0.1	28	Y
Tetramethrin	10475	15	0.1	0.1	0.2	11	
Thiabendazole	22204	51	0.2	0.2	0.3	29	Y
Thiacloprid	17324	246	1.4	1.3	1.6	25	Y
Thiametoxam	7752	93	1.2	1.0	1.5	11	
Thiametoxam (sum)	11881	121	1.0	0.9	1.2	15	
Thiocyclam	1140	2	0.2	0.1	0.6	2	
Thiophanate-Ethyl	819	1	0.1	0.0	0.7	3	
Thiophanate-methyl	17248	91	0.5	0.4	0.6	26	Y
Tolclofos-methyl	25724	148	0.6	0.5	0.7	29	Y
Tolyfluanid	8701	1	0.0	0.0	0.1	14	
Tolyfluanid (sum)	18912	9	0.0	0.0	0.1	21	Y
Triadimefon	12691	8	0.1	0.0	0.1	22	
Triadimefon (sum)	21196	254	1.2	1.1	1.4	24	Y
Triadimenol	11968	149	1.2	1.1	1.5	22	
Triazamate	5258	1	0.0	0.0	0.1	6	
Triazophos	24821	53	0.2	0.2	0.3	28	Y
Trichlorfon	14032	4	0.0	0.0	0.1	20	Y
Trifloxystrobin	23015	75	0.3	0.3	0.4	28	Y
Triflumizole	13253	35	0.3	0.2	0.4	11	
Triflumuron	11277	2	0.0	0.0	0.1	13	
Trifluralin	20084	39	0.2	0.1	0.3	21	
Triticonazole	13150	1	0.0	0.0	0.0	17	Y
Vinclozolin	13588	18	0.1	0.1	0.2	23	
Vinclozolin (sum)	13118	17	0.1	0.1	0.2	14	Y
Zoxamide	13192	1	0.0	0.0	0.0	15	
alpha-Endosulfan	5730	10	0.2	0.1	0.3	18	
beta-Endosulfan	5897	12	0.2	0.1	0.4	18	
cis-Resmethrin	721	1	0.1	0.0	0.8	1	
tau-Fluvalinate	16711	12	0.1	0.0	0.1	19	
<b>Total</b>	<b>4425979</b>	<b>23271</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

**TABLE B: EU+NCP – CEREALS, SURVEILLANCE SAMPLING: RESULTS PER REPORTING COUNTRY (2009)**

Country	No. of samples	Processed	Sought	Found	% sought from found	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
						No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	104	51	452	15	3.3	90	86.5	78.6	91.8	11	10.6	6.0	18.0	3	2.9	1.0	8.1
Belgium	28	1	407	8	2.0	5	17.9	8.0	35.8	23	82.1	64.2	92.0	0	0.0	0.0	9.8
Bulgaria	111	10	154	13	8.4	75	67.6	58.4	75.6	30	27.0	19.6	36.0	6	5.4	2.5	11.3
Cyprus	40	27	250	3	1.2	21	52.5	37.4	67.1	17	42.5	28.5	57.9	2	5.0	1.5	16.5
Czech Republic	91	5	301	16	5.3	67	73.6	63.7	81.6	23	25.3	17.5	35.1	1	1.1	0.3	5.9
Denmark	295	12	167	8	4.8	219	74.2	69.0	78.9	76	25.8	21.1	31.0	0	0.0	0.0	1.0
Estonia	21	9	266	0	0.0	21	100.0	87.3	100.0	0	0.0	0.0	12.7	0	0.0	0.0	12.7
Finland	122	39	296	15	5.1	75	61.5	52.6	69.6	41	33.6	25.8	42.4	6	4.9	2.3	10.3
France	482	137	298	10	3.4	335	69.5	65.2	73.4	144	29.9	26.0	34.1	3	0.6	0.2	1.8
Germany	368		713	32	4.5	241	65.5	60.5	70.2	127	34.5	29.8	39.5	0	0.0	0.0	0.8
Greece	36		61	1	1.6	34	94.4	81.8	98.3	2	5.6	1.7	18.2	0	0.0	0.0	7.8
Hungary	91		227	11	4.8	71	78.0	68.4	85.3	20	22.0	14.7	31.6	0	0.0	0.0	3.2
Ireland	75		300	11	3.7	48	64.0	52.7	73.9	27	36.0	26.1	47.3	0	0.0	0.0	3.9
Italy	626	280	305	12	3.9	520	83.1	79.9	85.8	104	16.6	13.9	19.7	2	0.3	0.1	1.1
Latvia	12		120	0	0.0	12	100.0	79.4	100.0	0	0.0	0.0	20.6	0	0.0	0.0	20.6
Lithuania	21	4	258	2	0.8	17	81.0	59.7	92.2	3	14.3	5.2	34.9	1	4.8	1.1	22.8
Luxembourg	17	17	302	3	1.0	9	52.9	30.8	74.0	8	47.1	26.0	69.2	0	0.0	0.0	15.3
Malta	8	8	124	2	1.6	5	62.5	29.9	86.3	3	37.5	13.7	70.1	0	0.0	0.0	28.3
Netherlands	122	38	227	31	13.7	42	34.4	26.6	43.2	80	65.6	56.8	73.4	0	0.0	0.0	2.4
Norway	126		301	8	2.7	90	71.4	63.0	78.6	36	28.6	21.4	37.0	0	0.0	0.0	2.3
Poland	150	20	122	9	7.4	142	94.7	89.8	97.2	6	4.0	1.9	8.4	2	1.3	0.4	4.7
Portugal	44	14	224	4	1.8	26	59.1	44.3	72.3	18	40.9	27.7	55.7	0	0.0	0.0	6.4
Romania	206	37	132	4	3.0	198	96.1	92.5	98.0	6	2.9	1.4	6.2	2	1.0	0.3	3.4
Slovakia	63	48	228	10	4.4	38	60.3	47.9	71.5	25	39.7	28.5	52.1	0	0.0	0.0	4.6
Slovenia	104	65	301	3	1.0	65	62.5	52.9	71.2	39	37.5	28.8	47.1	0	0.0	0.0	2.8

Country	No. of samples	Processed	Sought	Found	% sought from found	Samples with no measurable residues			Samples with residues below or at the MRL			Samples with residues above the MRL					
						No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Spain	18	3	253	2	0.8	15	83.3	60.4	93.9	3	16.7	6.1	39.6	0	0.0	0.0	14.6
Sweden	258	11	291	18	6.2	189	73.3	67.5	78.3	61	23.6	18.9	29.2	8	3.1	1.6	6.0
United Kingdom	362	290	65	9	13.8	126	34.8	30.1	39.9	235	64.9	59.9	69.7	1	0.3	0.1	1.5
<b>Total</b>	<b>4001</b>	<b>1126</b>				<b>2796</b>	<b>69.9</b>	<b>68.4</b>	<b>71.3</b>	<b>1168</b>	<b>29.2</b>	<b>27.8</b>	<b>30.6</b>	<b>37</b>	<b>0.9</b>	<b>0.7</b>	<b>1.3</b>

(a): Lower confidence limit; (b): Upper confidence limit

**TABLE C1: EU+NCP – FRUIT AND NUTS, SURVEILLANCE SAMPLING: RESULTS PER REPORTING COUNTRY 2009**

Country	No. of samples	No. of processed samples	No. of compounds sought	No. of compounds found	% sought from found	Samples with no measurable residues			Samples with residues below or at the MRL			Samples with residues above the MRL					
						No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	567	87	445	112	25.2	185	32.6	28.9	36.6	377	66.5	62.5	70.3	5	0.9	0.4	2.0
Belgium	746	26	432	132	30.6	135	18.1	15.5	21.0	573	76.8	73.6	79.7	38	5.1	3.7	6.9
Bulgaria	254	34	155	37	23.9	182	71.7	65.8	76.8	68	26.8	21.7	32.5	4	1.6	0.6	4.0
Cyprus	172	16	270	45	16.7	92	53.5	46.0	60.8	71	41.3	34.2	48.8	9	5.2	2.8	9.6
Czech Republic	449	33	301	122	40.5	60	13.4	10.5	16.8	381	84.9	81.2	87.9	8	1.8	0.9	3.5
Denmark	928	45	213	86	40.4	299	32.2	29.3	35.3	606	65.3	62.2	68.3	23	2.5	1.7	3.7
Estonia	183	16	321	61	19.0	75	41.0	34.1	48.2	104	56.8	49.6	63.8	4	2.2	0.9	5.5
Finland	875	192	314	132	42.0	200	22.9	20.2	25.8	574	65.6	62.4	68.7	101	11.5	9.6	13.8
France	1296	332	298	91	30.5	728	56.2	53.5	58.9	545	42.1	39.4	44.8	23	1.8	1.2	2.6
Germany	6922	159	744	227	30.5	1743	25.2	24.2	26.2	4990	72.1	71.0	73.1	189	2.7	2.4	3.1
Greece	710	23	286	66	23.1	451	63.5	59.9	67.0	237	33.4	30.0	36.9	22	3.1	2.1	4.6
Hungary	1047	88	289	102	35.3	345	33.0	30.2	35.9	696	66.5	63.6	69.3	6	0.6	0.3	1.2
Iceland	116		61	19	31.1	39	33.6	25.7	42.6	76	65.5	56.5	73.5	1	0.9	0.2	4.7
Ireland	482	77	300	76	25.3	145	30.1	26.2	34.3	328	68.0	63.8	72.1	9	1.9	1.0	3.5
Italy	3314	664	316	90	28.5	2465	74.4	72.9	75.8	826	24.9	23.5	26.4	23	0.7	0.5	1.0
Latvia	36	13	119	11	9.2	25	69.4	53.0	82.0	11	30.6	18.0	47.0	0	0.0	0.0	7.8
Lithuania	138	20	283	65	23.0	51	37.0	29.4	45.3	81	58.7	50.3	66.6	6	4.3	2.0	9.2
Luxembourg	59	15	317	39	12.3	22	37.3	26.1	50.1	36	61.0	48.2	72.4	1	1.7	0.4	8.9
Malta	47	15	124	13	10.5	28	59.6	45.3	72.4	17	36.2	24.0	50.5	2	4.3	1.3	14.3
Netherlands	1414	232	464	134	28.9	356	25.2	23.0	27.5	984	69.6	67.1	71.9	74	5.2	4.2	6.5
Norway	594	22	307	72	23.5	180	30.3	26.7	34.1	412	69.4	65.5	72.9	2	0.3	0.1	1.2
Poland	591	146	187	37	19.8	420	71.1	67.3	74.6	169	28.6	25.1	32.4	2	0.3	0.1	1.2
Portugal	486	84	227	34	15.0	282	58.0	53.6	62.3	187	38.5	34.3	42.9	17	3.5	2.2	5.5
Romania	1480	8	139	42	30.2	1053	71.1	68.8	73.4	419	28.3	26.1	30.7	8	0.5	0.3	1.1
Slovakia	321	56	241	79	32.8	111	34.6	29.6	39.9	206	64.2	58.8	69.2	4	1.2	0.5	3.1
Slovenia	517	34	258	91	35.3	138	26.7	23.1	30.7	359	69.4	65.3	73.3	20	3.9	2.5	5.9



Country	No. of samples	No. of processed samples	No. of compounds sought	No. of compounds found	% sought from found	Samples with no measurable residues			Samples with residues below or at the MRL			Samples with residues above the MRL					
						No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Spain	426	42	453	90	19.9	121	28.4	24.3	32.9	293	68.8	64.2	73.0	12	2.8	1.6	4.9
Sweden	777	111	401	139	34.7	185	23.8	20.9	26.9	537	69.1	65.8	72.3	55	7.1	5.5	9.1
United Kingdom	1016	248	295	94	31.9	296	29.1	26.4	32.0	708	69.7	66.8	72.4	12	1.2	0.7	2.1
<b>Total</b>	<b>25963</b>	<b>2838</b>				<b>10412</b>	<b>40.1</b>	<b>39.5</b>	<b>40.7</b>	<b>14871</b>	<b>57.3</b>	<b>56.7</b>	<b>57.9</b>	<b>680</b>	<b>2.6</b>	<b>2.4</b>	<b>2.8</b>

(a): Lower confidence limit; (b): Upper confidence limit

**TABLE C2: EU+NCP – VEGETABLES, SURVEILLANCE SAMPLING: RESULTS PER REPORTING COUNTRY - 2009**

Country	No. of samples	No. of processed samples	No. of compounds sought	No. of compounds found	% sought from found	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	820	64	446	105	23.5	529	64.5	61.2	67.7	280	34.1	31.0	37.5	11	1.3	0.8	2.4
Belgium	931	34	421	128	30.4	392	42.1	39.0	45.3	498	53.5	50.3	56.7	41	4.4	3.3	5.9
Bulgaria	543	17	155	50	32.3	419	77.2	73.4	80.5	118	21.7	18.5	25.4	6	1.1	0.5	2.4
Cyprus	273	13	274	45	16.4	189	69.2	63.5	74.4	63	23.1	18.5	28.4	21	7.7	5.1	11.5
Czech Republic	481	4	301	117	38.9	148	30.8	26.8	35.0	323	67.2	62.8	71.2	10	2.1	1.1	3.8
Denmark	717		213	65	30.5	533	74.3	71.0	77.4	169	23.6	20.6	26.8	15	2.1	1.3	3.4
Estonia	143	2	321	28	8.7	78	54.5	46.4	62.5	58	40.6	32.9	48.8	7	4.9	2.4	9.8
Finland	825	162	315	138	43.8	421	51.0	47.6	54.4	349	42.3	39.0	45.7	55	6.7	5.2	8.6
France	2109	28	298	85	28.5	1461	69.3	67.3	71.2	571	27.1	25.2	29.0	77	3.7	2.9	4.5
Germany	7402	95	754	261	34.6	3611	48.8	47.6	49.9	3516	47.5	46.4	48.6	275	3.7	3.3	4.2
Greece	1110		287	53	18.5	936	84.3	82.1	86.3	143	12.9	11.0	15.0	31	2.8	2.0	3.9
Hungary	1068	32	287	66	23.0	677	63.4	60.5	66.2	381	35.7	32.9	38.6	10	0.9	0.5	1.7
Iceland	184		61	8	13.1	170	92.4	87.6	95.4	13	7.1	4.2	11.7	1	0.5	0.1	3.0
Ireland	303	24	300	52	17.3	177	58.4	52.8	63.8	123	40.6	35.2	46.2	3	1.0	0.4	2.9
Italy	2490	141	319	79	24.8	2216	89.0	87.7	90.2	252	10.1	9.0	11.4	22	0.9	0.6	1.3
Latvia	41		121	5	4.1	32	78.0	63.2	87.9	7	17.1	8.6	31.4	2	4.9	1.5	16.2
Lithuania	105		283	33	11.7	62	59.0	49.5	68.0	39	37.1	28.5	46.7	4	3.8	1.5	9.4
Luxembourg	55		316	21	6.6	34	61.8	48.5	73.5	18	32.7	21.8	46.0	3	5.5	2.0	14.9
Malta	71		124	5	4.0	65	91.5	82.7	96.0	6	8.5	4.0	17.3	0	0.0	0.0	4.1
Netherlands	2146	5	464	137	29.5	1020	47.5	45.4	49.6	902	42.0	40.0	44.1	224	10.4	9.2	11.8
Norway	674		295	63	21.4	512	76.0	72.6	79.0	156	23.1	20.1	26.5	6	0.9	0.4	1.9
Poland	768		183	31	16.9	605	78.8	75.7	81.5	159	20.7	18.0	23.7	4	0.5	0.2	1.3
Portugal	416	11	226	18	8.0	360	86.5	82.9	89.5	51	12.3	9.5	15.8	5	1.2	0.5	2.8
Romania	1687	11	139	39	28.1	1547	91.7	90.3	92.9	133	7.9	6.7	9.3	7	0.4	0.2	0.9
Slovakia	254	12	240	43	17.9	192	75.6	69.9	80.5	59	23.2	18.5	28.8	3	1.2	0.4	3.4
Slovenia	617	17	309	69	22.3	400	64.8	61.0	68.5	206	33.4	29.8	37.2	11	1.8	1.0	3.2

Country	No. of samples	No. of processed samples	No. of compounds sought	No. of compounds found	% sought from found	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>
Spain	492	18	476	73	15.3	305	62.0	57.6	66.2	180	36.6	32.4	40.9	7	1.4	0.7	2.9
Sweden	547	33	395	104	26.3	321	58.7	54.5	62.7	196	35.8	31.9	39.9	30	5.5	3.9	7.7
United Kingdom	1180	110	296	82	27.7	699	59.2	56.4	62.0	447	37.9	35.2	40.7	34	2.9	2.1	4.0
<b>Total</b>	<b>28452</b>	<b>833</b>				<b>18111</b>	<b>63.7</b>	<b>63.1</b>	<b>64.2</b>	<b>9416</b>	<b>33.1</b>	<b>32.5</b>	<b>33.6</b>	<b>925</b>	<b>3.3</b>	<b>3.1</b>	<b>3.5</b>

(a): Lower confidence limit; (b): Upper confidence limit

**TABLE C3: EU+NCP – OTHER PLANT PRODUCTS, SURVEILLANCE SAMPLING: RESULTS PER REPORTING COUNTRY - 2009**

Country	No. of samples	No. of processed samples	No. of compounds sought	No. of compounds found	% sought from found	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	258	214	429	26	6.1	191	74.0	68.3	79.0	57	22.1	17.5	27.6	10	3.9	2.1	7.0
Belgium	46	22	286	26	9.1	25	54.3	40.1	67.9	19	41.3	28.3	55.7	2	4.3	1.3	14.5
Bulgaria	5	1	65	0	0.0	5	100.0	60.7	100.0	0	0.0	0.0	39.3	0	0.0	0.0	39.3
Cyprus	53	45	167	3	1.8	49	92.5	82.1	96.9	1	1.9	0.5	9.9	3	5.7	2.1	15.4
Czech Republic	1		295	0	0.0	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Denmark	22		208	1	0.5	21	95.5	78.1	98.9	1	4.5	1.1	21.9	0	0.0	0.0	12.2
Estonia	13		267	8	3.0	9	69.2	41.9	87.2	2	15.4	4.7	42.8	2	15.4	4.7	42.8
Finland	165	164	306	37	12.1	95	57.6	49.9	64.9	49	29.7	23.3	37.1	21	12.7	8.5	18.7
France	139	28	277	11	4.0	122	87.8	81.3	92.2	11	7.9	4.5	13.6	6	4.3	2.0	9.1
Germany	444	198	678	27	4.0	240	54.1	49.4	58.6	188	42.3	37.8	47.0	16	3.6	2.2	5.8
Greece	273	19	217	6	2.8	240	87.9	83.5	91.3	31	11.4	8.1	15.7	2	0.7	0.2	2.6
Hungary	62	19	185	7	3.8	42	67.7	55.3	78.0	18	29.0	19.2	41.3	2	3.2	1.0	11.0
Ireland	2	1	296	0	0.0	2	100.0	36.8	100.0	0	0.0	0.0	63.2	0	0.0	0.0	63.2
Italy	344	252	255	5	2.0	327	95.1	92.2	96.9	17	4.9	3.1	7.8	0	0.0	0.0	0.9
Latvia	2		118	0	0.0	2	100.0	36.8	100.0	0	0.0	0.0	63.2	0	0.0	0.0	63.2
Lithuania	8		283	0	0.0	8	100.0	71.7	100.0	0	0.0	0.0	28.3	0	0.0	0.0	28.3
Netherlands	72	1	462	15	3.2	33	45.8	34.8	57.3	37	51.4	40.0	62.6	2	2.8	0.9	9.5
Norway	56		298	19	6.4	35	62.5	49.3	74.0	19	33.9	22.9	47.1	2	3.6	1.1	12.1
Poland	1		2	0	0.0	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Portugal	9		80	2	2.5	8	88.9	55.5	97.5	0	0.0	0.0	25.9	1	11.1	2.5	44.5
Romania	27	3	127	2	1.6	25	92.6	76.5	97.7	0	0.0	0.0	10.1	2	7.4	2.3	23.5
Slovenia	23	18	227	1	0.4	20	87.0	67.6	95.3	3	13.0	4.7	32.4	0	0.0	0.0	11.7
Spain	44	26	256	2	0.8	42	95.5	84.9	98.6	2	4.5	1.4	15.1	0	0.0	0.0	6.4
Sweden	32	32	367	7	1.9	27	84.4	68.1	93.0	5	15.6	7.0	31.9	0	0.0	0.0	8.7
United Kingdom	99	89	274	13	4.7	74	74.7	65.3	82.3	25	25.3	17.7	34.7	0	0.0	0.0	3.0
<b>Total</b>	<b>2200</b>	<b>1113</b>				<b>1644</b>	<b>74.7</b>	<b>72.9</b>	<b>76.5</b>	<b>485</b>	<b>22.0</b>	<b>20.4</b>	<b>23.8</b>	<b>71</b>	<b>3.2</b>	<b>2.6</b>	<b>4.1</b>

(a): Lower confidence limit; (b): Upper confidence limit

**TABLE D: EU+NCP – ANIMAL PRODUCTS, SURVEILLANCE SAMPLING: RESULTS PER REPORTING COUNTRY - 2009**

Country	No. of samples	No. of processed samples	No. of compounds sought	No. of compounds found	% sought from found	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	51	15	136	2	1.5	46	90.2	79.0	95.6	2	3.9	1.2	13.2	3	5.9	2.1	15.9
Belgium	30	15	44	1	2.3	28	93.3	78.6	98.0	2	6.7	2.0	21.4	0	0.0	0.0	9.2
Cyprus	81	8	266	3	1.1	79	97.5	91.5	99.2	2	2.5	0.8	8.5	0	0.0	0.0	3.6
Czech Republic	30	15	32	2	6.3	15	50.0	33.1	66.9	15	50.0	33.1	66.9	0	0.0	0.0	9.2
Denmark	311	1	161	0	0.0	311	100.0	99.0	100.0	0	0.0	0.0	1.0	0	0.0	0.0	1.0
Estonia	25	15	45	1	2.2	24	96.0	80.4	99.1	1	4.0	0.9	19.6	0	0.0	0.0	10.9
Finland	27	12	53	1	1.9	26	96.3	81.7	99.1	1	3.7	0.9	18.3	0	0.0	0.0	10.1
France	3	1	267	0	0.0	3	100.0	47.3	100.0	0	0.0	0.0	52.7	0	0.0	0.0	52.7
Germany	1046	106	671	29	4.3	553	52.9	49.8	55.9	490	46.8	43.8	49.9	3	0.3	0.1	0.8
Greece	40	19	37	3	8.1	38	95.0	83.5	98.5	0	0.0	0.0	7.0	2	5.0	1.5	16.5
Ireland	462	15	311	5	1.6	450	97.4	95.5	98.5	11	2.4	1.3	4.2	1	0.2	0.1	1.2
Italy	14	5	11	0	0.0	14	100.0	81.9	100.0	0	0.0	0.0	18.1	0	0.0	0.0	18.1
Latvia	26	14	29	0	0.0	26	100.0	89.5	100.0	0	0.0	0.0	10.5	0	0.0	0.0	10.5
Lithuania	28	16	54	1	1.9	26	92.9	77.2	97.8	0	0.0	0.0	9.8	2	7.1	2.2	22.8
Luxembourg	15	15	59	0	0.0	15	100.0	82.9	100.0	0	0.0	0.0	17.1	0	0.0	0.0	17.1
Malta	31	15	30	0	0.0	31	100.0	91.1	100.0	0	0.0	0.0	8.9	0	0.0	0.0	8.9
Netherlands	49	24	44	0	0.0	49	100.0	94.2	100.0	0	0.0	0.0	5.8	0	0.0	0.0	5.8
Norway	15	15	42	0	0.0	15	100.0	82.9	100.0	0	0.0	0.0	17.1	0	0.0	0.0	17.1
Poland	153	100	66	5	7.6	148	96.7	92.6	98.6	4	2.6	1.1	6.5	1	0.7	0.2	3.6
Slovakia	26	15	62	3	4.8	12	46.2	28.7	64.7	14	53.8	35.3	71.3	0	0.0	0.0	10.5
Slovenia	45	30	43	2	4.7	40	88.9	76.4	95.1	5	11.1	4.9	23.6	0	0.0	0.0	6.3
Spain	356	52	157	2	1.3	352	98.9	97.2	99.5	4	1.1	0.5	2.8	0	0.0	0.0	0.8
Sweden	57	27	96	0	0.0	57	100.0	95.0	100.0	0	0.0	0.0	5.0	0	0.0	0.0	5.0
United Kingdom	925	697	43	4	9.3	883	95.5	93.9	96.6	42	4.5	3.4	6.1	0	0.0	0.0	0.3
<b>Total</b>	<b>3846</b>	<b>1217</b>				<b>3241</b>	<b>84.3</b>	<b>83.1</b>	<b>85.4</b>	<b>593</b>	<b>15.4</b>	<b>14.3</b>	<b>16.6</b>	<b>12</b>	<b>0.3</b>	<b>0.2</b>	<b>0.5</b>

(a): Lower confidence limit; (b): Upper confidence limit

**TABLE E: EU+NCP - BABY FOOD, SURVEILLANCE SAMPLING: RESULTS PER REPORTING COUNTRY - 2009.**

Country	No. of samples	No. of compounds		% sought from found	Samples with no measurable residues			Samples with residues below or at the MRL			Samples with residues above the MRL					
		sought	found		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	123	428	2	0.5	98	79.7	71.7	85.8	24	19.5	13.5	27.4	1	0.8	0.2	4.4
Belgium	90	288	1	0.3	88	97.8	92.3	99.3	0	0.0	0.0	3.2	2	2.2	0.7	7.7
Bulgaria	31	84	0	0.0	31	100.0	91.1	100.0	0	0.0	0.0	8.9	0	0.0	0.0	8.9
Cyprus	19	249	2	0.8	17	89.5	68.3	96.8	1	5.3	1.2	24.9	1	5.3	1.2	24.9
Czech Republic	52	300	9	3.0	42	80.8	68.0	89.2	9	17.3	9.4	29.8	1	1.9	0.5	10.1
Denmark	21	214	0	0.0	21	100.0	87.3	100.0	0	0.0	0.0	12.7	0	0.0	0.0	12.7
Estonia	12	238	0	0.0	12	100.0	79.4	100.0	0	0.0	0.0	20.6	0	0.0	0.0	20.6
Finland	39	290	0	0.0	39	100.0	92.8	100.0	0	0.0	0.0	7.2	0	0.0	0.0	7.2
France	13	277	0	0.0	13	100.0	80.7	100.0	0	0.0	0.0	19.3	0	0.0	0.0	19.3
Germany	191	655	17	2.6	165	86.4	80.8	90.5	26	13.6	9.5	19.2	0	0.0	0.0	1.5
Greece	17	223	0	0.0	17	100.0	84.7	100.0	0	0.0	0.0	15.3	0	0.0	0.0	15.3
Hungary	138	281	1	0.4	131	94.9	89.9	97.5	0	0.0	0.0	2.1	7	5.1	2.5	10.1
Italy	103	289	0	0.0	103	100.0	97.2	100.0	0	0.0	0.0	2.8	0	0.0	0.0	2.8
Latvia	10	118	0	0.0	10	100.0	76.2	100.0	0	0.0	0.0	23.8	0	0.0	0.0	23.8
Lithuania	10	283	0	0.0	10	100.0	76.2	100.0	0	0.0	0.0	23.8	0	0.0	0.0	23.8
Luxembourg	15	294	0	0.0	15	100.0	82.9	100.0	0	0.0	0.0	17.1	0	0.0	0.0	17.1
Malta	10	124	0	0.0	10	100.0	76.2	100.0	0	0.0	0.0	23.8	0	0.0	0.0	23.8
Netherlands	71	226	21	9.3	55	77.5	66.4	85.6	16	22.5	14.4	33.6	0	0.0	0.0	4.1
Norway	30	287	0	0.0	30	100.0	90.8	100.0	0	0.0	0.0	9.2	0	0.0	0.0	9.2
Poland	135	110	2	1.8	132	97.8	93.7	99.2	3	2.2	0.8	6.3	0	0.0	0.0	2.2
Portugal	12	194	2	1.0	10	83.3	54.6	95.0	0	0.0	0.0	20.6	2	16.7	5.0	45.4
Romania	307	78	0	0.0	307	100.0	99.0	100.0	0	0.0	0.0	1.0	0	0.0	0.0	1.0
Slovakia	60	111	6	5.4	52	86.7	75.8	93.0	8	13.3	7.0	24.2	0	0.0	0.0	4.8
Slovenia	61	200	0	0.0	61	100.0	95.3	100.0	0	0.0	0.0	4.7	0	0.0	0.0	4.7
Spain	143	360	4	1.1	135	94.4	89.3	97.1	8	5.6	2.9	10.7	0	0.0	0.0	2.1
Sweden	42	438	0	0.0	42	100.0	93.3	100.0	0	0.0	0.0	6.7	0	0.0	0.0	6.7
United Kingdom	133	138	1	0.7	132	99.2	95.9	99.8	0	0.0	0.0	2.2	1	0.8	0.2	4.1
<b>Total</b>	<b>1888</b>				<b>1778</b>	<b>94.2</b>	<b>93.0</b>	<b>95.1</b>	<b>95</b>	<b>5.0</b>	<b>4.1</b>	<b>6.1</b>	<b>15</b>	<b>0.8</b>	<b>0.5</b>	<b>1.3</b>

(a): Lower confidence limit; (b): Upper confidence limit

**TABLE F: EU+NCP – SURVEILLANCE AND ENFORCEMENT SAMPLING: NUMBER OF PESTICIDES FOUND IN THE SAME SAMPLE OF FRUIT AND NUTS, VEGETABLES AND CEREALS PER REPORTING COUNTRY - 2009.**

Country	Number of samples analysed	Number of pesticides found in the same 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	21	23	26	Number	%	
Austria	1931	1146	356	167	110	80	27	20	12	7	3	1	1	1												429	22.2	
Belgium	1871	676	396	241	177	118	112	58	37	23	16	11	5	1													799	42.7
Bulgaria	944	712	136	45	23	14	8	4		1	1																96	10.2
Cyprus	642	451	115	47	17	6	2	3	1																		76	11.8
Czech Republic	1106	338	214	179	136	92	54	34	19	14	10	7	5	2	2												554	50.1
Denmark	2294	1404	406	232	132	76	30	7	3	2	1	1															484	21.1
Estonia	397	219	81	43	31	9	7	6	1																		97	24.4
Finland	2053	864	368	280	218	135	75	47	29	18	6	2	2	2	3	1			2			1					821	40.0
France	4042	2667	716	333	158	96	35	20	9	4	3	1															659	16.3
Germany	16373	6556	3359	2244	1415	958	661	434	280	162	114	72	34	24	26	15	4	5	4	3	1	1	1				6458	39.4
Greece	2186	1716	271	94	59	22	10	7	3	2	2	1	1														199	9.1
Hungary	2406	1266	575	278	142	82	32	14	9	5	2	1															565	23.5
Iceland	300	209	36	39	9	5	2																				55	18.3
Ireland	1324	823	172	129	94	54	23	16	8	4	1																329	24.9
Italy	6932	5702	738	272	127	48	25	10	3	5	2																492	7.1
Latvia	127	107	14	4	2																						6	4.7
Lithuania	310	174	51	40	22	11	4	2	1	2	1	1	1														85	27.4
Luxembourg	161	98	24	13	9	5	6		3	1	1	1															39	24.2
Malta	167	139	16	10	1	1																					12	7.2
Netherlands	3877	1558	724	585	394	284	144	76	38	26	17	15	6	3	3			2							1		1595	41.1
Norway	1495	871	286	174	85	48	15	11		2	1	2															338	22.6
Poland	1798	1449	276	45	21	6	1																				73	4.1
Portugal	967	689	180	75	15	5	2	1	1																		98	10.1
Romania	3707	3130	453	96	26	1																					124	3.4
Slovakia	724	405	172	80	34	22	6	2	1					1													147	20.3
Slovenia	1382	738	295	144	74	63	25	17	13	8	4			1													349	25.3
Spain	1486	978	215	139	68	43	15	13	7	4	1	3															293	19.7
Sweden	1713	832	273	235	161	95	54	26	20	5	1	3	2	2	2	1					1						608	35.5
United Kingdom	3835	2330	661	379	180	136	68	38	23	9	7	2	2														844	22.0
<b>Total</b>	<b>66550</b>	<b>38247</b>	<b>11579</b>	<b>6642</b>	<b>3940</b>	<b>2515</b>	<b>1442</b>	<b>868</b>	<b>520</b>	<b>304</b>	<b>193</b>	<b>123</b>	<b>60</b>	<b>36</b>	<b>37</b>	<b>15</b>	<b>6</b>	<b>5</b>	<b>8</b>	<b>3</b>	<b>2</b>	<b>1</b>	<b>2</b>	<b>1</b>	<b>1</b>	<b>1</b>	<b>16724</b>	<b>25.1</b>

**TABLE G: EUCP - RESULTS OF THE TEN COMMODITIES ANALYSED 2009 BY REPORTING COUNTRY.**

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	142	91	64.1	55.9	71.5	51	35.9	28.5	44.1	0	0.0	0.0	2.1
Belgium	147	69	46.9	39	55	78	53.1	45	61	0	0.0	0.0	2.0
Bulgaria	379	289	76.3	71.7	80.3	83	21.9	18	26.3	7	1.8	0.9	3.8
Cyprus	207	159	76.8	70.6	82	41	19.8	15	25.8	7	3.4	1.7	6.8
Czech Republic	303	119	39.3	33.9	44.9	180	59.4	53.8	64.8	4	1.3	0.5	3.3
Denmark	320	148	46.3	40.9	51.7	171	53.4	48	58.8	1	0.3	0.1	1.7
Estonia	116	60	51.7	42.7	60.6	55	47.4	38.5	56.5	1	0.9	0.2	4.7
Finland	256	137	53.5	47.4	59.5	113	44.1	38.2	50.3	6	2.3	1.1	5.0
France	662	476	71.9	68.4	75.2	179	27	23.8	30.6	7	1.1	0.5	2.2
Germany	1451	489	33.7	31.3	36.2	945	65.1	62.6	67.5	17	1.2	0.7	1.9
Greece	532	389	73.1	69.2	76.7	131	24.6	21.2	28.5	12	2.3	1.3	3.9
Hungary	101	54	53.5	43.8	62.9	47	46.5	37.1	56.2	0	0.0	0.0	2.9
Iceland	65	41	63.1	50.9	73.8	22	33.8	23.5	46	2	3.1	0.9	10.5
Ireland	177	104	58.8	51.4	65.8	72	40.7	33.7	48	1	0.6	0.1	3.1
Italy	895	661	73.9	70.9	76.6	228	25.5	22.7	28.4	6	0.7	0.3	1.5
Latvia	114	95	83.3	75.4	89	17	14.9	9.5	22.6	2	1.8	0.5	6.1
Lithuania	147	93	63.3	55.2	70.6	46	31.3	24.4	39.2	8	5.4	2.8	10.4
Luxembourg	80	54	67.5	56.6	76.8	25	31.3	22.2	42.1	1	1.3	0.3	6.7
Malta	140	116	82.9	75.7	88.2	22	15.7	10.6	22.7	2	1.4	0.4	5.0
Netherlands	495	212	42.8	38.5	47.2	264	53.3	48.9	57.7	19	3.8	2.5	5.9
Norway	143	85	59.4	51.2	67.1	57	39.9	32.2	48.1	1	0.7	0.2	3.8
Poland	477	401	84.1	80.5	87.1	74	15.5	12.5	19	2	0.4	0.1	1.5
Portugal	332	258	77.7	72.9	81.9	73	22	17.9	26.8	1	0.3	0.1	1.7
Romania	594	516	86.9	83.9	89.3	73	12.3	9.9	15.2	5	0.8	0.4	2.0
Slovakia	158	83	52.5	44.8	60.2	75	47.5	39.8	55.2	0	0.0	0.0	1.9
Slovenia	309	182	58.9	53.3	64.2	124	40.1	34.8	45.7	3	1.0	0.4	2.8
Spain	392	223	56.9	51.9	61.7	164	41.8	37.1	46.8	5	1.3	0.6	2.9
Sweden	444	287	64.6	60.1	68.9	151	34	29.8	38.5	6	1.4	0.6	2.9
United Kingdom	975	589	60.4	57.3	63.4	382	39.2	36.2	42.3	4	0.4	0.2	1.0
<b>Total</b>	<b>10553</b>	<b>6480</b>	<b>61.4</b>	<b>60.5</b>	<b>62.3</b>	<b>3943</b>	<b>37.4</b>	<b>36.4</b>	<b>38.3</b>	<b>130</b>	<b>1.2</b>	<b>1.0</b>	<b>1.5</b>

(a): Lower confidence limit; (b): Upper confidence limit



**TABLE H: EUCP – RESULTS ACCORDING TO THE PESTICIDES ANALYSED 2009.**

Compound	No. 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>
3,5-Dichloroaniline	119	119	100.0	97.5	100.0	0	0.0	0.0	2.5	0	0.0	0.0	2.5
3-Chloroaniline	64	64	100.0	95.5	100.0	0	0.0	0.0	4.5	0	0.0	0.0	4.5
3-hydroxy-carbofuran	70	70	100.0	95.9	100.0	0	0.0	0.0	4.1	0	0.0	0.0	4.1
Abamectin (sum)	3054	3053	100.0	99.8	100.0	0	0.0	0.0	0.1	1	0.0	0.0	0.2
Acephate	7280	7280	100.0	100.0	100.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0
Acetamiprid	6668	6595	98.9	98.6	99.1	69	1.0	0.8	1.3	4	0.1	0.0	0.2
Aldicarb	541	541	100.0	99.4	100.0	0	0.0	0.0	0.6	0	0.0	0.0	0.6
Aldicarb (sum)	5616	5616	100.0	99.9	100.0	0	0.0	0.0	0.1	0	0.0	0.0	0.1
Aldicarb-Sulfone	462	462	100.0	99.4	100.0	0	0.0	0.0	0.6	0	0.0	0.0	0.6
Aldicarb-Sulfoxide	192	192	100.0	98.5	100.0	0	0.0	0.0	1.5	0	0.0	0.0	1.5
Aldrin	364	364	100.0	99.2	100.0	0	0.0	0.0	0.8	0	0.0	0.0	0.8
Aldrin and Dieldrin	618	610	98.7	97.5	99.3	8	1.3	0.7	2.5	0	0.0	0.0	0.5
Alphamethrin	731	731	100.0	99.6	100.0	0	0.0	0.0	0.4	0	0.0	0.0	0.4
Amitrole	459	459	100.0	99.4	100.0	0	0.0	0.0	0.6	0	0.0	0.0	0.6
Avermectin B1a	579	579	100.0	99.5	100.0	0	0.0	0.0	0.5	0	0.0	0.0	0.5
Avermectin B1b	30	30	100.0	90.8	100.0	0	0.0	0.0	9.2	0	0.0	0.0	9.2
Azinphos-ethyl	675	675	100.0	99.6	100.0	0	0.0	0.0	0.4	0	0.0	0.0	0.4
Azinphos-methyl	8504	8503	100.0	99.9	100.0	1	0.0	0.0	0.1	0	0.0	0.0	0.0
Azoxystrobin	8384	8028	95.8	95.3	96.2	354	4.2	3.8	4.7	2	0.0	0.0	0.1
Benfuracarb	2759	2759	100.0	99.9	100.0	0	0.0	0.0	0.1	0	0.0	0.0	0.1
Benomyl	192	191	99.5	97.1	99.9	1	0.5	0.1	2.9	0	0.0	0.0	1.5
Beta-cypermethrin	117	117	100.0	97.5	100.0	0	0.0	0.0	2.5	0	0.0	0.0	2.5
Bifenthrin	9524	9359	98.3	98.0	98.5	163	1.7	1.5	2.0	2	0.0	0.0	0.1
Boscalid	6091	5798	95.2	94.6	95.7	293	4.8	4.3	5.4	0	0.0	0.0	0.0
Bromopropylate	8415	8396	99.8	99.6	99.9	19	0.2	0.1	0.4	0	0.0	0.0	0.0
Bromuconazole (sum)	4715	4715	100.0	99.9	100.0	0	0.0	0.0	0.1	0	0.0	0.0	0.1
Bupirimate	7517	7499	99.8	99.6	99.8	18	0.2	0.2	0.4	0	0.0	0.0	0.0
Buprofezin	7822	7804	99.8	99.6	99.9	18	0.2	0.1	0.4	0	0.0	0.0	0.0

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Cadusafos	5175	5175	100.0	99.9	100.0	0	0.0	0.0	0.1	0	0.0	0.0	0.1
Camphechlor (sum animal products)	202	202	100.0	98.5	100.0	0	0.0	0.0	1.5	0	0.0	0.0	1.5
Captan	5578	5571	99.9	99.7	99.9	1	0.0	0.0	0.1	6	0.1	0.1	0.2
Carbaryl	7896	7883	99.8	99.7	99.9	12	0.2	0.1	0.3	1	0.0	0.0	0.1
Carbendazim	1567	1538	98.1	97.4	98.7	29	1.9	1.3	2.6	0	0.0	0.0	0.2
Carbendazim and benomyl	5331	5113	95.9	95.3	96.4	212	4.0	3.5	4.5	6	0.1	0.1	0.2
Carbofuran	1934	1933	99.9	99.7	100.0	1	0.1	0.0	0.3	0	0.0	0.0	0.2
Carbofuran (sum)	5846	5843	99.9	99.9	100.0	0	0.0	0.0	0.1	3	0.1	0.0	0.1
Carbosulfan	3840	3839	100.0	99.9	100.0	1	0.0	0.0	0.1	0	0.0	0.0	0.1
Chlordane (sum animal products)	475	474	99.8	98.8	99.9	1	0.2	0.1	1.2	0	0.0	0.0	0.6
Chlorfenvinphos	7293	7293	100.0	100.0	100.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0
Chloromequat	1308	1103	84.3	82.3	86.2	204	15.6	13.7	17.7	1	0.1	0.0	0.4
Chlorobenzilate	750	750	100.0	99.6	100.0	0	0.0	0.0	0.4	0	0.0	0.0	0.4
Chlorothalonil	8478	8376	98.8	98.5	99.0	102	1.2	1.0	1.5	0	0.0	0.0	0.0
Chlorpropham	4561	4558	99.9	99.8	100.0	2	0.0	0.0	0.2	1	0.0	0.0	0.1
Chlorpropham (sum)	3398	3396	99.9	99.8	100.0	2	0.1	0.0	0.2	0	0.0	0.0	0.1
Chlorpyrifos	8960	8573	95.7	95.2	96.1	373	4.2	3.8	4.6	14	0.2	0.1	0.3
Chlorpyrifos-methyl	9983	9881	99.0	98.8	99.2	100	1.0	0.8	1.2	2	0.0	0.0	0.1
Clofentezine	4826	4824	100.0	99.9	100.0	2	0.0	0.0	0.1	0	0.0	0.0	0.1
Cyfluthrin	1416	1415	99.9	99.6	100.0	1	0.1	0.0	0.4	0	0.0	0.0	0.2
Cyfluthrin (sum)	6728	6716	99.8	99.7	99.9	11	0.2	0.1	0.3	1	0.0	0.0	0.1
Cypermethrin	2584	2561	99.1	98.7	99.4	22	0.9	0.6	1.3	1	0.0	0.0	0.2
Cypermethrin (sum)	6995	6950	99.4	99.1	99.5	39	0.6	0.4	0.8	6	0.1	0.0	0.2
Cyproconazole	6002	5974	99.5	99.3	99.7	23	0.4	0.3	0.6	5	0.1	0.0	0.2
Cyprodinil	8131	7706	94.8	94.3	95.2	425	5.2	4.8	5.7	0	0.0	0.0	0.0
DDD, p,p-	65	65	100.0	95.6	100.0	0	0.0	0.0	4.4	0	0.0	0.0	4.4
DDE, p,p-	69	69	100.0	95.8	100.0	0	0.0	0.0	4.2	0	0.0	0.0	4.2

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DDT (sum)	717	646	90.1	87.7	92.1	70	9.8	7.8	12.2	1	0.1	0.0	0.8
DDT, o,p-	41	41	100.0	93.1	100.0	0	0.0	0.0	6.9	0	0.0	0.0	6.9
DDT, p,p-	295	285	96.6	93.9	98.1	10	3.4	1.9	6.1	0	0.0	0.0	1.0
DMSA	1330	1330	100.0	99.8	100.0	0	0.0	0.0	0.2	0	0.0	0.0	0.2
Deltamethrin	9774	9728	99.5	99.4	99.6	45	0.5	0.3	0.6	1	0.0	0.0	0.1
Demeton-S-Methylsulfone	382	382	100.0	99.2	100.0	0	0.0	0.0	0.8	0	0.0	0.0	0.8
Desmethyl pirimicarb	64	64	100.0	95.5	100.0	0	0.0	0.0	4.5	0	0.0	0.0	4.5
Diazinon	9109	9104	99.9	99.9	100.0	4	0.0	0.0	0.1	1	0.0	0.0	0.1
Dichlofluanid	8439	8439	100.0	100.0	100.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0
Dichlorvos	8757	8754	100.0	99.9	100.0	3	0.0	0.0	0.1	0	0.0	0.0	0.0
Dicofol (sum)	6734	6728	99.9	99.8	100.0	6	0.1	0.0	0.2	0	0.0	0.0	0.0
Dicofol o, p'	682	682	100.0	99.6	100.0	0	0.0	0.0	0.4	0	0.0	0.0	0.4
Dicofol p, p'	737	737	100.0	99.6	100.0	0	0.0	0.0	0.4	0	0.0	0.0	0.4
Dieldrin	397	394	99.2	97.8	99.7	3	0.8	0.3	2.2	0	0.0	0.0	0.7
Difenoconazole	7635	7610	99.7	99.5	99.8	19	0.2	0.2	0.4	6	0.1	0.0	0.2
Dimethoate	3009	3007	99.9	99.8	100.0	2	0.1	0.0	0.2	0	0.0	0.0	0.1
Dimethoate (sum)	5866	5833	99.4	99.2	99.6	20	0.3	0.2	0.5	13	0.2	0.1	0.4
Dimethomorph	6580	6479	98.5	98.1	98.7	101	1.5	1.3	1.9	0	0.0	0.0	0.0
Diphenylamine	7743	7739	99.9	99.9	100.0	3	0.0	0.0	0.1	1	0.0	0.0	0.1
Dithiocarbamates	4060	3643	89.7	88.8	90.6	416	10.2	9.4	11.2	1	0.0	0.0	0.1
Endosulfan (sum)	9836	9824	99.9	99.8	99.9	9	0.1	0.0	0.2	3	0.0	0.0	0.1
Endosulfansulfate	356	355	99.7	98.4	99.9	1	0.3	0.1	1.6	0	0.0	0.0	0.8
Endrin	1017	1017	100.0	99.7	100.0	0	0.0	0.0	0.3	0	0.0	0.0	0.3
Ethion	7850	7847	100.0	99.9	100.0	3	0.0	0.0	0.1	0	0.0	0.0	0.0
Ethoprophos	6385	6385	100.0	100.0	100.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0
Fenamiphos	2625	2625	100.0	99.9	100.0	0	0.0	0.0	0.1	0	0.0	0.0	0.1
Fenamiphos (sum)	2795	2794	100.0	99.8	100.0	1	0.0	0.0	0.2	0	0.0	0.0	0.1
Fenamiphos-Sulfoxid	758	758	100.0	99.6	100.0	0	0.0	0.0	0.4	0	0.0	0.0	0.4
Fenarimol	7811	7797	99.8	99.7	99.9	14	0.2	0.1	0.3	0	0.0	0.0	0.0

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Fenbuconazole	5370	5366	99.9	99.8	100.0	4	0.1	0.0	0.2	0	0.0	0.0	0.1
Fenhexamid	7691	7339	95.4	94.9	95.9	352	4.6	4.1	5.1	0	0.0	0.0	0.0
Fenitrothion	8697	8692	99.9	99.9	100.0	5	0.1	0.0	0.1	0	0.0	0.0	0.0
Fenoxycarb	5833	5813	99.7	99.5	99.8	20	0.3	0.2	0.5	0	0.0	0.0	0.1
Fenpropathrin	7074	7071	100.0	99.9	100.0	1	0.0	0.0	0.1	2	0.0	0.0	0.1
Fenthion	207	207	100.0	98.6	100.0	0	0.0	0.0	1.4	0	0.0	0.0	1.4
Fenthion (sum)	363	363	100.0	99.2	100.0	0	0.0	0.0	0.8	0	0.0	0.0	0.8
Fenvalerate and Esfenvalerate (sum of RR and SS isom)	286	286	100.0	99.0	100.0	0	0.0	0.0	1.0	0	0.0	0.0	1.0
Fenvalerate and Esfenvalerate (sum of RS and SR isom)	165	165	100.0	98.2	100.0	0	0.0	0.0	1.8	0	0.0	0.0	1.8
Fenvalerate/Esfenvalerate (sum)	442	442	100.0	99.3	100.0	0	0.0	0.0	0.7	0	0.0	0.0	0.7
Fipronil (sum)	2231	2231	100.0	99.9	100.0	0	0.0	0.0	0.1	0	0.0	0.0	0.1
Fludioxonil	7567	7220	95.4	94.9	95.9	346	4.6	4.1	5.1	1	0.0	0.0	0.1
Flufenoxuron	5166	5139	99.5	99.2	99.6	27	0.5	0.4	0.8	0	0.0	0.0	0.1
Fluquinconazole	5097	5097	100.0	99.9	100.0	0	0.0	0.0	0.1	0	0.0	0.0	0.1
Flusilazole	6602	6594	99.9	99.8	99.9	7	0.1	0.1	0.2	1	0.0	0.0	0.1
Flutriafol	4422	4364	98.7	98.3	99.0	58	1.3	1.0	1.7	0	0.0	0.0	0.1
Folpet	5861	5848	99.8	99.6	99.9	6	0.1	0.0	0.2	7	0.1	0.1	0.2
Formetanate	244	244	100.0	98.8	100.0	0	0.0	0.0	1.2	0	0.0	0.0	1.2
Formetanate (sum)	2337	2330	99.7	99.4	99.9	6	0.3	0.1	0.6	1	0.0	0.0	0.2
Fosfiazate	3031	3031	100.0	99.9	100.0	0	0.0	0.0	0.1	0	0.0	0.0	0.1
HCH alpha	761	759	99.7	99.1	99.9	0	0.0	0.0	0.4	2	0.3	0.1	0.9
HCH beta	747	744	99.6	98.8	99.9	3	0.4	0.1	1.2	0	0.0	0.0	0.4
Heptachlor	360	360	100.0	99.2	100.0	0	0.0	0.0	0.8	0	0.0	0.0	0.8
Heptachlor (sum)	691	691	100.0	99.6	100.0	0	0.0	0.0	0.4	0	0.0	0.0	0.4

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Heptachlor epoxide	56	56	100.0	94.9	100.0	0	0.0	0.0	5.1	0	0.0	0.0	5.1
Hexachlorobenzene	915	846	92.5	90.6	94.0	69	7.5	6.0	9.4	0	0.0	0.0	0.3
Hexaconazole	7158	7155	100.0	99.9	100.0	3	0.0	0.0	0.1	0	0.0	0.0	0.0
Hexythiazox	6101	6072	99.5	99.3	99.7	29	0.5	0.3	0.7	0	0.0	0.0	0.0
Imazalil	8003	7353	91.9	91.3	92.5	641	8.0	7.4	8.6	9	0.1	0.1	0.2
Imidacloprid	6755	6369	94.3	93.7	94.8	385	5.7	5.2	6.3	1	0.0	0.0	0.1
Indoxacarb	6079	5946	97.8	97.4	98.2	132	2.2	1.8	2.6	1	0.0	0.0	0.1
Iprodione	8803	8471	96.2	95.8	96.6	330	3.7	3.4	4.2	2	0.0	0.0	0.1
Iprovalicarb	6403	6381	99.7	99.5	99.8	22	0.3	0.2	0.5	0	0.0	0.0	0.0
Kresoxim-methyl	8218	8189	99.6	99.5	99.8	29	0.4	0.2	0.5	0	0.0	0.0	0.0
Lambda-Cyhalothrin	7695	7631	99.2	98.9	99.3	64	0.8	0.7	1.1	0	0.0	0.0	0.0
Lindane	910	906	99.6	98.9	99.8	4	0.4	0.2	1.1	0	0.0	0.0	0.3
Linuron	6064	6064	100.0	100.0	100.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0
Malaoxon	259	259	100.0	98.9	100.0	0	0.0	0.0	1.1	0	0.0	0.0	1.1
Malathion	2473	2452	99.2	98.7	99.4	20	0.8	0.5	1.2	1	0.0	0.0	0.2
Malathion (sum)	6320	6302	99.7	99.6	99.8	17	0.3	0.2	0.4	1	0.0	0.0	0.1
Mepanipyrim	1509	1508	99.9	99.6	100.0	1	0.1	0.0	0.4	0	0.0	0.0	0.2
Mepanipyrim (sum)	5222	5215	99.9	99.7	99.9	7	0.1	0.1	0.3	0	0.0	0.0	0.1
Mepiquat	1279	1261	98.6	97.8	99.1	18	1.4	0.9	2.2	0	0.0	0.0	0.2
Metalaxyl	2848	2809	98.6	98.1	99.0	39	1.4	1.0	1.9	0	0.0	0.0	0.1
Metalaxyl (sum)	5466	5372	98.3	97.9	98.6	94	1.7	1.4	2.1	0	0.0	0.0	0.1
Metalaxyl-M	83	80	96.4	89.9	98.7	3	3.6	1.3	10.1	0	0.0	0.0	3.5
Metconazole	5065	5062	99.9	99.8	100.0	3	0.1	0.0	0.2	0	0.0	0.0	0.1
Methamidophos	7798	7797	100.0	99.9	100.0	0	0.0	0.0	0.0	1	0.0	0.0	0.1
Methidathion	9553	9542	99.9	99.8	99.9	9	0.1	0.1	0.2	2	0.0	0.0	0.1
Methiocarb	1523	1522	99.9	99.6	100.0	1	0.1	0.0	0.4	0	0.0	0.0	0.2
Methiocarb (sum)	5628	5605	99.6	99.4	99.7	22	0.4	0.3	0.6	1	0.0	0.0	0.1
Methiocarb-Sulfon	138	138	100.0	97.9	100.0	0	0.0	0.0	2.1	0	0.0	0.0	2.1
Methiocarb-Sulfoxid	202	202	100.0	98.5	100.0	0	0.0	0.0	1.5	0	0.0	0.0	1.5

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Methomyl	2178	2172	99.7	99.4	99.9	2	0.1	0.0	0.3	4	0.2	0.1	0.5
Methomyl and Thiodicarb	4844	4823	99.6	99.3	99.7	17	0.4	0.2	0.6	4	0.1	0.0	0.2
Methoxychlor	148	144	97.3	93.3	98.9	4	2.7	1.1	6.7	0	0.0	0.0	2.0
Monocrotophos	7424	7421	100.0	99.9	100.0	1	0.0	0.0	0.1	2	0.0	0.0	0.1
Myclobutanil	8354	8033	96.2	95.7	96.5	321	3.8	3.5	4.3	0	0.0	0.0	0.0
Omethoate	1602	1601	99.9	99.7	100.0	0	0.0	0.0	0.2	1	0.1	0.0	0.3
Oxamyl	6194	6181	99.8	99.6	99.9	4	0.1	0.0	0.2	9	0.1	0.1	0.3
Oxychlorane	151	151	100.0	98.0	100.0	0	0.0	0.0	2.0	0	0.0	0.0	2.0
Oxydemeton-methyl	1101	1101	100.0	99.7	100.0	0	0.0	0.0	0.3	0	0.0	0.0	0.3
Oxydemeton-methyl (sum)	4865	4865	100.0	99.9	100.0	0	0.0	0.0	0.1	0	0.0	0.0	0.1
Paclobutrazol	3890	3887	99.9	99.8	100.0	3	0.1	0.0	0.2	0	0.0	0.0	0.1
Paraoxon-Methyl	466	466	100.0	99.4	100.0	0	0.0	0.0	0.6	0	0.0	0.0	0.6
Parathion	8405	8400	99.9	99.9	100.0	5	0.1	0.0	0.1	0	0.0	0.0	0.0
Parathion-methyl	3200	3192	99.8	99.5	99.9	8	0.3	0.1	0.5	0	0.0	0.0	0.1
Parathion-methyl (sum)	6219	6219	100.0	100.0	100.0	0	0.0	0.0	0.0	0	0.0	0.0	0.0
Parlar No 26	23	23	100.0	88.3	100.0	0	0.0	0.0	11.7	0	0.0	0.0	11.7
Parlar No 50	23	23	100.0	88.3	100.0	0	0.0	0.0	11.7	0	0.0	0.0	11.7
Parlar No 62	23	23	100.0	88.3	100.0	0	0.0	0.0	11.7	0	0.0	0.0	11.7
Penconazole	8506	8366	98.4	98.1	98.6	140	1.6	1.4	1.9	0	0.0	0.0	0.0
Permethrin (sum)	819	819	100.0	99.6	100.0	0	0.0	0.0	0.4	0	0.0	0.0	0.4
Phosalone	8744	8741	100.0	99.9	100.0	3	0.0	0.0	0.1	0	0.0	0.0	0.0
Phosmet	1614	1614	100.0	99.8	100.0	0	0.0	0.0	0.2	0	0.0	0.0	0.2
Phosmet (sum)	5565	5552	99.8	99.6	99.9	10	0.2	0.1	0.3	3	0.1	0.0	0.2
Phosmet oxon	24	24	100.0	88.7	100.0	0	0.0	0.0	11.3	0	0.0	0.0	11.3
Phoxim	2363	2362	100.0	99.8	100.0	1	0.0	0.0	0.2	0	0.0	0.0	0.1
Pirimicarb	1498	1495	99.8	99.4	99.9	3	0.2	0.1	0.6	0	0.0	0.0	0.2
Pirimicarb (sum)	5868	5856	99.8	99.6	99.9	12	0.2	0.1	0.4	0	0.0	0.0	0.1
Pirimiphos-methyl	9855	9701	98.4	98.2	98.7	154	1.6	1.3	1.8	0	0.0	0.0	0.0
Prochloraz	2542	2541	100.0	99.8	100.0	1	0.0	0.0	0.2	0	0.0	0.0	0.1

Compound	No. 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>
Prochloraz (sum)	4448	4442	99.9	99.7	99.9	5	0.1	0.0	0.3	1	0.0	0.0	0.1
Procymidone	8892	8828	99.3	99.1	99.4	64	0.7	0.6	0.9	0	0.0	0.0	0.0
Profenofos	8072	8060	99.9	99.7	99.9	10	0.1	0.1	0.2	2	0.0	0.0	0.1
Propamocarb	535	524	97.9	96.4	98.8	11	2.1	1.2	3.6	0	0.0	0.0	0.6
Propamocarb (sum)	4043	3976	98.3	97.9	98.7	67	1.7	1.3	2.1	0	0.0	0.0	0.1
Propargite	6941	6898	99.4	99.2	99.5	43	0.6	0.5	0.8	0	0.0	0.0	0.0
Prothioconazole	2475	2475	100.0	99.9	100.0	0	0.0	0.0	0.1	0	0.0	0.0	0.1
Pyrazophos	665	665	100.0	99.6	100.0	0	0.0	0.0	0.4	0	0.0	0.0	0.4
Pyridaben	6245	6226	99.7	99.5	99.8	18	0.3	0.2	0.5	1	0.0	0.0	0.1
Pyrimethanil	7975	7705	96.6	96.2	97.0	270	3.4	3.0	3.8	0	0.0	0.0	0.0
Pyriproxyfen	6580	6536	99.3	99.1	99.5	44	0.7	0.5	0.9	0	0.0	0.0	0.0
Quinoxifen	6337	6248	98.6	98.3	98.9	89	1.4	1.1	1.7	0	0.0	0.0	0.0
Resmethrin (sum)	772	772	100.0	99.6	100.0	0	0.0	0.0	0.4	0	0.0	0.0	0.4
Spiroxamine	6717	6625	98.6	98.3	98.9	92	1.4	1.1	1.7	0	0.0	0.0	0.0
Tebuconazole	8103	7985	98.5	98.3	98.8	118	1.5	1.2	1.7	0	0.0	0.0	0.0
Tebuconazole	5705	5679	99.5	99.3	99.7	26	0.5	0.3	0.7	0	0.0	0.0	0.1
Tebufenozide	6332	6305	99.6	99.4	99.7	27	0.4	0.3	0.6	0	0.0	0.0	0.0
Teflubenzuron	4803	4791	99.8	99.6	99.9	12	0.2	0.1	0.4	0	0.0	0.0	0.1
Tefluthrin	3982	3980	99.9	99.8	100.0	2	0.1	0.0	0.2	0	0.0	0.0	0.1
Tetradifon	7716	7712	99.9	99.9	100.0	4	0.1	0.0	0.1	0	0.0	0.0	0.0
Thiabendazole	7356	6925	94.1	93.6	94.7	431	5.9	5.3	6.4	0	0.0	0.0	0.0
Thiacloprid	5481	5448	99.4	99.2	99.6	33	0.6	0.4	0.8	0	0.0	0.0	0.1
Thiodicarb	1057	1057	100.0	99.7	100.0	0	0.0	0.0	0.3	0	0.0	0.0	0.3
Thiophanate-methyl	5801	5735	98.9	98.6	99.1	62	1.1	0.8	1.4	4	0.1	0.0	0.2
Tolclofos-methyl	8557	8556	100.0	99.9	100.0	1	0.0	0.0	0.1	0	0.0	0.0	0.0
Tolyfluanid	2379	2379	100.0	99.9	100.0	0	0.0	0.0	0.1	0	0.0	0.0	0.1
Tolyfluanid (sum)	5644	5642	100.0	99.9	100.0	2	0.0	0.0	0.1	0	0.0	0.0	0.1
Triadimefon	2101	2096	99.8	99.4	99.9	5	0.2	0.1	0.6	0	0.0	0.0	0.1
Triadimefon (sum)	6297	6130	97.3	96.9	97.7	167	2.7	2.3	3.1	0	0.0	0.0	0.0

Compound	No. 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>
Triadimenol	1585	1557	98.2	97.5	98.8	28	1.8	1.2	2.5	0	0.0	0.0	0.2
Triazophos	9299	9297	100.0	99.9	100.0	0	0.0	0.0	0.0	2	0.0	0.0	0.1
Trichlorfon	4067	4066	100.0	99.9	100.0	1	0.0	0.0	0.1	0	0.0	0.0	0.1
Trifloxystrobin	7685	7491	97.5	97.1	97.8	194	2.5	2.2	2.9	0	0.0	0.0	0.0
Triticonazole	4052	4051	100.0	99.9	100.0	1	0.0	0.0	0.1	0	0.0	0.0	0.1
Vinclozolin	5499	5492	99.9	99.7	99.9	7	0.1	0.1	0.3	0	0.0	0.0	0.1
Vinclozolin (sum)	3443	3435	99.8	99.5	99.9	8	0.2	0.1	0.5	0	0.0	0.0	0.1
alpha-Endosulfan	493	493	100.0	99.4	100.0	0	0.0	0.0	0.6	0	0.0	0.0	0.6
beta-Cyfluthrin	277	276	99.6	98.0	99.9	1	0.4	0.1	2.0	0	0.0	0.0	1.1
beta-Endosulfan	492	492	100.0	99.4	100.0	0	0.0	0.0	0.6	0	0.0	0.0	0.6
cis-Chlordane	165	165	100.0	98.2	100.0	0	0.0	0.0	1.8	0	0.0	0.0	1.8
cis-Heptachlorepoxyde	23	23	100.0	88.3	100.0	0	0.0	0.0	11.7	0	0.0	0.0	11.7
trans-Chlordane	169	169	100.0	98.3	100.0	0	0.0	0.0	1.7	0	0.0	0.0	1.7
trans-Heptachlorepoxyde	23	23	100.0	88.3	100.0	0	0.0	0.0	11.7	0	0.0	0.0	11.7
<b>Total</b>	<b>838299</b>	<b>829604</b>				<b>8546</b>				<b>149</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



**TABLE I: EUCP - RESULTS 2009 BY COMMODITY AND REPORTING COUNTRY**
**AUBERGINES (EGG PLANTS)**

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	14	4	28.6	11.8	55.1	10	71.4	44.9	88.2	0	0.0	0.0	18.1
Belgium	15	7	46.7	24.7	70.1	8	53.3	29.9	75.3	0	0.0	0.0	17.1
Bulgaria	39	31	79.5	64.4	89.2	8	20.5	10.8	35.6	0	0.0	0.0	7.2
Cyprus	27	18	66.7	47.6	81.4	9	33.3	18.6	52.4	0	0.0	0.0	10.1
Czech Republic	19	4	21.1	8.7	43.7	15	78.9	56.3	91.3	0	0.0	0.0	13.9
Denmark	21	14	66.7	45.1	82.8	6	28.6	13.9	50.2	1	4.8	1.1	22.8
Estonia	15	6	40.0	19.8	64.6	9	60.0	35.4	80.2	0	0.0	0.0	17.1
Finland	24	9	37.5	21.1	57.5	12	50.0	31.3	68.7	3	12.5	4.5	31.2
France	79	63	79.7	69.6	87.1	16	20.3	12.9	30.4	0	0.0	0.0	3.7
Germany	190	71	37.4	30.8	44.4	114	60.0	52.9	66.7	5	2.6	1.2	6.0
Greece	75	66	88.0	78.7	93.5	9	12.0	6.5	21.3	0	0.0	0.0	3.9
Hungary	13	9	69.2	41.9	87.2	4	30.8	12.8	58.1	0	0.0	0.0	19.3
Iceland	8	8	100.0	71.7	100.0	0	0.0	0.0	28.3	0	0.0	0.0	28.3
Ireland	15	4	26.7	11.0	52.4	11	73.3	47.6	89.0	0	0.0	0.0	17.1
Italy	102	94	92.2	85.3	95.9	8	7.8	4.1	14.7	0	0.0	0.0	2.9
Latvia	11	10	90.9	61.5	97.9	0	0.0	0.0	22.1	1	9.1	2.1	38.5
Lithuania	15	9	60.0	35.4	80.2	4	26.7	11.0	52.4	2	13.3	4.0	38.3
Luxembourg	13	8	61.5	35.1	82.3	5	38.5	17.7	64.9	0	0.0	0.0	19.3
Malta	15	14	93.3	69.8	98.4	1	6.7	1.6	30.2	0	0.0	0.0	17.1
Netherlands	39	18	46.2	31.5	61.5	18	46.2	31.5	61.5	3	7.7	2.8	20.4
Norway	15	8	53.3	29.9	75.3	6	40.0	19.8	64.6	1	6.7	1.6	30.2
Poland	50	41	82.0	69.1	90.2	9	18.0	9.8	30.9	0	0.0	0.0	5.7
Portugal	46	42	91.3	79.6	96.5	4	8.7	3.5	20.4	0	0.0	0.0	6.2
Romania	45	45	100.0	93.7	100.0	0	0.0	0.0	6.3	0	0.0	0.0	6.3
Slovakia	30	25	83.3	66.3	92.5	5	16.7	7.5	33.7	0	0.0	0.0	9.2
Slovenia	29	20	69.0	50.6	82.7	8	27.6	14.7	45.9	1	3.4	0.8	17.2
Spain	40	32	80.0	65.1	89.4	8	20.0	10.6	34.9	0	0.0	0.0	7.0
Sweden	27	13	48.1	30.6	66.1	12	44.4	27.5	62.8	2	7.4	2.3	23.5
United Kingdom	72	50	69.4	58.0	78.9	22	30.6	21.1	42.0	0	0.0	0.0	4.0
<b>Total</b>	<b>1103</b>	<b>743</b>	<b>67.4</b>	<b>64.5</b>	<b>70.1</b>	<b>341</b>	<b>30.9</b>	<b>28.3</b>	<b>33.7</b>	<b>19</b>	<b>1.7</b>	<b>1.1</b>	<b>2.7</b>

(a): Lower confidence limit; (b): Upper confidence limit

**BANANAS**

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	8	53.3	29.9	75.3	7	46.7	24.7	70.1	0	0.0	0.0	17.1
Belgium	15	4	26.7	11.0	52.4	11	73.3	47.6	89.0	0	0.0	0.0	17.1
Bulgaria	35	30	85.7	70.5	93.6	5	14.3	6.4	29.5	0	0.0	0.0	8.0
Cyprus	27	24	88.9	71.8	96.0	3	11.1	4.0	28.2	0	0.0	0.0	10.1
Czech Republic	58	7	12.1	6.0	22.9	51	87.9	77.1	94.0	0	0.0	0.0	5.0
Denmark	56	3	5.4	1.9	14.6	53	94.6	85.4	98.1	0	0.0	0.0	5.1
Estonia	15	2	13.3	4.0	38.3	13	86.7	61.7	96.0	0	0.0	0.0	17.1
Finland	20	4	20.0	8.2	41.9	16	80.0	58.1	91.8	0	0.0	0.0	13.3
France	109	89	81.7	73.3	87.8	19	17.4	11.5	25.7	1	0.9	0.2	5.0
Germany	190	37	19.5	14.5	25.7	153	80.5	74.3	85.5	0	0.0	0.0	1.6
Greece	26	13	50.0	31.9	68.1	13	50.0	31.9	68.1	0	0.0	0.0	10.5
Hungary	19	1	5.3	1.2	24.9	18	94.7	75.1	98.8	0	0.0	0.0	13.9
Iceland	17	0	0.0	0.0	15.3	17	100.0	84.7	100.0	0	0.0	0.0	15.3
Ireland	16	4	25.0	10.3	49.9	12	75.0	50.1	89.7	0	0.0	0.0	16.2
Italy	121	92	76.0	67.7	82.8	29	24.0	17.2	32.3	0	0.0	0.0	2.4
Latvia	12	9	75.0	46.2	90.9	3	25.0	9.1	53.8	0	0.0	0.0	20.6
Lithuania	15	1	6.7	1.6	30.2	14	93.3	69.8	98.4	0	0.0	0.0	17.1
Luxembourg	12	5	41.7	19.2	68.4	7	58.3	31.6	80.8	0	0.0	0.0	20.6
Malta	15	11	73.3	47.6	89.0	4	26.7	11.0	52.4	0	0.0	0.0	17.1
Netherlands	48	19	39.6	27.0	53.8	28	58.3	44.2	71.2	1	2.1	0.5	10.9
Norway	15	0	0.0	0.0	17.1	15	100.0	82.9	100.0	0	0.0	0.0	17.1
Poland	50	30	60.0	46.1	72.4	20	40.0	27.6	53.9	0	0.0	0.0	5.7
Portugal	52	26	50.0	36.8	63.2	25	48.1	35.1	61.4	1	1.9	0.5	10.1
Romania	109	104	95.4	89.7	98.0	5	4.6	2.0	10.3	0	0.0	0.0	2.7
Slovakia	15	3	20.0	7.3	45.6	12	80.0	54.4	92.7	0	0.0	0.0	17.1
Slovenia	15	1	6.7	1.6	30.2	14	93.3	69.8	98.4	0	0.0	0.0	17.1
Spain	80	14	17.5	10.8	27.3	64	80.0	69.9	87.3	2	2.5	0.8	8.6
Sweden	50	10	20.0	11.3	33.1	40	80.0	66.9	88.7	0	0.0	0.0	5.7
United Kingdom	96	14	14.6	8.9	23.0	82	85.4	77.0	91.1	0	0.0	0.0	3.0
<b>Total</b>	<b>1323</b>	<b>565</b>	<b>42.7</b>	<b>40.1</b>	<b>45.4</b>	<b>753</b>	<b>56.9</b>	<b>54.2</b>	<b>59.6</b>	<b>5</b>	<b>0.4</b>	<b>0.2</b>	<b>0.9</b>

(a): Lower confidence limit; (b): Upper confidence limit

**BUTTER**

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	14	14	100.0	81.9	100.0	0	0.0	0.0	18.1	0	0.0	0.0	18.1
Belgium	15	15	100.0	82.9	100.0	0	0.0	0.0	17.1	0	0.0	0.0	17.1
Cyprus	4	4	100.0	54.9	100.0	0	0.0	0.0	45.1	0	0.0	0.0	45.1
Czech Republic	15	0	0.0	0.0	17.1	15	100.0	82.9	100.0	0	0.0	0.0	17.1
Estonia	15	14	93.3	69.8	98.4	1	6.7	1.6	30.2	0	0.0	0.0	17.1
Germany	68	19	27.9	18.7	39.6	49	72.1	60.4	81.3	0	0.0	0.0	4.2
Greece	16	15	93.8	71.3	98.5	0	0.0	0.0	16.2	1	6.3	1.5	28.7
Ireland	15	15	100.0	82.9	100.0	0	0.0	0.0	17.1	0	0.0	0.0	17.1
Italy	5	5	100.0	60.7	100.0	0	0.0	0.0	39.3	0	0.0	0.0	39.3
Latvia	14	14	100.0	81.9	100.0	0	0.0	0.0	18.1	0	0.0	0.0	18.1
Lithuania	16	14	87.5	63.6	96.2	0	0.0	0.0	16.2	2	12.5	3.8	36.4
Malta	15	15	100.0	82.9	100.0	0	0.0	0.0	17.1	0	0.0	0.0	17.1
Netherlands	24	24	100.0	88.7	100.0	0	0.0	0.0	11.3	0	0.0	0.0	11.3
Poland	50	47	94.0	83.8	97.8	3	6.0	2.2	16.2	0	0.0	0.0	5.7
Slovakia	15	2	13.3	4.0	38.3	13	86.7	61.7	96.0	0	0.0	0.0	17.1
Slovenia	15	11	73.3	47.6	89.0	4	26.7	11.0	52.4	0	0.0	0.0	17.1
Spain	21	21	100.0	87.3	100.0	0	0.0	0.0	12.7	0	0.0	0.0	12.7
Sweden	27	27	100.0	89.9	100.0	0	0.0	0.0	10.1	0	0.0	0.0	10.1
United Kingdom	109	100	91.7	85.0	95.6	9	8.3	4.4	15.0	0	0.0	0.0	2.7
<b>Total</b>	<b>473</b>	<b>376</b>	<b>79.5</b>	<b>75.6</b>	<b>82.9</b>	<b>94</b>	<b>19.9</b>	<b>16.5</b>	<b>23.7</b>	<b>3</b>	<b>0.6</b>	<b>0.2</b>	<b>1.8</b>

(a): Lower confidence limit; (b): Upper confidence limit

**CAULIFLOWER**

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	14	93.3	69.8	98.4	1	6.7	1.6	30.2	0	0.0	0.0	17.1
Belgium	15	1	6.7	1.6	30.2	14	93.3	69.8	98.4	0	0.0	0.0	17.1
Bulgaria	38	32	84.2	69.5	92.5	6	15.8	7.5	30.5	0	0.0	0.0	7.4
Cyprus	15	11	73.3	47.6	89.0	2	13.3	4.0	38.3	2	13.3	4.0	38.3
Czech Republic	19	5	26.3	11.9	49.1	14	73.7	50.9	88.1	0	0.0	0.0	13.9
Denmark	4	4	100.0	54.9	100.0	0	0.0	0.0	45.1	0	0.0	0.0	45.1
Estonia	12	3	25.0	9.1	53.8	8	66.7	38.6	86.1	1	8.3	1.9	36.0
Finland	24	24	100.0	88.7	100.0	0	0.0	0.0	11.3	0	0.0	0.0	11.3
France	54	53	98.1	90.3	99.6	1	1.9	0.4	9.7	0	0.0	0.0	5.3
Germany	163	63	38.7	31.5	46.3	100	61.3	53.7	68.5	0	0.0	0.0	1.8
Greece	24	24	100.0	88.7	100.0	0	0.0	0.0	11.3	0	0.0	0.0	11.3
Hungary	14	11	78.6	51.9	92.2	3	21.4	7.8	48.1	0	0.0	0.0	18.1
Iceland	10	10	100.0	76.2	100.0	0	0.0	0.0	23.8	0	0.0	0.0	23.8
Ireland	15	14	93.3	69.8	98.4	1	6.7	1.6	30.2	0	0.0	0.0	17.1
Italy	67	65	97.0	89.8	99.1	2	3.0	0.9	10.2	0	0.0	0.0	4.3
Latvia	13	9	69.2	41.9	87.2	3	23.1	8.4	50.8	1	7.7	1.8	33.9
Lithuania	15	12	80.0	54.4	92.7	3	20.0	7.3	45.6	0	0.0	0.0	17.1
Luxembourg	8	8	100.0	71.7	100.0	0	0.0	0.0	28.3	0	0.0	0.0	28.3
Malta	17	17	100.0	84.7	100.0	0	0.0	0.0	15.3	0	0.0	0.0	15.3
Netherlands	43	42	97.7	88.0	99.4	1	2.3	0.6	12.0	0	0.0	0.0	6.6
Norway	17	17	100.0	84.7	100.0	0	0.0	0.0	15.3	0	0.0	0.0	15.3
Poland	51	33	64.7	50.9	76.4	18	35.3	23.6	49.1	0	0.0	0.0	5.6
Portugal	50	41	82.0	69.1	90.2	9	18.0	9.8	30.9	0	0.0	0.0	5.7
Romania	30	30	100.0	90.8	100.0	0	0.0	0.0	9.2	0	0.0	0.0	9.2
Slovakia	16	7	43.8	23.0	67.1	9	56.3	32.9	77.0	0	0.0	0.0	16.2
Slovenia	42	13	31.0	19.1	46.1	29	69.0	53.9	80.9	0	0.0	0.0	6.7
Spain	37	22	59.5	43.4	73.7	14	37.8	24.0	54.0	1	2.7	0.6	13.8
Sweden	21	20	95.2	77.2	98.9	1	4.8	1.1	22.8	0	0.0	0.0	12.7
United Kingdom	72	72	100.0	96.0	100.0	0	0.0	0.0	4.0	0	0.0	0.0	4.0
<b>Total</b>	<b>921</b>	<b>677</b>	<b>73.5</b>	<b>70.6</b>	<b>76.3</b>	<b>239</b>	<b>26.0</b>	<b>23.2</b>	<b>28.9</b>	<b>5</b>	<b>0.5</b>	<b>0.2</b>	<b>1.3</b>

(a): Lower confidence limit; (b): Upper confidence limit

**CHICKEN EGGS**

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	13	100	100	80.7	100	0	0	0	19.3	0	0	0	19.3
Belgium	15	100	100	82.9	100	0	0	0	17.1	0	0	0	17.1
Cyprus	29	100	100	90.5	100	0	0	0	9.5	0	0	0	9.5
Czech Republic	15	100	100	82.9	100	0	0	0	17.1	0	0	0	17.1
Estonia	8	100	100	71.7	100	0	0	0	28.3	0	0	0	28.3
Finland	15	100	100	82.9	100	0	0	0	17.1	0	0	0	17.1
Germany	65	46	70.8	58.7	80.4	19	29.2	19.6	41.3	0	0	0	4.4
Greece	21	20	95.2	77.2	98.9	0	0	0	12.7	1	4.8	1.1	22.8
Ireland	16	16	100	83.8	100	0	0	0	16.2	0	0	0	16.2
Italy	9	9	100	74.1	100	0	0	0	25.9	0	0	0	25.9
Latvia	12	12	100	79.4	100	0	0	0	20.6	0	0	0	20.6
Lithuania	12	12	100	79.4	100	0	0	0	20.6	0	0	0	20.6
Luxembourg	15	15	100	82.9	100	0	0	0	17.1	0	0	0	17.1
Malta	16	16	100	83.8	100	0	0	0	16.2	0	0	0	16.2
Netherlands	25	25	100	89.1	100	0	0	0	10.9	0	0	0	10.9
Norway	15	15	100	82.9	100	0	0	0	17.1	0	0	0	17.1
Poland	53	53	100	94.6	100	0	0	0	5.4	0	0	0	5.4
Slovakia	11	10	90.9	61.5	97.9	1	9.1	2.1	38.5	0	0	0	22.1
Slovenia	15	15	100	82.9	100	0	0	0	17.1	0	0	0	17.1
Spain	41	41	100	93.1	100	0	0	0	6.9	0	0	0	6.9
Sweden	30	30	100	90.8	100	0	0	0	9.2	0	0	0	9.2
United Kingdom	108	103	95.4	89.6	98	5	4.6	2	10.4	0	0	0	2.7
<b>Total</b>	<b>559</b>	<b>533</b>	<b>95.3</b>	<b>93.3</b>	<b>96.8</b>	<b>25</b>	<b>4.5</b>	<b>3.1</b>	<b>6.5</b>	<b>1</b>	<b>0.2</b>	<b>0.0</b>	<b>1.0</b>

(a): Lower confidence limit; (b): Upper confidence limit

## ORANGE JUICE

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	9	60	35.4	80.2	6	40	19.8	64.6	0	0	0	17.1
Belgium	15	8	53.3	29.9	75.3	7	46.7	24.7	70.1	0	0	0	17.1
Bulgaria	29	29	100	90.5	100	0	0	0	9.5	0	0	0	9.5
Cyprus	11	11	100	77.9	100	0	0	0	22.1	0	0	0	22.1
Czech Republic	29	17	58.6	40.6	74.5	12	41.4	25.5	59.4	0	0	0	9.5
Denmark	12	11	91.7	64	98.1	1	8.3	1.9	36	0	0	0	20.6
Estonia	15	13	86.7	61.7	96	2	13.3	4	38.3	0	0	0	17.1
Finland	16	7	43.8	23	67.1	9	56.3	32.9	77	0	0	0	16.2
France	50	45	90	78.6	95.6	5	10	4.4	21.4	0	0	0	5.7
Germany	96	33	34.4	25.6	44.3	63	65.6	55.7	74.4	0	0	0	3
Greece	21	20	95.2	77.2	98.9	1	4.8	1.1	22.8	0	0	0	12.7
Ireland	18	15	83.3	60.4	93.9	3	16.7	6.1	39.6	0	0	0	14.6
Italy	33	30	90.9	76.3	96.7	3	9.1	3.3	23.7	0	0	0	8.4
Latvia	12	12	100	79.4	100	0	0	0	20.6	0	0	0	20.6
Lithuania	12	12	100	79.4	100	0	0	0	20.6	0	0	0	20.6
Luxembourg	15	10	66.7	41.3	84.8	5	33.3	15.2	58.7	0	0	0	17.1
Malta	15	9	60	35.4	80.2	6	40	19.8	64.6	0	0	0	17.1
Norway	15	5	33.3	15.2	58.7	10	66.7	41.3	84.8	0	0	0	17.1
Poland	49	41	83.7	70.9	91.4	8	16.3	8.6	29.1	0	0	0	5.8
Portugal	35	35	100	92	100	0	0	0	8	0	0	0	8
Romania	4	4	100	54.9	100	0	0	0	45.1	0	0	0	45.1
Slovakia	15	12	80	54.4	92.7	3	20	7.3	45.6	0	0	0	17.1
Slovenia	15	13	86.7	61.7	96	2	13.3	4	38.3	0	0	0	17.1
Spain	22	18	81.8	61.2	92.5	4	18.2	7.5	38.8	0	0	0	12.2
Sweden	14	14	100	81.9	100	0	0	0	18.1	0	0	0	18.1
United Kingdom	72	60	83.3	73	90.2	12	16.7	9.8	27	0	0	0	4
<b>Total</b>	<b>655</b>	<b>493</b>	<b>75.3</b>	<b>71.8</b>	<b>78.4</b>	<b>162</b>	<b>24.7</b>	<b>21.6</b>	<b>28.2</b>	<b>0</b>	<b>0.0</b>	<b>0.0</b>	<b>0.5</b>

(a): Lower confidence limit; (b): Upper confidence limit

**PEAS (WITHOUT PODS)**

Country	No. of samples	Samples with no measurable residues						Samples with residues below or at the MRL						Samples with residues above the MRL			
		%		LCL <sup>(a)</sup>		UCL <sup>(b)</sup>		%		LCL <sup>(a)</sup>		UCL <sup>(b)</sup>		Number	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
		Number		Number		Number		Number		Number		Number					
Austria	14	10	71.4	44.9	88.2	4	28.6	11.8	55.1	0	0	0	0	0	0	18.1	
Belgium	14	9	64.3	38.4	83.7	5	35.7	16.3	61.6	0	0	0	0	0	0	18.1	
Bulgaria	40	34	85	70.8	92.8	5	12.5	5.6	26.2	1	2.5	0.6	0.6	0	0	12.9	
Cyprus	27	23	85.2	67.3	93.9	4	14.8	6.1	32.7	0	0	0	0	0	0	10.1	
Czech Republic	17	11	64.7	41	82.7	6	35.3	17.3	59	0	0	0	0	0	0	15.3	
Finland	22	16	72.7	51.6	86.8	6	27.3	13.2	48.4	0	0	0	0	0	0	12.2	
France	40	27	67.5	51.9	79.9	11	27.5	16.1	42.9	2	5	1.5	1.5	0	0	16.5	
Germany	191	93	48.7	41.7	55.7	95	49.7	42.7	56.8	3	1.6	0.6	0.6	0	0	4.5	
Greece	20	18	90	69.6	97	1	5	1.2	23.8	1	5	1.2	1.2	0	0	23.8	
Ireland	13	9	69.2	41.9	87.2	4	30.8	12.8	58.1	0	0	0	0	0	0	19.3	
Italy	55	53	96.4	87.7	98.9	2	3.6	1.1	12.3	0	0	0	0	0	0	5.2	
Latvia	8	6	75	40	92.5	2	25	7.5	60	0	0	0	0	0	0	28.3	
Lithuania	17	12	70.6	46.5	86.7	4	23.5	9.7	47.6	1	5.9	1.4	1.4	0	0	27.3	
Luxembourg	1	1	100	22.4	100	0	0	0	77.6	0	0	0	0	0	0	77.6	
Malta	15	13	86.7	61.7	96	2	13.3	4	38.3	0	0	0	0	0	0	17.1	
Netherlands	2	1	50	9.4	90.6	1	50	9.4	90.6	0	0	0	0	0	0	63.2	
Norway	15	15	100	82.9	100	0	0	0	17.1	0	0	0	0	0	0	17.1	
Poland	50	48	96	86.5	98.8	2	4	1.2	13.5	0	0	0	0	0	0	5.7	
Portugal	46	45	97.8	88.7	99.5	1	2.2	0.5	11.3	0	0	0	0	0	0	6.2	
Romania	22	22	100	87.8	100	0	0	0	12.2	0	0	0	0	0	0	12.2	
Slovakia	10	9	90	58.7	97.7	1	10	2.3	41.3	0	0	0	0	0	0	23.8	
Slovenia	51	41	80.4	67.5	88.9	10	19.6	11.1	32.5	0	0	0	0	0	0	5.6	
Spain	29	26	89.7	73.5	96.2	3	10.3	3.8	26.5	0	0	0	0	0	0	9.5	
Sweden	19	15	78.9	56.3	91.3	4	21.1	8.7	43.7	0	0	0	0	0	0	13.9	
United Kingdom	72	65	90.3	81.2	95.1	7	9.7	4.9	18.8	0	0	0	0	0	0	4	
<b>Total</b>	<b>810</b>	<b>622</b>	<b>76.8</b>	<b>73.8</b>	<b>79.6</b>	<b>180</b>	<b>22.2</b>	<b>19.5</b>	<b>25.2</b>	<b>8</b>	<b>1.0</b>	<b>0.5</b>	<b>0.5</b>	<b>8</b>	<b>1.0</b>	<b>1.9</b>	

(a): Lower confidence limit; (b): Upper confidence limit

**PEPPERS**

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	46.7	24.7	70.1	8	53.3	29.9	75.3	0	0	0	17.1
Belgium	15	9	60	35.4	80.2	6	40	19.8	64.6	0	0	0	17.1
Bulgaria	65	48	73.8	62	83	17	26.2	17	38	0	0	0	4.4
Cyprus	28	19	67.9	49.2	82.1	8	28.6	15.3	47.2	1	3.6	0.8	17.8
Czech Republic	53	26	49.1	36.1	62.2	24	45.3	32.6	58.6	3	5.7	2.1	15.4
Denmark	64	47	73.4	61.5	82.7	17	26.6	17.3	38.5	0	0	0	4.5
Estonia	16	8	50	27.8	72.2	8	50	27.8	72.2	0	0	0	16.2
Finland	54	24	44.4	32	57.7	30	55.6	42.3	68	0	0	0	5.3
France	84	63	75	64.7	83	21	25	17	35.3	0	0	0	3.5
Germany	203	82	40.4	33.9	47.3	117	57.6	50.7	64.2	4	2	0.8	4.9
Greece	149	110	73.8	66.2	80.2	35	23.5	17.4	30.9	4	2.7	1.1	6.7
Hungary	16	16	100	83.8	100	0	0	0	16.2	0	0	0	16.2
Iceland	15	14	93.3	69.8	98.4	0	0	0	17.1	1	6.7	1.6	30.2
Ireland	17	12	70.6	46.5	86.7	5	29.4	13.3	53.5	0	0	0	15.3
Italy	132	109	82.6	75.2	88.1	21	15.9	10.7	23.1	2	1.5	0.5	5.3
Latvia	9	7	77.8	44.4	93.3	2	22.2	6.7	55.6	0	0	0	25.9
Lithuania	15	6	40	19.8	64.6	8	53.3	29.9	75.3	1	6.7	1.6	30.2
Luxembourg	13	7	53.8	28.9	77	5	38.5	17.7	64.9	1	7.7	1.8	33.9
Malta	16	14	87.5	63.6	96.2	2	12.5	3.8	36.4	0	0	0	16.2
Netherlands	145	59	40.7	33	48.8	75	51.7	43.6	59.7	11	7.6	4.3	13.1
Norway	16	9	56.3	32.9	77	7	43.8	23	67.1	0	0	0	16.2
Poland	49	39	79.6	66.3	88.5	10	20.4	11.5	33.7	0	0	0	5.8
Portugal	50	49	98	89.6	99.5	1	2	0.5	10.4	0	0	0	5.7
Romania	151	139	92.1	86.6	95.4	10	6.6	3.7	11.8	2	1.3	0.4	4.7
Slovakia	16	11	68.8	44	85.8	5	31.3	14.2	56	0	0	0	16.2
Slovenia	71	47	66.2	54.6	76.1	24	33.8	23.9	45.4	0	0	0	4.1
Spain	72	40	55.6	44.1	66.5	32	44.4	33.5	55.9	0	0	0	4
Sweden	34	15	44.1	28.8	60.6	17	50	34	66	2	5.9	1.8	19.2
United Kingdom	150	101	67.3	59.5	74.3	49	32.7	25.7	40.5	0	0	0	2
<b>Total</b>	<b>1733</b>	<b>1137</b>	<b>65.6</b>	<b>63.3</b>	<b>67.8</b>	<b>564</b>	<b>32.5</b>	<b>30.4</b>	<b>34.8</b>	<b>32</b>	<b>1.8</b>	<b>1.3</b>	<b>2.6</b>

(a): Lower confidence limit; (b): Upper confidence limit



TABLE GRAPES

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	14	1	7.1	1.7	31.9	13	92.9	68.1	98.3	0	0	0	18.1
Belgium	14	1	7.1	1.7	31.9	13	92.9	68.1	98.3	0	0	0	18.1
Bulgaria	32	19	59.4	42.1	74.5	13	40.6	25.5	57.9	0	0	0	8.7
Cyprus	27	10	37	21.5	55.9	13	48.1	30.6	66.1	4	14.8	6.1	32.7
Czech Republic	32	2	6.3	1.9	20.2	29	90.6	75.7	96.6	1	3.1	0.7	15.8
Denmark	77	14	18.2	11.2	28.3	63	81.8	71.7	88.8	0	0	0	3.8
Estonia	15	1	6.7	1.6	30.2	14	93.3	69.8	98.4	0	0	0	17.1
Finland	43	6	14	6.6	27.4	34	79.1	64.7	88.5	3	7	2.5	18.7
France	83	17	20.5	13.2	30.4	62	74.7	64.4	82.8	4	4.8	2	11.7
Germany	204	16	7.8	4.9	12.4	183	89.7	84.8	93.2	5	2.5	1.1	5.6
Greece	156	81	51.9	44.1	59.6	70	44.9	37.3	52.7	5	3.2	1.4	7.3
Hungary	13	1	7.7	1.8	33.9	12	92.3	66.1	98.2	0	0	0	19.3
Iceland	15	9	60	35.4	80.2	5	33.3	15.2	58.7	1	6.7	1.6	30.2
Ireland	23	2	8.7	2.7	27	20	87	67.6	95.3	1	4.3	1	21.1
Italy	195	86	44.1	37.3	51.1	106	54.4	47.3	61.2	3	1.5	0.6	4.4
Latvia	11	4	36.4	15.2	65.1	7	63.6	34.9	84.8	0	0	0	22.1
Lithuania	15	3	20	7.3	45.6	10	66.7	41.3	84.8	2	13.3	4	38.3
Luxembourg	3	0	0	0	52.7	3	100	47.3	100	0	0	0	52.7
Malta	16	7	43.8	23	67.1	7	43.8	23	67.1	2	12.5	3.8	36.4
Netherlands	145	17	11.7	7.5	18	124	85.5	78.9	90.3	4	2.8	1.1	6.9
Norway	15	3	20	7.3	45.6	12	80	54.4	92.7	0	0	0	17.1
Poland	25	21	84	65.1	93.4	4	16	6.6	34.9	0	0	0	10.9
Portugal	45	16	35.6	23.2	50.2	29	64.4	49.8	76.8	0	0	0	6.3
Romania	134	79	59	50.5	66.9	53	39.6	31.7	48	2	1.5	0.5	5.2
Slovakia	15	0	0	0	17.1	15	100	82.9	100	0	0	0	17.1
Slovenia	31	0	0	0	8.9	29	93.5	79.2	98	2	6.5	2	20.8
Spain	44	4	9.1	3.7	21.2	38	86.4	73.2	93.5	2	4.5	1.4	15.1
Sweden	70	9	12.9	7	22.7	59	84.3	74	91	2	2.9	0.9	9.8
United Kingdom	152	15	9.9	6.1	15.7	134	88.2	82	92.4	3	2	0.7	5.6
<b>Total</b>	<b>1664</b>	<b>444</b>	<b>26.7</b>	<b>24.6</b>	<b>28.9</b>	<b>1174</b>	<b>70.6</b>	<b>68.3</b>	<b>72.7</b>	<b>46</b>	<b>2.8</b>	<b>2.1</b>	<b>3.7</b>

(a): Lower confidence limit; (b): Upper confidence limit

## WHEAT

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	13	11	84.6	57.2	95.3	2	15.4	4.7	42.8	0	0	0	19.3
Belgium	14	0	0	0	18.1	14	100	81.9	100	0	0	0	18.1
Bulgaria	101	66	65.3	55.6	73.9	29	28.7	20.8	38.2	6	5.9	2.8	12.4
Cyprus	12	10	83.3	54.6	95	2	16.7	5	45.4	0	0	0	20.6
Czech Republic	46	32	69.6	55.1	80.9	14	30.4	19.1	44.9	0	0	0	6.2
Denmark	86	55	64	53.4	73.3	31	36	26.7	46.6	0	0	0	3.4
Estonia	5	5	100	60.7	100	0	0	0	39.3	0	0	0	39.3
Finland	38	32	84.2	69.5	92.5	6	15.8	7.5	30.5	0	0	0	7.4
France	163	119	73	65.7	79.2	44	27	20.8	34.3	0	0	0	1.8
Germany	81	29	35.8	26.2	46.7	52	64.2	53.3	73.8	0	0	0	3.6
Greece	24	22	91.7	74	97.5	2	8.3	2.5	26	0	0	0	11.3
Hungary	26	16	61.5	42.4	77.6	10	38.5	22.4	57.6	0	0	0	10.5
Ireland	29	13	44.8	28.3	62.6	16	55.2	37.4	71.7	0	0	0	9.5
Italy	176	118	67	59.8	73.6	57	32.4	25.9	39.6	1	0.6	0.1	3.1
Latvia	12	12	100	79.4	100	0	0	0	20.6	0	0	0	20.6
Lithuania	15	12	80	54.4	92.7	3	20	7.3	45.6	0	0	0	17.1
Netherlands	24	7	29.2	14.9	49.4	17	70.8	50.6	85.1	0	0	0	11.3
Norway	20	13	65	43	81.9	7	35	18.1	57	0	0	0	13.3
Poland	50	48	96	86.5	98.8	0	0	0	5.7	2	4	1.2	13.5
Portugal	8	4	50	21.2	78.8	4	50	21.2	78.8	0	0	0	28.3
Romania	99	93	93.9	87.4	97.1	5	5.1	2.2	11.3	1	1	0.2	5.4
Slovakia	15	4	26.7	11	52.4	11	73.3	47.6	89	0	0	0	17.1
Slovenia	25	21	84	65.1	93.4	4	16	6.6	34.9	0	0	0	10.9
Spain	6	5	83.3	42.1	96.3	1	16.7	3.7	57.9	0	0	0	34.8
Sweden	152	134	88.2	82	92.4	18	11.8	7.6	18	0	0	0	1.9
United Kingdom	72	9	12.5	6.8	22.1	62	86.1	76.2	92.2	1	1.4	0.3	7.4
<b>Total</b>	<b>1312</b>	<b>890</b>	<b>67.8</b>	<b>65.3</b>	<b>70.3</b>	<b>411</b>	<b>31.3</b>	<b>28.9</b>	<b>33.9</b>	<b>11</b>	<b>0.8</b>	<b>0.5</b>	<b>1.5</b>

(a): Lower confidence limit; (b): Upper confidence limit

**TABLE J: EU+NCP – ENFORCEMENT SAMPLING: RESULTS PER REPORTING COUNTRY FOR ANIMAL PRODUCTS, BABY FOOD, CEREALS, FRUIT AND NUTS, VEGETABLES AND OTHER PLANT PRODUCTS - 2009**
**ANIMAL PRODUCTS**

Country	No. of samples	Processed	Samples with no measurable residues		Samples with residues below or at the MRL		Samples with residues above the MRL	
			Number	%	Number	%	Number	%
Germany	22		9	40.9	13	59.1	0	0.0
Greece	1		1	100.0	0	0.0	0	0.0
<b>Total</b>	<b>23</b>	<b>0</b>	<b>10</b>	<b>43.5</b>	<b>13</b>	<b>56.5</b>	<b>0</b>	<b>0.0</b>

**BABY FOOD**

Country	No. of samples	Processed	Samples with no measurable residues		Samples with residues below or at the MRL		Samples with residues above the MRL	
			Number	%	Number	%	Number	%
Germany	3		2		1		0	
<b>Total</b>	<b>3</b>		<b>2</b>	<b>66.7</b>	<b>1</b>	<b>33.3</b>	<b>0</b>	<b>0.0</b>

**CEREALS**

Country	No. of samples	Processed	Samples with no measurable residues		Samples with residues below or at the MRL		Samples with residues above the MRL	
			Number	%	Number	%	Number	%
Austria	22	21	15	68.2	6	27.3	1	4.5
Germany	6		6	100.0	0	0.0	0	0.0
Greece	2		2	100.0	0	0.0	0	0.0
Netherlands	1		1	100.0	0	0.0	0	0.0
Poland	3		2	66.7	1	33.3	0	0.0
Romania	1		1	100.0	0	0.0	0	0.0
Sweden	7		0	0.0	1	14.3	6	85.7
<b>Total</b>	<b>42</b>	<b>21</b>	<b>27</b>	<b>64.3</b>	<b>8</b>	<b>19.0</b>	<b>7</b>	<b>16.7</b>

**FRUIT AND NUTS**

Country	No. of samples	Processed	Samples with no measurable residues		Samples with residues below or at the MRL		Samples with residues above the MRL	
			Number	%	Number	%	Number	%
Austria	63	9	26	41.3	36	57.1	1	1.6
Belgium	30		11	36.7	11	36.7	8	26.7
Bulgaria	5		0	0.0	0	0.0	5	100.0
Finland	161		12	7.5	79	49.1	70	43.5
France	1		0	0.0	0	0.0	1	100.0
Germany	211		63	29.9	135	64.0	13	6.2
Greece	57		7	12.3	43	75.4	7	12.3
Ireland	2		1	50.0	1	50.0	0	0.0
Malta	1		0	0.0	0	0.0	1	100.0
Netherlands	10		0	0.0	9	90.0	1	10.0
Norway	2		2	100.0	0	0.0	0	0.0
Poland	5	2	4	80.0	1	20.0	0	0.0
Portugal	1		0	0.0	0	0.0	1	100.0
Romania	7		5	71.4	0	0.0	2	28.6
Slovakia	1		0	0.0	1	100.0	0	0.0
Slovenia	7		0	0.0	6	85.7	1	14.3
Spain	23		6	26.1	14	60.9	3	13.0
Sweden	35		3	8.6	24	68.6	8	22.9
<b>Total</b>	<b>622</b>	<b>11</b>	<b>140</b>	<b>22.5</b>	<b>360</b>	<b>57.9</b>	<b>122</b>	<b>19.6</b>

**OTHER PLANT PRODUCTS**

Country	No. of samples	Processed	Samples with no measurable residues		Samples with residues below or at the MRL		Samples with residues above the MRL	
			Number	%	Number	%	Number	%
Austria	17	17	6	35.3	11	64.7	0	0.0
Germany	11		2	18.2	6	54.5	3	27.3
Greece	1		1	100.0	0	0.0	0	0.0
Poland	1	1	1	100.0	0	0.0	0	0.0
Portugal	1		1	100.0	0	0.0	0	0.0
Spain	3	1	3	100.0	0	0.0	0	0.0
<b>Total</b>	<b>34</b>	<b>19</b>	<b>14</b>	<b>41.2</b>	<b>17</b>	<b>50.0</b>	<b>3</b>	<b>8.8</b>

**VEGETABLES**

Country	No. of samples	Processed	Samples with no measurable residues		Samples with residues below or at the MRL		Samples with residues above the MRL	
			Number	%	Number	%	Number	%
Austria	38	13	28	73.7	9	23.7	1	2.6
Belgium	211	24	58	27.5	98	46.4	55	26.1
Bulgaria	2	2	2	100.0	0	0.0	0	0.0
Finland	72		15	20.8	17	23.6	40	55.6
Germany	240	8	86	35.8	103	42.9	51	21.3
Greece	31	2	18	58.1	6	19.4	7	22.6
Ireland	3		1	33.3	2	66.7	0	0.0
Malta	2		0	0.0	2	100.0	0	0.0
Netherlands	3		2	66.7	1	33.3	0	0.0
Norway	2		2	100.0	0	0.0	0	0.0
Poland	9		8	88.9	1	11.1	0	0.0
Romania	3		3	100.0	0	0.0	0	0.0
Slovakia	1		1	100.0	0	0.0	0	0.0
Slovenia	2		1	50.0	1	50.0	0	0.0
Spain	52	1	33	63.5	18	34.6	1	1.9
Sweden	29		12	41.4	9	31.0	8	27.6
<b>Total</b>	<b>700</b>	<b>50</b>	<b>270</b>	<b>38.6</b>	<b>267</b>	<b>38.1</b>	<b>163</b>	<b>23.3</b>

**TABLE K1: EU+NCP – SURVEILLANCE SAMPLING: COMPARISON OF ORGANIC AND OTHER PRODUCTION RESULTS 2009 IN COUNTRIES REPORTING ORGANIC SAMPLES OF ANIMAL PRODUCTS, BABY FOOD, CEREALS, FRUIT AND NUTS, VEGETABLES AND OTHER PLANT PRODUCTS**

**ANIMAL PRODUCTS**

Country	Production method	No. of samples	Samples with no measurable residues	Samples with residues below or at the MRL	Samples with residues above the MRL			
					No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	Organic	10	10	0	0	0.0	0.0	23.8
	Other production	41	36	2	3	7.3	2.7	19.5
Belgium	Organic	2	2	0	0	0.0	0.0	63.2
	Other production	28	26	2	0	0.0	0.0	9.8
Finland	Organic	3	3	0	0	0.0	0.0	52.7
	Other production	24	23	1	0	0.0	0.0	11.3
France	Organic	1	1	0	0	0.0	0.0	77.6
	Other production	2	2	0	0	0.0	0.0	63.2
Germany	Organic	55	14	41	0	0.0	0.0	5.2
	Other production	1013	548	462	3	0.3	0.1	0.9
Latvia	Organic	3	3	0	0	0.0	0.0	52.7
	Other production	23	23	0	0	0.0	0.0	11.7
Luxembourg	Organic	5	5	0	0	0.0	0.0	39.3
	Other production	10	10	0	0	0.0	0.0	23.8
Netherlands	Organic	4	4	0	0	0.0	0.0	45.1
	Other production	45	45	0	0	0.0	0.0	6.3
Spain	Organic	1	1	0	0	0.0	0.0	77.6
	Other production	355	351	4	0	0.0	0.0	0.8
Sweden	Organic	3	3	0	0	0.0	0.0	52.7
	Other production	54	54	0	0	0.0	0.0	5.3
United Kingdom	Organic	106	104	2	0	0.0	0.0	2.8
	Other production	819	779	40	0	0.0	0.0	0.4

(a): Lower confidence limit; (b): Upper confidence limit

**BABY FOOD**

Country	Production method	No. of samples	Samples with no measurable residues	Samples with residues below or at the MRL	Samples with residues above the MRL			
					No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	Organic	93	83	10	0	0.0	0.0	3.1
	Other production	30	15	14	1	3.3	0.8	16.7
Czech Republic	Organic	10	10	0	0	0.0	0.0	23.8
	Other production	42	32	9	1	2.4	0.6	12.3
Denmark	Organic	7	7	0	0	0.0	0.0	31.2
	Other production	14	14	0	0	0.0	0.0	18.1
Finland	Organic	25	25	0	0	0.0	0.0	10.9
	Other production	14	14	0	0	0.0	0.0	18.1
France	Organic	3	3	0	0	0.0	0.0	52.7
	Other production	10	10	0	0	0.0	0.0	23.8
Germany	Organic	87	76	11	0	0.0	0.0	3.4
	Other production	107	91	16	0	0.0	0.0	2.7
Luxembourg	Organic	7	7	0	0	0.0	0.0	31.2
	Other production	8	8	0	0	0.0	0.0	28.3
Slovakia	Organic	4	4	0	0	0.0	0.0	45.1
	Other production	56	48	8	0	0.0	0.0	5.1
Spain	Organic	4	4	0	0	0.0	0.0	45.1
	Other production	139	131	8	0	0.0	0.0	2.1
Sweden	Organic	9	9	0	0	0.0	0.0	25.9
	Other production	33	33	0	0	0.0	0.0	8.4
United Kingdom	Organic	41	40	0	1	2.4	0.6	12.6
	Other production	92	92	0	0	0.0	0.0	3.2

(a): Lower confidence limit; (b): Upper confidence limit

**CEREALS**

Country	Production method	No. of samples	Samples with no measurable residues	Samples with residues below or at the MRL	Samples with residues above the MRL			
					No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	Organic	70	62	8	0	0.0	0.0	4.1
	Other production	56	43	9	4	7.1	2.9	17.0
Cyprus	Organic	1	1	0	0	0.0	0.0	77.6
	Other production	39	20	17	2	5.1	1.6	16.9
Czech Republic	Organic	24	22	2	0	0.0	0.0	11.3
	Other production	67	45	21	1	1.5	0.4	7.9
Denmark	Organic	43	41	2	0	0.0	0.0	6.6
	Other production	252	178	74	0	0.0	0.0	1.2
Estonia	Organic	12	12	0	0	0.0	0.0	20.6
	Other production	9	9	0	0	0.0	0.0	25.9
Finland	Organic	17	17	0	0	0.0	0.0	15.3
	Other production	105	58	41	6	5.7	2.7	11.9
France	Organic	102	97	5	0	0.0	0.0	2.9
	Other production	380	238	139	3	0.8	0.3	2.3
Germany	Organic	105	86	19	0	0.0	0.0	2.8
	Other production	269	161	108	0	0.0	0.0	1.1
Greece	Organic	1	1	0	0	0.0	0.0	77.6
	Other production	37	35	2	0	0.0	0.0	7.6
Italy	Organic	1	0	0	1	100.0	22.4	100.0
	Other production	625	520	104	1	0.2	0.0	0.9
Latvia	Organic	1	1	0	0	0.0	0.0	77.6
	Other production	11	11	0	0	0.0	0.0	22.1
Luxembourg	Organic	4	4	0	0	0.0	0.0	45.1
	Other production	13	5	8	0	0.0	0.0	19.3
Netherlands	Organic	17	11	6	0	0.0	0.0	15.3
	Other production	106	32	74	0	0.0	0.0	2.8
Poland	Organic	12	12	0	0	0.0	0.0	20.6
	Other production	141	132	7	2	1.4	0.4	5.0
Sweden	Organic	9	8	1	0	0.0	0.0	25.9
	Other production	256	181	61	14	5.5	3.3	9.0
United Kingdom	Organic	11	9	2	0	0.0	0.0	22.1
	Other production	351	117	233	1	0.3	0.1	1.6

(a): Lower confidence limit; (b): Upper confidence limit



**FRUIT AND NUTS**

Country	Production method	No. of samples	Samples with no measurable residues	Samples with residues below or at the MRL	Samples with residues above the MRL			
					No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	Organic	72	69	3	0	0.0	0.0	4.0
	Other production	558	142	410	6	1.1	0.5	2.3
Belgium	Organic	2	2	0	0	0.0	0.0	63.2
	Other production	774	144	584	46	5.9	4.5	7.8
Cyprus	Organic	7	7	0	0	0.0	0.0	31.2
	Other production	165	85	71	9	5.5	2.9	10.0
Czech Republic	Organic	7	4	3	0	0.0	0.0	31.2
	Other production	442	56	378	8	1.8	0.9	3.5
Denmark	Organic	55	54	1	0	0.0	0.0	5.2
	Other production	873	245	605	23	2.6	1.8	3.9
Estonia	Organic	3	3	0	0	0.0	0.0	52.7
	Other production	180	72	104	4	2.2	0.9	5.6
Finland	Organic	42	39	1	2	4.8	1.5	15.8
	Other production	994	173	652	169	17.0	14.8	19.5
France	Organic	108	106	2	0	0.0	0.0	2.7
	Other production	1189	622	543	24	2.0	1.4	3.0
Germany	Organic	435	354	80	1	0.2	0.1	1.3
	Other production	6698	1452	5045	201	3.0	2.6	3.4
Greece	Organic	9	8	1	0	0.0	0.0	25.9
	Other production	758	450	279	29	3.8	2.7	5.4
Iceland	Organic	4	4	0	0	0.0	0.0	45.1
	Other production	112	35	76	1	0.9	0.2	4.8
Ireland	Organic	26	26	0	0	0.0	0.0	10.5
	Other production	458	120	329	9	2.0	1.1	3.7
Lithuania	Organic	6	6	0	0	0.0	0.0	34.8
	Other production	132	45	81	6	4.6	2.1	9.6
Luxembourg	Organic	3	3	0	0	0.0	0.0	52.7
	Other production	56	19	36	1	1.8	0.4	9.4
Malta	Organic	1	1	0	0	0.0	0.0	77.6
	Other production	47	27	17	3	6.4	2.3	17.2
Netherlands	Organic	48	41	5	2	4.2	1.3	14.0
	Other production	1376	315	988	73	5.3	4.2	6.6
Norway	Organic	43	42	1	0	0.0	0.0	6.6
	Other production	553	140	411	2	0.4	0.1	1.3
Portugal	Organic	3	2	1	0	0.0	0.0	52.7
	Other production	484	280	186	18	3.7	2.4	5.8
Slovakia	Organic	11	11	0	0	0.0	0.0	22.1
	Other production	311	100	207	4	1.3	0.5	3.3
Spain	Organic	3	2	1	0	0.0	0.0	52.7
	Other production	446	125	306	15	3.4	2.1	5.5
Sweden	Organic	29	28	1	0	0.0	0.0	9.5
	Other production	783	160	560	63	8.1	6.3	10.2
United Kingdom	Organic	38	37	1	0	0.0	0.0	7.4
	Other production	978	259	707	12	1.2	0.7	2.1

(a): Lower confidence limit; (b): Upper confidence limit

**OTHER PLANT PRODUCTS**

Country	Production method	No. of samples	Samples with no measurable residues	Samples with residues below or at the MRL	Samples with residues above the MRL			
					No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	Organic	43	36	7	0	0.0	0.0	6.6
	Other production	232	161	61	10	4.3	2.4	7.8
Cyprus	Organic	2	2	0	0	0.0	0.0	63.2
	Other production	51	47	1	3	5.9	2.1	16.0
Denmark	Organic	4	4	0	0	0.0	0.0	45.1
	Other production	18	17	1	0	0.0	0.0	14.6
Finland	Organic	35	30	4	1	2.9	0.7	14.5
	Other production	130	65	45	20	15.4	10.2	22.6
France	Organic	22	21	1	0	0.0	0.0	12.2
	Other production	117	101	10	6	5.1	2.4	10.7
Germany	Organic	64	32	32	0	0.0	0.0	4.5
	Other production	391	210	162	19	4.9	3.1	7.5
Greece	Organic	2	2	0	0	0.0	0.0	63.2
	Other production	272	239	31	2	0.7	0.2	2.6
Lithuania	Organic	1	1	0	0	0.0	0.0	77.6
	Other production	7	7	0	0	0.0	0.0	31.2
Netherlands	Organic	7	5	2	0	0.0	0.0	31.2
	Other production	65	28	35	2	3.1	1.0	10.5
Sweden	Organic	3	3	0	0	0.0	0.0	52.7
	Other production	29	24	5	0	0.0	0.0	9.5
United Kingdom	Organic	1	1	0	0	0.0	0.0	77.6
	Other production	98	73	25	0	0.0	0.0	3.0

(a): Lower confidence limit; (b): Upper confidence limit

## VEGETABLES

Country	Production method	No. of samples	Samples with no measurable residues	Samples with residues below or at the MRL	Samples with residues above the MRL			
					No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Austria	Organic	72	71	0	1	1.4	0.3	7.4
	Other production	786	486	289	11	1.4	0.8	2.5
Belgium	Organic	3	1	2	0	0.0	0.0	52.7
	Other production	1139	449	594	96	8.4	7.0	10.2
Bulgaria	Organic	10	10	0	0	0.0	0.0	23.8
	Other production	535	411	118	6	1.1	0.5	2.4
Cyprus	Organic	10	10	0	0	0.0	0.0	23.8
	Other production	263	179	63	21	8.0	5.3	11.9
Czech Republic	Organic	14	10	4	0	0.0	0.0	18.1
	Other production	467	138	319	10	2.1	1.2	3.9
Denmark	Organic	46	45	1	0	0.0	0.0	6.2
	Other production	671	488	168	15	2.2	1.4	3.7
Estonia	Organic	8	8	0	0	0.0	0.0	28.3
	Other production	135	70	58	7	5.2	2.6	10.3
Finland	Organic	23	23	0	0	0.0	0.0	11.7
	Other production	874	413	366	95	10.9	9.0	13.1
France	Organic	84	82	2	0	0.0	0.0	3.5
	Other production	2025	1379	569	77	3.8	3.1	4.7
Germany	Organic	514	418	94	2	0.4	0.1	1.4
	Other production	7128	3279	3525	324	4.6	4.1	5.1
Greece	Organic	40	40	0	0	0.0	0.0	7.1
	Other production	1101	914	149	38	3.5	2.5	4.7
Iceland	Organic	8	8	0	0	0.0	0.0	28.3
	Other production	176	162	13	1	0.6	0.1	3.1
Ireland	Organic	14	13	1	0	0.0	0.0	18.1
	Other production	292	165	124	3	1.0	0.4	3.0
Italy	Organic	2	0	0	2	100.0	36.8	100.0
	Other production	2488	2216	252	20	0.8	0.5	1.2
Latvia	Organic	1	1	0	0	0.0	0.0	77.6
	Other production	40	31	7	2	5.0	1.5	16.5
Lithuania	Organic	5	5	0	0	0.0	0.0	39.3
	Other production	100	57	39	4	4.0	1.6	9.8
Luxembourg	Organic	12	11	1	0	0.0	0.0	20.6
	Other production	43	23	17	3	7.0	2.5	18.7
Malta	Organic	4	4	0	0	0.0	0.0	45.1
	Other production	69	61	8	0	0.0	0.0	4.2
Netherlands	Organic	112	104	8	0	0.0	0.0	2.6
	Other production	2037	918	895	224	11.0	9.7	12.4
Norway	Organic	61	60	1	0	0.0	0.0	4.7
	Other production	615	454	155	6	1.0	0.5	2.1
Poland	Organic	4	4	0	0	0.0	0.0	45.1
	Other production	773	609	160	4	0.5	0.2	1.3
Slovakia	Organic	3	3	0	0	0.0	0.0	52.7
	Other production	252	190	59	3	1.2	0.4	3.4
Spain	Organic	2	2	0	0	0.0	0.0	63.2
	Other production	542	336	198	8	1.5	0.8	2.9
Sweden	Organic	10	9	1	0	0.0	0.0	23.8
	Other production	566	324	204	38	6.7	4.9	9.1
United Kingdom	Organic	47	44	3	0	0.0	0.0	6.1
	Other production	1133	655	444	34	3.0	2.2	4.2

(a): Lower confidence limit; (b): Upper confidence limit

**TABLE K2: EU+NCP – SURVEILLANCE SAMPLING: RESULTS BY PRODUCTION TYPE IN ANIMAL PRODUCTS, BABY FOOD, CEREALS, FRUIT, VEGETABLES AND OTHER PLANT PRODUCTS - 2009**
**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		
		No.	%	LCL <sup>(a)</sup> UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup> UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup> UCL <sup>(b)</sup>
Battery production	63	62	98.4	91.6 99.6	1	1.6	0.4 8.4	0	0.0	0.0 4.6
Free range production	3	3	100.0	47.3 100.0	0	0.0	0.0 52.7	0	0.0	0.0 52.7
Industrial production	154	126	81.8	75.0 87.1	28	18.2	12.9 25.0	0	0.0	0.0 1.9
Non-organic production	546	534	97.8	96.2 98.7	5	0.9	0.4 2.1	7	1.3	0.6 2.6
Organic production	193	150	77.7	71.3 83.0	43	22.3	17.0 28.7	0	0.0	0.0 1.5
Other production method	13	13	100.0	80.7 100.0	0	0.0	0.0 19.3	0	0.0	0.0 19.3
Outdoor / Open-air growing condition	2	2	100.0	36.8 100.0	0	0.0	0.0 63.2	0	0.0	0.0 63.2
Production method unknown	2810	2289	81.5	80.0 82.9	516	18.4	17.0 19.8	5	0.2	0.1 0.4
Traditional production	62	62	100.0	95.4 100.0	0	0.0	0.0 4.6	0	0.0	0.0 4.6
<b>Total</b>	<b>3846</b>	<b>3241</b>	<b>84.3</b>	<b>83.1</b> <b>85.4</b>	<b>593</b>	<b>15.4</b>	<b>14.3</b> <b>16.6</b>	<b>12</b>	<b>0.3</b>	<b>0.2</b> <b>0.5</b>

(a): Lower confidence limit; (b): Upper confidence limit

**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		
		No.	%	LCL <sup>(a)</sup> UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup> UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup> UCL <sup>(b)</sup>
Industrial production	127	122	96.1	91.1 98.3	5	3.9	1.7 8.9	0	0.0	0.0 2.3
Integrated Pest Management	1	1	100.0	22.4 100.0	0	0.0	0.0 77.6	0	0.0	0.0 77.6
Non-organic production	445	402	90.3	87.2 92.7	39	8.8	6.5 11.8	4	0.9	0.4 2.3
Organic production	288	267	92.7	89.1 95.2	20	6.9	4.6 10.5	1	0.3	0.1 1.9
Production method unknown	994	953	95.9	94.5 96.9	31	3.1	2.2 4.4	10	1.0	0.6 1.8
Traditional production	33	33	100.0	91.6 100.0	0	0.0	0.0 8.4	0	0.0	0.0 8.4
<b>Total</b>	<b>1888</b>	<b>1778</b>	<b>94.2</b>	<b>93.0</b> <b>95.1</b>	<b>95</b>	<b>5.0</b>	<b>4.1</b> <b>6.1</b>	<b>15</b>	<b>0.8</b>	<b>0.5</b> <b>1.3</b>

(a): Lower confidence limit; (b): Upper confidence limit

**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			
		No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Integrated Pest Management	54	30	55.6	42.3	68.0	19	35.2	23.8	48.6	5	9.3	4.1	20.0
Non-organic production	2117	1535	72.5	70.6	74.4	565	26.7	24.8	28.6	17	0.8	0.5	1.3
Organic production	408	368	90.2	86.9	92.7	39	9.6	7.1	12.8	1	0.2	0.1	1.4
Outdoor / Open-air growing condition	21	20	95.2	77.2	98.9	1	4.8	1.1	22.8	0	0.0	0.0	12.7
Production method unknown	1154	663	57.5	54.6	60.3	485	42.0	39.2	44.9	6	0.5	0.2	1.1
Traditional production	247	180	72.9	67.0	78.0	59	23.9	19.0	29.6	8	3.2	1.7	6.3
<b>Total</b>	<b>4001</b>	<b>2796</b>	<b>69.9</b>	<b>68.4</b>	<b>71.3</b>	<b>1168</b>	<b>29.2</b>	<b>27.8</b>	<b>30.6</b>	<b>37</b>	<b>0.9</b>	<b>0.7</b>	<b>1.3</b>

(a): Lower confidence limit; (b): Upper confidence limit

**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			
		No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Domestic or cultivated	6	5	83.3	42.1	96.3	1	16.7	3.7	57.9	0	0.0	0.0	34.8
Free range production	2	2	100.0	36.8	100.0	0	0.0	0.0	63.2	0	0.0	0.0	63.2
Industrial production	80	67	83.8	74.1	90.2	13	16.3	9.8	25.9	0	0.0	0.0	3.6
Integrated Pest Management	278	161	57.9	52.0	63.6	107	38.5	33.0	44.3	10	3.6	2.0	6.5
Non-organic production	28268	16729	59.2	58.6	59.8	10638	37.6	37.1	38.2	901	3.2	3.0	3.4
Organic production	2196	1931	87.9	86.5	89.2	255	11.6	10.3	13.0	10	0.5	0.3	0.8
Outdoor / Open-air growing condition	396	265	66.9	62.1	71.4	121	30.6	26.2	35.3	10	2.5	1.4	4.6
Production method unknown	23917	10451	43.7	43.1	44.3	12817	53.6	53.0	54.2	649	2.7	2.5	2.9
Traditional production	1370	480	35.0	32.6	37.6	794	58.0	55.3	60.5	96	7.0	5.8	8.5
Under glass / protected growing condition	102	76	74.5	65.2	82.0	26	25.5	18.0	34.8	0	0.0	0.0	2.9
<b>Total</b>	<b>56615</b>	<b>30167</b>	<b>53.3</b>	<b>52.9</b>	<b>53.7</b>	<b>24772</b>	<b>43.8</b>	<b>43.3</b>	<b>44.2</b>	<b>1676</b>	<b>3.0</b>	<b>2.8</b>	<b>3.1</b>

(a): Lower confidence limit; (b): Upper confidence limit

**TABLE K3: EU+NCP – SURVEILLANCE SAMPLING: RESULTS BY TREATMENT IN ANIMAL PRODUCTS, BABY FOOD, CEREALS, FRUIT AND NUTS, VEGETABLES AND OTHER PLANT PRODUCTS - 2009.**
**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									
		No.		%		UCL <sup>(b)</sup>		No.		%		LCL <sup>(a)</sup>		UCL <sup>(b)</sup>		No.		%		LCL <sup>(a)</sup>		UCL <sup>(b)</sup>	
Churning	514	392	76.3	72.4	79.7	79.7	118	23.0	19.5	26.8	4	0.8	0.3	2.0									
Cooked	15	14	93.3	69.8	98.5	98.5	1	6.7	1.6	30.2	0	0.0	0.0	17.1									
Freezing	24	24	100.0	88.7	100.0	100.0	0	0.0	0.0	11.3	0	0.0	0.0	11.3									
Preserving	2	2	100.0	36.8	100.0	100.0	0	0.0	0.0	63.2	0	0.0	0.0	63.2									
Processed	683	668	97.8	96.4	98.7	98.7	15	2.2	1.3	3.6	0	0.0	0.0	0.4									
Unknown	3	3	100.0	47.3	100.0	100.0	0	0.0	0.0	52.7	0	0.0	0.0	52.7									
Unprocessed	2605	2138	82.1	80.6	83.5	83.5	459	17.6	16.2	19.1	8	0.3	0.2	0.6									

(a): Lower confidence limit; (b): Upper confidence limit

**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									
		No.		%		UCL <sup>(b)</sup>		No.		%		LCL <sup>(a)</sup>		UCL <sup>(b)</sup>		No.		%		LCL <sup>(a)</sup>		UCL <sup>(b)</sup>	
Canning	18	18	100.0	85.4	100.0	100.0	0	0.0	0.0	14.6	0	0.0	0.0	14.6									
Cooking in air (Baking)	1	0	0.0	0.0	77.6	77.6	1	100.0	22.4	100.0	0	0.0	0.0	77.6									
Dehydration	2	2	100.0	36.8	100.0	100.0	0	0.0	0.0	63.2	0	0.0	0.0	63.2									
Juicing	30	30	100.0	90.8	100.0	100.0	0	0.0	0.0	9.2	0	0.0	0.0	9.2									
Milling	1	1	100.0	22.4	100.0	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6									
Milling - refined flour	3	1	33.3	6.8	80.6	80.6	2	66.7	19.4	93.2	0	0.0	0.0	52.7									
Preserving	62	55	88.7	78.4	94.4	94.4	6	9.7	4.6	19.6	1	1.6	0.4	8.5									
Processed	1560	1481	94.9	93.7	95.9	95.9	67	4.3	3.4	5.4	12	0.8	0.4	1.3									
Unknown	20	20	100.0	86.7	100.0	100.0	0	0.0	0.0	13.3	0	0.0	0.0	13.3									
Unprocessed	191	170	89.0	83.8	92.7	92.7	19	10.0	6.5	15.0	2	1.1	0.3	3.7									

(a): Lower confidence limit; (b): Upper confidence limit

**CEREALS**

Treatment	No. of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Canning	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Cooked	18	11	61.1	38.4	79.8	7	38.9	20.3	61.6	0	0.0	0.0	14.6
Cooking in air (Baking)	75	55	73.3	62.3	82.0	20	26.7	18.0	37.7	0	0.0	0.0	3.9
Cooking in oil (Frying)	2	2	100.0	36.8	100.0	0	0.0	0.0	63.2	0	0.0	0.0	63.2
Dehydration	55	49	89.1	78.1	94.8	4	7.3	3.0	17.3	2	3.6	1.1	12.3
Freezing	2	1	50.0	9.4	90.6	1	50.0	9.4	90.6	0	0.0	0.0	63.2
Milling	380	252	66.3	61.4	70.9	126	33.2	28.6	38.0	2	0.5	0.2	1.9
Milling - bran production	9	6	66.7	34.8	87.8	3	33.3	12.2	65.3	0	0.0	0.0	25.9
Milling - refined flour	27	19	70.4	51.3	84.1	8	29.6	15.9	48.7	0	0.0	0.0	10.2
Milling - unprocessed flour	14	7	50.0	26.6	73.4	7	50.0	26.6	73.4	0	0.0	0.0	18.1
Oil production	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Peeling (edible peel)	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Pickling	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Polishing	72	62	86.1	76.3	92.2	9	12.5	6.8	22.1	1	1.4	0.3	7.4
Processed	441	224	50.8	46.1	55.4	214	48.5	43.9	53.2	3	0.7	0.3	2.0
Production of alcoholic beverages	2	1	50.0	9.4	90.6	1	50.0	9.4	90.6	0	0.0	0.0	63.2
Silage/Fodder production	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Unknown	26	19	73.1	53.7	86.3	6	23.1	11.1	42.3	1	3.9	0.9	19.0
Unprocessed	2873	2083	72.5	70.8	74.1	762	26.5	24.9	28.2	28	1.0	0.7	1.4

(a): Lower confidence limit; (b): Upper confidence limit

**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			
		No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Canning	60	48	80.0	68.2	88.1	11	18.3	10.6	30.0	1	1.7	0.4	8.8
Dehydration	171	96	56.1	48.6	63.4	71	41.5	34.4	49.0	4	2.3	1.0	5.9
Freezing	190	77	40.5	33.8	47.6	105	55.3	48.2	62.2	8	4.2	2.2	8.1
Juicing	965	744	77.1	74.3	79.6	221	22.9	20.4	25.7	0	0.0	0.0	0.3
Milling	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Oil production	4	4	100.0	54.9	100.0	0	0.0	0.0	45.1	0	0.0	0.0	45.1
Peeling (edible peel)	2	2	100.0	36.8	100.0	0	0.0	0.0	63.2	0	0.0	0.0	63.2
Pickling	6	5	83.3	42.1	96.3	1	16.7	3.7	57.9	0	0.0	0.0	34.8
Preserving	116	105	90.5	83.8	94.6	10	8.6	4.8	15.2	1	0.9	0.2	4.7
Processed	557	369	66.3	62.2	70.1	166	29.8	26.2	33.7	22	4.0	2.6	5.9
Production of alcoholic beverages	48	37	77.1	63.4	86.7	11	22.9	13.3	36.6	0	0.0	0.0	5.9
Unknown	8	7	87.5	51.8	97.2	1	12.5	2.8	48.3	0	0.0	0.0	28.3
Unprocessed	22935	8291	36.2	35.5	36.8	14000	61.0	60.4	61.7	644	2.8	2.6	3.0
Wine production	886	621	70.1	67.0	73.0	265	29.9	27.0	33.0	0	0.0	0.0	0.3
Wine production - red wine cold process	7	5	71.4	34.9	91.5	2	28.6	8.5	65.1	0	0.0	0.0	31.2
Wine production - white wine	7	0	0.0	0.0	31.2	7	100.0	68.8	100.0	0	0.0	0.0	31.2

(a): Lower confidence limit; (b): Upper confidence limit



**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			
		No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Canning	3	3	100.0	47.3	100.0	0	0.0	0.0	52.7	0	0.0	0.0	52.7
Churning	8	8	100.0	71.7	100.0	0	0.0	0.0	28.3	0	0.0	0.0	28.3
Cooked	8	8	100.0	71.7	100.0	0	0.0	0.0	28.3	0	0.0	0.0	28.3
Cooking in air (Baking)	2	2	100.0	36.8	100.0	0	0.0	0.0	63.2	0	0.0	0.0	63.2
Dehydration	36	33	91.7	78.1	97.0	3	8.3	3.0	21.9	0	0.0	0.0	7.8
Freezing	4	3	75.0	28.4	94.7	1	25.0	5.3	71.6	0	0.0	0.0	45.1
Infusion / extractions	28	22	78.6	60.3	89.7	6	21.4	10.3	39.7	0	0.0	0.0	9.8
Milling	2	2	100.0	36.8	100.0	0	0.0	0.0	63.2	0	0.0	0.0	63.2
Oil production	469	407	86.8	83.4	89.5	61	13.0	10.3	16.4	1	0.2	0.1	1.2
Oil production - Cold press	129	116	89.9	83.5	94.0	13	10.1	6.0	16.5	0	0.0	0.0	2.3
Oil production - Solvent Extraction	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Oil production - Virgin oil after cold press	84	69	82.1	72.6	88.8	15	17.9	11.2	27.4	0	0.0	0.0	3.5
Oil production - refined oils	9	8	88.9	55.5	97.5	1	11.1	2.5	44.5	0	0.0	0.0	25.9
Processed	312	211	67.6	62.2	72.6	79	25.3	20.8	30.4	22	7.1	4.7	10.5
Production of alcoholic beverages	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Sugar production	21	21	100.0	87.3	100.0	0	0.0	0.0	12.7	0	0.0	0.0	12.7
Unprocessed	1083	729	67.3	64.5	70.0	306	28.3	25.7	31.0	48	4.4	3.4	5.8

(a): Lower confidence limit; (b): Upper confidence limit

## VEGETABLES

Treatment	No. of samples	Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Canning	189	179	94.7	90.5	97.1	9	4.8	2.6	8.8	1	0.5	0.1	2.9
Cooking in water	10	10	100.0	76.2	100.0	0	0.0	0.0	23.8	0	0.0	0.0	23.8
Dehydration	178	79	44.4	37.3	51.7	73	41.0	34.1	48.4	26	14.6	10.2	20.6
Fermentation	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Freezing	648	513	79.2	75.9	82.1	121	18.7	15.9	21.9	14	2.2	1.3	3.6
Juicing	27	27	100.0	89.9	100.0	0	0.0	0.0	10.2	0	0.0	0.0	10.2
Milling	12	11	91.7	64.0	98.1	1	8.3	1.9	36.0	0	0.0	0.0	20.6
Peeling (edible peel)	5	3	60.0	22.3	88.2	2	40.0	11.8	77.7	0	0.0	0.0	39.3
Peeling (inedible peel)	29	25	86.2	69.3	94.4	4	13.8	5.6	30.7	0	0.0	0.0	9.5
Pickling	18	9	50.0	28.9	71.1	9	50.0	28.9	71.1	0	0.0	0.0	14.6
Preserving	2	1	50.0	9.4	90.6	1	50.0	9.4	90.6	0	0.0	0.0	63.2
Processed	341	172	50.4	45.2	55.7	156	45.8	40.5	51.1	13	3.8	2.3	6.4
Unknown	21	20	95.2	77.2	98.9	1	4.8	1.1	22.8	0	0.0	0.0	12.7
Unprocessed	26971	17061	63.3	62.7	63.8	9039	33.5	33.0	34.1	871	3.2	3.0	3.5

(a): Lower confidence limit; (b): Upper confidence limit

**TABLE L: EU+NCP – ENFORCEMENT AND SURVEILLANCE SAMPLING: RESULTS BY COUNTRY OF ORIGIN - 2009.**

Country of origin	No. of samples	ENFORCEMENT											
		Samples with no measurable residues				Samples with residues below or at the MRL				Samples with residues above the MRL			
		No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Argentina	77	21	27.3	18.6	38.2	39	50.7	39.7	61.5	17	22.1	14.3	32.6
Austria	50	26	52.0	38.5	65.3	24	48.0	34.8	61.5	0	0.0	0.0	5.7
Belarus	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Belgium	34	11	32.4	19.1	49.3	11	32.4	19.1	49.3	12	35.3	21.5	52.2
Brazil	21	2	9.5	2.9	29.2	8	38.1	20.7	59.3	11	52.4	32.2	71.8
Bulgaria	4	3	75.0	28.4	94.7	0	0.0	0.0	45.1	1	25.0	5.3	71.6
Chile	4	0	0.0	0.0	45.1	4	100.0	54.9	100.0	0	0.0	0.0	45.1
China	27	7	25.9	13.2	44.9	17	63.0	44.1	78.5	3	11.1	4.0	28.2
Colombia	22	2	9.1	2.8	28.0	13	59.1	38.5	76.8	7	31.8	16.4	52.9
Costa Rica	5	2	40.0	11.8	77.7	3	60.0	22.3	88.2	0	0.0	0.0	39.3
Czech Republic	1	0	0.0	0.0	77.6	1	100.0	22.4	100.0	0	0.0	0.0	77.6
Dominican Republic	98	36	36.7	27.9	46.6	46	46.9	37.3	56.8	16	16.3	10.3	24.9
Ecuador	18	2	11.1	3.4	33.1	14	77.8	54.4	90.9	2	11.1	3.4	33.1
Egypt	47	6	12.8	6.1	25.3	32	68.1	53.8	79.6	9	19.2	10.5	32.6
Ethiopia	1	0	0.0	0.0	77.6	1	100.0	22.4	100.0	0	0.0	0.0	77.6
Finland	1	0	0.0	0.0	77.6	1	100.0	22.4	100.0	0	0.0	0.0	77.6
France	26	6	23.1	11.1	42.3	18	69.2	49.8	83.5	2	7.7	2.4	24.3
Germany	102	43	42.2	33.0	51.9	58	56.9	47.2	66.1	1	1.0	0.2	5.3
Greece	96	28	29.2	21.0	39.0	54	56.3	46.3	65.8	14	14.6	8.9	23.0
Hungary	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
India	33	9	27.3	15.1	44.4	11	33.3	19.8	50.5	13	39.4	24.7	56.4
Indonesia	2	0	0.0	0.0	63.2	2	100.0	36.8	100.0	0	0.0	0.0	63.2
Ireland	3	1	33.3	6.8	80.6	2	66.7	19.4	93.2	0	0.0	0.0	52.7
Israel	15	9	60.0	35.4	80.3	3	20.0	7.3	45.7	3	20.0	7.3	45.7
Italy	60	32	53.3	40.9	65.4	26	43.3	31.6	55.9	2	3.3	1.0	11.4

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			
		No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Japan	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Jordan	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Kenya	8	3	37.5	13.7	70.1	2	25.0	7.5	60.0	3	37.5	13.7	70.1
Malta	3	0	0.0	0.0	52.7	2	66.7	19.4	93.2	1	33.3	6.8	80.6
Mexico	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Morocco	5	3	60.0	22.3	88.2	2	40.0	11.8	77.7	0	0.0	0.0	39.3
Netherlands	26	10	38.5	22.4	57.6	15	57.7	38.8	74.5	1	3.9	0.9	19.0
Non domestic, import	13	4	30.8	12.8	58.1	9	69.2	41.9	87.2	0	0.0	0.0	19.3
Pakistan	9	0	0.0	0.0	25.9	3	33.3	12.2	65.3	6	66.7	34.8	87.8
Panama	1	0	0.0	0.0	77.6	1	100.0	22.4	100.0	0	0.0	0.0	77.6
Peru	6	4	66.7	29.0	90.1	0	0.0	0.0	34.8	2	33.3	9.9	71.0
Poland	27	17	63.0	44.1	78.5	7	25.9	13.2	44.9	3	11.1	4.0	28.2
Portugal	4	1	25.0	5.3	71.6	2	50.0	14.7	85.3	1	25.0	5.3	71.6
Romania	12	9	75.0	46.2	90.9	1	8.3	1.9	36.0	2	16.7	5.0	45.5
Russia	2	0	0.0	0.0	63.2	2	100.0	36.8	100.0	0	0.0	0.0	63.2
Serbia	1	0	0.0	0.0	77.6	1	100.0	22.4	100.0	0	0.0	0.0	77.6
Slovenia	5	1	20.0	4.3	64.1	3	60.0	22.3	88.2	1	20.0	4.3	64.1
South Africa	13	5	38.5	17.7	64.9	8	61.5	35.1	82.3	0	0.0	0.0	19.3
Spain	125	58	46.4	37.9	55.1	65	52.0	43.3	60.6	2	1.6	0.5	5.6
Sri Lanka	2	2	100.0	36.8	100.0	0	0.0	0.0	63.2	0	0.0	0.0	63.2
Thailand	217	53	24.4	19.2	30.6	75	34.6	28.6	41.1	89	41.0	34.7	47.7
Turkey	35	8	22.9	12.1	39.2	14	40.0	25.5	56.5	13	37.1	23.1	53.8
Uganda	21	3	14.3	5.2	34.9	1	4.8	1.1	22.8	17	81.0	59.7	92.2
United Kingdom	1	0	0.0	0.0	77.6	0	0.0	0.0	77.6	1	100.0	22.4	100.0
United States	55	4	7.3	3.0	17.3	24	43.6	31.3	56.8	27	49.1	36.3	62.0
Unknown	78	26	33.3	23.9	44.4	41	52.6	41.6	63.3	11	14.1	8.1	23.6
Uruguay	2	1	50.0	9.4	90.6	0	0.0	0.0	63.2	1	50.0	9.4	90.6
Vietnam	5	4	80.0	35.9	95.7	0	0.0	0.0	39.3	1	20.0	4.3	64.1

(a): Lower confidence limit; (b): Upper confidence limit

## SURVEILLANCE

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			
		No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Afghanistan	2	2	100.0	36.8	100.0	0	0.0	0.0	63.2	0	0.0	0.0	63.2
Albania	7	5	71.4	34.9	91.5	2	28.6	8.5	65.1	0	0.0	0.0	31.2
Algeria	3	2	66.7	19.4	93.2	1	33.3	6.8	80.6	0	0.0	0.0	52.7
Argentina	679	258	38.0	34.4	41.7	385	56.7	53.0	60.4	36	5.3	3.9	7.3
Australia	51	28	54.9	41.3	67.8	22	43.1	30.5	56.8	1	2.0	0.5	10.3
Austria	947	655	69.2	66.2	72.0	280	29.6	26.8	32.6	12	1.3	0.7	2.2
Bangladesh	19	17	89.5	68.3	96.8	1	5.3	1.2	24.9	1	5.3	1.2	24.9
Belarus	26	24	92.3	75.7	97.7	2	7.7	2.4	24.3	0	0.0	0.0	10.5
Belgium	1605	562	35.0	32.7	37.4	988	61.6	59.2	63.9	55	3.4	2.6	4.4
Belize	11	0	0.0	0.0	22.1	11	100.0	77.9	100.0	0	0.0	0.0	22.1
Benin	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Bolivia	4	1	25.0	5.3	71.6	0	0.0	0.0	45.1	3	75.0	28.4	94.7
Bosnia And Herzegovina	18	11	61.1	38.4	79.8	7	38.9	20.3	61.6	0	0.0	0.0	14.6
Brazil	622	182	29.3	25.8	33.0	414	66.6	62.8	70.2	26	4.2	2.9	6.1
Bulgaria	733	529	72.2	68.8	75.3	187	25.5	22.5	28.8	17	2.3	1.5	3.7
Burkina Faso	7	7	100.0	68.8	100.0	0	0.0	0.0	31.2	0	0.0	0.0	31.2
Burundi	8	6	75.0	40.0	92.5	1	12.5	2.8	48.3	1	12.5	2.8	48.3
Cambodia	2	2	100.0	36.8	100.0	0	0.0	0.0	63.2	0	0.0	0.0	63.2
Cameroon	49	6	12.2	5.8	24.3	43	87.8	75.7	94.2	0	0.0	0.0	5.8
Canada	82	57	69.5	58.8	78.4	24	29.3	20.5	39.9	1	1.2	0.3	6.5
Central African Republic	3	2	66.7	19.4	93.2	1	33.3	6.8	80.6	0	0.0	0.0	52.7
Chile	783	230	29.4	26.3	32.7	528	67.4	64.1	70.6	25	3.2	2.2	4.7
China	712	395	55.5	51.8	59.1	255	35.8	32.4	39.4	62	8.7	6.9	11.0
Colombia	338	102	30.2	25.5	35.3	230	68.1	62.9	72.8	6	1.8	0.8	3.8
Comoros	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6

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			
		No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Cook Islands	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Costa Rica	416	114	27.4	23.3	31.9	299	71.9	67.4	76.0	3	0.7	0.3	2.1
Cote D'Ivoire	72	38	52.8	41.4	63.9	32	44.4	33.5	56.0	2	2.8	0.9	9.6
Croatia	39	19	48.7	33.8	63.9	18	46.2	31.5	61.5	2	5.1	1.6	16.9
Cuba	15	10	66.7	41.3	84.8	3	20.0	7.3	45.7	2	13.3	4.1	38.4
Cyprus	498	333	66.9	62.6	70.9	132	26.5	22.8	30.6	33	6.6	4.8	9.2
Czech Republic	352	176	50.0	44.8	55.2	169	48.0	42.8	53.2	7	2.0	1.0	4.0
Denmark	884	788	89.1	86.9	91.0	92	10.4	8.6	12.6	4	0.5	0.2	1.2
Dominica	30	30	100.0	90.8	100.0	0	0.0	0.0	9.2	0	0.0	0.0	9.2
Dominican Republic	254	147	57.9	51.7	63.8	83	32.7	27.2	38.7	24	9.5	6.5	13.7
EEA	1	0	0.0	0.0	77.6	1	100.0	22.4	100.0	0	0.0	0.0	77.6
Ecuador	437	221	50.6	45.9	55.2	212	48.5	43.9	53.2	4	0.9	0.4	2.3
Egypt	774	322	41.6	38.2	45.1	356	46.0	42.5	49.5	96	12.4	10.3	14.9
El Salvador	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Estonia	220	175	79.6	73.7	84.3	44	20.0	15.3	25.8	1	0.5	0.1	2.5
Ethiopia	23	13	56.5	36.6	74.5	10	43.5	25.6	63.4	0	0.0	0.0	11.7
European Union	244	217	88.9	84.4	92.3	26	10.7	7.4	15.2	1	0.4	0.1	2.3
Finland	340	250	73.5	68.6	77.9	88	25.9	21.5	30.8	2	0.6	0.2	2.1
France	3210	1736	54.1	52.4	55.8	1395	43.5	41.8	45.2	79	2.5	2.0	3.1
French Guiana	44	41	93.2	81.7	97.5	3	6.8	2.5	18.3	0	0.0	0.0	6.4
Gambia	2	0	0.0	0.0	63.2	2	100.0	36.8	100.0	0	0.0	0.0	63.2
Georgia	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Germany	7788	3778	48.5	47.4	49.6	3887	49.9	48.8	51.0	123	1.6	1.3	1.9
Ghana	86	45	52.3	41.9	62.6	40	46.5	36.3	57.0	1	1.2	0.3	6.2
Greece	2574	1819	70.7	68.9	72.4	707	27.5	25.8	29.2	48	1.9	1.4	2.5
Grenada	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Guadeloupe	226	211	93.4	89.3	95.9	8	3.5	1.8	6.8	7	3.1	1.5	6.3
Guam	1	0	0.0	0.0	77.6	1	100.0	22.4	100.0	0	0.0	0.0	77.6

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			
		No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Guatemala	32	12	37.5	22.9	54.9	17	53.1	36.4	69.2	3	9.4	3.4	24.3
Guinea	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Guyana	3	2	66.7	19.4	93.2	0	0.0	0.0	52.7	1	33.3	6.8	80.6
Honduras	47	6	12.8	6.1	25.3	41	87.2	74.8	93.9	0	0.0	0.0	6.1
Hongkong	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Hungary	1594	926	58.1	55.7	60.5	649	40.7	38.3	43.2	19	1.2	0.8	1.9
Iceland	88	85	96.6	90.5	98.8	3	3.4	1.2	9.5	0	0.0	0.0	3.3
India	438	184	42.0	37.5	46.7	175	40.0	35.5	44.6	79	18.0	14.7	21.9
Indonesia	21	17	81.0	59.7	92.2	4	19.1	7.8	40.3	0	0.0	0.0	12.7
Iran	18	17	94.4	74.0	98.7	1	5.6	1.3	26.0	0	0.0	0.0	14.6
Ireland	694	575	82.9	79.9	85.5	116	16.7	14.1	19.7	3	0.4	0.2	1.3
Israel	679	306	45.1	41.4	48.8	333	49.0	45.3	52.8	40	5.9	4.4	7.9
Italy	8537	5675	66.5	65.5	67.5	2759	32.3	31.3	33.3	103	1.2	1.0	1.5
Jamaica	5	2	40.0	11.8	77.7	2	40.0	11.8	77.7	1	20.0	4.3	64.1
Japan	10	6	60.0	30.8	83.3	2	20.0	6.0	51.8	2	20.0	6.0	51.8
Jordan	38	6	15.8	7.5	30.5	27	71.1	55.1	83.0	5	13.2	5.9	27.4
Kazakhstan	28	25	89.3	72.7	96.1	3	10.7	3.9	27.4	0	0.0	0.0	9.8
Kenya	273	112	41.0	35.4	47.0	116	42.5	36.8	48.4	45	16.5	12.6	21.4
Korea (South)	8	8	100.0	71.7	100.0	0	0.0	0.0	28.3	0	0.0	0.0	28.3
Kyrgyzstan	2	2	100.0	36.8	100.0	0	0.0	0.0	63.2	0	0.0	0.0	63.2
Latvia	51	47	92.2	81.5	96.8	4	7.8	3.2	18.5	0	0.0	0.0	5.6
Lebanon	10	5	50.0	23.4	76.6	5	50.0	23.4	76.6	0	0.0	0.0	23.8
Lithuania	120	99	82.5	74.7	88.2	18	15.0	9.7	22.5	3	2.5	0.9	7.1
Luxembourg	50	31	62.0	48.1	74.2	16	32.0	20.8	45.9	3	6.0	2.2	16.2
Macedonia	63	48	76.2	64.3	85.0	12	19.1	11.3	30.5	3	4.8	1.7	13.1
Madagascar	12	9	75.0	46.2	90.9	3	25.0	9.1	53.8	0	0.0	0.0	20.6
Malawi	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Malaysia	36	12	33.3	20.2	49.8	18	50.0	34.4	65.6	6	16.7	8.0	32.0

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			
		No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Mali	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Malta	86	76	88.4	79.9	93.5	8	9.3	4.8	17.3	2	2.3	0.7	8.1
Martinique	344	323	93.9	90.9	96.0	16	4.7	2.9	7.4	5	1.5	0.6	3.4
Mexico	80	47	58.8	47.8	68.9	31	38.8	28.8	49.7	2	2.5	0.8	8.6
Moldova	16	15	93.8	71.3	98.5	1	6.3	1.5	28.7	0	0.0	0.0	16.2
Monaco	2	0	0.0	0.0	63.2	2	100.0	36.8	100.0	0	0.0	0.0	63.2
Morocco	577	184	31.9	28.2	35.8	376	65.2	61.2	68.9	17	3.0	1.9	4.7
Myanmar	2	2	100.0	36.8	100.0	0	0.0	0.0	63.2	0	0.0	0.0	63.2
Namibia	28	12	42.9	26.5	61.1	15	53.6	35.7	70.6	1	3.6	0.9	17.8
Nepal	3	3	100.0	47.3	100.0	0	0.0	0.0	52.7	0	0.0	0.0	52.7
Netherlands	3276	1686	51.5	49.8	53.2	1553	47.4	45.7	49.1	37	1.1	0.8	1.6
New Zealand	362	249	68.8	63.8	73.3	110	30.4	25.9	35.3	3	0.8	0.3	2.4
Nicaragua	4	2	50.0	14.7	85.3	2	50.0	14.7	85.3	0	0.0	0.0	45.1
Niger	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Nigeria	3	1	33.3	6.8	80.6	2	66.7	19.4	93.2	0	0.0	0.0	52.7
Non EEA	21	5	23.8	10.7	45.4	16	76.2	54.6	89.3	0	0.0	0.0	12.7
Non domestic, import	355	189	53.2	48.0	58.4	159	44.8	39.7	50.0	7	2.0	1.0	4.0
Norway	517	378	73.1	69.1	76.8	139	26.9	23.3	30.9	0	0.0	0.0	0.6
Oman	3	0	0.0	0.0	52.7	3	100.0	47.3	100.0	0	0.0	0.0	52.7
Pakistan	91	60	65.9	55.7	74.9	24	26.4	18.4	36.3	7	7.7	3.8	15.1
Panama	90	25	27.8	19.6	37.8	65	72.2	62.2	80.4	0	0.0	0.0	3.2
Papua New Guinea	2	2	100.0	36.8	100.0	0	0.0	0.0	63.2	0	0.0	0.0	63.2
Paraguay	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Peru	211	111	52.6	45.9	59.2	90	42.7	36.2	49.4	10	4.7	2.6	8.5
Philippines	6	6	100.0	65.2	100.0	0	0.0	0.0	34.8	0	0.0	0.0	34.8
Poland	1949	1512	77.6	75.7	79.4	416	21.3	19.6	23.2	21	1.1	0.7	1.6
Portugal	687	457	66.5	62.9	70.0	205	29.8	26.5	33.4	25	3.6	2.5	5.3
Puerto Rico	2	0	0.0	0.0	63.2	2	100.0	36.8	100.0	0	0.0	0.0	63.2



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			
		No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Reunion	58	34	58.6	45.8	70.4	20	34.5	23.6	47.4	4	6.9	2.8	16.5
Romania	1940	1663	85.7	84.1	87.2	265	13.7	12.2	15.3	12	0.6	0.4	1.1
Russia	44	38	86.4	73.2	93.5	6	13.6	6.5	26.8	0	0.0	0.0	6.4
Saint Lucia	1	0	0.0	0.0	77.6	1	100.0	22.4	100.0	0	0.0	0.0	77.6
Saudi Arabia	6	4	66.7	29.0	90.1	2	33.3	9.9	71.0	0	0.0	0.0	34.8
Senegal	39	17	43.6	29.3	59.1	18	46.2	31.5	61.5	4	10.3	4.2	23.7
Serbia	114	70	61.4	52.2	69.8	39	34.2	26.1	43.3	5	4.4	1.9	9.9
Sierra Leone	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Singapore	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
Slovakia	235	152	64.7	58.4	70.5	83	35.3	29.5	41.6	0	0.0	0.0	1.3
Slovenia	570	342	60.0	55.9	63.9	218	38.3	34.4	42.3	10	1.8	1.0	3.2
South Africa	1127	270	24.0	21.6	26.5	830	73.7	71.0	76.1	27	2.4	1.7	3.5
Spain	7174	3243	45.2	44.1	46.4	3842	53.6	52.4	54.7	89	1.2	1.0	1.5
Sri Lanka	37	27	73.0	56.9	84.6	8	21.6	11.4	37.3	2	5.4	1.7	17.8
Sudan	1	0	0.0	0.0	77.6	1	100.0	22.4	100.0	0	0.0	0.0	77.6
Suriname	168	93	55.4	47.8	62.7	58	34.5	27.8	42.0	17	10.1	6.4	15.6
Swaziland	5	3	60.0	22.3	88.2	2	40.0	11.8	77.7	0	0.0	0.0	39.3
Sweden	533	420	78.8	75.1	82.1	110	20.6	17.4	24.3	3	0.6	0.2	1.6
Switzerland	36	31	86.1	71.2	93.8	5	13.9	6.2	28.8	0	0.0	0.0	7.8
Syria	17	12	70.6	46.5	86.7	5	29.4	13.3	53.5	0	0.0	0.0	15.3
Taiwan	3	1	33.3	6.8	80.6	2	66.7	19.4	93.2	0	0.0	0.0	52.7
Tanzania	9	8	88.9	55.5	97.5	1	11.1	2.5	44.5	0	0.0	0.0	25.9
Thailand	841	372	44.2	40.9	47.6	211	25.1	22.3	28.1	258	30.7	27.7	33.9
Togo	8	5	62.5	29.9	86.3	3	37.5	13.7	70.1	0	0.0	0.0	28.3
Tokelau	11	11	100.0	77.9	100.0	0	0.0	0.0	22.1	0	0.0	0.0	22.1
Tunisia	28	22	78.6	60.3	89.7	6	21.4	10.3	39.7	0	0.0	0.0	9.8
Turkey	1591	830	52.2	49.7	54.6	681	42.8	40.4	45.3	80	5.0	4.1	6.2
Uganda	38	25	65.8	49.8	78.8	4	10.5	4.3	24.2	9	23.7	13.0	39.3

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			
		No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>	No.	%	LCL <sup>(a)</sup>	UCL <sup>(b)</sup>
Ukraine	26	23	88.5	70.8	95.8	3	11.5	4.2	29.2	0	0.0	0.0	10.5
United Arab Emirates	1	1	100.0	22.4	100.0	0	0.0	0.0	77.6	0	0.0	0.0	77.6
United Kingdom	1951	1360	69.7	67.6	71.7	584	29.9	27.9	32.0	7	0.4	0.2	0.7
United States	327	136	41.6	36.4	47.0	166	50.8	45.4	56.2	25	7.7	5.2	11.1
Unknown	2566	1705	66.5	64.6	68.3	829	32.3	30.5	34.1	32	1.3	0.9	1.8
Uruguay	72	25	34.7	24.8	46.3	42	58.3	46.8	69.0	5	6.9	3.1	15.3
Venezuela	1	0	0.0	0.0	77.6	1	100.0	22.4	100.0	0	0.0	0.0	77.6
Vietnam	83	50	60.2	49.5	70.1	21	25.3	17.2	35.6	12	14.5	8.5	23.6
Yemen	2	2	100.0	36.8	100.0	0	0.0	0.0	63.2	0	0.0	0.0	63.2
Zambia	38	31	81.6	66.5	90.7	7	18.4	9.3	33.5	0	0.0	0.0	7.4
Zimbabwe	20	9	45.0	25.7	66.0	10	50.0	29.8	70.2	1	5.0	1.2	23.8

(a): Lower confidence limit; (b): Upper confidence limit

## APPENDIX IV – RESULTS OF THE DIETARY EXPOSURE CALCULATIONS



Abamectin		
Status of the active substance:	Included	
Code number:	2	
Toxicological end points		
ADI (mg/kg bw/day):	0.0025	ARID (mg/kg bw): 0.1
Source of ADI:	EFSA	Source of ARID: EFSA
Year of evaluation:	2008	Year of evaluation: 2008

**Chronic risk assessment**

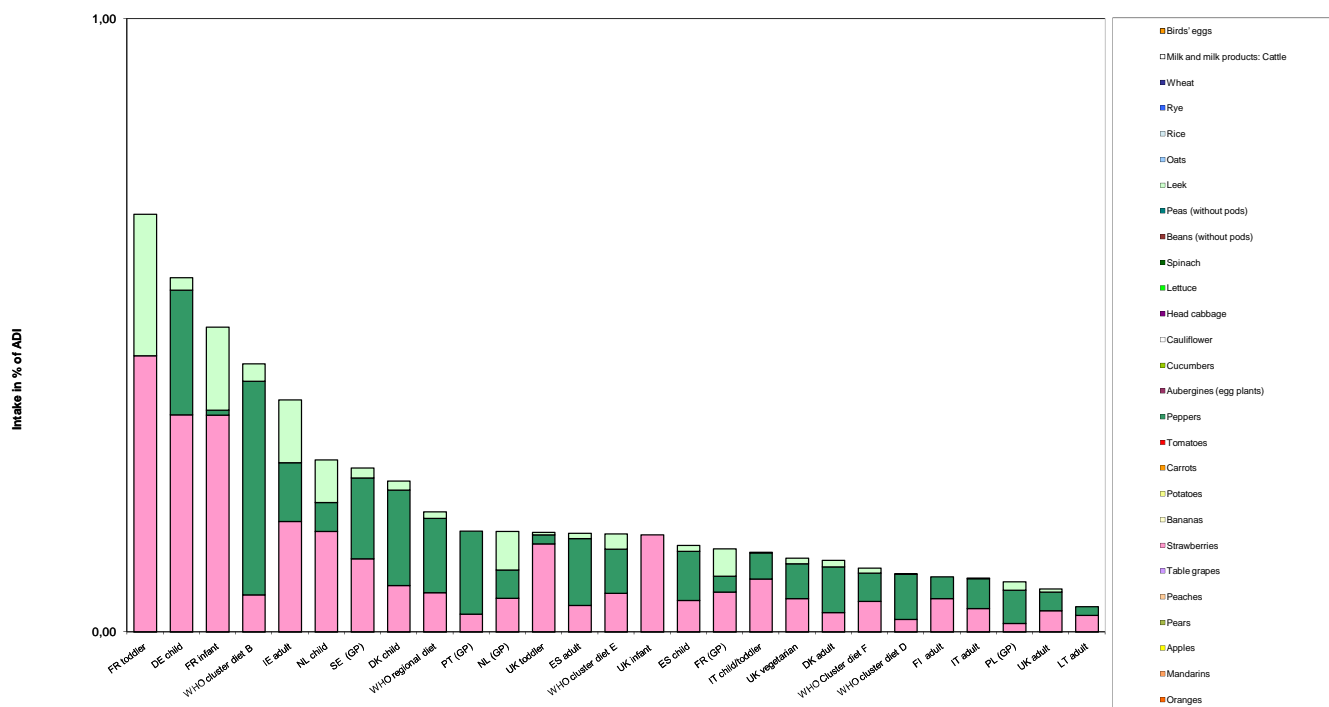
Highest calculated exposure in % of ADI		MS Diet		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
0.7	FR toddler	0.5	Strawberries	0.2	Leek	0.0	FRUIT (FRESH OR FROZEN)								
0.6	DE child	0.4	Strawberries	0.2	Peppers	0.0	Leek								
0.5	FR infant	0.4	Strawberries	0.1	Leek	0.0	Peppers								
0.4	WHO cluster diet B	0.3	Peppers	0.1	Strawberries	0.0	Leek								
0.4	IE adult	0.2	Strawberries	0.1	Leek	0.1	Peppers								
0.3	NL child	0.2	Strawberries	0.1	Leek	0.0	Peppers								
0.3	SE (GP)	0.1	Peppers	0.1	Strawberries	0.0	Leek								
0.2	DK child	0.2	Peppers	0.1	Strawberries	0.0	Leek								
0.2	WHO regional diet	0.1	Peppers	0.1	Strawberries	0.0	Leek								
0.2	PT (GP)	0.1	Peppers	0.0	Strawberries	0.0	FRUIT (FRESH OR FROZEN)								
0.2	NL (GP)	0.1	Leek	0.1	Strawberries	0.0	Peppers								
0.2	UK toddler	0.1	Strawberries	0.0	Peppers	0.0	Leek								
0.2	ES adult	0.1	Peppers	0.0	Strawberries	0.0	Leek								
0.2	WHO cluster diet E	0.1	Peppers	0.1	Strawberries	0.0	Leek								
0.2	UK infant	0.2	Strawberries	0.1	FRUIT (FRESH OR FROZEN)	0.0	Leek								
0.1	ES child	0.1	Peppers	0.1	Strawberries	0.0	Leek								
0.1	FR (GP)	0.1	Strawberries	0.0	Leek	0.0	Peppers								
0.1	IT child/toddler	0.1	Strawberries	0.0	Peppers	0.0	Leek								
0.1	UK vegetarian	0.1	Peppers	0.1	Strawberries	0.0	Leek								
0.1	DK adult	0.1	Peppers	0.0	Strawberries	0.0	Leek								
0.1	WHO Cluster diet F	0.0	Strawberries	0.0	Peppers	0.0	Leek								
0.1	WHO cluster diet D	0.1	Peppers	0.0	Strawberries	0.0	Leek								
0.1	FI adult	0.1	Strawberries	0.0	Peppers	0.0	FRUIT (FRESH OR FROZEN)								
0.1	IT adult	0.0	Peppers	0.0	Strawberries	0.0	Leek								
0.1	PL (GP)	0.1	Peppers	0.0	Strawberries	0.0	Leek								
0.1	UK adult	0.0	Strawberries	0.0	Peppers	0.0	Leek								
0.0	LT adult	0.0	Strawberries	0.0	Peppers	0.0	FRUIT (FRESH OR FROZEN)								

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.01	425							
2009	Bananas	0.01	415							
2009	Peppers	0.05	416		0.24	0.06		3.78	DE child	
2009	Aubergines (egg plants)	0.02	319							
2009	Caulliflower	0.01	318							
2009	Peas (without pods)	0.01	286							
2009	Wheat	0.01	414							
2009	Milk and milk products: Cattle	0.005								
2009	Cattle		114							
2009	Birds' eggs	0.01	120							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Abamectin**



<b>Accephate</b>	
Status of the active substance:	Excluded
Code number:	3
Toxicological end points	
ADI (mg/kg bw/day):	0.03
Source of ADI:	JMPR
Year of evaluation:	2005
ARID (mg/kg bw):	0.1
Source of ARID:	JMPR
Year of evaluation:	2005

**Chronic risk assessment**

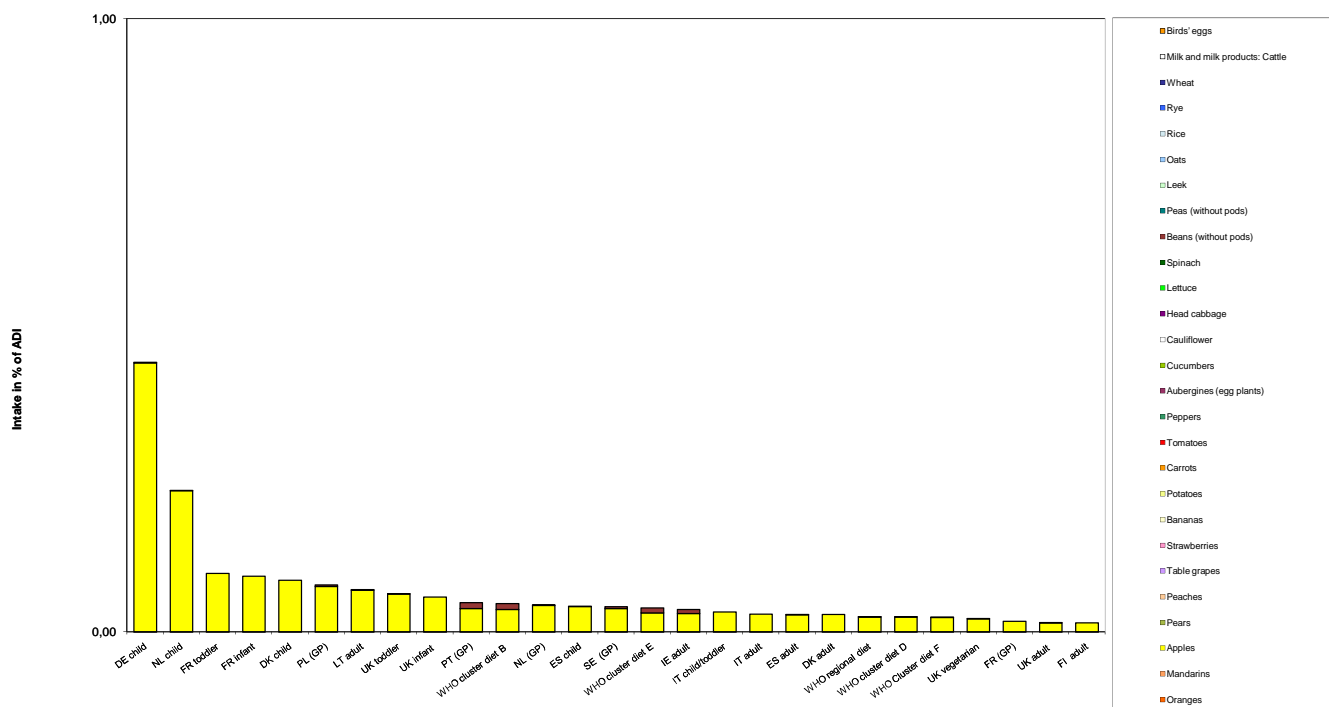
		Exposure (range) in % of ADI minimum - maximum					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.4	DE child	0.4	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.2	NL child	0.2	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.1	FR toddler	0.1	Apples		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.1	FR infant	0.1	Apples		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.1	DK child	0.1	Apples		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.1	PL (GP)	0.1	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.1	LT adult	0.1	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.1	UK toddler	0.1	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.1	UK infant	0.1	Apples		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	PT (GP)	0.0	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.0	WHO cluster diet B	0.0	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.0	NL (GP)	0.0	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.0	ES child	0.0	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.0	SE (GP)	0.0	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.0	WHO cluster diet E	0.0	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.0	IE adult	0.0	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.0	IT child/toddler	0.0	Apples		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	IT adult	0.0	Apples		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	ES adult	0.0	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.0	DK adult	0.0	Apples		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	WHO regional diet	0.0	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.0	WHO cluster diet D	0.0	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.0	WHO Cluster diet F	0.0	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.0	UK vegetarian	0.0	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.0	FR (GP)	0.0	Apples		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	UK adult	0.0	Apples	0.0	Beans (without pods)		FRUIT (FRESH OR FROZEN)
0.0	FI adult	0.0	Apples		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.02	1372							
2009	Bananas	0.02	970							
2009	Peppers	0.02	1320							
2009	Aubergines (egg plants)	0.02	840							
2009	Caulliflower	0.02	744							
2009	Peas (without pods)	0.02	644							
2009	Wheat	0.02	849							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Acephate**



<b>Acetamiprid</b>	
Status of the active substance:	<b>Included</b>
Code number:	<b>4</b>
<b>Toxicological end points</b>	
ADI (mg/kg bw/day):	<b>0.07</b>
Source of ADI:	<b>COM</b>
Year of evaluation:	<b>2004</b>
ARID (mg/kg bw):	<b>0.1</b>
Source of ARID:	<b>COM</b>
Year of evaluation:	<b>2004</b>

**Chronic risk assessment**

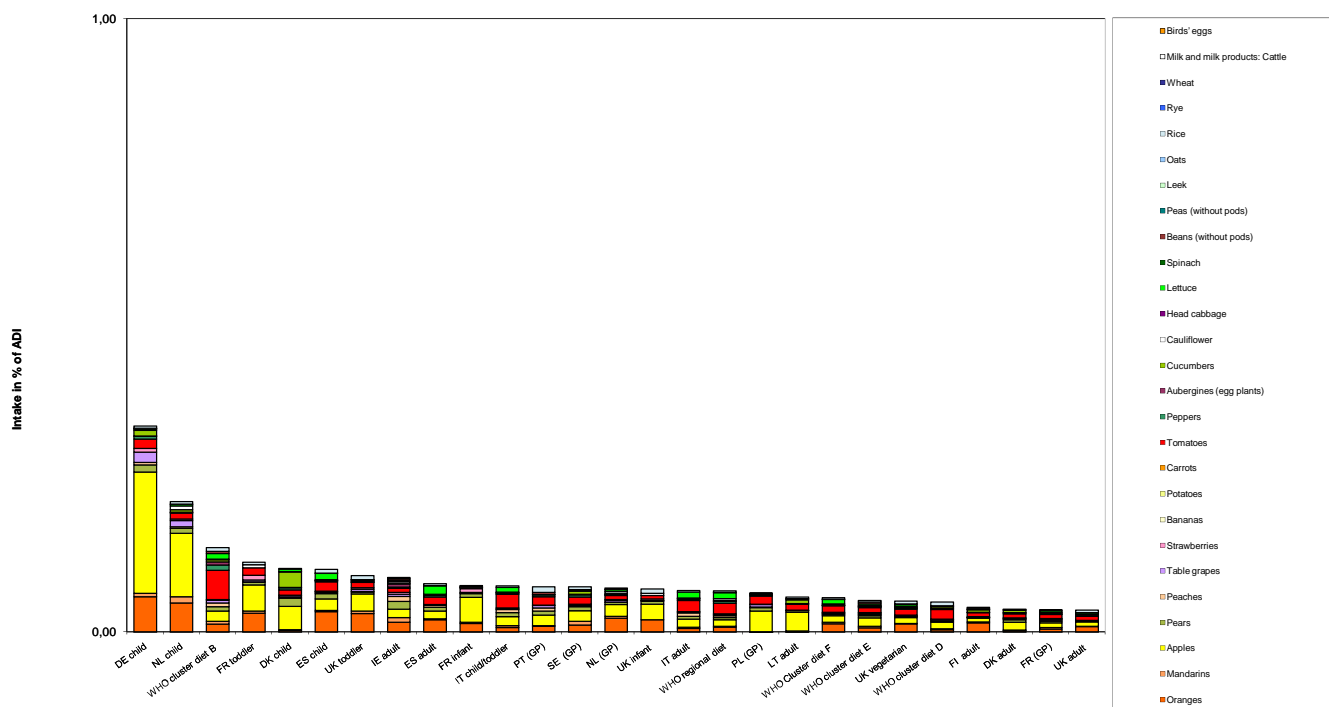
Highest calculated exposure in % of ADI		MS Diet		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
0.3	DE child	0.2	Apples	0.1	Oranges	0.0	Table grapes								
0.2	NL child	0.1	Apples	0.0	Oranges	0.0	Table grapes								
0.1	WHO cluster diet B	0.0	Tomatoes	0.0	Apples	0.0	Oranges								
0.1	FR toddler	0.0	Apples	0.0	Oranges	0.0	Tomatoes								
0.1	DK child	0.0	Apples	0.0	Cucumbers	0.0	Pears								
0.1	ES child	0.0	Oranges	0.0	Apples	0.0	Tomatoes								
0.1	UK toddler	0.0	Oranges	0.0	Apples	0.0	Tomatoes								
0.1	IE adult	0.0	Oranges	0.0	Apples	0.0	Pears								
0.1	ES adult	0.0	Oranges	0.0	Lettuce	0.0	Apples								
0.1	FR infant	0.0	Apples	0.0	Oranges	0.0	Pears								
0.1	IT child/toddler	0.0	Tomatoes	0.0	Apples	0.0	Lettuce								
0.1	PT (GP)	0.0	Apples	0.0	Tomatoes	0.0	Rice								
0.1	SE (GP)	0.0	Apples	0.0	Tomatoes	0.0	Oranges								
0.1	NL (GP)	0.0	Oranges	0.0	Apples	0.0	Tomatoes								
0.1	UK infant	0.0	Apples	0.0	Oranges	0.0	Rice								
0.1	IT adult	0.0	Tomatoes	0.0	Apples	0.0	Lettuce								
0.1	WHO regional diet	0.0	Tomatoes	0.0	Apples	0.0	Lettuce								
0.1	PL (GP)	0.0	Apples	0.0	Tomatoes	0.0	Pears								
0.1	LT adult	0.0	Apples	0.0	Tomatoes	0.0	Cucumbers								
0.1	WHO Cluster diet F	0.0	Oranges	0.0	Apples	0.0	Tomatoes								
0.1	WHO cluster diet E	0.0	Apples	0.0	Tomatoes	0.0	Oranges								
0.1	UK vegetarian	0.0	Oranges	0.0	Apples	0.0	Tomatoes								
0.0	WHO cluster diet D	0.0	Tomatoes	0.0	Apples	0.0	Rice								
0.0	FI adult	0.0	Oranges	0.0	Tomatoes	0.0	Apples								
0.0	DK adult	0.0	Apples	0.0	Tomatoes	0.0	Cucumbers								
0.0	FR (GP)	0.0	Apples	0.0	Tomatoes	0.0	Oranges								
0.0	UK adult	0.0	Oranges	0.0	Tomatoes	0.0	Apples								

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.01	1223	0.08		0.01		0.65	DE child	
2009	Bananas	0.01	966							
2009	Peppers	0.3	1244	2.97	0.08	0.39		24.56	DE child	
2009	Aubergines (egg plants)	0.1	779	3.98	0.26	0.14		3.50	UK 4-6 yr	
2009	Cauliflower	0.01	675		0.15	0.01		0.93	NL child	
2009	Peas (without pods)	0.01	609							
2009	Wheat	0.01	678							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Acetamiprid**



Aldicarb			
Status of the active substance:	Excluded		
Code number:	5		
Toxicological end points			
ADI (mg/kg bw/day):	0.003	ARID (mg/kg bw):	0.1
Source of ADI:	JMPR	Source of ARID:	ECCO
Year of evaluation:	1995	Year of evaluation:	2001

**Chronic risk assessment**

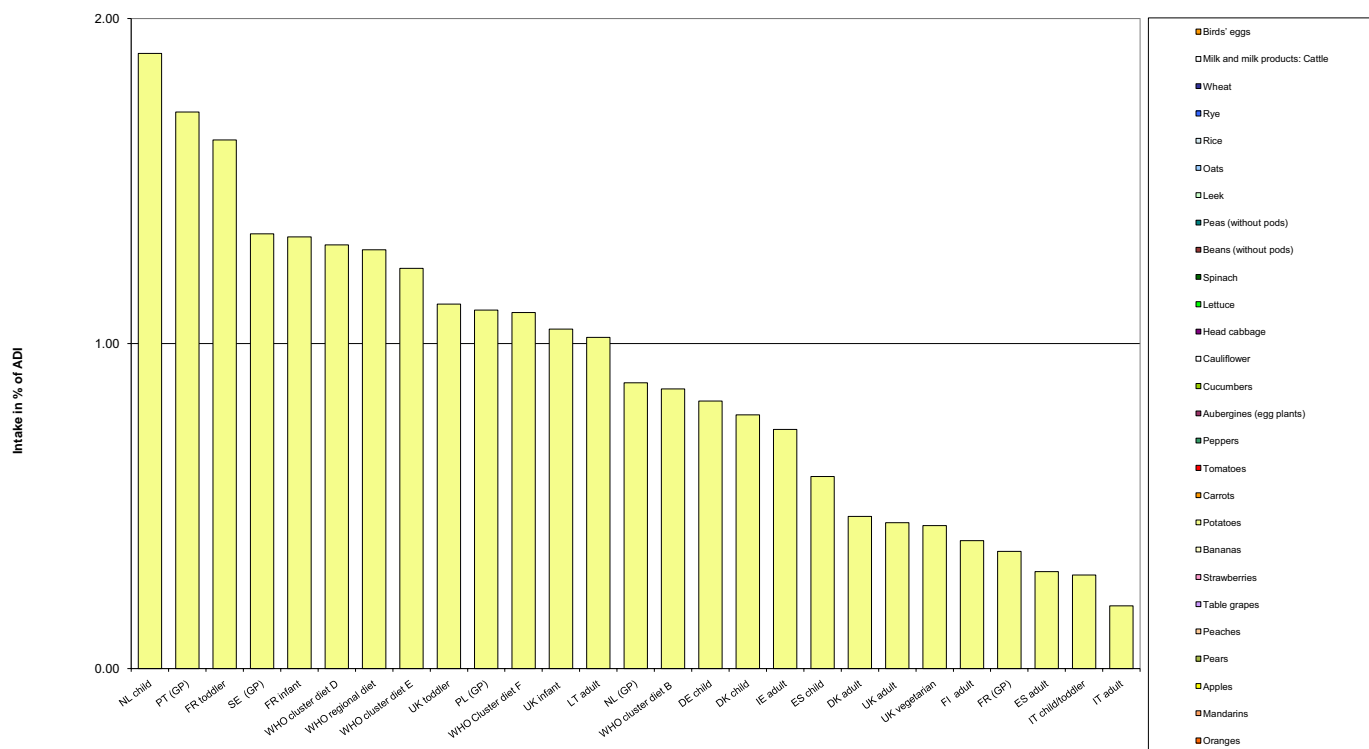
		Exposure (range) in % of ADI minimum - maximum					
		2					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.9	NL child	1.9	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.7	PT (GP)	1.7	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.6	FR toddler	1.6	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.3	SE (GP)	1.3	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.3	FR infant	1.3	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.3	WHO cluster diet D	1.3	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.3	WHO regional diet	1.3	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.2	WHO cluster diet E	1.2	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.1	UK toddler	1.1	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.1	PL (GP)	1.1	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.1	WHO Cluster diet F	1.1	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.0	UK infant	1.0	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.0	LT adult	1.0	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.9	NL (GP)	0.9	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.9	WHO cluster diet B	0.9	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.8	DE child	0.8	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.8	DK child	0.8	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.7	IE adult	0.7	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.6	ES child	0.6	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.5	DK adult	0.5	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.4	UK adult	0.4	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.4	UK vegetarian	0.4	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.4	FI adult	0.4	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.4	FR (GP)	0.4	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.3	ES adult	0.3	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.3	IT child/toddler	0.3	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.2	IT adult	0.2	Potatoes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.02	1009							
2009	Bananas	0.02	792							
2009	Peppers	0.02	1003							
2009	Aubergines (egg plants)	0.02	640							
2009	Cauliflower	0.02	617							
2009	Peas (without pods)	0.02	542							
2009	Wheat	0.05	560							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Aldicarb**





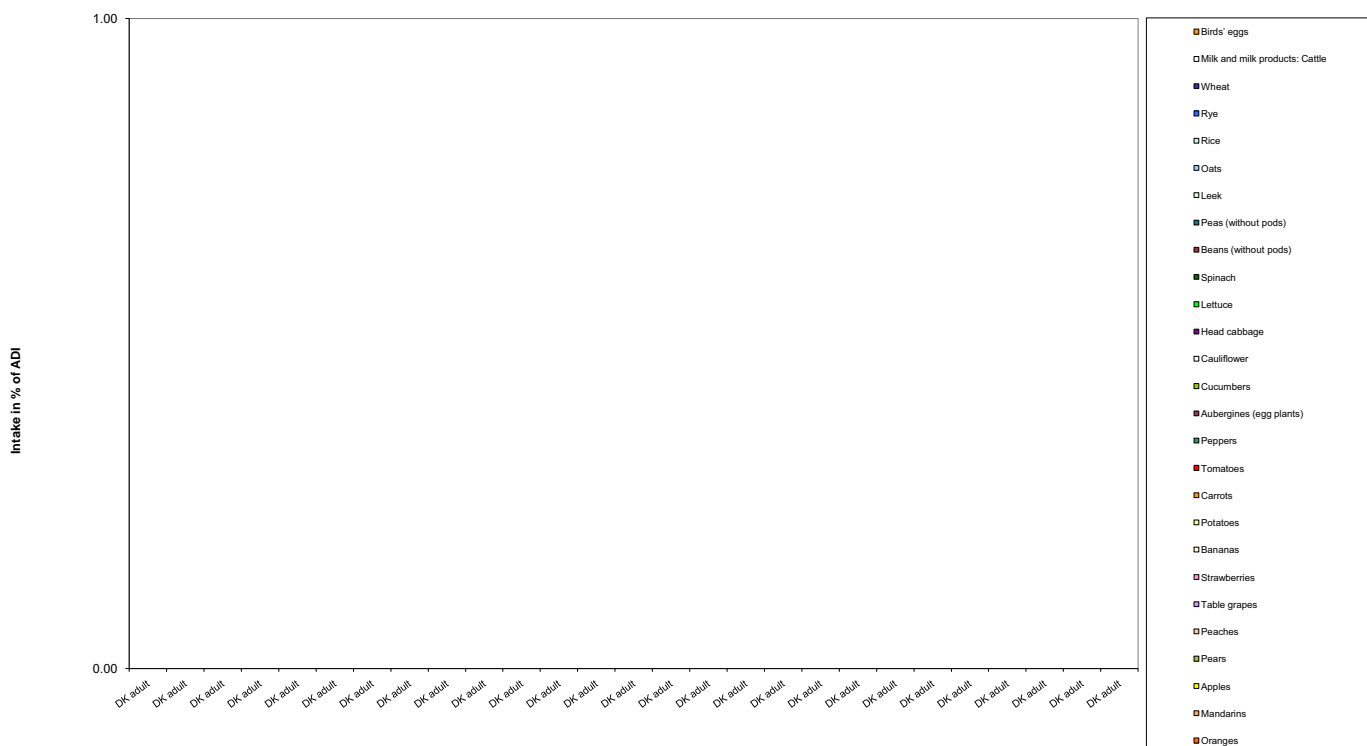
Amitrole			
Status of the active substance:	Included		
Code number:	6		
Toxicological end points			
ADI (mg/kg bw/day):	0.001	ARID (mg/kg bw):	0.1
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2001	Year of evaluation:	2001

Chronic risk assessment							
Exposure (range) in % of ADI minimum - maximum							
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	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		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	0.01	59							
2009	Bananas	0.01	60							
2009	Peppers	0.01	71							
2009	Aubergines (egg plants)	0.01	74							
2009	Cauliflower	0.01	79							
2009	Peas (without pods)	0.01	28							
2009	Wheat	0.01	58							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

<sup>a)</sup> The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Amitrole



Azinphos ethyl			
Status of the active substance:	Excluded		
Code number:	7		
Toxicological end points			
ADI (mg/kg bw/day):		ARID (mg/kg bw):	0.1
Source of ADI:	COM/Decision 1995	Source of ARID:	COM/Decision 1995
Year of evaluation:		Year of evaluation:	

No ADI and ARID were derived.  
 No measurements above the LOQ were reported for the food commodities included in the EU rolling programme

Chronic risk assessment								
		Exposure (range) in % of ADI minimum - maximum #DIV/0!						
No of diets exceeding ADI: ---								
Year	Highest calculated exposure in % of ADI	MS Diet	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										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
2009	Milk and milk products: Cattle	0.01	306							
2009	Birds' eggs	0.01	369							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Azinphos ethyl



<b>Azinphos-methyl</b>			
Status of the active substance:	Excluded		
Code number:	8		
Toxicological end points			
ADI (mg/kg bw/day):	0.005	ARfD (mg/kg bw):	0.01
Source of ADI:	DE	Source of ARfD:	COM
Year of evaluation:	2008	Year of evaluation:	2006

**Chronic risk assessment**

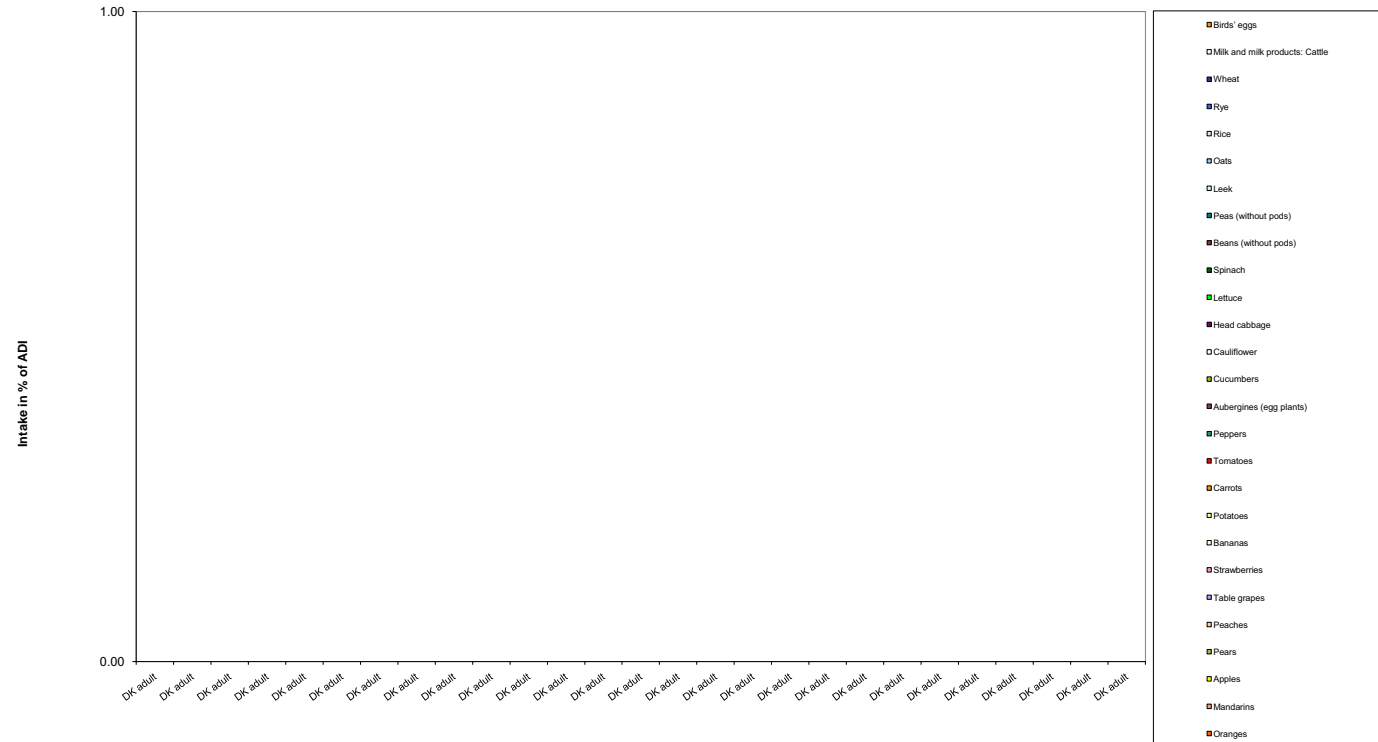
Exposure (range) in % of ADI minimum - maximum							
No of diets exceeding ADI:							
---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	1525	0.07		0.05		32.74	DE child	
2009	Bananas	0.05	1184							
2009	Peppers	0.05	1499							
2009	Aubergines (egg plants)	0.05	984							
2009	Cauliflower	0.05	819							
2009	Peas (without pods)	0.05	717							
2009	Wheat	0.05	1162							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Azinphos-methyl**



Azoxystrobin			
Status of the active substance:	Included		
Code number:	9		
Toxicological end points			
ADI (mg/kg bw/day):	0.2	ARID (mg/kg bw):	n.n.
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2010	Year of evaluation:	2010

**Chronic risk assessment**

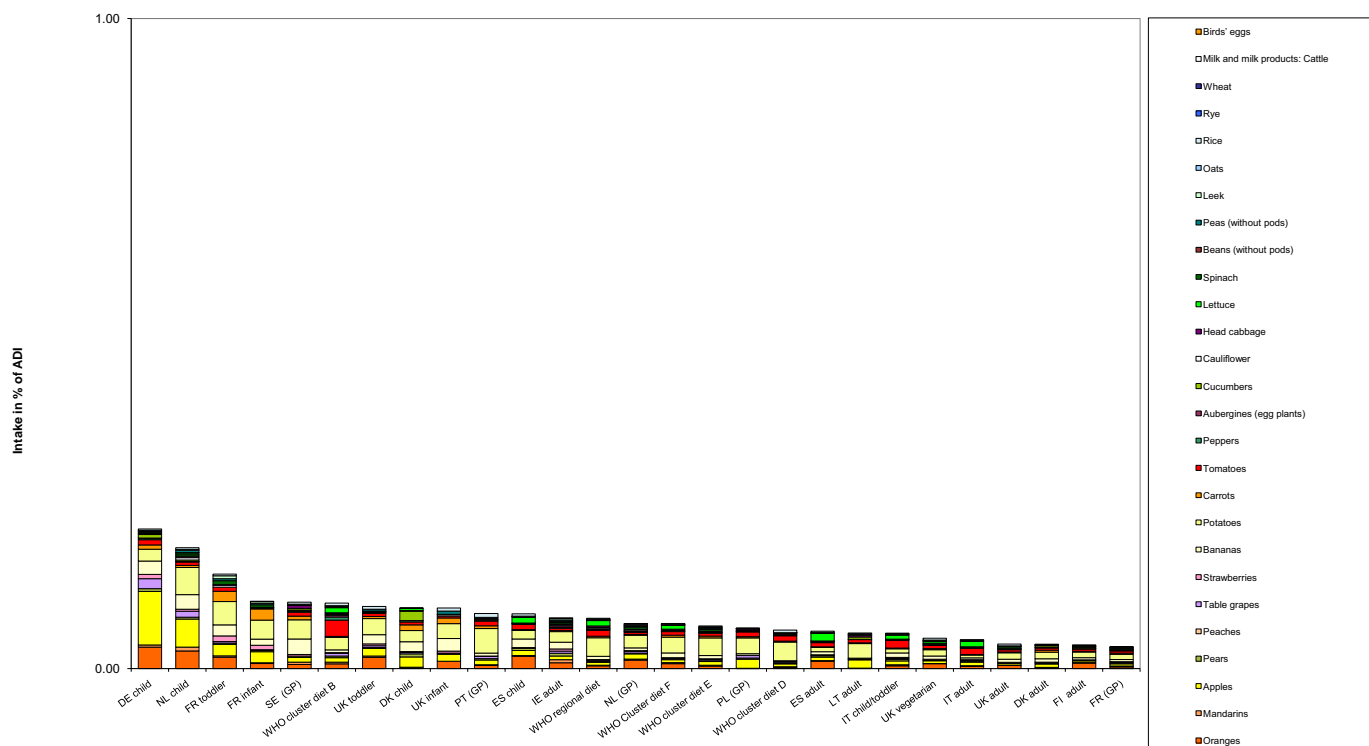
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities
0.2	DE child	0.1	Apples	0.0	Oranges	0.0	Bananas
0.2	NL child	0.0	Apples	0.0	Potatoes	0.0	Oranges
0.1	FR toddler	0.0	Potatoes	0.0	Apples	0.0	Oranges
0.1	FR infant	0.0	Potatoes	0.0	Carrots	0.0	Apples
0.1	SE (GP)	0.0	Potatoes	0.0	Bananas	0.0	Apples
0.1	WHO cluster diet B	0.0	Tomatoes	0.0	Potatoes	0.0	Lettuce
0.1	UK toddler	0.0	Potatoes	0.0	Oranges	0.0	Bananas
0.1	DK child	0.0	Potatoes	0.0	Apples	0.0	Bananas
0.1	UK infant	0.0	Potatoes	0.0	Bananas	0.0	Oranges
0.1	PT (GP)	0.0	Potatoes	0.0	Tomatoes	0.0	Apples
0.1	ES child	0.0	Oranges	0.0	Bananas	0.0	Potatoes
0.1	IE adult	0.0	Potatoes	0.0	Bananas	0.0	Oranges
0.1	WHO regional diet	0.0	Potatoes	0.0	Tomatoes	0.0	Lettuce
0.1	NL (GP)	0.0	Potatoes	0.0	Oranges	0.0	Apples
0.1	WHO Cluster diet F	0.0	Potatoes	0.0	Oranges	0.0	Bananas
0.1	WHO cluster diet E	0.0	Potatoes	0.0	Apples	0.0	Bananas
0.1	PL (GP)	0.0	Potatoes	0.0	Apples	0.0	Tomatoes
0.1	WHO cluster diet D	0.0	Potatoes	0.0	Tomatoes	0.0	Apples
0.1	ES adult	0.0	Lettuce	0.0	Oranges	0.0	Potatoes
0.1	LT adult	0.0	Potatoes	0.0	Apples	0.0	Tomatoes
0.1	IT child/toddler	0.0	Tomatoes	0.0	Bananas	0.0	Potatoes
0.0	UK vegetarian	0.0	Potatoes	0.0	Oranges	0.0	Tomatoes
0.0	IT adult	0.0	Tomatoes	0.0	Lettuce	0.0	Apples
0.0	UK adult	0.0	Potatoes	0.0	Oranges	0.0	Bananas
0.0	DK adult	0.0	Potatoes	0.0	Apples	0.0	Bananas
0.0	FI adult	0.0	Potatoes	0.0	Oranges	0.0	Tomatoes
0.0	FR (GP)	0.0	Potatoes	0.0	Tomatoes	0.0	Bananas

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	2	1481							
2009	Bananas	2	1172	6.1		0.69				
2009	Peppers	2	1458	5.97	0.07	2.03				
2009	Aubergines (egg plants)	2	953	1.26		0.10				
2009	Cauliflower	0.5	852	0.12		0.00				
2009	Peas (without pods)	0.2	747	5.35	0.13	0.22				
2009	Wheat	0.3	1140							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Azoxystrobin**



Benfuracarb			
Status of the active substance:	Excluded		
Code number:	10		
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**

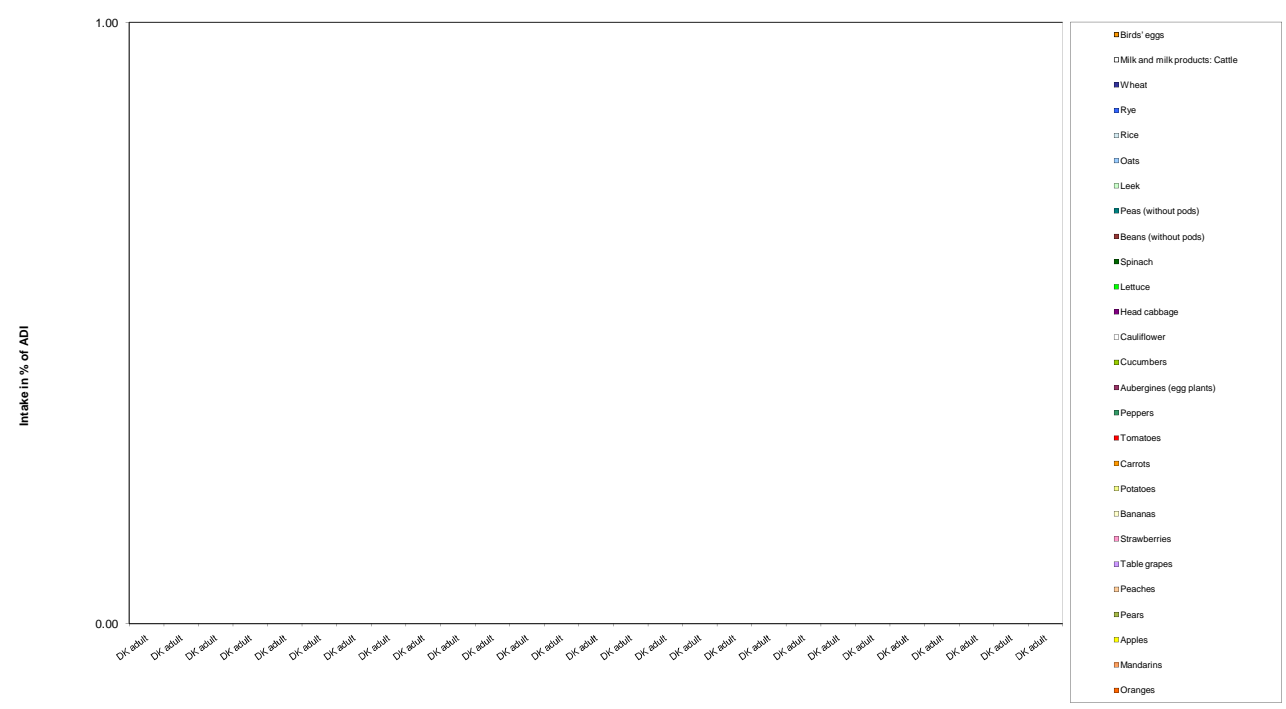
		Exposure (range) in % of ADI minimum - maximum					
		No of diets exceeding ADI:		---			
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
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DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)

**Acute risk assessment**

Year	Commodity <sup>a)</sup>	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	458							
2009	Bananas	0.05	342							
2009	Peppers	0.05	616							
2009	Aubergines (egg plants)	0.05	344							
2009	Cauliflower	0.05	303							
2009	Peas (without pods)	0.05	258							
2009	Wheat	0.05	313							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

<sup>a)</sup> The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Benfuracarb**



<b>Bifenthrin</b>	
Status of the active substance:	Excluded
Code number:	11
Toxicological end points	
ADI (mg/kg bw/day):	0.015
Source of ADI:	EFSA
Year of evaluation:	2008
ARID (mg/kg bw):	0.03
Source of ARID:	EFSA
Year of evaluation:	2008

**Chronic risk assessment**

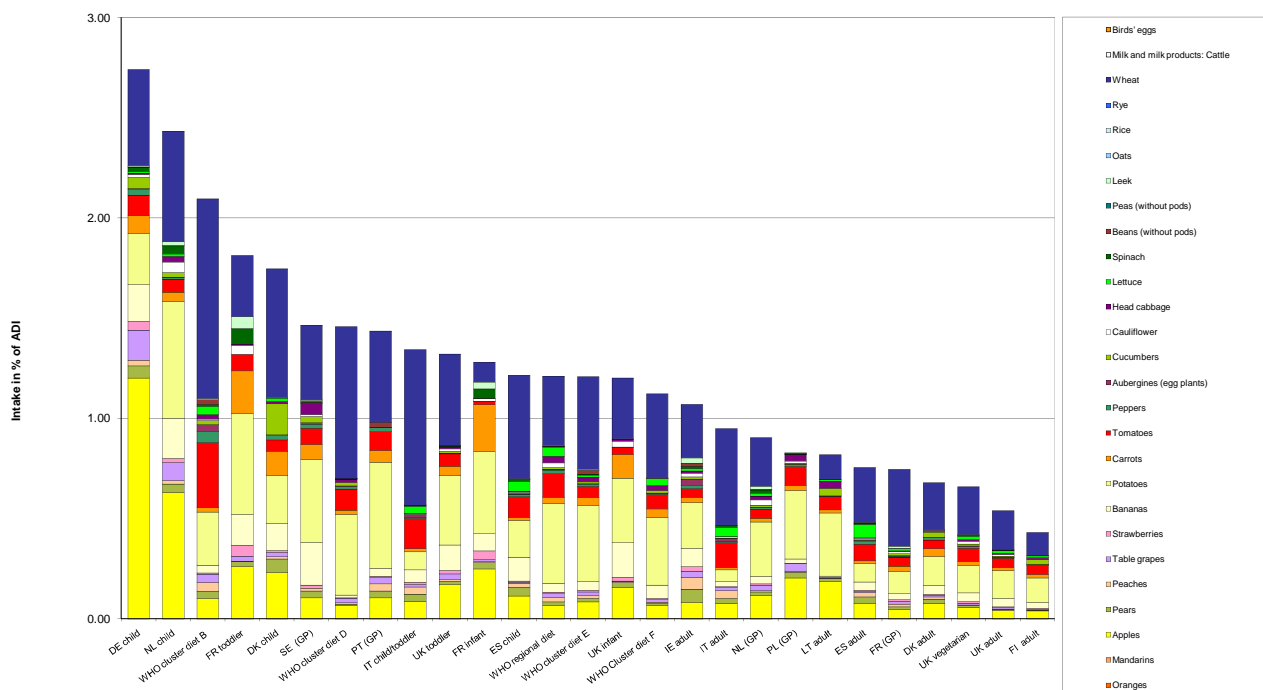
		Exposure (range) in % of ADI minimum - maximum					
		3					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
2.7	DE child	1.2	Apples	0.5	Wheat	0.3	Potatoes
2.4	NL child	0.6	Apples	0.6	Potatoes	0.6	Wheat
2.1	WHO cluster diet B	1.0	Wheat	0.3	Tomatoes	0.3	Potatoes
1.8	FR toddler	0.5	Potatoes	0.3	Wheat	0.3	Apples
1.7	DK child	0.6	Wheat	0.2	Potatoes	0.2	Apples
1.5	SE (GP)	0.4	Potatoes	0.4	Wheat	0.2	Bananas
1.5	WHO cluster diet D	0.8	Wheat	0.4	Potatoes	0.1	Tomatoes
1.4	PT (GP)	0.5	Potatoes	0.5	Wheat	0.1	Apples
1.3	IT child/toddler	0.8	Wheat	0.1	Tomatoes	0.1	Potatoes
1.3	UK toddler	0.5	Wheat	0.3	Potatoes	0.2	Apples
1.3	FR infant	0.4	Potatoes	0.2	Apples	0.2	Carrots
1.2	ES child	0.5	Wheat	0.2	Potatoes	0.1	Bananas
1.2	WHO regional diet	0.4	Potatoes	0.3	Wheat	0.1	Tomatoes
1.2	WHO cluster diet E	0.5	Wheat	0.4	Potatoes	0.1	Apples
1.2	UK infant	0.3	Potatoes	0.3	Wheat	0.2	Bananas
1.1	WHO Cluster diet F	0.4	Wheat	0.3	Potatoes	0.1	Tomatoes
1.1	IE adult	0.3	Wheat	0.2	Potatoes	0.1	Bananas
0.9	IT adult	0.5	Wheat	0.1	Tomatoes	0.1	Apples
0.9	NL (GP)	0.3	Potatoes	0.2	Wheat	0.1	Apples
0.8	PL (GP)	0.3	Potatoes	0.2	Apples	0.1	Tomatoes
0.8	LT adult	0.3	Potatoes	0.2	Apples	0.1	Wheat
0.8	ES adult	0.3	Wheat	0.1	Potatoes	0.1	Tomatoes
0.7	FR (GP)	0.4	Wheat	0.1	Potatoes	0.0	Apples
0.7	DK adult	0.2	Wheat	0.1	Potatoes	0.1	Apples
0.7	UK vegetarian	0.2	Wheat	0.1	Potatoes	0.1	Tomatoes
0.5	UK adult	0.2	Wheat	0.1	Potatoes	0.0	Tomatoes
0.4	FI adult	0.1	Potatoes	0.1	Wheat	0.0	Tomatoes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.2	1525							
2009	Bananas	0.1	1208	5.9	0.17	0.19		52.95	UK infant	
2009	Peppers	0.2	1511	0.66		0.19		39.89	DE child	
2009	Aubergines (egg plants)	0.2	906	0.61		0.07		5.58	UK 4-6 yr	
2009	Cauliflower	0.2	838	0.36		0.03		6.61	NL child	
2009	Peas (without pods)	0.05	759							
2009	Wheat	0.5	1237	0.32		0.05		2.41	UK 4-6 yr	
2009	Milk and milk products: Cattle	0.01	422							
2009	Birds' eggs	0.01	410							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Bifenthrin**



<b>Boscalid</b>			
Status of the active substance:	<b>Included</b>		
Code number:	<b>12</b>		
<b>Toxicological end points</b>			
ADI (mg/kg bw/day):	<b>0.04</b>	ARID (mg/kg bw):	<b>n.n.</b>
Source of ADI:	<b>JMPR 2006</b>	Source of ARID:	<b>JMPR 2006</b>
Year of evaluation:		Year of evaluation:	

**Chronic risk assessment**

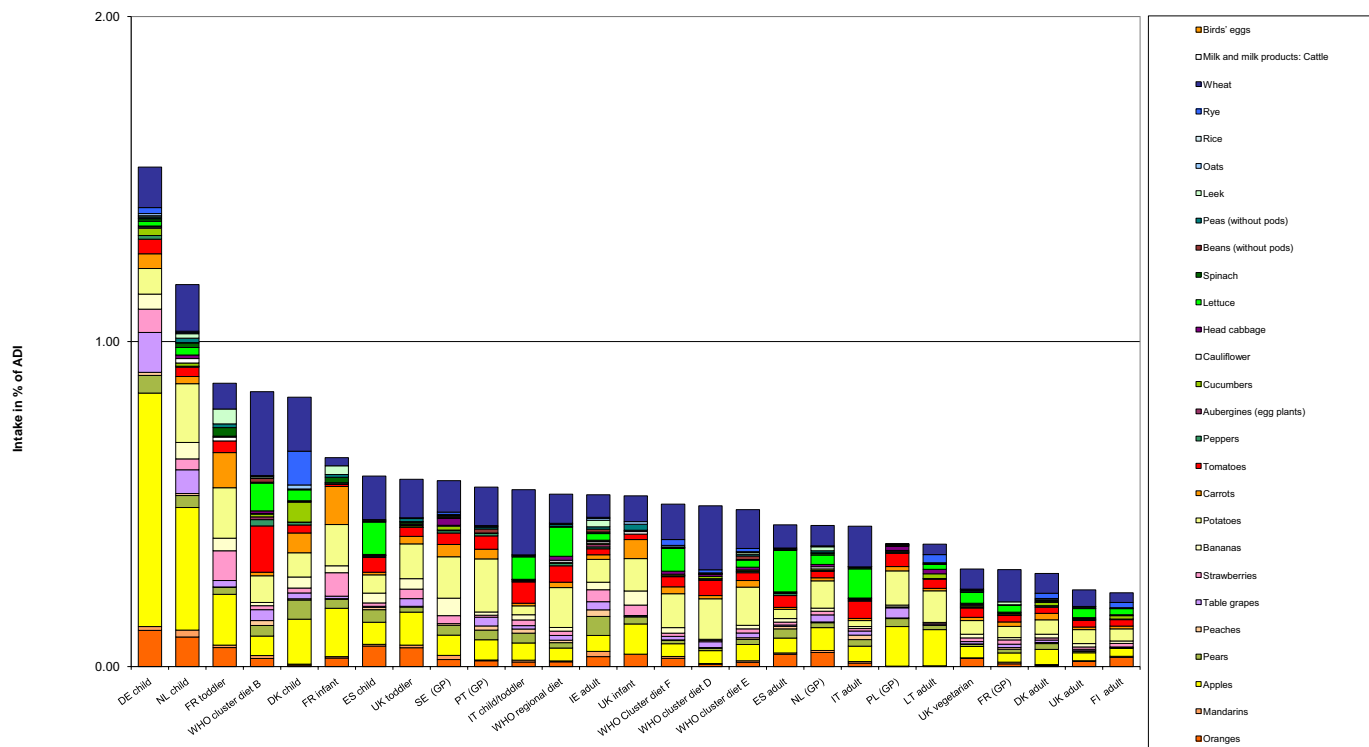
		Exposure (range) in % of ADI minimum - maximum 2					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.5	DE child	0.7	Apples	0.1	Wheat	0.1	Table grapes
1.2	NL child	0.4	Apples	0.2	Potatoes	0.1	Wheat
0.9	FR toddler	0.2	Apples	0.2	Potatoes	0.1	Carrots
0.8	WHO cluster diet B	0.3	Wheat	0.1	Potatoes	0.1	Lettuce
0.8	DK child	0.2	Wheat	0.1	Apples	0.1	Rye
0.6	FR infant	0.1	Apples	0.1	Potatoes	0.1	Carrots
0.6	ES child	0.1	Wheat	0.1	Lettuce	0.1	Apples
0.6	UK toddler	0.1	Wheat	0.1	Potatoes	0.1	Apples
0.6	SE (GP)	0.1	Potatoes	0.1	Wheat	0.1	Apples
0.6	PT (GP)	0.2	Potatoes	0.1	Wheat	0.1	Apples
0.5	IT child/toddler	0.2	Wheat	0.1	Lettuce	0.1	Tomatoes
0.5	WHO regional diet	0.1	Potatoes	0.1	Lettuce	0.1	Wheat
0.5	IE adult	0.1	Potatoes	0.1	Wheat	0.1	Pears
0.5	UK infant	0.1	Potatoes	0.1	Apples	0.1	Wheat
0.5	WHO Cluster diet F	0.1	Wheat	0.1	Potatoes	0.1	Lettuce
0.5	WHO cluster diet D	0.2	Wheat	0.1	Potatoes	0.0	Tomatoes
0.5	WHO cluster diet E	0.1	Wheat	0.1	Potatoes	0.1	Apples
0.4	ES adult	0.1	Lettuce	0.1	Wheat	0.0	Apples
0.4	NL (GP)	0.1	Potatoes	0.1	Apples	0.1	Wheat
0.4	IT adult	0.1	Wheat	0.1	Lettuce	0.1	Tomatoes
0.4	PL (GP)	0.1	Apples	0.1	Potatoes	0.0	Tomatoes
0.4	LT adult	0.1	Apples	0.1	Potatoes	0.0	Wheat
0.3	UK vegetarian	0.1	Wheat	0.0	Potatoes	0.0	Apples
0.3	FR (GP)	0.1	Wheat	0.0	Potatoes	0.0	Apples
0.3	DK adult	0.1	Wheat	0.0	Apples	0.0	Potatoes
0.2	UK adult	0.1	Wheat	0.0	Potatoes	0.0	Lettuce
0.2	FI adult	0.0	Potatoes	0.0	Wheat	0.0	Oranges

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	5	1045	0.1		0.03				
2009	Bananas	0.3	849	0.1		1.00				
2009	Peppers	2	1105	2.99		0.07				
2009	Aubergines (egg plants)	1	745	1.34		0.02				
2009	Cauliflower	1	656	1.07		0.14				
2009	Peas (without pods)	1	581	6.20		0.02				
2009	Wheat	0.5	628	2.23						
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Boscalid**



<b>Bromopropylate</b>	
Status of the active substance:	Excluded
Code number:	13
Toxicological end points	
ADI (mg/kg bw/day):	0.03
Source of ADI:	JMPR
Year of evaluation:	1993
ARID (mg/kg bw):	0.03
Source of ARID:	JMPR
Year of evaluation:	1993

Active substance was not assessed regarding the setting of an ARID. The acute risk assessment was performed on the basis of the ADI.

**Chronic risk assessment**

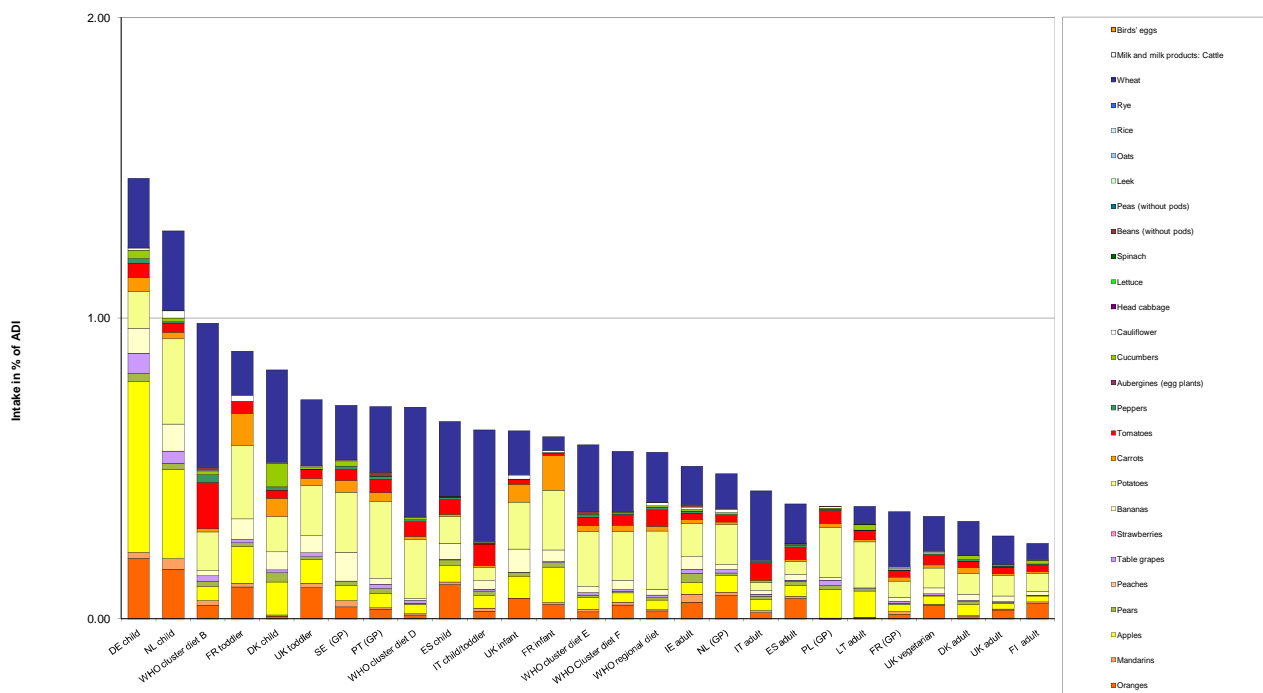
		Exposure (range) in % of ADI minimum - maximum					
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		No of diets exceeding ADI:					
		---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.5	DE child	0.6	Apples	0.2	Wheat	0.2	Oranges
1.3	NL child	0.3	Apples	0.3	Potatoes	0.3	Wheat
1.0	WHO cluster diet B	0.5	Wheat	0.2	Tomatoes	0.1	Potatoes
0.9	FR toddler	0.2	Potatoes	0.1	Wheat	0.1	Apples
0.8	DK child	0.3	Wheat	0.1	Potatoes	0.1	Apples
0.7	UK toddler	0.2	Wheat	0.2	Potatoes	0.1	Oranges
0.7	SE (GP)	0.2	Potatoes	0.2	Wheat	0.1	Bananas
0.7	PT (GP)	0.3	Potatoes	0.2	Wheat	0.0	Apples
0.7	WHO cluster diet D	0.4	Wheat	0.2	Potatoes	0.1	Tomatoes
0.7	ES child	0.2	Wheat	0.1	Oranges	0.1	Potatoes
0.6	IT child/toddler	0.4	Wheat	0.1	Tomatoes	0.0	Potatoes
0.6	UK infant	0.2	Potatoes	0.1	Wheat	0.1	Bananas
0.6	FR infant	0.2	Potatoes	0.1	Apples	0.1	Carrots
0.6	WHO cluster diet E	0.2	Wheat	0.2	Potatoes	0.0	Apples
0.6	WHO Cluster diet F	0.2	Wheat	0.2	Potatoes	0.0	Oranges
0.6	WHO regional diet	0.2	Potatoes	0.2	Wheat	0.1	Tomatoes
0.5	IE adult	0.1	Wheat	0.1	Potatoes	0.1	Oranges
0.5	NL (GP)	0.1	Potatoes	0.1	Wheat	0.1	Oranges
0.4	IT adult	0.2	Wheat	0.1	Tomatoes	0.0	Apples
0.4	ES adult	0.1	Wheat	0.1	Oranges	0.0	Potatoes
0.4	PL (GP)	0.2	Potatoes	0.1	Apples	0.0	Tomatoes
0.4	LT adult	0.2	Potatoes	0.1	Apples	0.1	Wheat
0.4	FR (GP)	0.2	Wheat	0.1	Potatoes	0.0	Apples
0.3	UK vegetarian	0.1	Wheat	0.1	Potatoes	0.0	Oranges
0.3	DK adult	0.1	Wheat	0.1	Potatoes	0.0	Apples
0.3	UK adult	0.1	Wheat	0.1	Potatoes	0.0	Oranges
0.3	FI adult	0.1	Potatoes	0.1	Wheat	0.1	Oranges

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	2	1480							
2009	Bananas	0.05	1205	0.2		0.01		2.79	UK infant	
2009	Peppers	0.05	1526	0.20		0.02		4.20	DE child	
2009	Aubergines (egg plants)	0.05	966					4.41	NL child	
2009	Cauliflower	0.05	847	0.12		0.02		1.44	UK 4-6 yr	
2009	Peas (without pods)	0.05	718							
2009	Wheat	0.05	1083	0.18		0.03				
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Bromopropylate**





<b>Bromuconazole</b>	
Status of the active substance:	Excluded
Code number:	14
Toxicological end points	
ADI (mg/kg bw/day):	0.01
Source of ADI:	EFSA
Year of evaluation:	2010
ARID (mg/kg bw):	0.1
Source of ARID:	EFSA
Year of evaluation:	2010

**Chronic risk assessment**

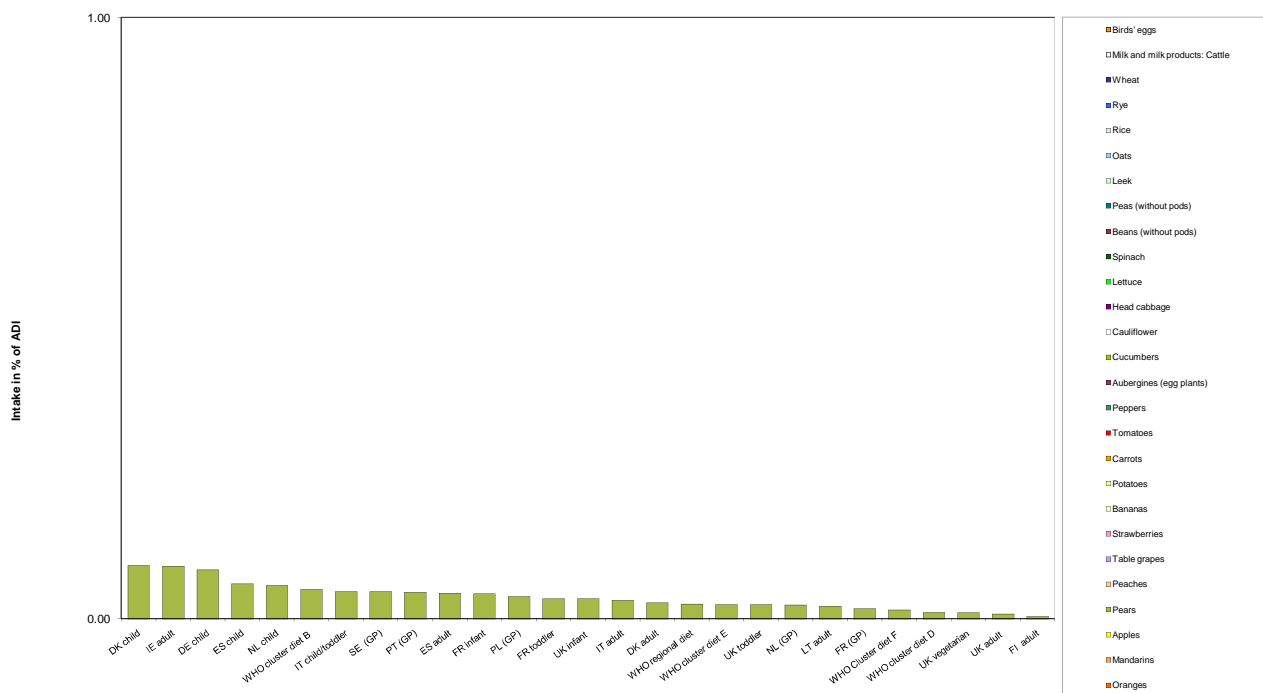
		Exposure (range) in % of ADI minimum - maximum					
		No of diets exceeding ADI:		---			
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.1	DK child	0.1	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.1	IE adult	0.1	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.1	DE child	0.1	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.1	ES child	0.1	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.1	NL child	0.1	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	WHO cluster diet B	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	IT child/toddler	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	SE (GP)	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	PT (GP)	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	ES adult	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	FR infant	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	PL (GP)	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	FR toddler	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	UK infant	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	IT adult	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	DK adult	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	WHO regional diet	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	WHO cluster diet E	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	UK toddler	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	NL (GP)	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	LT adult	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	FR (GP)	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	WHO Cluster diet F	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	WHO cluster diet D	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	UK vegetarian	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	UK adult	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.0	FI adult	0.0	Pears		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.5	820							
2009	Bananas	0.1	619							
2009	Peppers	0.05	878							
2009	Aubergines (egg plants)	0.05	559							
2009	Cauliflower	0.05	526							
2009	Peas (without pods)	0.05	481							
2009	Wheat	0.2	477							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Bromuconazole**



<b>Bupirimate</b>	
Status of the active substance:	Excluded
Code number:	15
Toxicological end points	
ADI (mg/kg bw/day):	0.05
Source of ADI:	EFSA
Year of evaluation:	2010
ARID (mg/kg bw):	0.05
Source of ARID:	EFSA
Year of evaluation:	2010

**Chronic risk assessment**

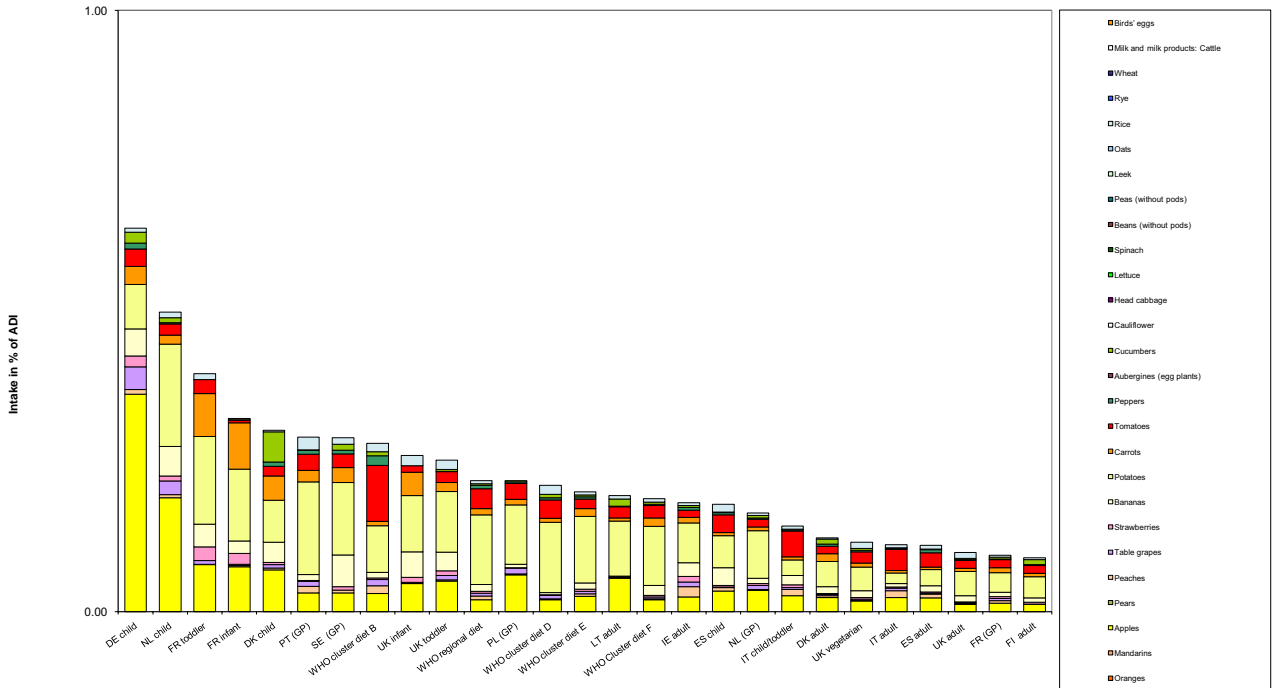
		Exposure (range) in % of ADI minimum - maximum					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.6	DE child	0.4	Apples	0.1	Potatoes	0.0	Bananas
0.5	NL child	0.2	Apples	0.2	Potatoes	0.0	Bananas
0.4	FR toddler	0.1	Potatoes	0.1	Apples	0.1	Carrots
0.3	FR infant	0.1	Potatoes	0.1	Carrots	0.1	Apples
0.3	DK child	0.1	Potatoes	0.1	Apples	0.1	Cucumbers
0.3	PT (GP)	0.2	Potatoes	0.0	Apples	0.0	Tomatoes
0.3	SE (GP)	0.1	Potatoes	0.1	Bananas	0.0	Apples
0.3	WHO cluster diet B	0.1	Tomatoes	0.1	Potatoes	0.0	Apples
0.3	UK infant	0.1	Potatoes	0.0	Apples	0.0	Bananas
0.3	UK toddler	0.1	Potatoes	0.1	Apples	0.0	Bananas
0.2	WHO regional diet	0.1	Potatoes	0.0	Tomatoes	0.0	Apples
0.2	PL (GP)	0.1	Potatoes	0.1	Apples	0.0	Tomatoes
0.2	WHO cluster diet D	0.1	Potatoes	0.0	Tomatoes	0.0	Apples
0.2	WHO cluster diet E	0.1	Potatoes	0.0	Apples	0.0	Tomatoes
0.2	LT adult	0.1	Potatoes	0.1	Apples	0.0	Tomatoes
0.2	WHO Cluster diet F	0.1	Potatoes	0.0	Tomatoes	0.0	Apples
0.2	IE adult	0.1	Potatoes	0.0	Apples	0.0	Bananas
0.2	ES child	0.1	Potatoes	0.0	Apples	0.0	Tomatoes
0.2	NL (GP)	0.1	Potatoes	0.0	Apples	0.0	Tomatoes
0.1	IT child/toddler	0.0	Tomatoes	0.0	Apples	0.0	Potatoes
0.1	DK adult	0.0	Potatoes	0.0	Apples	0.0	Carrots
0.1	UK vegetarian	0.0	Potatoes	0.0	Tomatoes	0.0	Apples
0.1	IT adult	0.0	Tomatoes	0.0	Apples	0.0	Potatoes
0.1	ES adult	0.0	Potatoes	0.0	Tomatoes	0.0	Apples
0.1	UK adult	0.0	Potatoes	0.0	Tomatoes	0.0	Apples
0.1	FR (GP)	0.0	Potatoes	0.0	Apples	0.0	Tomatoes
0.1	FI adult	0.0	Potatoes	0.0	Tomatoes	0.0	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	1	1239							
2009	Bananas	0.05	1107	0.1		0.02		3.34	UK infant	
2009	Peppers	2	1319	1.14		0.16		20.15	DE child	
2009	Aubergines (egg plants)	0.05	882							
2009	Cauliflower	0.05	806							
2009	Peas (without pods)	0.5	717							
2009	Wheat	0.05	864							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Bupirimate**



Buprofezin		
Status of the active substance:	Excluded	
Code number:	16	
Toxicological end points		
ADI (mg/kg bw/day):	0.01	ARID (mg/kg bw):
Source of ADI:	EFSA	Source of ARID:
Year of evaluation:	2010	Year of evaluation:
	0.5	EFSA
		2010

**Chronic risk assessment**

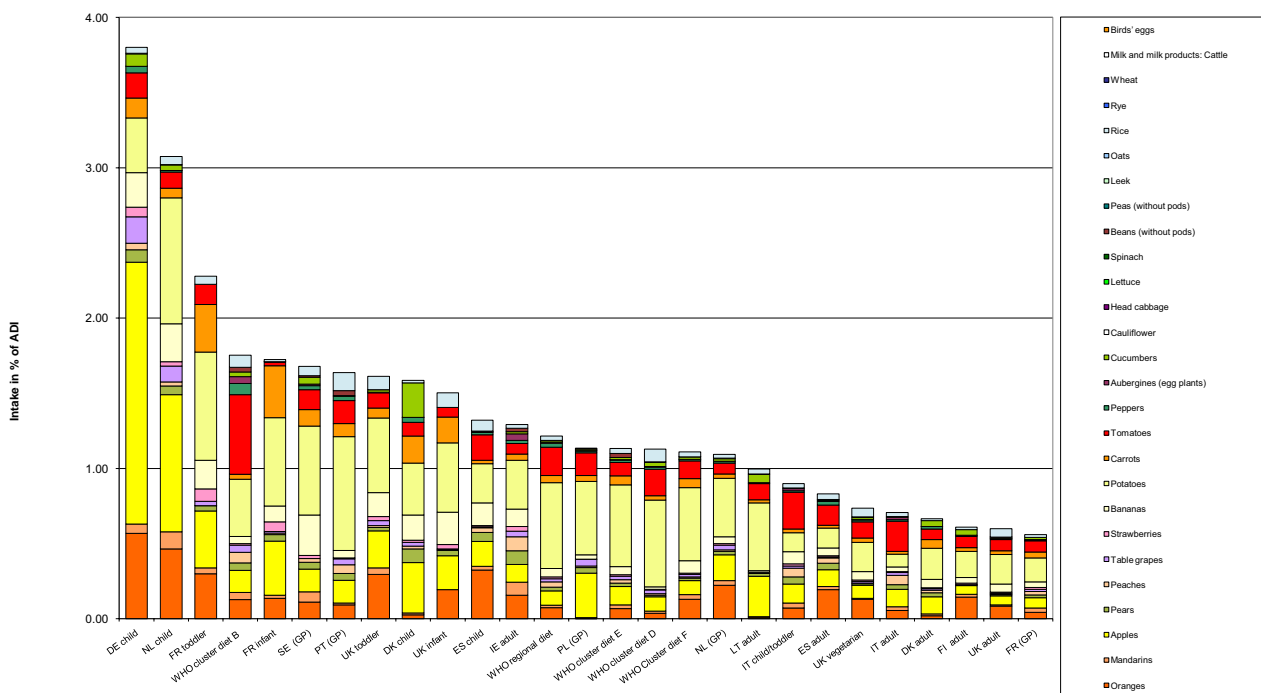
		Exposure (range) in % of ADI minimum - maximum					
		1      4					
		No of diets exceeding ADI:      ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
3.8	DE child	1.7	Apples	0.6	Oranges	0.4	Potatoes
3.1	NL child	0.9	Apples	0.8	Potatoes	0.5	Oranges
2.3	FR toddler	0.7	Potatoes	0.4	Apples	0.3	Carrots
1.8	WHO cluster diet B	0.5	Tomatoes	0.4	Potatoes	0.1	Apples
1.7	FR infant	0.6	Potatoes	0.4	Apples	0.3	Carrots
1.7	SE (GP)	0.6	Potatoes	0.3	Bananas	0.2	Apples
1.6	PT (GP)	0.8	Potatoes	0.2	Tomatoes	0.2	Apples
1.6	UK toddler	0.5	Potatoes	0.3	Oranges	0.2	Apples
1.6	DK child	0.3	Potatoes	0.3	Apples	0.2	Cucumbers
1.5	UK infant	0.5	Potatoes	0.2	Apples	0.2	Bananas
1.3	ES child	0.3	Oranges	0.3	Potatoes	0.2	Tomatoes
1.3	IE adult	0.3	Potatoes	0.2	Oranges	0.1	Apples
1.2	WHO regional diet	0.6	Potatoes	0.2	Tomatoes	0.1	Apples
1.1	PL (GP)	0.5	Potatoes	0.3	Apples	0.2	Tomatoes
1.1	WHO cluster diet E	0.5	Potatoes	0.1	Apples	0.1	Tomatoes
1.1	WHO cluster diet D	0.6	Potatoes	0.2	Tomatoes	0.1	Apples
1.1	WHO Cluster diet F	0.5	Potatoes	0.1	Oranges	0.1	Tomatoes
1.1	NL (GP)	0.4	Potatoes	0.2	Oranges	0.2	Apples
1.0	LT adult	0.5	Potatoes	0.3	Apples	0.1	Tomatoes
0.9	IT child/toddler	0.2	Tomatoes	0.1	Apples	0.1	Potatoes
0.8	ES adult	0.2	Oranges	0.1	Tomatoes	0.1	Potatoes
0.7	UK vegetarian	0.2	Potatoes	0.1	Oranges	0.1	Tomatoes
0.7	IT adult	0.2	Tomatoes	0.1	Apples	0.1	Potatoes
0.7	DK adult	0.2	Potatoes	0.1	Apples	0.1	Tomatoes
0.6	FI adult	0.2	Potatoes	0.1	Oranges	0.1	Tomatoes
0.6	UK adult	0.2	Potatoes	0.1	Oranges	0.1	Tomatoes
0.6	FR (GP)	0.2	Potatoes	0.1	Tomatoes	0.1	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	1	1365							
2009	Bananas	0.5	1143	0.5		0.20		3.34	UK infant	
2009	Peppers	1	1446	0.28		0.09		1.07	DE child	
2009	Aubergines (egg plants)	1	915	0.33		0.06		0.32	UK 4-6 yr	
2009	Cauliflower	0.05	767							
2009	Peas (without pods)	0.5	669							
2009	Wheat	0.05	977							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Buprofezin**



Cadusafos (aka ebufos)			
Status of the active substance:	Excluded		
Code number:	17		
Toxicological end points			
ADI (mg/kg bw/day):	0.0004	ARID (mg/kg bw):	0.003
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2008	Year of evaluation:	2008

**Chronic risk assessment**

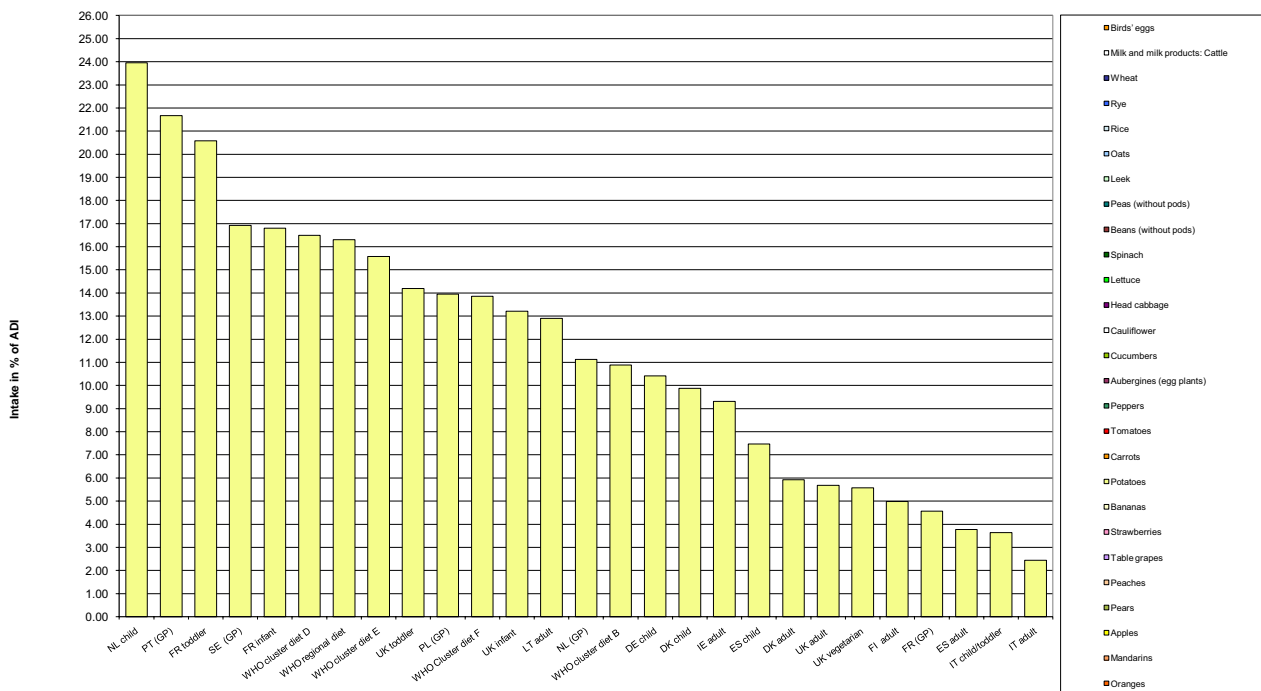
		Exposure (range) in % of ADI minimum - maximum					
		2 24					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
24.0	NL child	24.0	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
21.7	PT (GP)	21.7	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
20.6	FR toddler	20.6	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
16.9	SE (GP)	16.9	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
16.8	FR infant	16.8	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
16.5	WHO cluster diet D	16.5	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
16.3	WHO regional diet	16.3	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
15.6	WHO cluster diet E	15.6	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
14.2	UK toddler	14.2	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
14.0	PL (GP)	14.0	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
13.9	WHO Cluster diet F	13.9	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
13.2	UK infant	13.2	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
12.9	LT adult	12.9	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
11.1	NL (GP)	11.1	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
10.9	WHO cluster diet B	10.9	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
10.4	DE child	10.4	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
9.9	DK child	9.9	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
9.3	IE adult	9.3	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
7.5	ES child	7.5	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
5.9	DK adult	5.9	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
5.7	UK adult	5.7	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
5.6	UK vegetarian	5.6	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
5.0	FI adult	5.0	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
4.6	FR (GP)	4.6	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
3.8	ES adult	3.8	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
3.6	IT child/toddler	3.6	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
2.4	IT adult	2.4	Potatoes		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes		931							
2009	Bananas		787							
2009	Peppers		890							
2009	Aubergines (egg plants)		605							
2009	Cauliflower		539							
2009	Peas (without pods)		481							
2009	Wheat		528							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Cadusafos (aka ebufos)**



<b>Camphechlor</b>	
Status of the active substance:	<b>Excluded</b>
Code number:	<b>18</b>
<b>Toxicological end points</b>	
ADI (mg/kg bw/day):	ARID (mg/kg bw):
Source of ADI:	Source of ARID:
Year of evaluation:	Year of evaluation:

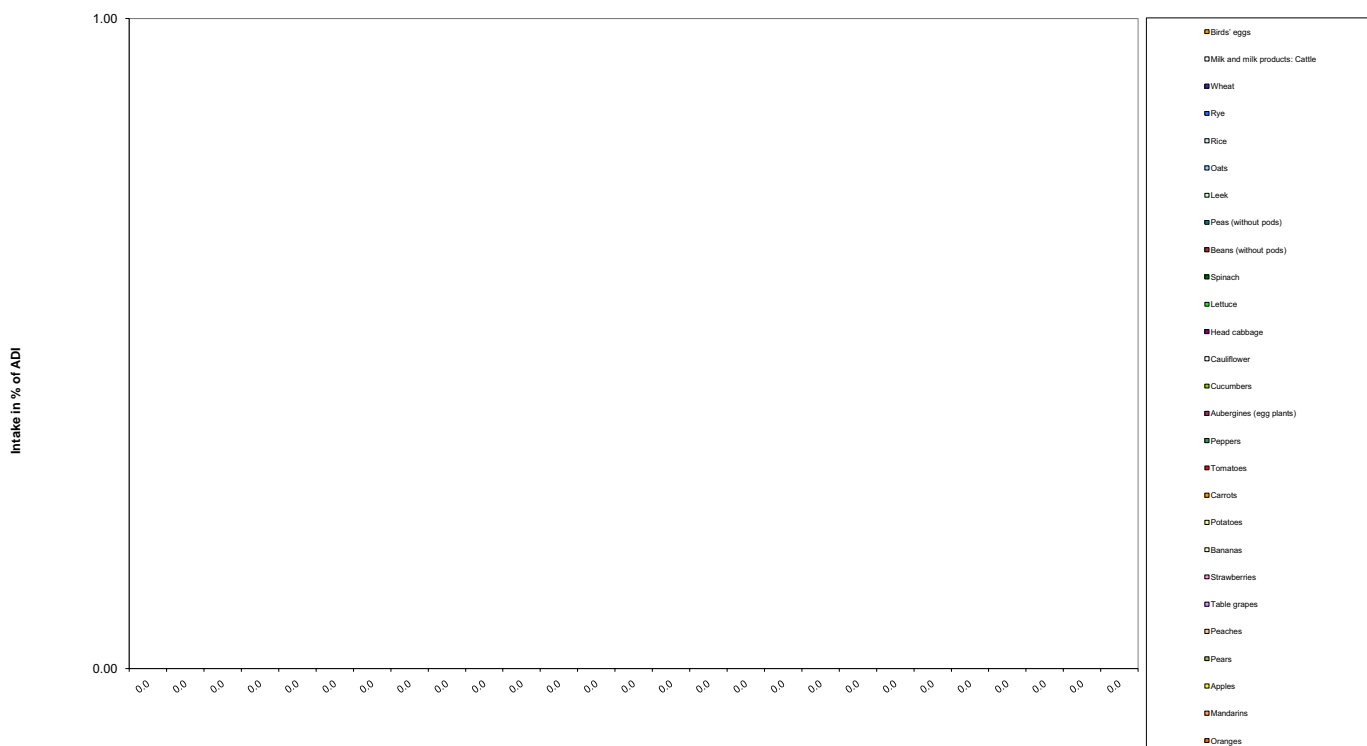
No residue levels quantified above the LOQ.

<b>Chronic risk assessment</b>							
		Exposure (range) in % of ADI minimum - maximum #DIV/0!					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	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

<b>Acute risk assessment</b>										
Year	Commodity <sup>a)</sup>	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
2009	Milk and milk products: Cattle		83							
2009	Birds' eggs		119							

<sup>a)</sup> The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Camphechlor**



<b>Captan</b>	
Status of the active substance:	Included
Code number:	19
Toxicological end points	
ADI (mg/kg bw/day):	0.1      ARID (mg/kg bw):      0.3
Source of ADI:	EFSA      Source of ARID:      EFSA
Year of evaluation:	2009      Year of evaluation:      2009

**Chronic risk assessment**

Exposure (range) in % of ADI  
minimum - maximum

No of diets exceeding ADI:      ---      1

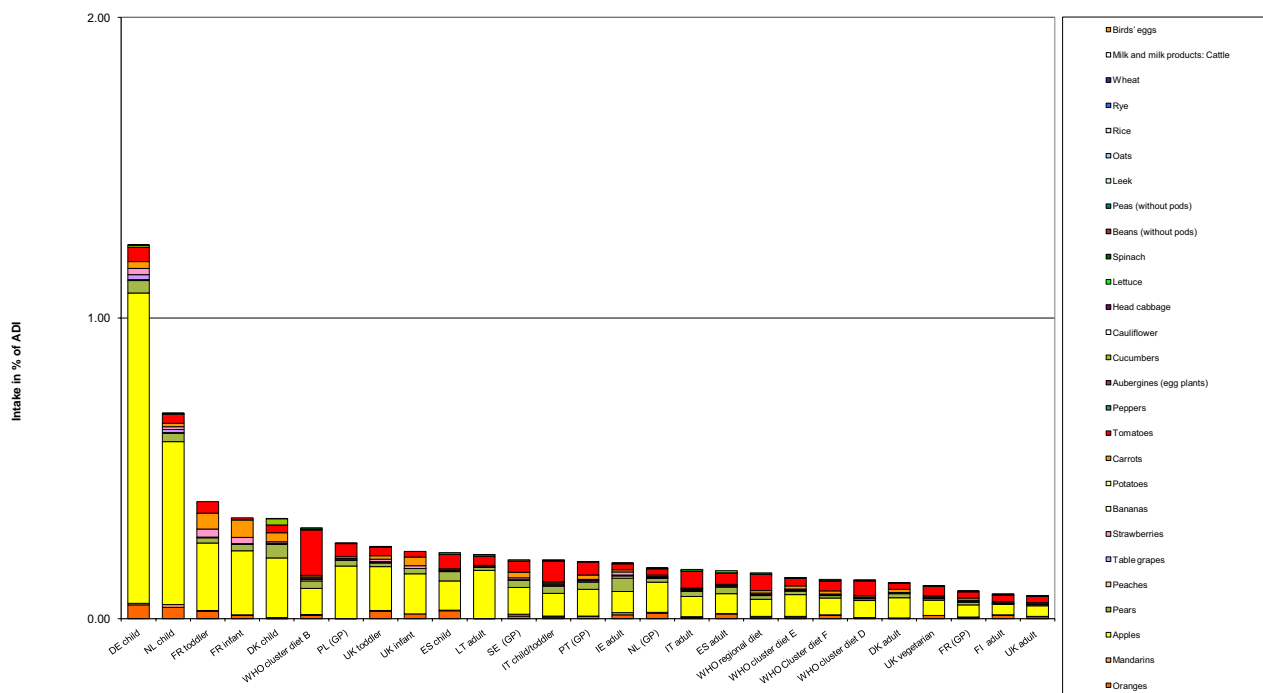
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.2	DE child	1.0	Apples	0.0	Tomatoes	0.0	Oranges
0.7	NL child	0.5	Apples	0.0	Oranges	0.0	Tomatoes
0.4	FR toddler	0.2	Apples	0.1	Carrots	0.0	Tomatoes
0.3	FR infant	0.2	Apples	0.1	Carrots	0.0	Pears
0.3	DK child	0.2	Apples	0.0	Pears	0.0	Carrots
0.3	WHO cluster diet B	0.2	Tomatoes	0.1	Apples	0.0	Pears
0.3	PL (GP)	0.2	Apples	0.0	Tomatoes	0.0	Pears
0.2	UK toddler	0.1	Apples	0.0	Tomatoes	0.0	Oranges
0.2	UK infant	0.1	Apples	0.0	Carrots	0.0	Tomatoes
0.2	ES child	0.1	Apples	0.0	Tomatoes	0.0	Pears
0.2	LT adult	0.2	Apples	0.0	Tomatoes	0.0	Pears
0.2	SE (GP)	0.1	Apples	0.0	Tomatoes	0.0	Pears
0.2	IT child/toddler	0.1	Apples	0.1	Tomatoes	0.0	Pears
0.2	PT (GP)	0.1	Apples	0.0	Tomatoes	0.0	Pears
0.2	IE adult	0.1	Apples	0.0	Pears	0.0	Tomatoes
0.2	NL (GP)	0.1	Apples	0.0	Tomatoes	0.0	Oranges
0.2	IT adult	0.1	Apples	0.1	Tomatoes	0.0	Pears
0.2	ES adult	0.1	Apples	0.0	Tomatoes	0.0	Pears
0.2	WHO regional diet	0.1	Apples	0.1	Tomatoes	0.0	Pears
0.1	WHO cluster diet E	0.1	Apples	0.0	Tomatoes	0.0	Pears
0.1	WHO cluster diet F	0.1	Apples	0.0	Tomatoes	0.0	Oranges
0.1	WHO cluster diet D	0.1	Apples	0.0	Tomatoes	0.0	Pears
0.1	DK adult	0.1	Apples	0.0	Tomatoes	0.0	Pears
0.1	UK vegetarian	0.1	Apples	0.0	Tomatoes	0.0	Oranges
0.1	FR (GP)	0.0	Apples	0.0	Tomatoes	0.0	Pears
0.1	FI adult	0.0	Apples	0.0	Tomatoes	0.0	Oranges
0.1	UK adult	0.0	Apples	0.0	Tomatoes	0.0	Oranges

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.02	1014	0.010	0.59	0.6		13.10	DE child	
2009	Bananas	0.02	799							
2009	Peppers	0.1	1027							
2009	Aubergines (egg plants)	0.02	624							
2009	Cauliflower	0.02	563							
2009	Peas (without pods)	0.02	427							
2009	Wheat	0.02	761							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Captan**



<b>Carbaryl</b>	
Status of the active substance:	Excluded
Code number:	20
Toxicological end points	
ADI (mg/kg bw/day):	0.0075
Source of ADI:	EFSA
Year of evaluation:	2006
ARID (mg/kg bw):	0.01
Source of ARID:	EFSA
Year of evaluation:	2006

**Chronic risk assessment**

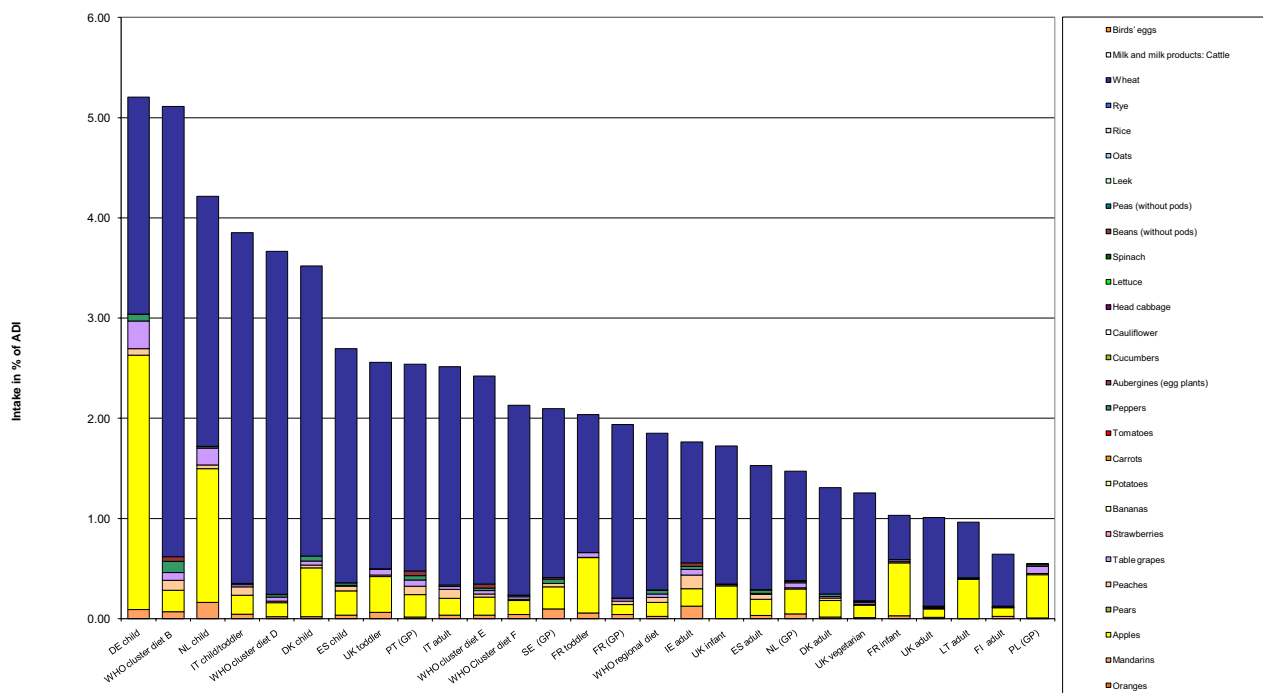
		Exposure (range) in % of ADI minimum - maximum					
		1	5				
		No of diets exceeding ADI:					
		---	---				
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
5.2	DE child	2.5	Apples	2.2	Wheat	0.3	Table grapes
5.1	WHO cluster diet B	4.5	Wheat	0.2	Apples	0.1	Peppers
4.2	NL child	2.5	Wheat	1.3	Apples	0.2	Table grapes
3.9	IT child/toddler	3.5	Wheat	0.2	Apples	0.1	Peaches
3.7	WHO cluster diet D	3.4	Wheat	0.1	Apples	0.0	Table grapes
3.5	DK child	2.9	Wheat	0.5	Apples	0.0	Peppers
2.7	ES child	2.3	Wheat	0.2	Apples	0.0	Peaches
2.6	UK toddler	2.1	Wheat	0.4	Apples	0.1	Mandarins
2.5	PT (GP)	2.1	Wheat	0.2	Apples	0.1	Peaches
2.5	IT adult	2.2	Wheat	0.2	Apples	0.1	Peaches
2.4	WHO cluster diet E	2.1	Wheat	0.2	Apples	0.0	Beans (without pods)
2.1	WHO Cluster diet F	1.9	Wheat	0.1	Apples	0.0	Mandarins
2.1	SE (GP)	1.7	Wheat	0.2	Apples	0.1	Mandarins
2.0	FR toddler	1.4	Wheat	0.6	Apples	0.1	Mandarins
1.9	FR (GP)	1.7	Wheat	0.1	Apples	0.0	Mandarins
1.8	WHO regional diet	1.6	Wheat	0.1	Apples	0.1	Peaches
1.8	IE adult	1.2	Wheat	0.2	Apples	0.1	Peaches
1.7	UK infant	1.4	Wheat	0.3	Apples	0.0	Peaches
1.5	ES adult	1.2	Wheat	0.2	Apples	0.1	Peaches
1.5	NL (GP)	1.1	Wheat	0.2	Apples	0.1	Table grapes
1.3	DK adult	1.1	Wheat	0.2	Apples	0.0	Peaches
1.3	UK vegetarian	1.1	Wheat	0.1	Apples	0.0	Peppers
1.0	FR infant	0.5	Apples	0.4	Wheat	0.0	Mandarins
1.0	UK adult	0.9	Wheat	0.1	Apples	0.0	Mandarins
1.0	LT adult	0.6	Wheat	0.4	Apples	0.0	Beans (without pods)
0.6	FI adult	0.5	Wheat	0.1	Apples	0.0	Mandarins
0.6	PL (GP)	0.4	Apples	0.1	Table grapes	0.0	Peppers

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	1402	0.010		0.6		13.10	DE child	
2009	Bananas	0.05	1148							
2009	Peppers	0.05	1385	0.07	0.07	0.09		57.94	DE child	
2009	Aubergines (egg plants)	0.05	872							
2009	Cauliflower	0.05	779							
2009	Peas (without pods)	0.05	653							
2009	Wheat	0.5	1099	0.73		0.13		18.78	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Carbaryl**



<b>Carbendazim</b>	
Status of the active substance:	<b>Included</b>
Code number:	<b>21</b>
<b>Toxicological end points</b>	
ADI (mg/kg bw/day):	<b>0.02</b>
Source of ADI:	<b>EFSA</b>
Year of evaluation:	<b>2010</b>
ARID (mg/kg bw):	<b>0.02</b>
Source of ARID:	<b>EFSA</b>
Year of evaluation:	<b>2010</b>

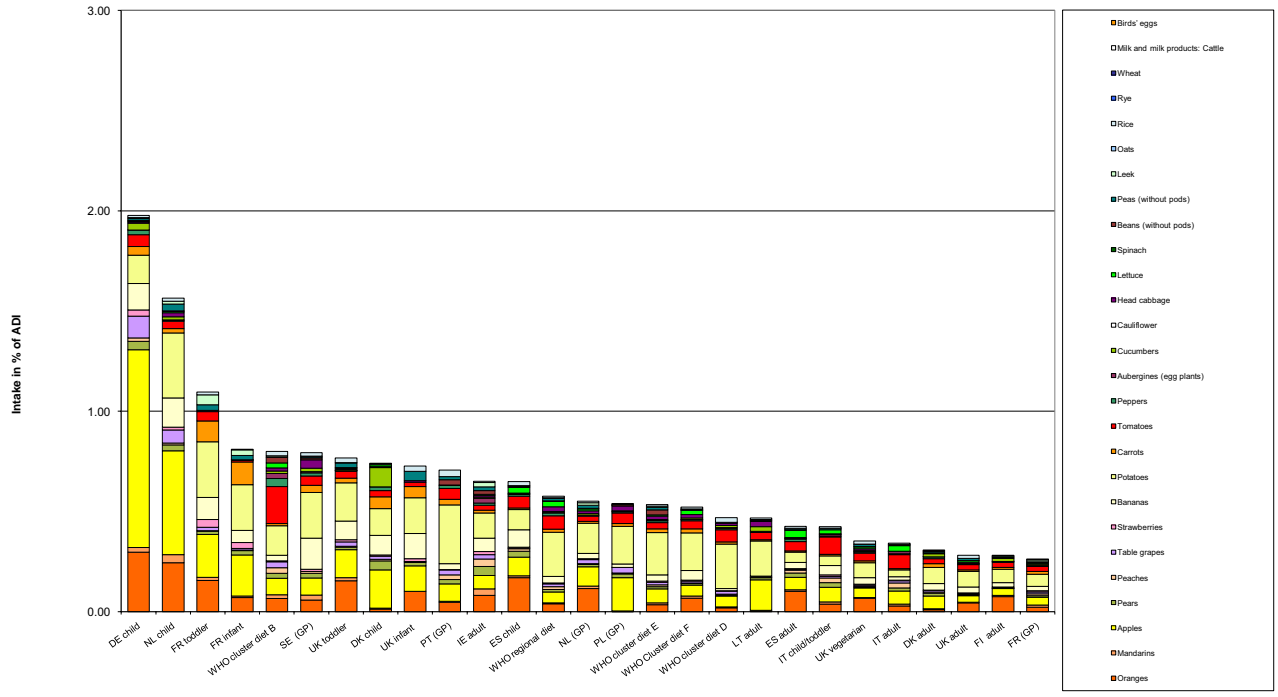
For the risk assessment the toxicological reference values of carbendazim are used. ADI and ARID for benomyl: 0.03 mg/kg bw/d (DE, 1998).

<b>Chronic risk assessment</b>					
		Exposure (range) in % of ADI minimum - maximum			
		No of diets exceeding ADI:		---	
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)	
MS Diet		Commodity / group of commodities		Commodity / group of commodities	
		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
2.0	DE child	1.0	Apples	0.3	Oranges
1.6	NL child	0.5	Apples	0.3	Potatoes
1.1	FR toddler	0.3	Potatoes	0.2	Apples
0.8	FR infant	0.2	Potatoes	0.2	Apples
0.8	WHO cluster diet B	0.2	Tomatoes	0.1	Potatoes
0.8	SE (GP)	0.2	Potatoes	0.2	Bananas
0.8	UK toddler	0.2	Potatoes	0.2	Oranges
0.7	DK child	0.2	Apples	0.1	Potatoes
0.7	UK infant	0.2	Potatoes	0.1	Apples
0.7	PT (GP)	0.3	Potatoes	0.1	Apples
0.7	IE adult	0.1	Potatoes	0.1	Oranges
0.6	ES child	0.2	Oranges	0.1	Potatoes
0.6	WHO regional diet	0.2	Potatoes	0.1	Tomatoes
0.6	NL (GP)	0.2	Potatoes	0.1	Oranges
0.5	PL (GP)	0.2	Potatoes	0.2	Apples
0.5	WHO cluster diet E	0.2	Potatoes	0.1	Apples
0.5	WHO Cluster diet F	0.2	Potatoes	0.1	Oranges
0.5	WHO cluster diet D	0.2	Potatoes	0.1	Tomatoes
0.5	LT adult	0.2	Potatoes	0.2	Apples
0.4	ES adult	0.1	Oranges	0.1	Apples
0.4	IT child/toddler	0.1	Tomatoes	0.1	Apples
0.4	UK vegetarian	0.1	Potatoes	0.1	Oranges
0.3	IT adult	0.1	Tomatoes	0.1	Apples
0.3	DK adult	0.1	Potatoes	0.1	Apples
0.3	UK adult	0.1	Potatoes	0.0	Oranges
0.3	FI adult	0.1	Oranges	0.1	Potatoes
0.3	FR (GP)	0.1	Potatoes	0.0	Apples

<b>Acute risk assessment</b>										
								Acute exposure expressed in % of the ARID		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	0.3	939	2.77	0.21	1.5	2	491.10	DE child	
2009	Bananas	0.1	706	0.4	0.21	0.10	1	41.80	UK infant	
2009	Peppers	0.1	961	1.35	0.21	0.45	1	141.70	DE child	
2009	Aubergines (egg plants)	0.5	617	2.43		0.10		12.25	UK 4-6 yr	
2009	Cauliflower	0.1	518							
2009	Peas (without pods)	0.1	516	11.05	0.39	0.22		9.01	UK infant	
2009	Wheat	0.1	668							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Carbendazim**





Carbofuran			
Status of the active substance:	Excluded		
Code number:	22		
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

**Chronic risk assessment**

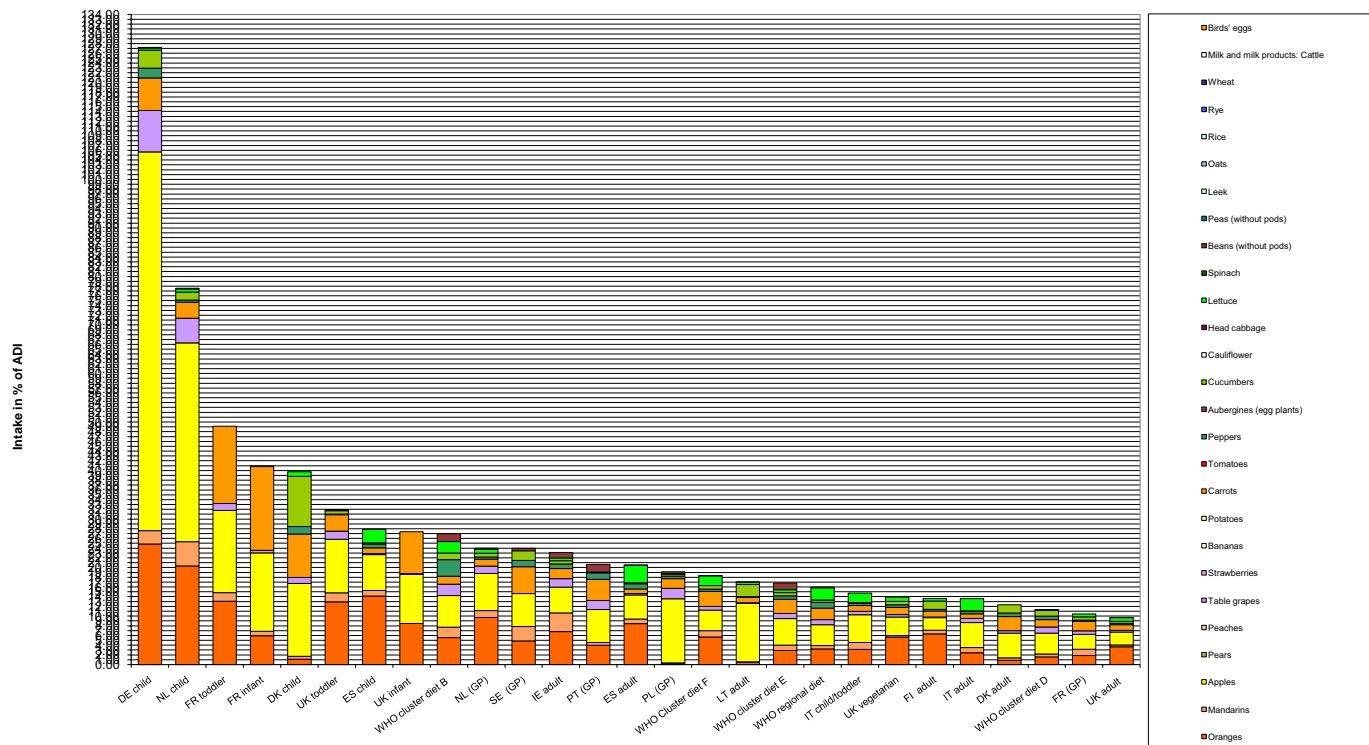
		Exposure (range) in % of ADI minimum - maximum					
		10	127				
		No of diets exceeding ADI:					
		1	1				
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
127.2	DE child	78.1	Apples	24.9	Oranges	8.5	Table grapes
77.6	NL child	41.0	Apples	20.3	Oranges	5.1	Table grapes
49.1	FR toddler	17.0	Apples	15.9	Carrots	13.1	Oranges
40.9	FR infant	17.3	Carrots	16.2	Apples	5.9	Oranges
39.8	DK child	15.0	Apples	10.4	Cucumbers	9.0	Carrots
31.9	UK toddler	12.9	Oranges	11.0	Apples	3.4	Carrots
27.9	ES child	14.1	Oranges	7.4	Apples	2.8	Lettuce
27.4	UK infant	10.1	Apples	8.6	Carrots	8.5	Oranges
27.0	WHO cluster diet B	6.5	Apples	5.6	Oranges	3.4	Peppers
24.0	NL (GP)	9.7	Oranges	7.6	Apples	1.5	Table grapes
24.0	SE (GP)	6.8	Apples	5.5	Carrots	4.9	Oranges
23.1	IE adult	6.8	Oranges	5.3	Apples	3.8	Mandarins
20.7	PT (GP)	6.8	Apples	4.3	Carrots	4.0	Oranges
20.5	ES adult	8.4	Oranges	5.0	Apples	3.6	Lettuce
19.1	PL (GP)	13.2	Apples	2.2	Table grapes	2.0	Carrots
18.3	WHO Cluster diet F	5.7	Oranges	4.2	Apples	3.1	Carrots
17.1	LT adult	12.1	Apples	2.5	Cucumbers	1.1	Carrots
16.8	WHO cluster diet E	5.5	Apples	2.9	Carrots	2.9	Oranges
16.0	WHO regional diet	4.3	Apples	3.2	Oranges	2.5	Lettuce
14.7	IT child/toddler	5.7	Apples	3.1	Oranges	1.9	Lettuce
14.0	UK vegetarian	5.7	Oranges	3.8	Apples	1.5	Carrots
13.6	FI adult	6.3	Oranges	2.6	Apples	1.7	Cucumbers
13.6	IT adult	5.1	Apples	2.5	Lettuce	2.4	Oranges
12.3	DK adult	5.1	Apples	2.9	Carrots	1.7	Cucumbers
11.4	WHO cluster diet D	4.3	Apples	1.6	Oranges	1.5	Carrots
10.4	FR (GP)	3.1	Apples	2.0	Carrots	1.9	Oranges
9.7	UK adult	3.7	Oranges	2.7	Apples	1.2	Carrots

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.02	1053		0.09	0.03	1	1309.60	DE child	
2009	Bananas	0.02	795							
2009	Peppers	0.02	1075		0.19	0.34	2	14275.09	DE child	
2009	Aubergines (egg plants)	0.02	698							
2009	Cauliflower	0.02	627							
2009	Peas (without pods)	0.02	545							
2009	Wheat	0.02	600							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Carbofuran**



<b>Carbosulfan</b>			
Status of the active substance:	Excluded		
Code number:	23		
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**

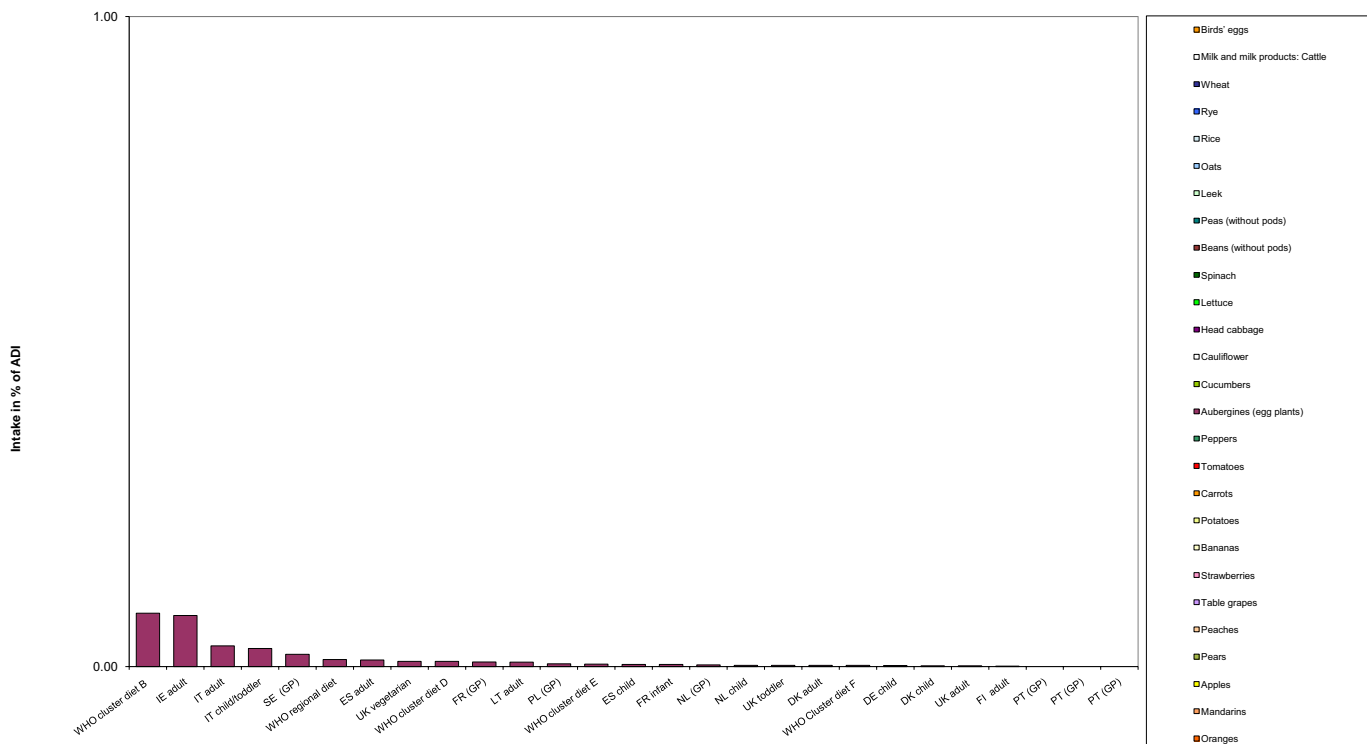
		Exposure (range) in % of ADI minimum - maximum					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.1	WHO cluster diet B	0.1	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	IE adult	0.1	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	IT adult	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	IT child/toddler	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	SE (GP)	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	WHO regional diet	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	ES adult	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	UK vegetarian	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	WHO cluster diet D	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	FR (GP)	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	LT adult	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	PL (GP)	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	WHO cluster diet E	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	ES child	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	FR infant	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	NL (GP)	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	NL child	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	UK toddler	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	DK adult	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	WHO Cluster diet F	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	DE child	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	DK child	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	UK adult	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	FI adult	0.0	Aubergines (egg)	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	PT (GP)		FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	PT (GP)		FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	PT (GP)		FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	678							
2009	Bananas	0.05	520							
2009	Peppers	0.05	809							
2009	Aubergines (egg plants)	0.05	474	0.21		0.01		5.00	UK 4-6 yr	
2009	Cauliflower	0.05	408							
2009	Peas (without pods)	0.05	308							
2009	Wheat	0.05	442							
	Milk and milk products:									
2009	Cattle									
2009	Birds' eggs									

<sup>a)</sup> The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Carbosulfan**



Chlordane			
Status of the active substance:	Excluded		
Code number:	24		
Toxicological end points			
ADI (mg/kg bw/day):	0.0005	ARID (mg/kg bw):	0.0005
Source of ADI:	JMPR	Source of ARID:	
Year of evaluation:	1994	Year of evaluation:	

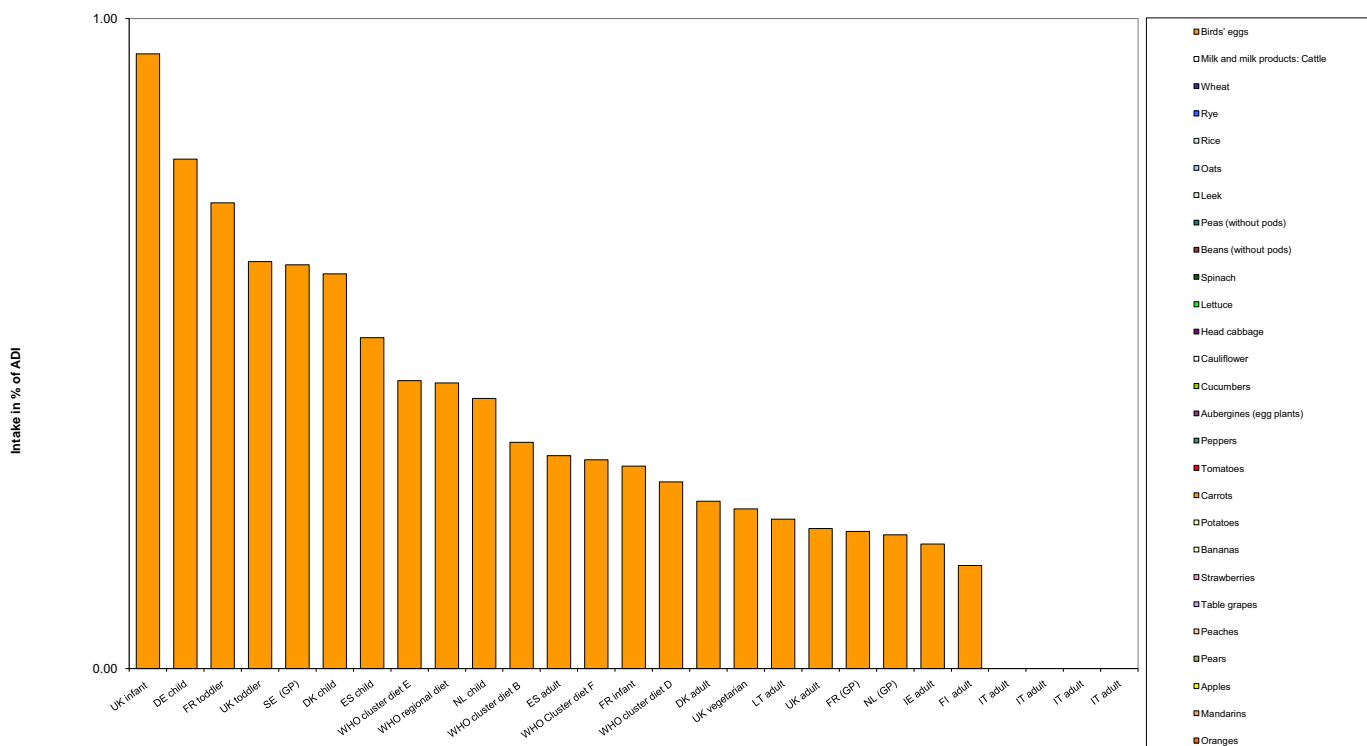
Active substance was not assessed regarding the setting of an ARID. The acute risk assessment was performed on the basis of the ADI.

Chronic risk assessment							
			Exposure (range) in % of ADI minimum - maximum 1				
			No of diets exceeding ADI: ---				
Highest calculated exposure in % of ADI	MS Diet	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
0.9	UK infant	0.9	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.8	DE child	0.8	Birds' eaoas		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.7	FR toddler	0.7	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.6	UK toddler	0.6	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.6	SE (GP)	0.6	Birds' eaoas		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.6	DK child	0.6	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.5	ES child	0.5	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.4	WHO cluster diet E	0.4	Birds' eaoas		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.4	WHO regional diet	0.4	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.4	NL child	0.4	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.3	WHO cluster diet B	0.3	Birds' eaoas		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.3	ES adult	0.3	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.3	WHO Cluster diet F	0.3	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.3	FR infant	0.3	Birds' eaoas		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.3	WHO cluster diet D	0.3	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.3	DK adult	0.3	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	UK vegetarian	0.2	Birds' eaoas		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	LT adult	0.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	UK adult	0.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	FR (GP)	0.2	Birds' eaoas		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	NL (GP)	0.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	IE adult	0.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	FI adult	0.2	Birds' eaoas		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	IT adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	IT adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	IT adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	IT adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
2009	Milk and milk products: Cattle		178							
2009	Birds' eggs		297	0.34		0.01		34.76	UK infant	

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Chlordane



Chlorfenvinphos			
Status of the active substance:	Excluded		
Code number:	25		
Toxicological end points			
ADI (mg/kg bw/day):	0.0005	ARID (mg/kg bw):	0.0005
Source of ADI:	JMPR	Source of ARID:	JMPR
Year of evaluation:	1994	Year of evaluation:	1994

Active substance was not assessed regarding the setting of an ARID. However, no residues were reported above the LOQ for the 9 crops included in the 2009 EU programme. Therefore, the estimation of the acute exposure was not necessary.

**Chronic risk assessment**

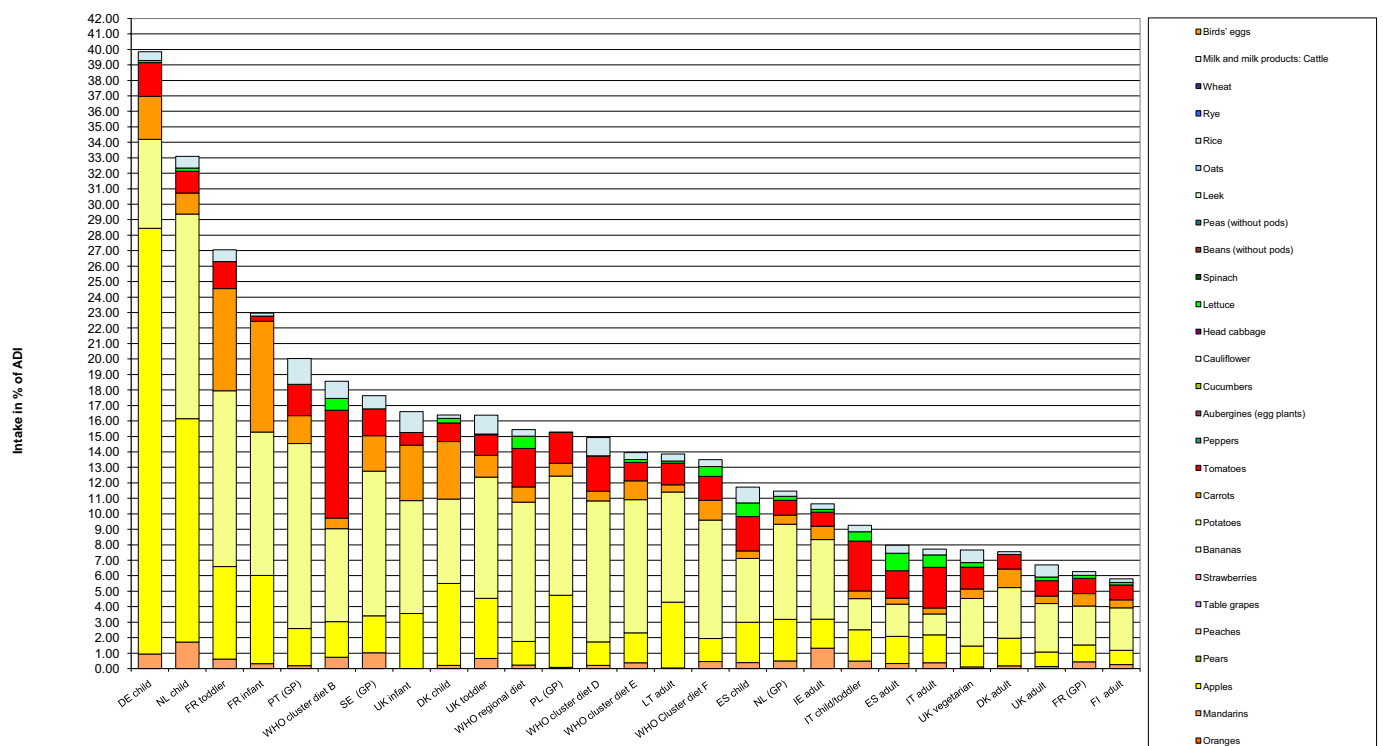
		Exposure (range) in % of ADI minimum - maximum					
		6	40				
No of diets exceeding ADI:							
		6	---				
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
39.8	DE child	27.5	Apples	5.7	Potatoes	2.8	Carrots
33.1	NL child	14.4	Apples	13.2	Potatoes	1.7	Mandarins
27.1	FR toddler	11.4	Potatoes	6.6	Carrots	6.0	Apples
23.0	FR infant	9.3	Potatoes	7.2	Carrots	5.7	Apples
20.0	PT (GP)	12.0	Potatoes	2.4	Apples	2.0	Tomatoes
18.6	WHO cluster diet B	7.0	Tomatoes	6.0	Potatoes	2.3	Apples
17.6	SE (GP)	9.3	Potatoes	2.4	Apples	2.3	Carrots
16.6	UK infant	7.3	Potatoes	3.6	Carrots	3.6	Apples
16.4	DK child	5.5	Potatoes	5.3	Apples	3.7	Carrots
16.4	UK toddler	7.8	Potatoes	3.9	Apples	1.4	Carrots
15.4	WHO regional diet	9.0	Potatoes	2.5	Tomatoes	1.5	Apples
15.3	PL (GP)	7.7	Potatoes	4.7	Apples	2.0	Tomatoes
14.9	WHO cluster diet D	9.1	Potatoes	2.3	Tomatoes	1.5	Apples
14.0	WHO cluster diet E	8.6	Potatoes	1.9	Apples	1.2	Carrots
13.9	LT adult	7.1	Potatoes	4.3	Apples	1.4	Tomatoes
13.5	WHO Cluster diet F	7.6	Potatoes	1.5	Tomatoes	1.5	Apples
11.7	ES child	4.1	Potatoes	2.6	Apples	2.2	Tomatoes
11.5	NL (GP)	6.1	Potatoes	2.7	Apples	1.0	Tomatoes
10.6	IE adult	5.1	Potatoes	1.9	Apples	1.3	Mandarins
9.3	IT child/toddler	3.2	Tomatoes	2.0	Apples	2.0	Potatoes
8.0	ES adult	2.1	Potatoes	1.8	Tomatoes	1.8	Apples
7.7	IT adult	2.6	Tomatoes	1.8	Apples	1.3	Potatoes
7.7	UK vegetarian	3.1	Potatoes	1.4	Tomatoes	1.3	Apples
7.6	DK adult	3.3	Potatoes	1.8	Apples	1.2	Carrots
6.7	UK adult	3.1	Potatoes	1.0	Tomatoes	0.9	Apples
6.3	FR (GP)	2.5	Potatoes	1.1	Apples	1.0	Tomatoes
5.8	FI adult	2.8	Potatoes	1.0	Tomatoes	0.9	Apples

**Acute risk assessment**

								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	0.02	1326							
2009	Bananas	0.02	1042							
2009	Peppers	0.02	1283							
2009	Aubergines (egg plants)	0.02	841							
2009	Cauliflower	0.02	722							
2009	Peas (without pods)	0.02	617							
2009	Wheat	0.02	939							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Chlorfenvinphos**



Chlormequat			
Status of the active substance:	Included		
Code number:	26		
Toxicological end points			
ADI (mg/kg bw/day):	0.04	ARID (mg/kg bw):	0.09
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2008	Year of evaluation:	2008

**Chronic risk assessment**

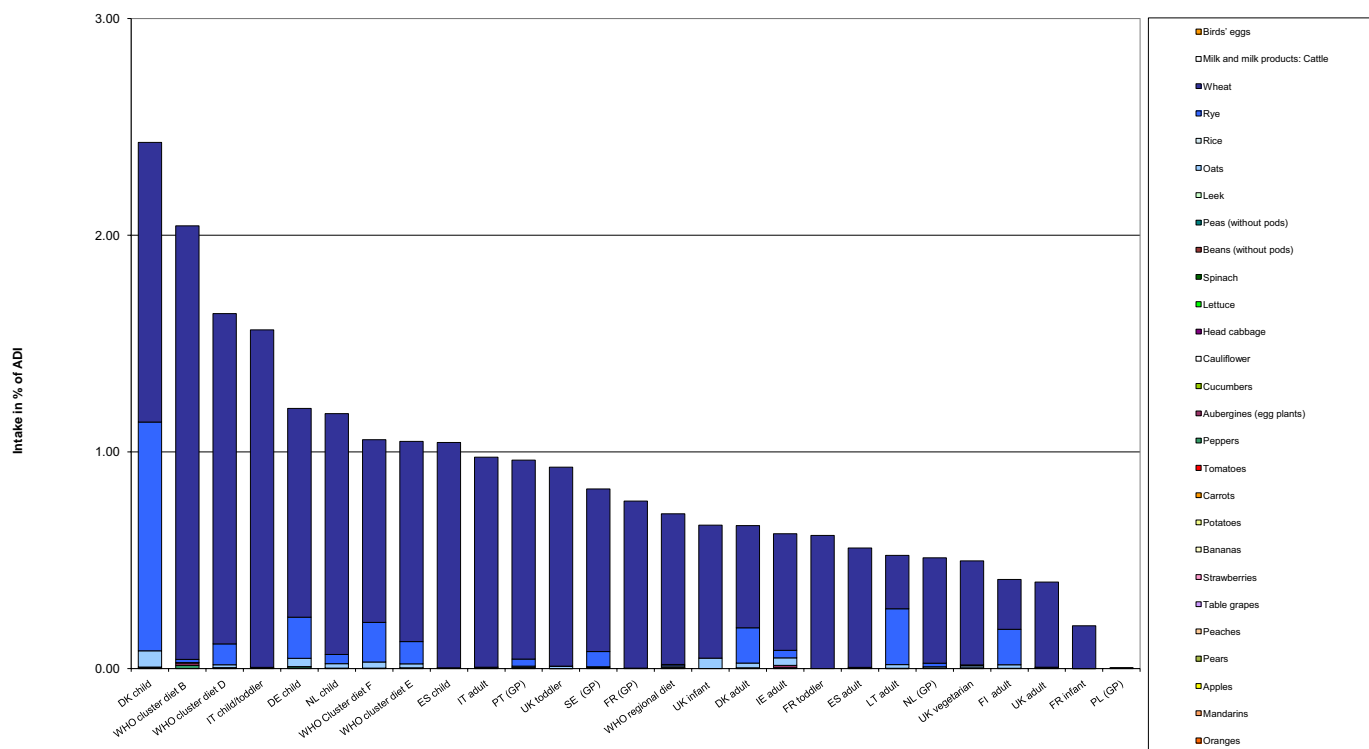
Exposure (range) in % of ADI minimum - maximum		No of diets exceeding ADI:					
2		---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
2.4	DK child	1.3	Wheat	1.1	Rye	0.1	Oats
2.0	WHO cluster diet B	2.0	Wheat	0.0	Peppers	0.0	Rye
1.6	WHO cluster diet D	1.5	Wheat	0.1	Rye	0.0	Oats
1.6	IT child/toddler	1.6	Wheat	0.0	Aubergines (egg)	0.0	Peppers
1.2	DE child	1.0	Wheat	0.2	Rye	0.0	Oats
1.2	NL child	1.1	Wheat	0.0	Rye	0.0	Oats
1.1	WHO Cluster diet F	0.8	Wheat	0.2	Rye	0.0	Oats
1.0	WHO cluster diet E	0.9	Wheat	0.1	Rye	0.0	Oats
1.0	ES child	1.0	Wheat	0.0	Peppers	0.0	Aubergines (egg plants)
1.0	IT adult	1.0	Wheat	0.0	Aubergines (egg)	0.0	Peppers
1.0	PT (GP)	0.9	Wheat	0.0	Rye	0.0	Peppers
0.9	UK toddler	0.9	Wheat	0.0	Oats	0.0	Rye
0.8	SE (GP)	0.8	Wheat	0.1	Rye	0.0	Peppers
0.8	FR (GP)	0.8	Wheat	0.0	Peppers	0.0	Aubergines (egg plants)
0.7	WHO regional diet	0.7	Wheat	0.0	Oats	0.0	Rye
0.7	UK infant	0.6	Wheat	0.0	Oats	0.0	FRUIT (FRESH OR FROZEN)
0.7	DK adult	0.5	Wheat	0.2	Rye	0.0	Oats
0.6	IE adult	0.5	Wheat	0.0	Rye	0.0	Oats
0.6	FR toddler	0.6	Wheat	0.0	FRUIT (FRESH OR	0.0	FRUIT (FRESH OR FROZEN)
0.6	ES adult	0.6	Wheat	0.0	Peppers	0.0	Aubergines (egg plants)
0.5	LT adult	0.3	Rye	0.2	Wheat	0.0	Oats
0.5	NL (GP)	0.5	Wheat	0.0	Rye	0.0	Oats
0.5	UK vegetarian	0.5	Wheat	0.0	Oats	0.0	Rye
0.4	FI adult	0.2	Wheat	0.2	Rye	0.0	Oats
0.4	UK adult	0.4	Wheat	0.0	Oats	0.0	Rye
0.2	FR infant	0.2	Wheat	0.0	Aubergines (egg)	0.0	Peppers
0.0	PL (GP)	0.0	Peppers	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR FROZEN)

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes									
2009	Bananas									
2009	Peppers	0.05	532	0.19		0.05		3.50	DE child	
2009	Aubergines (egg plants)	0.05	315	2.54	0.32	1.20		33.33	UK 4-6 yr	
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat	2	461	42.30		1.00		16.05	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Chlormequat**



Chlorobenzilate		
Status of the active substance:	Excluded	
Code number:	27	
Toxicological end points		
ADI (mg/kg bw/day):	0.02	ARID (mg/kg bw):
Source of ADI:	JMPR	Source of ARID:
Year of evaluation:	1980	Year of evaluation:

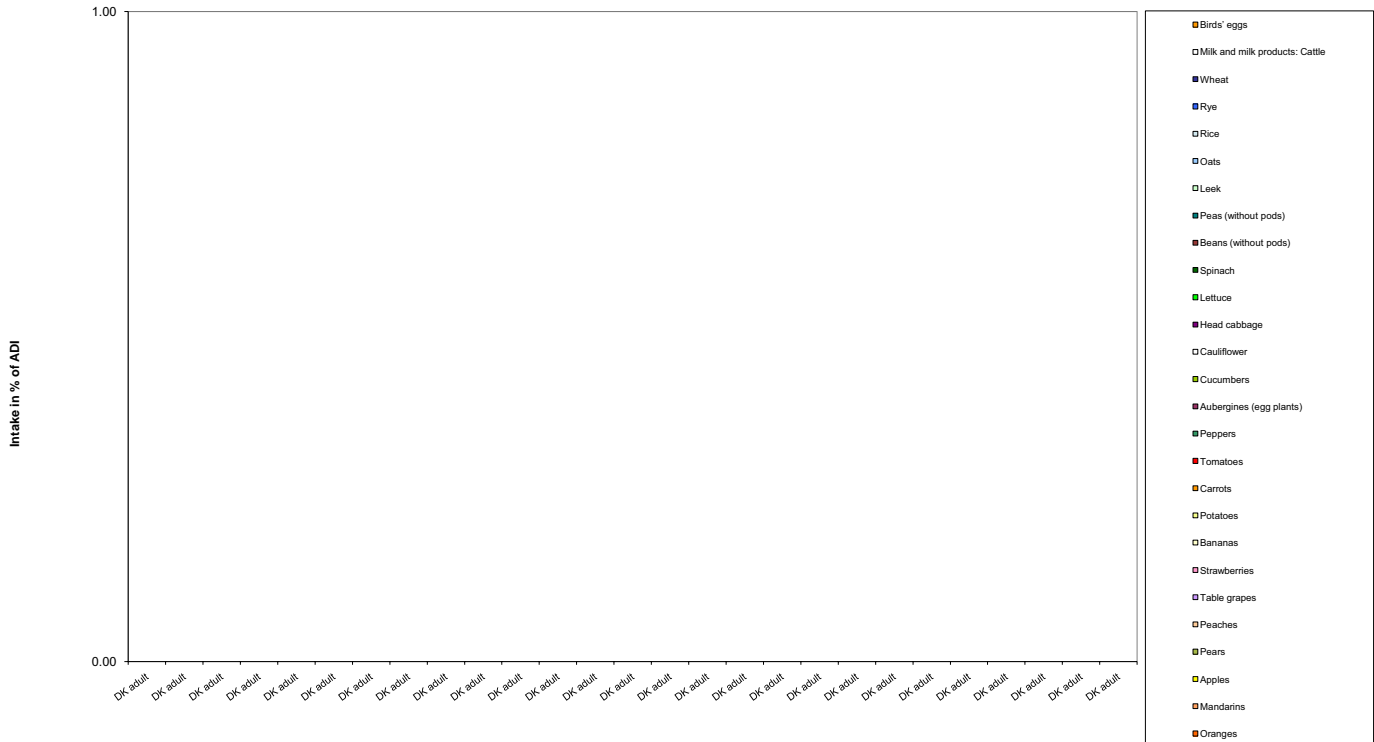
Active substance was not assessed regarding the setting of an ARID.  
 No measurements above the LOQ were reported for the food commodities included in the 2009 EU rolling programme.

Chronic risk assessment							
Exposure (range) in % of ADI minimum - maximum							
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	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		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
2009	Milk and milk products: Cattle	0.1	332							
2009	Birds' eggs	0.1	418							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Chlorobenzilate



Chlorothalonil			
Status of the active substance:	Included		
Code number:	28		
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**

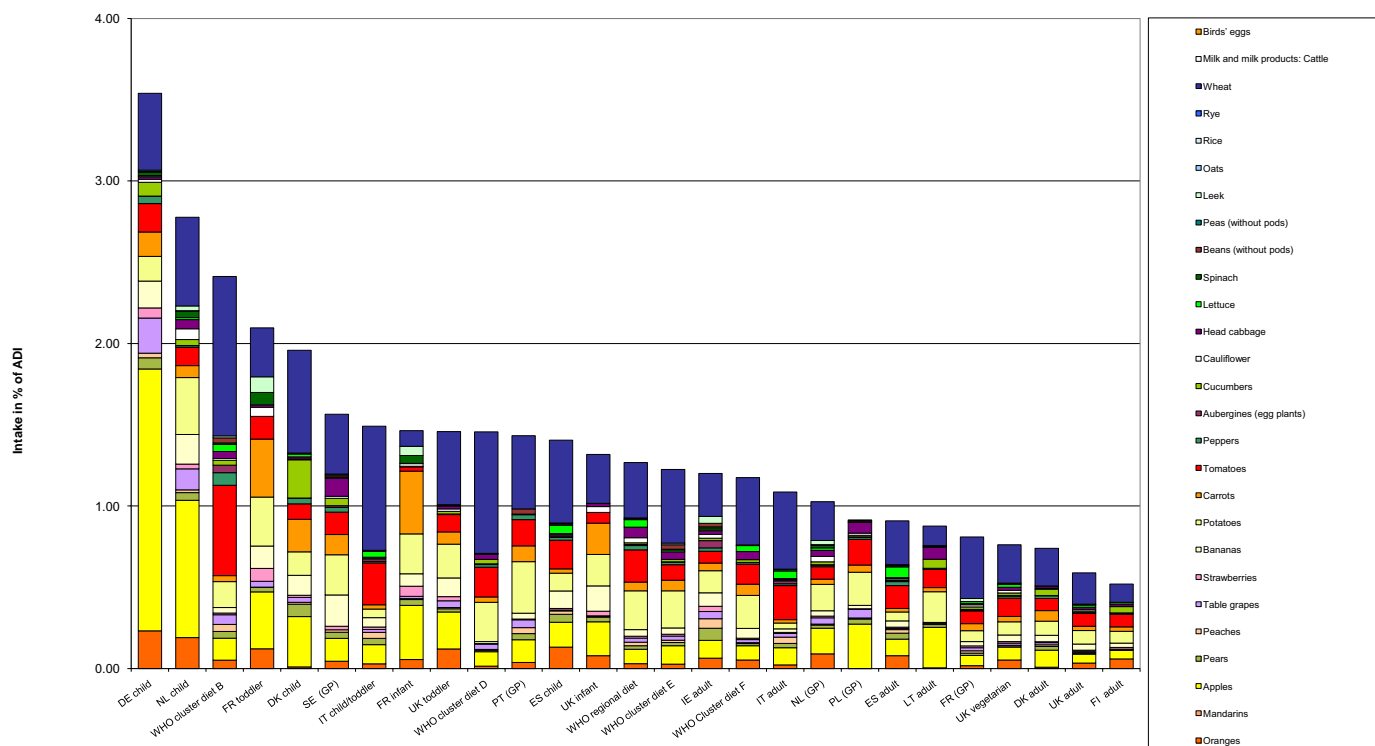
		Exposure (range) in % of ADI minimum - maximum					
		1	4				
No of diets exceeding ADI:							
		1	---				
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
3.5	DE child	1.6	Apples	0.5	Wheat	0.2	Oranges
2.8	NL child	0.8	Apples	0.5	Wheat	0.4	Potatoes
2.4	WHO cluster diet B	1.0	Wheat	0.6	Potatoes	0.2	Potatoes
2.1	FR toddler	0.4	Carrots	0.4	Apples	0.3	Wheat
2.0	DK child	0.6	Wheat	0.3	Apples	0.2	Cucumbers
1.6	SE (GP)	0.4	Wheat	0.2	Potatoes	0.2	Bananas
1.5	IT child/toddler	0.8	Wheat	0.3	Potatoes	0.1	Apples
1.5	FR infant	0.4	Carrots	0.3	Apples	0.2	Potatoes
1.5	UK toddler	0.5	Wheat	0.2	Apples	0.2	Potatoes
1.5	WHO cluster diet D	0.7	Wheat	0.2	Potatoes	0.2	Potatoes
1.4	PT (GP)	0.5	Wheat	0.3	Potatoes	0.2	Tomatoes
1.4	ES child	0.5	Wheat	0.2	Tomatoes	0.2	Apples
1.3	UK infant	0.3	Wheat	0.2	Apples	0.2	Potatoes
1.3	WHO regional diet	0.3	Wheat	0.2	Potatoes	0.2	Tomatoes
1.2	WHO cluster diet E	0.5	Wheat	0.2	Potatoes	0.1	Apples
1.2	IE adult	0.3	Wheat	0.1	Potatoes	0.1	Apples
1.2	WHO Cluster diet F	0.4	Wheat	0.2	Potatoes	0.1	Tomatoes
1.1	IT adult	0.5	Wheat	0.2	Tomatoes	0.1	Apples
1.0	NL (GP)	0.2	Wheat	0.2	Potatoes	0.2	Apples
0.9	PL (GP)	0.3	Apples	0.2	Potatoes	0.2	Tomatoes
0.9	ES adult	0.3	Wheat	0.1	Tomatoes	0.1	Apples
0.9	LT adult	0.2	Apples	0.2	Potatoes	0.1	Wheat
0.8	FR (GP)	0.4	Wheat	0.1	Tomatoes	0.1	Potatoes
0.8	UK vegetarian	0.2	Wheat	0.1	Tomatoes	0.1	Potatoes
0.7	DK adult	0.2	Wheat	0.1	Apples	0.1	Potatoes
0.6	UK adult	0.2	Wheat	0.1	Potatoes	0.1	Tomatoes
0.5	FI adult	0.1	Wheat	0.1	Tomatoes	0.1	Potatoes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	1	1507	0.07		0.02		0.22	DE child	
2009	Bananas	0.2	1163	0.4		0.06		0.84	UK infant	
2009	Peppers	2	1528	2.23		1.80		18.89	DE child	
2009	Aubergines (egg plants)	2	969	5.99		0.33		1.38	UK 4-6 yr	
2009	Cauliflower	3	827	0.24		0.06		0.66	NL child	
2009	Peas (without pods)	0.3	668							
2009	Wheat	0.1	1220	0.08		0.00		0.01	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Chlorothalonil**



Chlorpropham			
Status of the active substance:	Included		
Code number:	29		
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:	2003	Year of evaluation:	2003

**Chronic risk assessment**

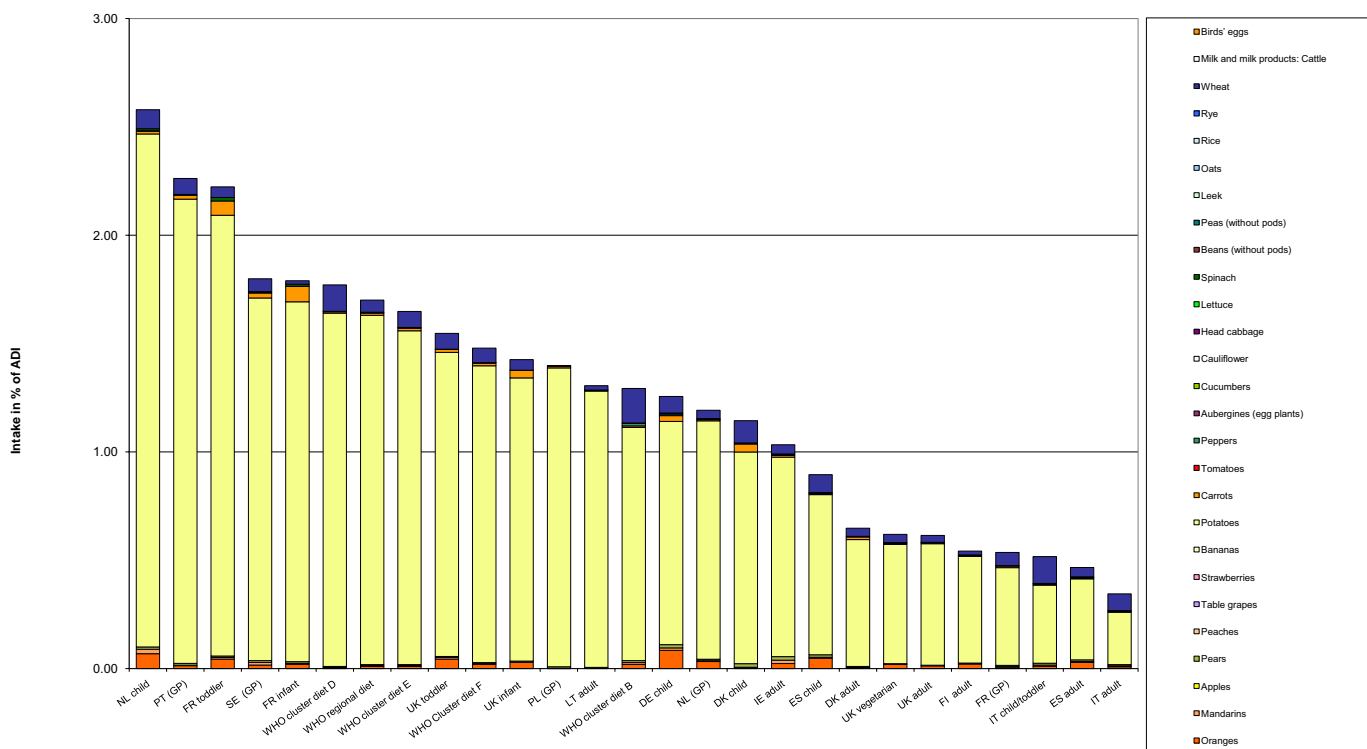
Exposure (range) in % of ADI minimum - maximum		No of diets exceeding ADI:					
3		---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
2.6	NL child	2.4	Potatoes	0.1	Wheat	0.1	Oranges
2.3	PT (GP)	2.1	Potatoes	0.1	Wheat	0.0	Carrots
2.2	FR toddler	2.0	Potatoes	0.1	Carrots	0.0	Wheat
1.8	SE (GP)	1.7	Potatoes	0.1	Wheat	0.0	Carrots
1.8	FR infant	1.7	Potatoes	0.1	Carrots	0.0	Oranges
1.8	WHO cluster diet D	1.6	Potatoes	0.1	Wheat	0.0	Carrots
1.7	WHO regional diet	1.6	Potatoes	0.1	Wheat	0.0	Oranges
1.6	WHO cluster diet E	1.5	Potatoes	0.1	Wheat	0.0	Carrots
1.5	UK toddler	1.4	Potatoes	0.1	Wheat	0.0	Oranges
1.5	WHO Cluster diet F	1.4	Potatoes	0.1	Wheat	0.0	Oranges
1.4	UK infant	1.3	Potatoes	0.0	Wheat	0.0	Carrots
1.4	PL (GP)	1.4	Potatoes	0.0	Carrots	0.0	Pears
1.3	LT adult	1.3	Potatoes	0.0	Wheat	0.0	Carrots
1.3	WHO cluster diet B	1.1	Potatoes	0.2	Wheat	0.0	Oranges
1.3	DE child	1.0	Potatoes	0.1	Oranges	0.1	Wheat
1.2	NL (GP)	1.1	Potatoes	0.0	Wheat	0.0	Oranges
1.1	DK child	1.0	Potatoes	0.1	Wheat	0.0	Carrots
1.0	IE adult	0.9	Potatoes	0.0	Wheat	0.0	Oranges
0.9	ES child	0.7	Potatoes	0.1	Wheat	0.0	Oranges
0.6	DK adult	0.6	Potatoes	0.0	Wheat	0.0	Carrots
0.6	UK vegetarian	0.6	Potatoes	0.0	Wheat	0.0	Oranges
0.6	UK adult	0.6	Potatoes	0.0	Wheat	0.0	Oranges
0.5	FI adult	0.5	Potatoes	0.0	Oranges	0.0	Wheat
0.5	FR (GP)	0.5	Potatoes	0.1	Wheat	0.0	Carrots
0.5	IT child/toddler	0.4	Potatoes	0.1	Wheat	0.0	Oranges
0.5	ES adult	0.4	Potatoes	0.0	Wheat	0.0	Oranges
0.3	IT adult	0.2	Potatoes	0.1	Wheat	0.0	Oranges

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	623							
2009	Bananas	0.05	501							
2009	Peppers	0.05	664	0.15		0.02		0.30	DE child	
2009	Aubergines (egg plants)	0.05	411							
2009	Cauliflower	0.05	362							
2009	Peas (without pods)	0.05	332							
2009	Wheat	0.02	278	0.36		0.00		0.01	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Chlorpropham**





<b>Chlorpyrifos</b>			
Status of the active substance:	<b>Included</b>		
Code number:	<b>30</b>		
<b>Toxicological end points</b>			
ADI (mg/kg bw/day):	<b>0.01</b>	ARID (mg/kg bw):	<b>0.1</b>
Source of ADI:	<b>COM</b>	Source of ARID:	<b>COM</b>
Year of evaluation:	<b>2005</b>	Year of evaluation:	<b>2005</b>

**Chronic risk assessment**

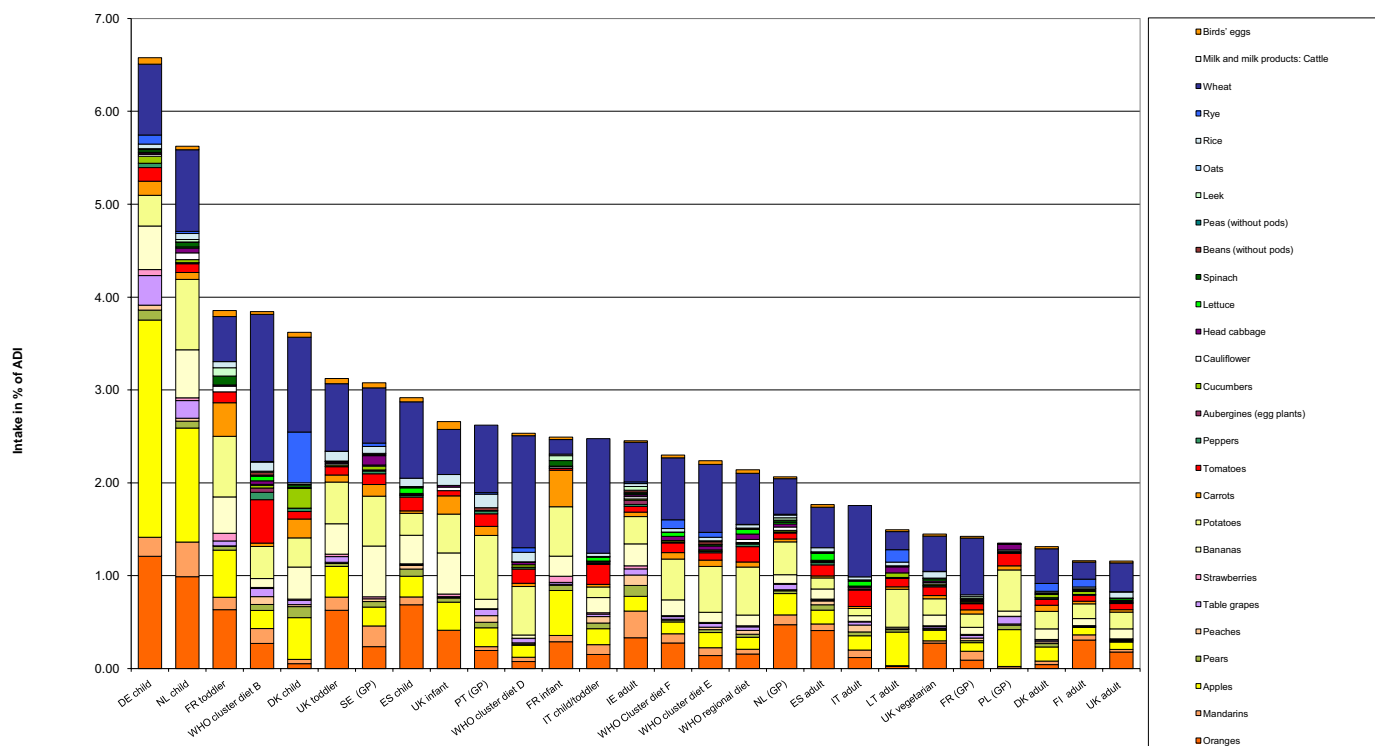
		Exposure (range) in % of ADI minimum - maximum					
		1	7				
No of diets exceeding ADI:							
		1	---				
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
6.6	DE child	2.3	Apples	1.2	Oranges	0.8	Wheat
5.6	NL child	1.2	Apples	1.0	Oranges	0.9	Wheat
3.9	FR toddler	0.7	Potatoes	0.6	Oranges	0.5	Apples
3.8	WHO cluster diet B	1.6	Wheat	0.5	Tomatoes	0.3	Potatoes
3.6	DK child	1.0	Wheat	0.5	Rye	0.5	Apples
3.1	UK toddler	0.7	Wheat	0.6	Oranges	0.4	Potatoes
3.1	SE (GP)	0.6	Wheat	0.5	Bananas	0.5	Potatoes
2.9	ES child	0.8	Wheat	0.7	Oranges	0.3	Bananas
2.7	UK infant	0.5	Wheat	0.4	Bananas	0.4	Potatoes
2.6	PT (GP)	0.7	Wheat	0.7	Potatoes	0.2	Apples
2.5	WHO cluster diet D	1.2	Wheat	0.5	Potatoes	0.2	Tomatoes
2.5	FR infant	0.5	Potatoes	0.5	Apples	0.4	Carrots
2.5	IT child/toddler	1.2	Wheat	0.2	Tomatoes	0.2	Apples
2.5	IE adult	0.4	Wheat	0.3	Oranges	0.3	Potatoes
2.3	WHO Cluster diet F	0.7	Wheat	0.4	Potatoes	0.3	Oranges
2.2	WHO cluster diet E	0.7	Wheat	0.5	Potatoes	0.2	Apples
2.1	WHO regional diet	0.6	Wheat	0.5	Potatoes	0.2	Tomatoes
2.1	NL (GP)	0.5	Oranges	0.4	Wheat	0.4	Potatoes
1.8	ES adult	0.4	Wheat	0.4	Oranges	0.1	Apples
1.8	IT adult	0.8	Wheat	0.2	Tomatoes	0.2	Apples
1.5	LT adult	0.4	Potatoes	0.4	Apples	0.2	Wheat
1.4	UK vegetarian	0.4	Wheat	0.3	Oranges	0.2	Potatoes
1.4	FR (GP)	0.6	Wheat	0.1	Potatoes	0.1	Mandarins
1.4	PL (GP)	0.4	Potatoes	0.4	Apples	0.1	Tomatoes
1.3	DK adult	0.4	Wheat	0.2	Potatoes	0.2	Apples
1.2	FI adult	0.3	Oranges	0.2	Wheat	0.2	Potatoes
1.2	UK adult	0.3	Wheat	0.2	Potatoes	0.2	Oranges

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.5	1436	11.98	0.28	1.21		79.23	DE child	HRM (1.88 mg/kg) corrected by PF of 0.021
2009	Bananas	3	1130	14.0		0.04		3.26	UK infant	
2009	Peppers	0.5	1443	1.32	0.07	0.83		52.27	DE child	
2009	Aubergines (egg plants)	0.5	925	0.43		0.11		2.75	UK 4-6 yr	
2009	Cauliflower	0.05	811	0.37	0.25	0.20		13.22	NL child	
2009	Peas (without pods)	0.05	689							
2009	Wheat	0.05	1078	1.30	0.65	0.31		4.48	UK 4-6 yr	
2009	Milk and milk products: Cattle	0.01	432							
2009	Birds' eggs	0.01	456	0.22		0.01		0.07	UK infant	

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Chlorpyrifos**



Chlorpyrifos-methyl			
Status of the active substance:	Included		
Code number:	31		
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**

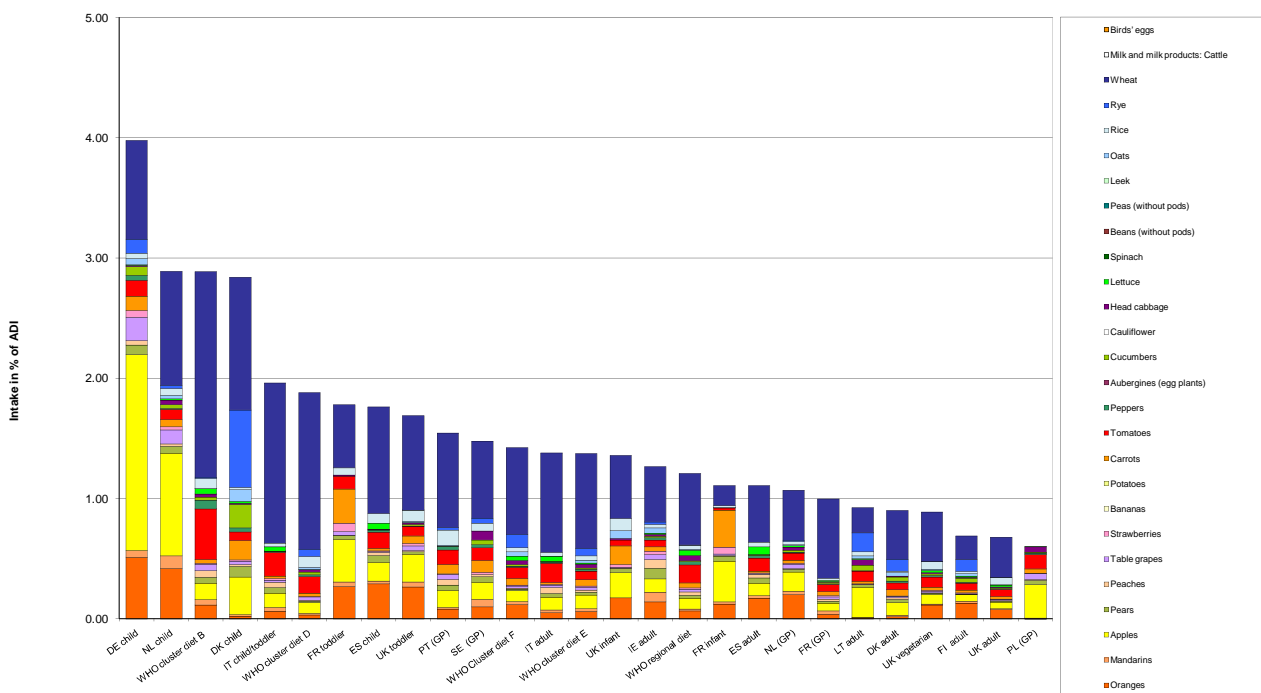
		Exposure (range) in % of ADI minimum - maximum					
		1 --- 4					
		No of diets exceeding ADI:					
		---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
4.0	DE child	1.6	Apples	0.8	Wheat	0.5	Oranges
2.9	NL child	1.0	Wheat	0.9	Apples	0.4	Oranges
2.9	WHO cluster diet B	1.7	Wheat	0.4	Tomatoes	0.1	Apples
2.8	DK child	1.1	Wheat	0.6	Rye	0.3	Apples
2.0	IT child/toddler	1.3	Wheat	0.2	Tomatoes	0.1	Apples
1.9	WHO cluster diet D	1.3	Wheat	0.1	Tomatoes	0.1	Apples
1.8	FR toddler	0.5	Wheat	0.4	Apples	0.3	Carrots
1.8	ES child	0.9	Wheat	0.3	Oranges	0.2	Apples
1.7	UK toddler	0.8	Wheat	0.3	Oranges	0.2	Apples
1.5	PT (GP)	0.8	Wheat	0.1	Apples	0.1	Rice
1.5	SE (GP)	0.6	Wheat	0.1	Apples	0.1	Tomatoes
1.4	WHO Cluster diet F	0.7	Wheat	0.1	Oranges	0.1	Rye
1.4	IT adult	0.8	Wheat	0.2	Tomatoes	0.1	Apples
1.4	WHO cluster diet E	0.8	Wheat	0.1	Apples	0.1	Tomatoes
1.4	UK infant	0.5	Wheat	0.2	Apples	0.2	Oranges
1.3	IE adult	0.5	Wheat	0.1	Oranges	0.1	Apples
1.2	WHO regional diet	0.6	Wheat	0.2	Tomatoes	0.1	Apples
1.1	FR infant	0.3	Apples	0.3	Carrots	0.2	Wheat
1.1	ES adult	0.5	Wheat	0.2	Oranges	0.1	Tomatoes
1.1	NL (GP)	0.4	Wheat	0.2	Oranges	0.2	Apples
1.0	FR (GP)	0.7	Wheat	0.1	Apples	0.1	Tomatoes
0.9	LT adult	0.3	Apples	0.2	Wheat	0.2	Rye
0.9	DK adult	0.4	Wheat	0.1	Apples	0.1	Rye
0.9	UK vegetarian	0.4	Wheat	0.1	Oranges	0.1	Tomatoes
0.7	FI adult	0.2	Wheat	0.1	Oranges	0.1	Rye
0.7	UK adult	0.3	Wheat	0.1	Oranges	0.1	Tomatoes
0.6	PL (GP)	0.3	Apples	0.1	Tomatoes	0.0	Table grapes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.2	1610	3.48	0.06	0.22		14.41	DE child	
2009	Bananas	0.05	1267							
2009	Peppers	0.5	1584	0.19		0.04		2.52	DE child	
2009	Aubergines (egg plants)	0.5	1023							
2009	Cauliflower	0.05	893							
2009	Peas (without pods)	0.05	784							
2009	Wheat	3	1256	3.26	0.08	1.00		14.45	UK 4-6 yr	
	Milk and milk products: Cattle	0.01	447							
2009	Birds' eggs	0.01	483							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Chlorpyrifos-methyl**



<b>Clofentezine</b>			
Status of the active substance:	Included		
Code number:	32		
Toxicological end points			
ADI (mg/kg bw/day):	0.02	ARID (mg/kg bw):	n.n.
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2009	Year of evaluation:	2009

**Chronic risk assessment**

Exposure (range) in % of ADI  
minimum - maximum

No of diets exceeding ADI: ---

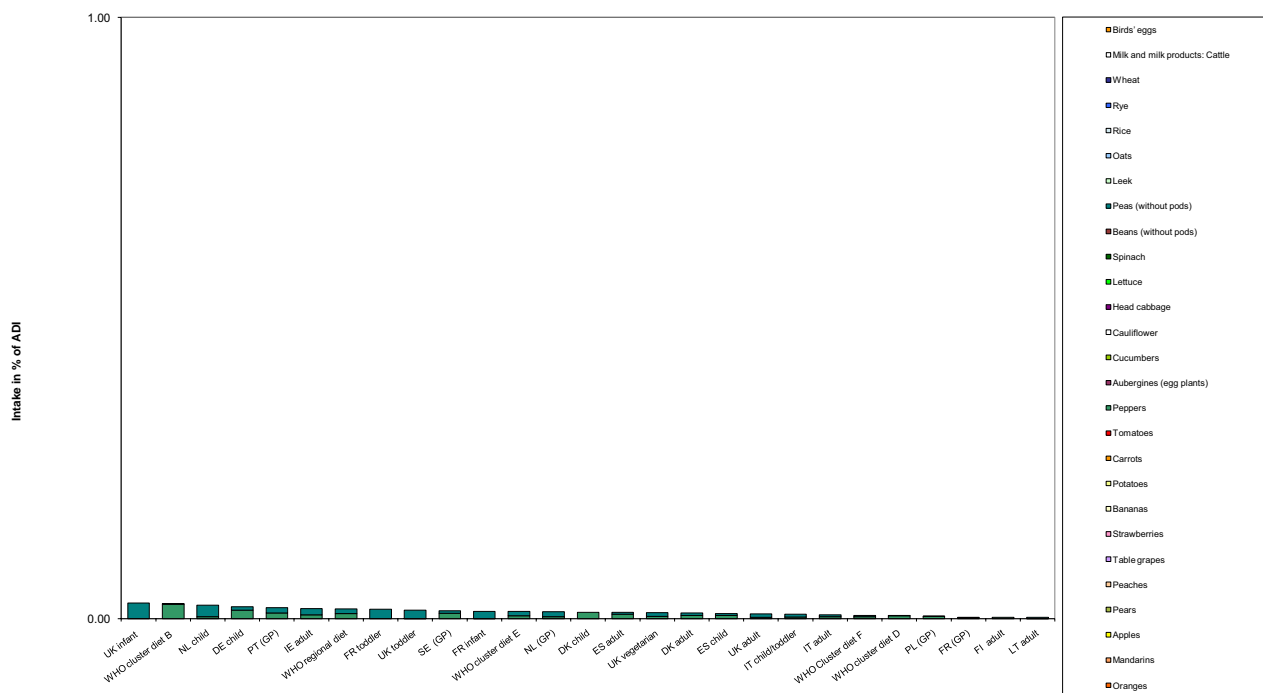
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.0	UK infant	0.0	Peas (without pods)	0.0	FRUIT (FRESH OR FROZEN)	0.0	FRUIT (FRESH OR FROZEN)
0.0	WHO cluster diet B	0.0	Peppers	0.0	Peas (without pods)	0.0	Peas (without pods)
0.0	NL child	0.0	Peas (without pods)	0.0	Peppers	0.0	Peppers
0.0	DE child	0.0	Peppers	0.0	Peas (without pods)	0.0	Peas (without pods)
0.0	PT (GP)	0.0	Peppers	0.0	Peas (without pods)	0.0	Peas (without pods)
0.0	IE adult	0.0	Peas (without pods)	0.0	Peppers	0.0	Peppers
0.0	WHO regional diet	0.0	Peppers	0.0	Peas (without pods)	0.0	Peas (without pods)
0.0	FR toddler	0.0	Peas (without pods)	0.0	FRUIT (FRESH OR FROZEN)	0.0	FRUIT (FRESH OR FROZEN)
0.0	UK toddler	0.0	Peas (without pods)	0.0	Peppers	0.0	Peppers
0.0	SE (GP)	0.0	Peppers	0.0	Peas (without pods)	0.0	Peas (without pods)
0.0	FR infant	0.0	Peas (without pods)	0.0	Peppers	0.0	Peppers
0.0	WHO cluster diet E	0.0	Peas (without pods)	0.0	Peppers	0.0	Peppers
0.0	NL (GP)	0.0	Peas (without pods)	0.0	Peppers	0.0	Peppers
0.0	DK child	0.0	Peppers	0.0	FRUIT (FRESH OR FROZEN)	0.0	FRUIT (FRESH OR FROZEN)
0.0	ES adult	0.0	Peppers	0.0	Peas (without pods)	0.0	Peas (without pods)
0.0	UK vegetarian	0.0	Peas (without pods)	0.0	Peppers	0.0	Peppers
0.0	DK adult	0.0	Peppers	0.0	Peas (without pods)	0.0	Peas (without pods)
0.0	ES child	0.0	Peppers	0.0	Peas (without pods)	0.0	Peas (without pods)
0.0	UK adult	0.0	Peas (without pods)	0.0	Peppers	0.0	Peppers
0.0	IT child/toddler	0.0	Peas (without pods)	0.0	Peppers	0.0	Peppers
0.0	IT adult	0.0	Peppers	0.0	Peas (without pods)	0.0	Peas (without pods)
0.0	WHO Cluster diet F	0.0	Peppers	0.0	Peas (without pods)	0.0	Peas (without pods)
0.0	WHO cluster diet D	0.0	Peppers	0.0	Peas (without pods)	0.0	Peas (without pods)
0.0	PL (GP)	0.0	Peppers	0.0	Peas (without pods)	0.0	Peas (without pods)
0.0	FR (GP)	0.0	Peppers	0.0	Peas (without pods)	0.0	Peas (without pods)
0.0	FI adult	0.0	Peppers	0.0	FRUIT (FRESH OR FROZEN)	0.0	FRUIT (FRESH OR FROZEN)
0.0	LT adult	0.0	Peas (without pods)	0.0	Peppers	0.0	Peppers

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.02	898							
2009	Bananas	2	681							
2009	Peppers	0.02	940	0.11		0.01				
2009	Aubergines (egg plants)	0.02	630							
2009	Cauliflower	0.02	525							
2009	Peas (without pods)	0.02	469	0.21		0.01				
2009	Wheat	0.02	373							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Clofentezine**



Cyfluthrin			
Status of the active substance:	Included		
Code number:	33		
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:	2002	Year of evaluation:	2002

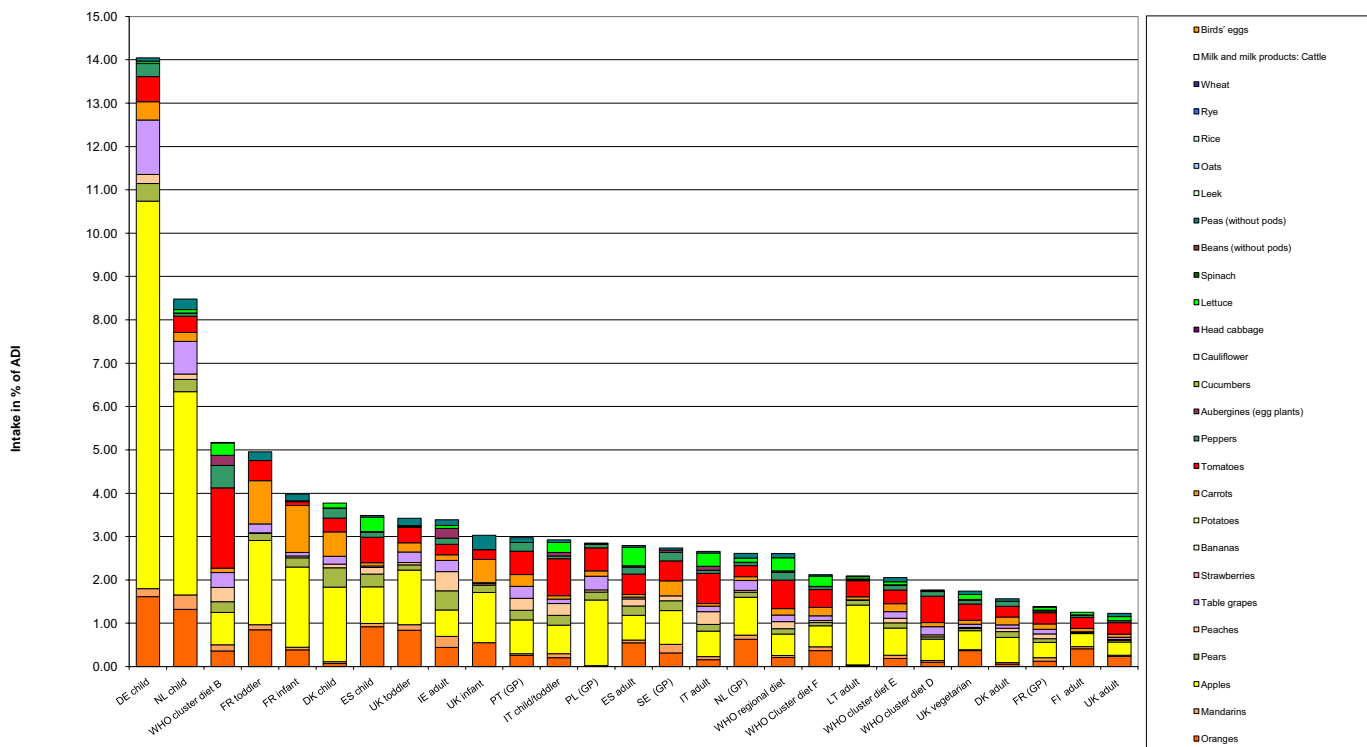
For beta-cyfluthrin the same toxicological reference values were established.

Chronic risk assessment							
		Exposure (range) in % of ADI minimum - maximum					
		1	14				
No of diets exceeding ADI:							
		1	---				
Highest calculated exposure in % of ADI	MS Diet	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
14.0	DE child	8.9	Apples	1.6	Oranges	1.3	Table grapes
8.5	NL child	4.7	Apples	1.3	Oranges	0.8	Table grapes
5.2	WHO cluster diet B	1.8	Tomatoes	0.7	Apples	0.5	Peppers
5.0	FR toddler	1.9	Apples	1.0	Carrots	0.8	Oranges
4.0	FR infant	1.9	Apples	1.1	Carrots	0.4	Oranges
3.8	DK child	1.7	Apples	0.6	Carrots	0.4	Pears
3.5	ES child	0.9	Oranges	0.8	Apples	0.6	Tomatoes
3.4	UK toddler	1.3	Apples	0.8	Oranges	0.4	Tomatoes
3.4	IE adult	0.6	Apples	0.4	Peaches	0.4	Oranges
3.0	UK infant	1.2	Apples	0.6	Oranges	0.5	Carrots
3.0	PT (GP)	0.8	Apples	0.5	Tomatoes	0.3	Peaches
2.9	IT child/toddler	0.9	Tomatoes	0.7	Apples	0.3	Peaches
2.8	PL (GP)	1.5	Apples	0.5	Tomatoes	0.3	Table grapes
2.8	ES adult	0.6	Apples	0.5	Oranges	0.5	Tomatoes
2.7	SE (GP)	0.8	Apples	0.5	Tomatoes	0.3	Carrots
2.7	IT adult	0.7	Tomatoes	0.6	Apples	0.3	Lettuce
2.6	NL (GP)	0.9	Apples	0.6	Oranges	0.3	Tomatoes
2.6	WHO regional diet	0.7	Tomatoes	0.5	Apples	0.3	Lettuce
2.1	WHO Cluster diet F	0.5	Apples	0.4	Tomatoes	0.4	Oranges
2.1	LT adult	1.4	Apples	0.4	Tomatoes	0.1	Pears
2.1	WHO cluster diet E	0.6	Apples	0.3	Tomatoes	0.2	Oranges
1.8	WHO cluster diet D	0.6	Tomatoes	0.5	Apples	0.2	Table grapes
1.7	UK vegetarian	0.4	Apples	0.4	Tomatoes	0.4	Oranges
1.6	DK adult	0.6	Apples	0.2	Tomatoes	0.2	Carrots
1.4	FR (GP)	0.4	Apples	0.3	Tomatoes	0.1	Carrots
1.3	FI adult	0.4	Oranges	0.3	Apples	0.3	Tomatoes
1.2	UK adult	0.3	Apples	0.3	Tomatoes	0.2	Oranges

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	0.3	1085	0.55		0.1		32.74	DE child	
2009	Bananas	0.02	917							
2009	Peppers	0.3	1087	0.18		0.15		47.23	DE child	
2009	Aubergines (egg plants)	0.1	680	0.29		0.01		1.25	UK 4-6 yr	
2009	Cauliflower	0.05	594		0.18					
2009	Peas (without pods)	0.05	552	0.18		0.13		5.37	UK infant	
2009	Wheat	0.02	736							
2009	Milk and milk products: Cattle	0.02	322							
2009	Birds' eggs	0.02	343							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Cyfluthrin



Cypermethrin			
Status of the active substance:	Included		
Code number:	34		
Toxicological end points			
ADI (mg/kg bw/day):	0.015	ARID (mg/kg bw):	0.04
Source of ADI:	COM	Source of ARID:	JMPR
Year of evaluation:	2004	Year of evaluation:	2006

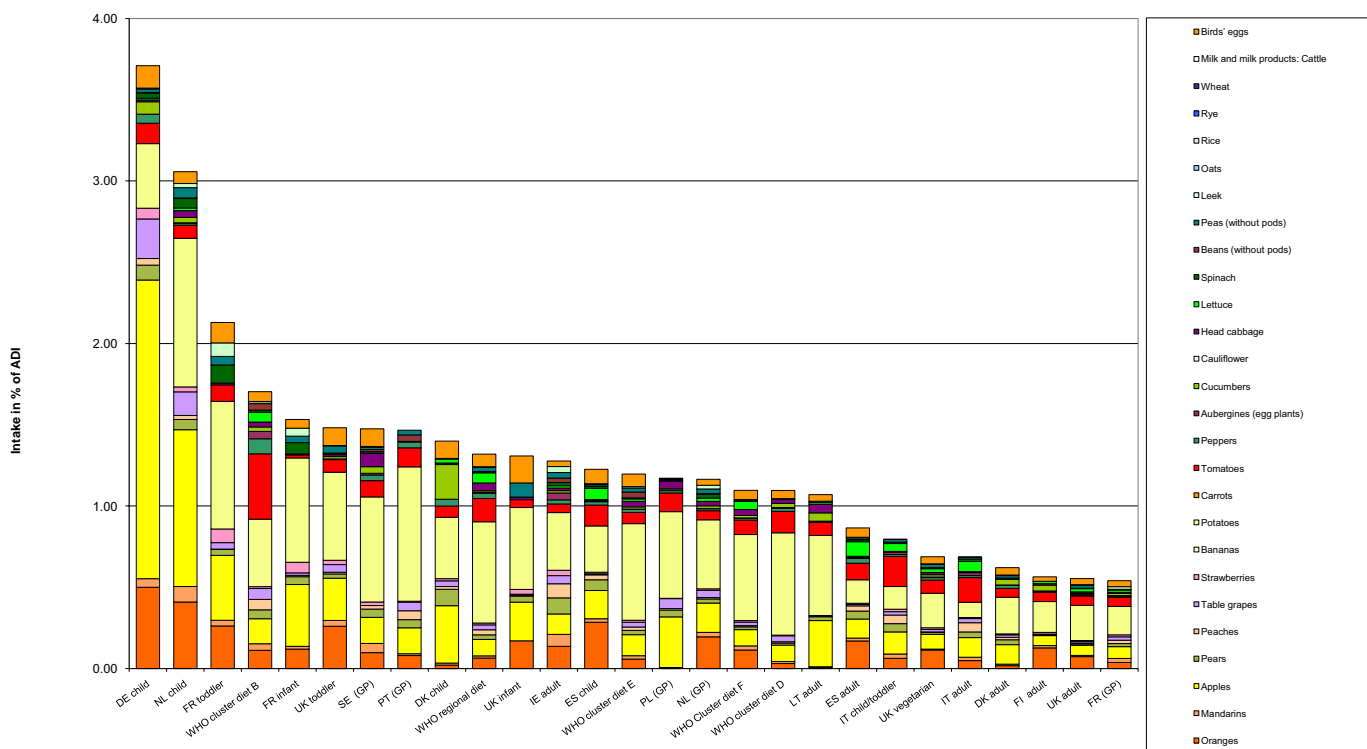
For the risk assessment the toxicological reference values of alpha-cypermethrin were selected.

Chronic risk assessment							
		Exposure (range) in % of ADI minimum - maximum					
		1	4				
No of diets exceeding ADI:							
		1	---				
Highest calculated exposure in % of ADI	MS Diet	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
3.7	DE child	1.8	Apples	0.5	Oranges	0.4	Potatoes
3.1	NL child	1.0	Apples	0.9	Potatoes	0.4	Oranges
2.1	FR toddler	0.8	Potatoes	0.4	Apples	0.3	Oranges
1.7	WHO cluster diet B	0.4	Potatoes	0.4	Tomatoes	0.2	Apples
1.5	FR infant	0.6	Potatoes	0.4	Apples	0.1	Oranges
1.5	UK toddler	0.5	Potatoes	0.3	Oranges	0.3	Apples
1.5	SE (GP)	0.6	Potatoes	0.2	Apples	0.1	Birds' eggs
1.5	PT (GP)	0.8	Potatoes	0.2	Apples	0.1	Tomatoes
1.4	DK child	0.4	Potatoes	0.4	Apples	0.2	Cucumbers
1.3	WHO regional diet	0.6	Potatoes	0.1	Tomatoes	0.1	Apples
1.3	UK infant	0.5	Potatoes	0.2	Apples	0.2	Oranges
1.3	IE adult	0.4	Potatoes	0.1	Oranges	0.1	Apples
1.2	ES child	0.3	Potatoes	0.3	Oranges	0.2	Apples
1.2	WHO cluster diet E	0.6	Potatoes	0.1	Apples	0.1	Birds' eggs
1.2	PL (GP)	0.5	Potatoes	0.3	Apples	0.1	Tomatoes
1.2	NL (GP)	0.4	Potatoes	0.2	Oranges	0.2	Apples
1.1	WHO Cluster diet F	0.5	Potatoes	0.1	Oranges	0.1	Apples
1.1	WHO cluster diet D	0.6	Potatoes	0.1	Tomatoes	0.1	Apples
1.1	LT adult	0.5	Potatoes	0.3	Apples	0.1	Tomatoes
0.9	ES adult	0.2	Oranges	0.1	Potatoes	0.1	Apples
0.8	IT child/toddler	0.2	Tomatoes	0.1	Potatoes	0.1	Apples
0.7	UK vegetarian	0.2	Potatoes	0.1	Oranges	0.1	Apples
0.7	IT adult	0.2	Tomatoes	0.1	Apples	0.1	Potatoes
0.6	DK adult	0.2	Potatoes	0.1	Apples	0.1	Tomatoes
0.6	FI adult	0.2	Potatoes	0.1	Oranges	0.1	Apples
0.6	UK adult	0.2	Potatoes	0.1	Oranges	0.1	Apples
0.5	FR (GP)	0.2	Potatoes	0.1	Apples	0.1	Tomatoes

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	0.5	1082	1.94	0.18	0.81	1	132.60	DE child	
2009	Bananas	0.05	852							
2009	Peppers	0.5	1155	0.69	0.35	1.30	3	204.68	DE child	
2009	Aubergines (egg plants)	0.5	704	1.14		0.31		19.38	UK 4-6 yr	
2009	Cauliflower	0.5	641							
2009	Peas (without pods)	0.05	570	0.18		0.01		0.20	UK infant	
2009	Wheat	2	807							
2009	Milk and milk products: Cattle	0.02	341							
2009	Birds' eggs	0.05	372	0.27		0.01		0.37	UK infant	

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Cypermethrin



Cypermethrin			
Status of the active substance:	Included		
Code number:	34		
Toxicological end points			
ADI (mg/kg bw/day):	0.015	ARfD (mg/kg bw):	0.125
Source of ADI:	COM	Source of ARfD:	EFSA
Year of evaluation:	2004	Year of evaluation:	2008

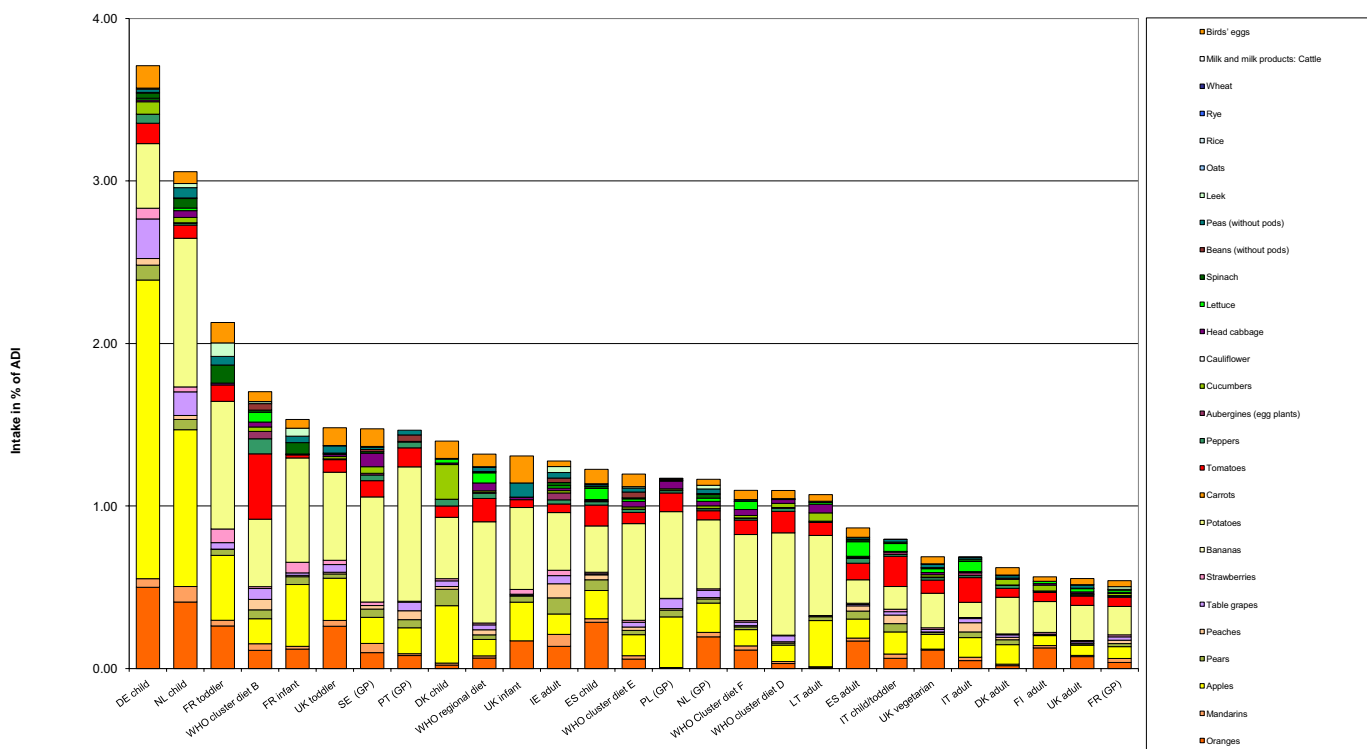
For the risk assessment the toxicological reference values of zeta-cypermethrin were selected.

Chronic risk assessment							
		Exposure (range) in % of ADI					
		minimum - maximum					
		1 - 4					
No of diets exceeding ADI: --							
Highest calculated exposure in % of ADI	MS Diet	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
3.7	DE child	1.8	Apples	0.5	Oranges	0.4	Potatoes
3.1	NL child	1.0	Apples	0.9	Potatoes	0.4	Oranges
2.1	FR toddler	0.8	Potatoes	0.4	Apples	0.3	Oranges
1.7	WHO cluster diet B	0.4	Potatoes	0.4	Tomatoes	0.2	Apples
1.5	FR infant	0.6	Potatoes	0.4	Apples	0.1	Oranges
1.5	UK toddler	0.5	Potatoes	0.3	Oranges	0.3	Apples
1.5	SE (GP)	0.6	Potatoes	0.2	Apples	0.1	Birds' eggs
1.5	PT (GP)	0.8	Potatoes	0.2	Apples	0.1	Tomatoes
1.4	DK child	0.4	Potatoes	0.4	Apples	0.2	Cucumbers
1.3	WHO regional diet	0.6	Potatoes	0.1	Tomatoes	0.1	Apples
1.3	UK infant	0.5	Potatoes	0.2	Apples	0.2	Oranges
1.3	IE adult	0.4	Potatoes	0.1	Oranges	0.1	Apples
1.2	ES child	0.3	Potatoes	0.3	Oranges	0.2	Apples
1.2	WHO cluster diet E	0.6	Potatoes	0.1	Apples	0.1	Birds' eggs
1.2	PL (GP)	0.5	Potatoes	0.3	Apples	0.1	Tomatoes
1.2	NL (GP)	0.4	Potatoes	0.2	Oranges	0.2	Apples
1.1	WHO Cluster diet F	0.5	Potatoes	0.1	Oranges	0.1	Apples
1.1	WHO cluster diet D	0.6	Potatoes	0.1	Tomatoes	0.1	Apples
1.1	LT adult	0.5	Potatoes	0.3	Apples	0.1	Tomatoes
0.9	ES adult	0.2	Oranges	0.1	Potatoes	0.1	Apples
0.8	IT child/toddler	0.2	Tomatoes	0.1	Potatoes	0.1	Apples
0.7	UK vegetarian	0.2	Potatoes	0.1	Oranges	0.1	Apples
0.7	IT adult	0.2	Tomatoes	0.1	Apples	0.1	Potatoes
0.6	DK adult	0.2	Potatoes	0.1	Apples	0.1	Tomatoes
0.6	FI adult	0.2	Potatoes	0.1	Oranges	0.1	Apples
0.6	UK adult	0.2	Potatoes	0.1	Oranges	0.1	Apples
0.5	FR (GP)	0.2	Potatoes	0.1	Apples	0.1	Tomatoes

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	0.5	1082	1.94	0.18	0.81	1	42.43	DE child	
2009	Bananas	0.05	852							
2009	Peppers	0.5	1155	0.69	0.35	1.30	3	65.50	DE child	
2009	Aubergines (egg plants)	0.5	704	1.14		0.31		6.20	UK 4-6 yr	
2009	Cauliflower	0.5	641							
2009	Peas (without pods)	0.05	570	0.18		0.01		0.07	UK infant	
2009	Wheat	2	807							
2009	Milk and milk products: Cattle	0.02	341							
2009	Birds' eggs	0.05	372	0.27		0.01		0.12	UK infant	

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Cypermethrin



Cyproconazole			
Status of the active substance:	Excluded		
Code number:	35		
Toxicological end points			
ADI (mg/kg bw/day):	0.02	ARID (mg/kg bw):	0.02
Source of ADI:	DAR	Source of ARID:	DAR
Year of evaluation:	2010	Year of evaluation:	2010

**Chronic risk assessment**

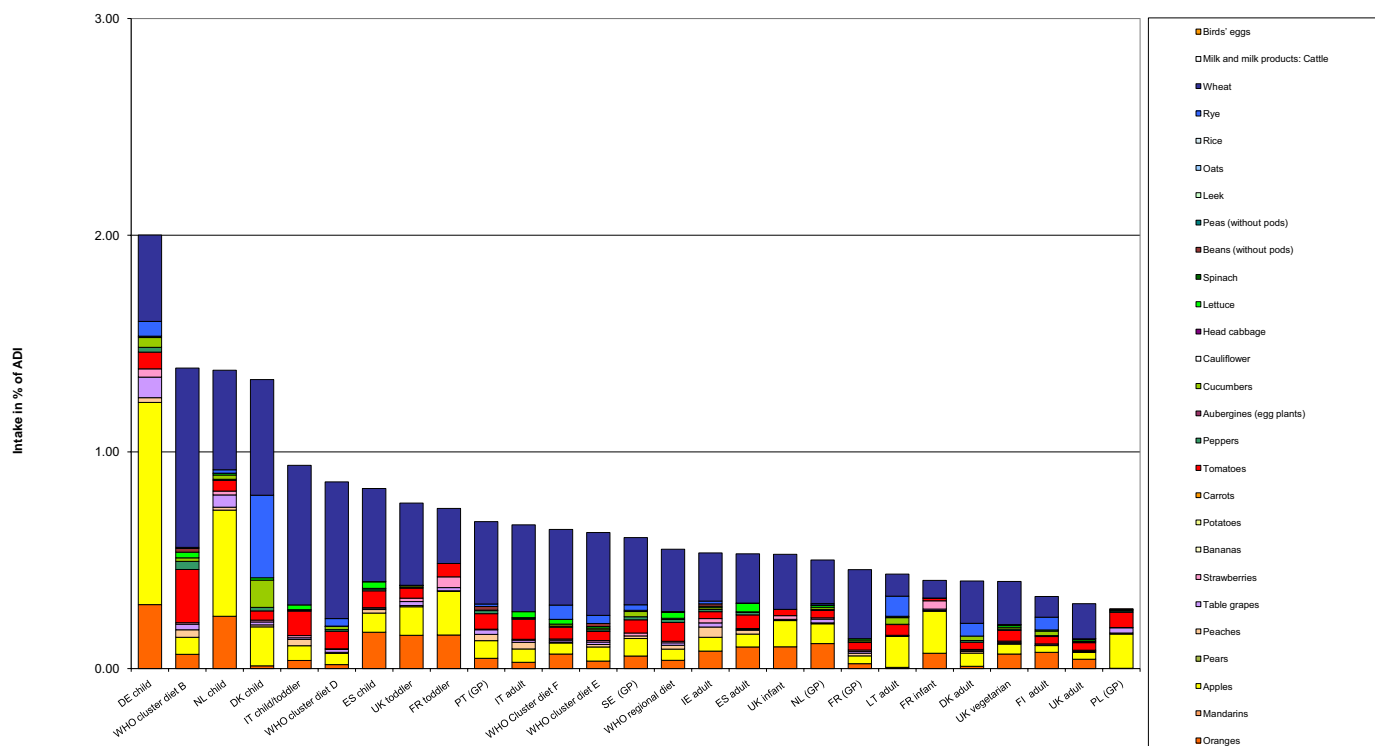
Exposure (range) in % of ADI minimum - maximum		2					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
2.0	DE child	0.9	Apples	0.4	Wheat	0.3	Oranges
1.4	WHO cluster diet B	0.8	Wheat	0.2	Tomatoes	0.1	Apples
1.4	NL child	0.5	Apples	0.5	Wheat	0.2	Oranges
1.3	DK child	0.5	Wheat	0.4	Rye	0.2	Apples
0.9	IT child/toddler	0.6	Wheat	0.1	Tomatoes	0.1	Apples
0.9	WHO cluster diet D	0.6	Wheat	0.1	Tomatoes	0.1	Apples
0.8	ES child	0.4	Wheat	0.2	Oranges	0.1	Apples
0.8	UK toddler	0.4	Wheat	0.2	Oranges	0.1	Apples
0.7	FR toddler	0.3	Wheat	0.2	Apples	0.2	Oranges
0.7	PT (GP)	0.4	Wheat	0.1	Apples	0.1	Tomatoes
0.7	IT adult	0.4	Wheat	0.1	Tomatoes	0.1	Apples
0.6	WHO Cluster diet F	0.3	Wheat	0.1	Oranges	0.1	Rye
0.6	WHO cluster diet E	0.4	Wheat	0.1	Apples	0.0	Tomatoes
0.6	SE (GP)	0.3	Wheat	0.1	Apples	0.1	Tomatoes
0.6	WHO regional diet	0.3	Wheat	0.1	Tomatoes	0.1	Apples
0.5	IE adult	0.2	Wheat	0.1	Oranges	0.1	Apples
0.5	ES adult	0.2	Wheat	0.1	Oranges	0.1	Tomatoes
0.5	UK infant	0.3	Wheat	0.1	Apples	0.1	Oranges
0.5	NL (GP)	0.2	Wheat	0.1	Oranges	0.1	Apples
0.5	FR (GP)	0.3	Wheat	0.0	Apples	0.0	Tomatoes
0.4	LT adult	0.1	Apples	0.1	Wheat	0.1	Rye
0.4	FR infant	0.2	Apples	0.1	Wheat	0.1	Oranges
0.4	DK adult	0.2	Wheat	0.1	Apples	0.1	Rye
0.4	UK vegetarian	0.2	Wheat	0.1	Oranges	0.0	Tomatoes
0.3	FI adult	0.1	Wheat	0.1	Oranges	0.1	Rye
0.3	UK adult	0.2	Wheat	0.0	Oranges	0.0	Tomatoes
0.3	PL (GP)	0.2	Apples	0.1	Tomatoes	0.0	Table grapes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.2	1047	0.86	0.10	0.33	1	108.04	DE child	
2009	Bananas	0.05	880							
2009	Peppers	0.05	1029	1.26	0.39	0.17		53.53	DE child	
2009	Aubergines (egg plants)	0.05	691							
2009	Cauliflower	0.05	623							
2009	Peas (without pods)	0.05	527							
2009	Wheat	0.1	760	0.13		0.01		0.72	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Cyproconazole**



Cyprodinil			
Status of the active substance:	Included		
Code number:	36		
Toxicological end points			
ADI (mg/kg bw/day):	0.03	ARID (mg/kg bw):	n.n.
Source of ADI:	EFSA	Source of ARID:	DE
Year of evaluation:	2005	Year of evaluation:	2006

**Chronic risk assessment**

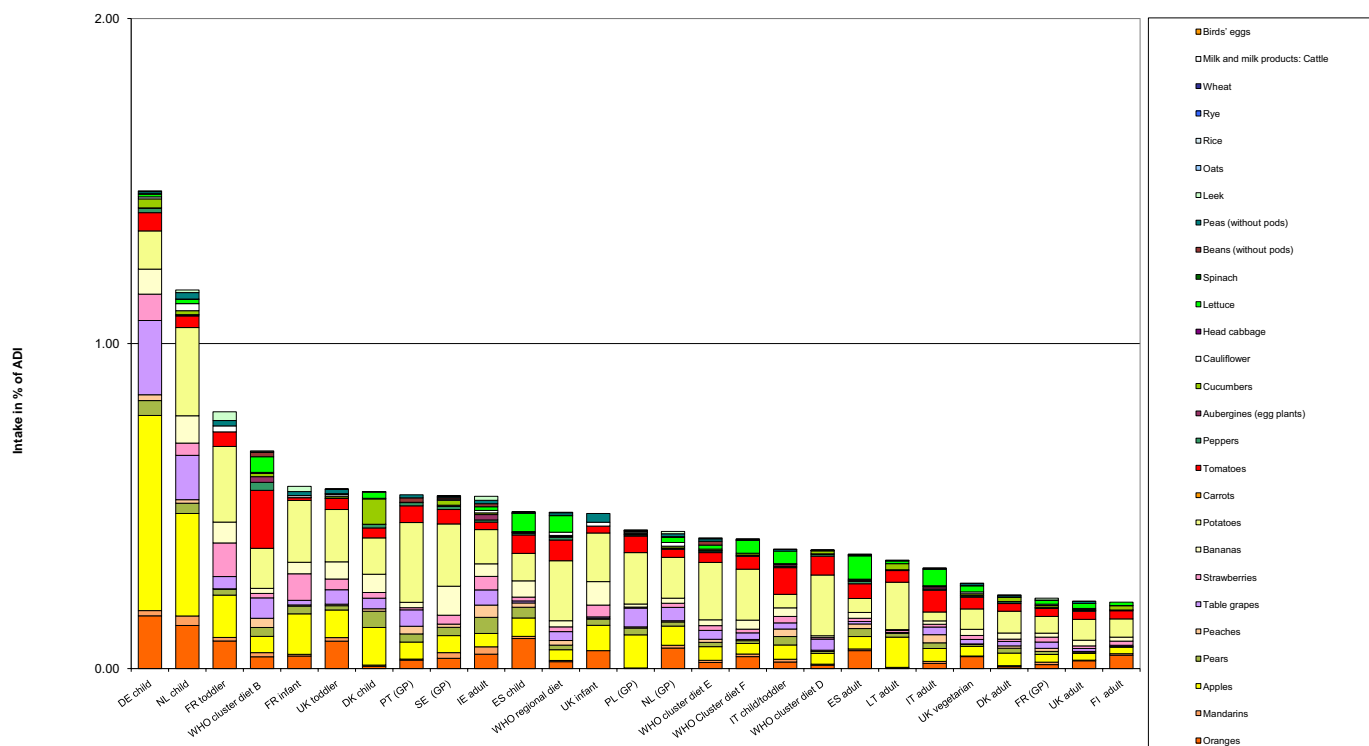
		Exposure (range) in % of ADI minimum - maximum					
		1					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.5	DE child	0.6	Apples	0.2	Table grapes	0.2	Oranges
1.2	NL child	0.3	Apples	0.3	Potatoes	0.1	Table grapes
0.8	FR toddler	0.2	Potatoes	0.1	Apples	0.1	Strawberries
0.7	WHO cluster diet B	0.2	Tomatoes	0.1	Potatoes	0.1	Table grapes
0.6	FR infant	0.2	Potatoes	0.1	Apples	0.1	Strawberries
0.6	UK toddler	0.2	Potatoes	0.1	Apples	0.1	Oranges
0.5	DK child	0.1	Apples	0.1	Potatoes	0.1	Cucumbers
0.5	PT (GP)	0.2	Potatoes	0.1	Apples	0.1	Tomatoes
0.5	SE (GP)	0.2	Potatoes	0.1	Bananas	0.1	Apples
0.5	IE adult	0.1	Potatoes	0.0	Pears	0.0	Table grapes
0.5	ES child	0.1	Oranges	0.1	Potatoes	0.1	Apples
0.5	WHO regional diet	0.2	Potatoes	0.1	Tomatoes	0.1	Lettuce
0.5	UK infant	0.1	Potatoes	0.1	Apples	0.1	Bananas
0.4	PL (GP)	0.2	Potatoes	0.1	Apples	0.1	Table grapes
0.4	NL (GP)	0.1	Potatoes	0.1	Oranges	0.1	Apples
0.4	WHO cluster diet E	0.2	Potatoes	0.0	Apples	0.0	Tomatoes
0.4	WHO Cluster diet F	0.2	Potatoes	0.0	Lettuce	0.0	Tomatoes
0.4	IT child/toddler	0.1	Tomatoes	0.0	Apples	0.0	Potatoes
0.4	WHO cluster diet D	0.2	Potatoes	0.1	Tomatoes	0.0	Table grapes
0.4	ES adult	0.1	Lettuce	0.1	Oranges	0.0	Tomatoes
0.3	LT adult	0.1	Potatoes	0.1	Apples	0.0	Tomatoes
0.3	IT adult	0.1	Tomatoes	0.1	Lettuce	0.0	Apples
0.3	UK vegetarian	0.1	Potatoes	0.0	Oranges	0.0	Tomatoes
0.2	DK adult	0.1	Potatoes	0.0	Apples	0.0	Tomatoes
0.2	FR (GP)	0.1	Potatoes	0.0	Tomatoes	0.0	Apples
0.2	UK adult	0.1	Potatoes	0.0	Tomatoes	0.0	Oranges
0.2	FI adult	0.1	Potatoes	0.0	Oranges	0.0	Tomatoes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	5	1452	20.66		2.39				
2009	Bananas	0.05	1125	0.1		0.00				
2009	Peppers	1	1461	1.98		0.29				
2009	Aubergines (egg plants)	1	930	7.42		0.33				
2009	Cauliflower	0.05	814	0.12		0.00				
2009	Peas (without pods)	0.1	703	3.56		0.03				
2009	Wheat	0.5	1063							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Cyprodinil**





DDT			
Status of the active substance:	Excluded		
Code number:	37		
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

**Chronic risk assessment**

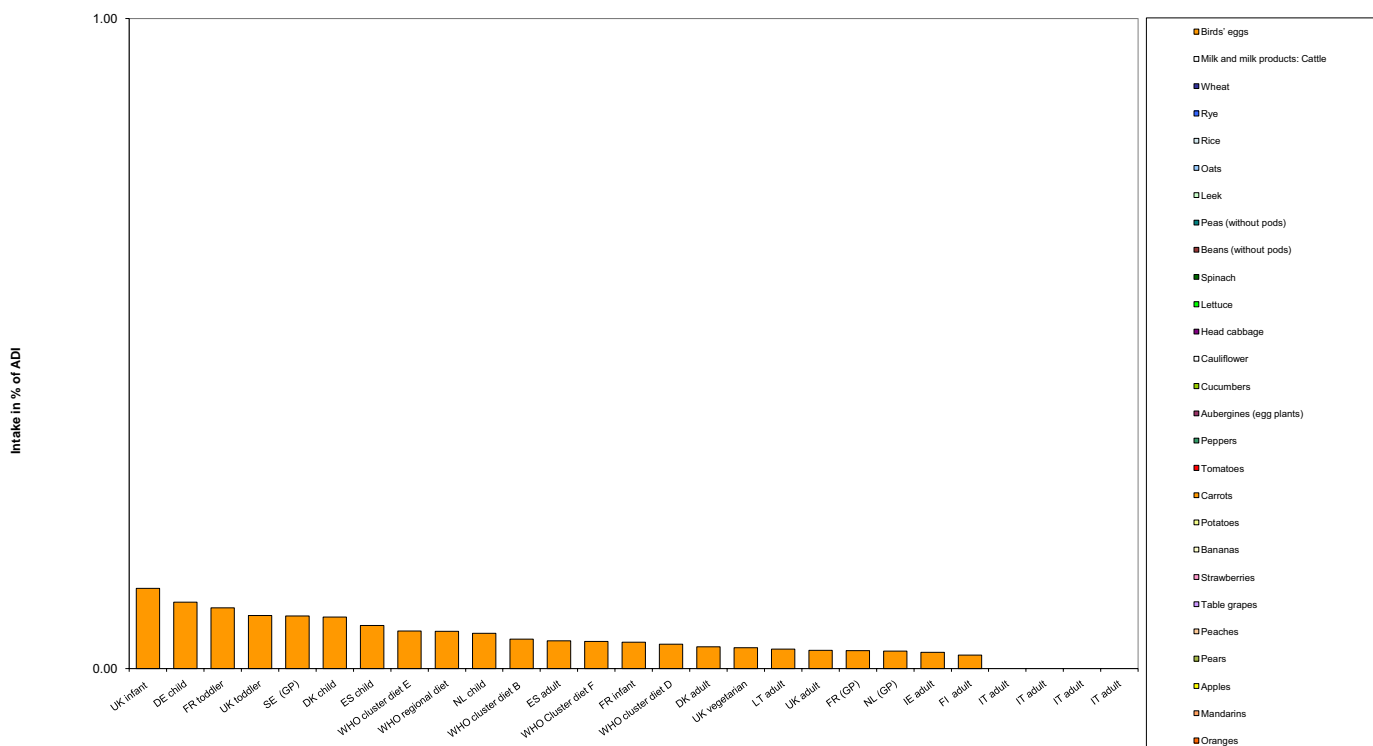
Highest calculated exposure in % of ADI		Exposure (range) in % of ADI minimum - maximum	
No of diets exceeding ADI: ---			
Highest contributor to MS Diet	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.1 UK infant	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.1 DE child	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.1 FR toddler	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.1 UK toddler	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.1 SE (GP)	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.1 DK child	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.1 ES child	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.1 WHO cluster diet E	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.1 WHO regional diet	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.1 NL child	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.0 WHO cluster diet B	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.0 ES adult	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.0 WHO Cluster diet F	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.0 FR infant	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.0 WHO cluster diet D	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.0 DK adult	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.0 UK vegetarian	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.0 LT adult	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.0 UK adult	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.0 FR (GP)	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.0 NL (GP)	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.0 IE adult	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
0.0 FI adult	Birds' eggs	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
IT adult	FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
IT adult	FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
IT adult	FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)
IT adult	FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
2009	Milk and milk products: Cattle	0.04	318	16.04	0.25	0.0012				
2009	Birds' eggs	0.05	399	4.76		0.05				

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: DDT**



Deltamethrin			
Status of the active substance:	Included		
Code number:	38		
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:	2002	Year of evaluation:	2002

**Chronic risk assessment**

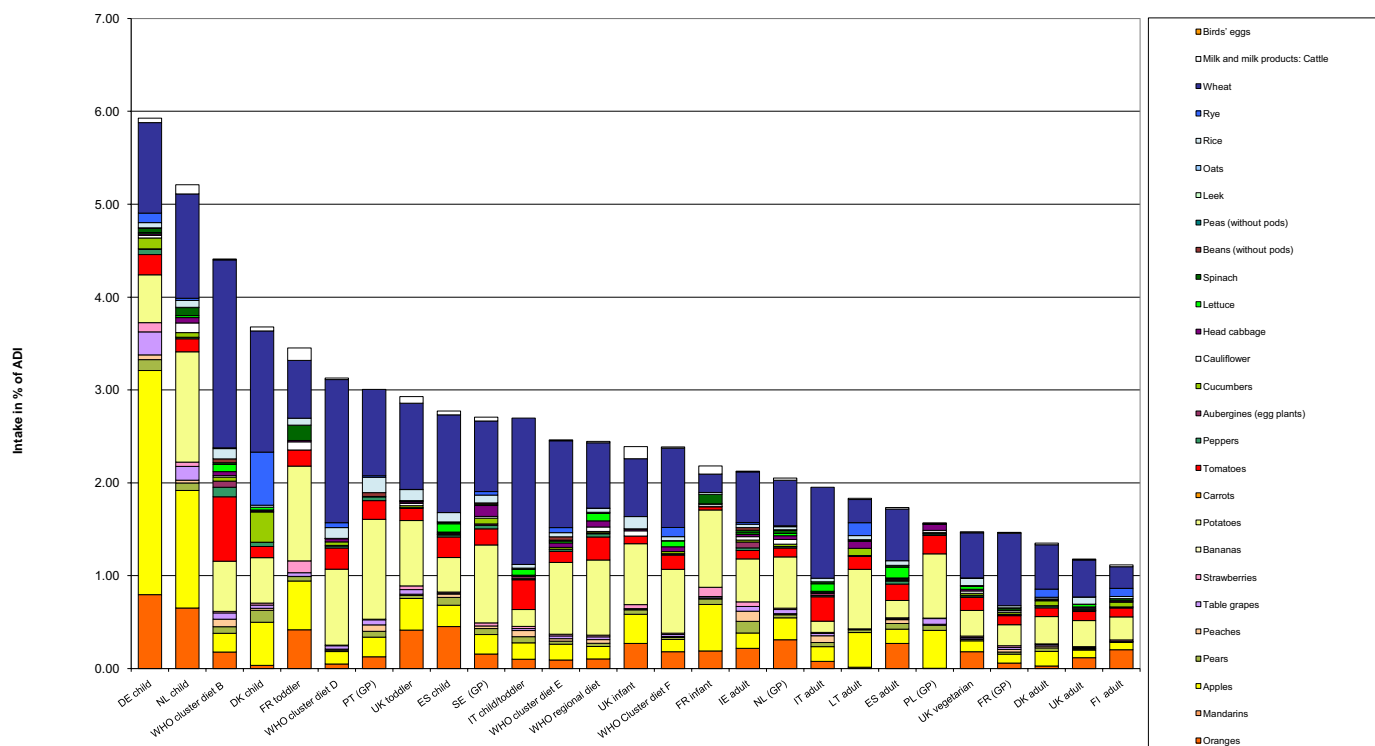
		Exposure (range) in % of ADI minimum - maximum					
		1	6				
No of diets exceeding ADI:							
		1	---				
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
5.9	DE child	2.4	Apples	1.0	Wheat	0.8	Oranges
5.2	NL child	1.3	Apples	1.2	Potatoes	1.1	Wheat
4.4	WHO cluster diet B	2.0	Wheat	0.7	Tomatoes	0.5	Potatoes
3.7	DK child	1.3	Wheat	0.6	Rye	0.5	Potatoes
3.5	FR toddler	1.0	Potatoes	0.6	Wheat	0.5	Apples
3.1	WHO cluster diet D	1.5	Wheat	0.8	Potatoes	0.2	Tomatoes
3.0	PT (GP)	1.1	Potatoes	0.9	Wheat	0.2	Apples
2.9	UK toddler	0.9	Wheat	0.7	Potatoes	0.4	Oranges
2.8	ES child	1.1	Wheat	0.5	Oranges	0.4	Potatoes
2.7	SE (GP)	0.8	Potatoes	0.8	Wheat	0.2	Apples
2.7	IT child/toddler	1.6	Wheat	0.3	Tomatoes	0.2	Potatoes
2.5	WHO cluster diet E	0.9	Wheat	0.8	Potatoes	0.2	Apples
2.4	WHO regional diet	0.8	Potatoes	0.7	Wheat	0.2	Tomatoes
2.4	UK infant	0.7	Potatoes	0.6	Wheat	0.3	Apples
2.4	WHO Cluster diet F	0.9	Wheat	0.7	Potatoes	0.2	Oranges
2.2	FR infant	0.8	Potatoes	0.5	Apples	0.2	Wheat
2.1	IE adult	0.5	Wheat	0.5	Potatoes	0.2	Oranges
2.1	NL (GP)	0.6	Potatoes	0.5	Wheat	0.3	Oranges
2.0	IT adult	1.0	Wheat	0.3	Tomatoes	0.2	Apples
1.8	LT adult	0.6	Potatoes	0.4	Apples	0.2	Wheat
1.7	ES adult	0.6	Wheat	0.3	Oranges	0.2	Potatoes
1.6	PL (GP)	0.7	Potatoes	0.4	Apples	0.2	Tomatoes
1.5	UK vegetarian	0.5	Wheat	0.3	Potatoes	0.2	Oranges
1.5	FR (GP)	0.8	Wheat	0.2	Potatoes	0.1	Tomatoes
1.4	DK adult	0.5	Wheat	0.3	Potatoes	0.2	Apples
1.2	UK adult	0.4	Wheat	0.3	Potatoes	0.1	Oranges
1.1	FI adult	0.2	Potatoes	0.2	Wheat	0.2	Oranges

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.2	1552	0.84	0.06	0.21	1	137.51	DE child	HRM corrected by PF (0.42)
2009	Bananas	0.05	1222							
2009	Peppers	0.2	1552	0.64		0.10		62.98	DE child	
2009	Aubergines (egg plants)	0.3	1006	0.60		0.20		50.00	UK 4-6 yr	
2009	Cauliflower	0.1	859	0.23		0.05		33.04	NL child	
2009	Peas (without pods)	0.2	773							
2009	Wheat	2	1245	0.88		0.63		91.63	UK 4-6 yr	
2009	Milk and milk products: Cattle	0.05	436	0.69		0.0002		0.19	UK infant	
2009	Birds' eggs	0.05	493							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Deltamethrin**



Diazinon			
Status of the active substance:	Excluded		
Code number:	39		
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**

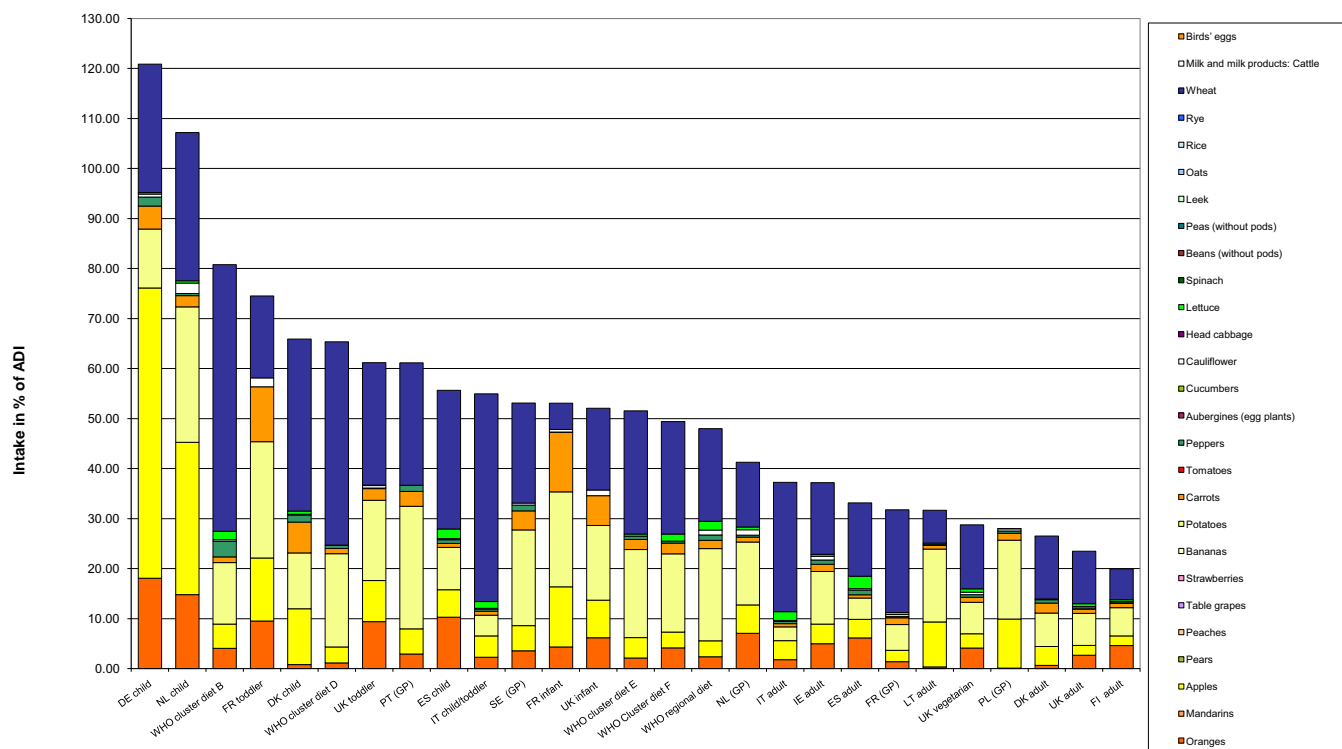
		Exposure (range) in % of ADI minimum - maximum					
		20	121				
		No of diets exceeding ADI:					
		2	2				
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
120.9	DE child	58.0	Apples	25.7	Wheat	18.1	Oranges
107.2	NL child	30.4	Apples	29.6	Wheat	27.1	Potatoes
80.8	WHO cluster diet B	53.3	Wheat	12.3	Potatoes	4.8	Apples
74.5	FR toddler	23.3	Potatoes	16.4	Wheat	12.6	Apples
65.9	DK child	34.4	Wheat	11.2	Apples	11.2	Potatoes
65.3	WHO cluster diet D	40.6	Wheat	18.6	Potatoes	3.2	Apples
61.2	UK toddler	24.5	Wheat	16.0	Potatoes	9.4	Oranges
61.1	PT (GP)	24.5	Potatoes	24.5	Wheat	5.0	Apples
55.6	ES child	27.7	Wheat	10.3	Oranges	8.5	Potatoes
54.9	IT child/toddler	41.5	Wheat	4.3	Apples	4.1	Potatoes
53.1	SE (GP)	20.0	Wheat	19.1	Potatoes	5.0	Apples
53.1	FR infant	19.0	Potatoes	12.0	Apples	11.9	Carrots
52.1	UK infant	16.4	Wheat	14.9	Potatoes	7.5	Apples
51.5	WHO cluster diet E	24.6	Wheat	17.6	Potatoes	4.1	Apples
49.4	WHO Cluster diet F	22.5	Wheat	15.7	Potatoes	4.1	Oranges
48.0	WHO regional diet	18.5	Wheat	18.4	Potatoes	3.2	Apples
41.3	NL (GP)	13.0	Wheat	12.6	Potatoes	7.1	Oranges
37.2	IT adult	25.8	Wheat	3.8	Apples	2.8	Potatoes
37.2	IE adult	14.3	Wheat	10.5	Potatoes	5.0	Oranges
33.1	ES adult	14.7	Wheat	6.1	Oranges	4.3	Potatoes
31.8	FR (GP)	20.5	Wheat	5.2	Potatoes	2.3	Apples
31.7	LT adult	14.6	Potatoes	9.0	Apples	6.6	Wheat
28.7	UK vegetarian	12.8	Wheat	6.3	Potatoes	4.1	Oranges
28.0	PL (GP)	15.8	Potatoes	9.8	Apples	1.4	Carrots
26.5	DK adult	12.6	Wheat	6.7	Potatoes	3.8	Apples
23.5	UK adult	10.5	Wheat	6.4	Potatoes	2.7	Oranges
19.9	FI adult	6.1	Wheat	5.6	Potatoes	4.6	Oranges

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.01	1612							
2009	Bananas	0.01	1252							
2009	Peppers	0.05	1621	0.12		0.02		5.04	DE child	
2009	Aubergines (egg plants)	0.01	1042							
2009	Cauliflower	0.01	902	0.22		0.01		2.11	NL child	
2009	Peas (without pods)	0.01	779							
2009	Wheat	0.02	1255		0.08	0.70		40.46	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Diazinon**



<b>Dichlofluanid</b>			
Status of the active substance:	Excluded		
Code number:	40		
Toxicological end points			
ADI (mg/kg bw/day):	0.007	ARID (mg/kg bw):	n.n.
Source of ADI:	NL	Source of ARID:	NL
Year of evaluation:	2000	Year of evaluation:	

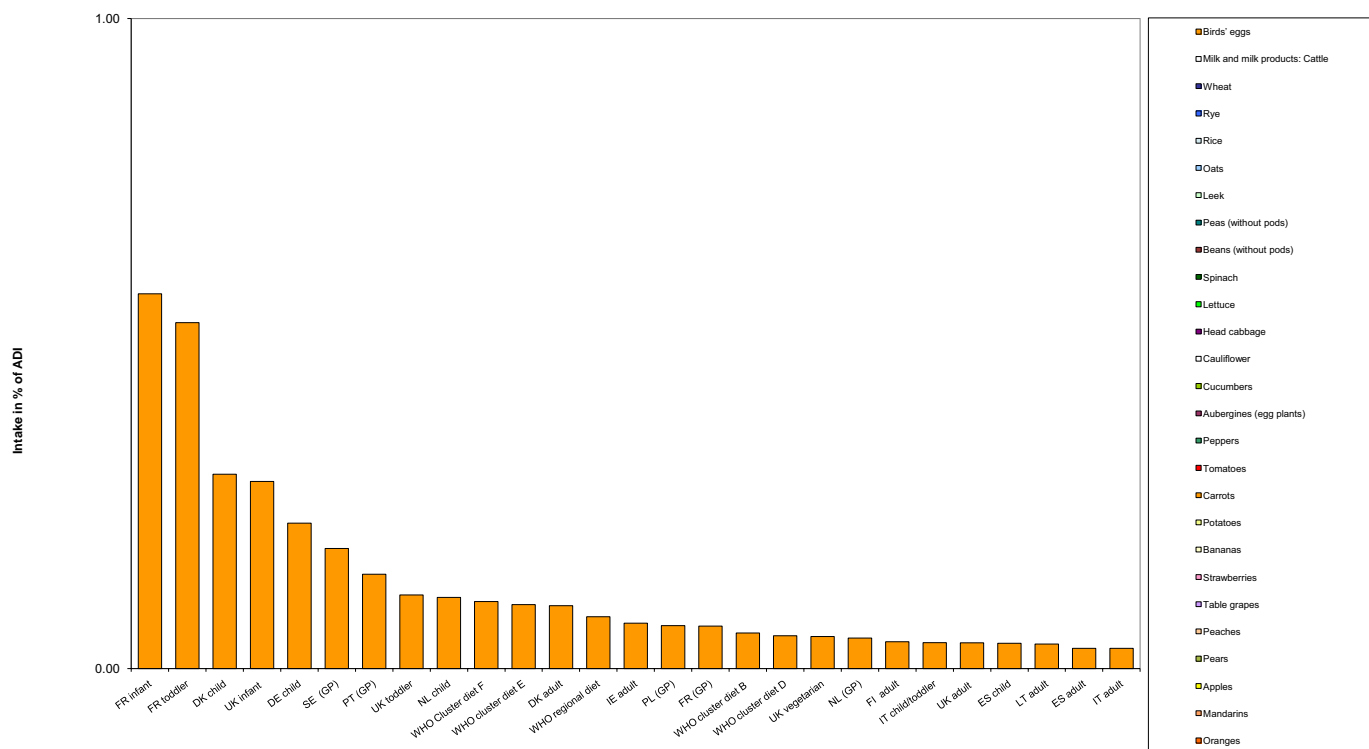
**Chronic risk assessment**

Exposure (range) in % of ADI minimum - maximum							
1							
No of diets exceeding ADI:							
---							
Highest calculated exposure in % of ADI	MS Diet	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
0.6	FR infant	0.6	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.5	FR toddler	0.5	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.3	DK child	0.3	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.3	UK infant	0.3	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.2	DE child	0.2	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.2	SE (GP)	0.2	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	PT (GP)	0.1	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	UK toddler	0.1	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	NL child	0.1	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	WHO Cluster diet F	0.1	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	WHO cluster diet E	0.1	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	DK adult	0.1	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	WHO regional diet	0.1	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	IE adult	0.1	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	PL (GP)	0.1	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	FR (GP)	0.1	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	WHO cluster diet B	0.1	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	WHO cluster diet D	0.1	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	UK vegetarian	0.0	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	NL (GP)	0.0	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	FI adult	0.0	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	IT child/toddler	0.0	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	UK adult	0.0	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	ES child	0.0	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	LT adult	0.0	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	ES adult	0.0	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	IT adult	0.0	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes		1482							
2009	Bananas		1246							
2009	Peppers		1520							
2009	Aubergines (egg plants)		972							
2009	Cauliflower		828							
2009	Peas (without pods)		686							
2009	Wheat		1092							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Dichlofluanid



Dichlorvos	
Status of the active substance:	Excluded
Code number:	41
Toxicological end points	
ADI (mg/kg bw/day):	ARfD (mg/kg bw):
Source of ADI:	Source of ARfD:
Year of evaluation:	Year of evaluation:

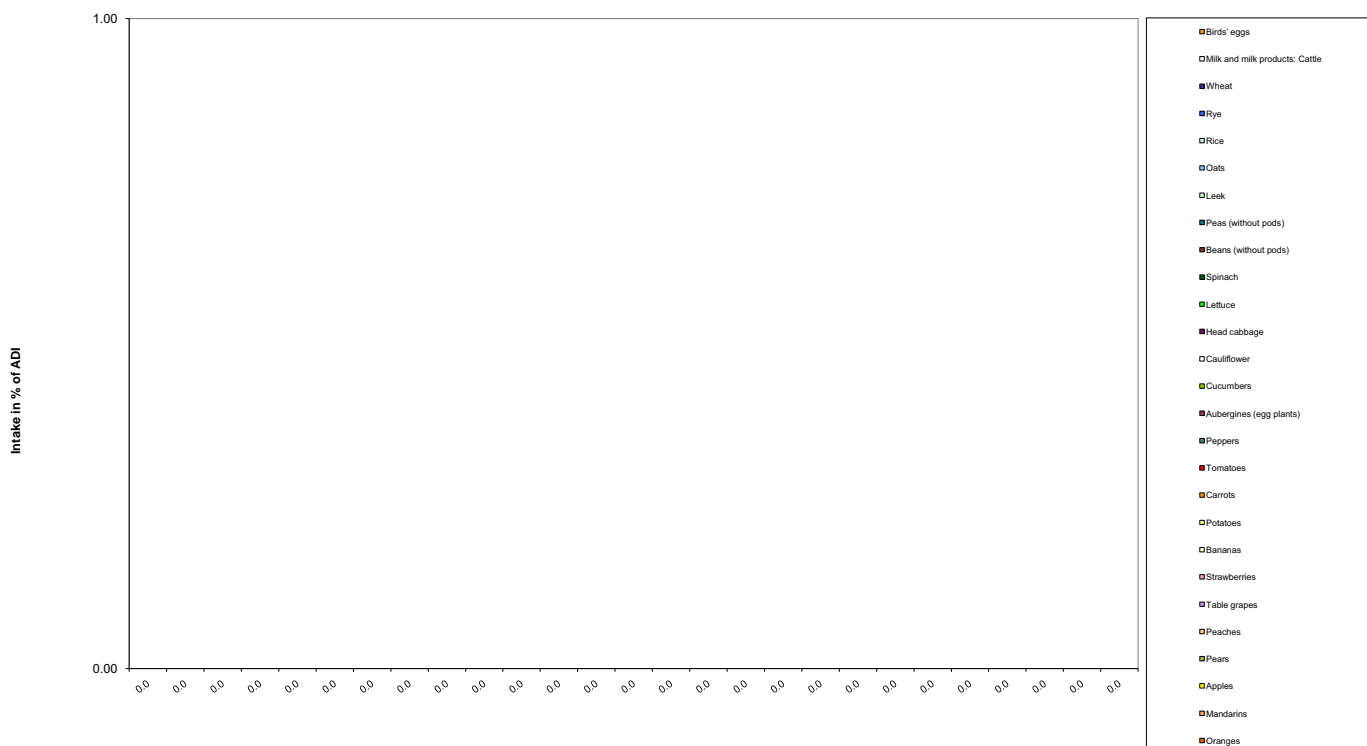
No final ADI/ARfD available for this substance. No risk assessment could be performed.

Chronic risk assessment							
		Exposure (range) in % of ADI minimum - maximum #DIV/0!					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	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										
								Acute exposure expressed in % of the ARfD		
Year	Commodity <sup>a)</sup>	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	0.01	1552							
2009	Bananas	0.01	1217							
2009	Peppers	0.01	1547							
2009	Aubergines (egg plants)	0.01	1001	0.36		0.005				
2009	Cauliflower	0.01	842							
2009	Peas (without pods)	0.01	758							
2009	Wheat	0.01	1236							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

<sup>a)</sup> The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Dichlorvos



Dicofol			
Status of the active substance:	Excluded		
Code number:	42		
Toxicological end points			
ADI (mg/kg bw/day):	0.0022	ARID (mg/kg bw):	0.15
Source of ADI:	DAR	Source of ARID:	DAR
Year of evaluation:	2006	Year of evaluation:	2006

**Chronic risk assessment**

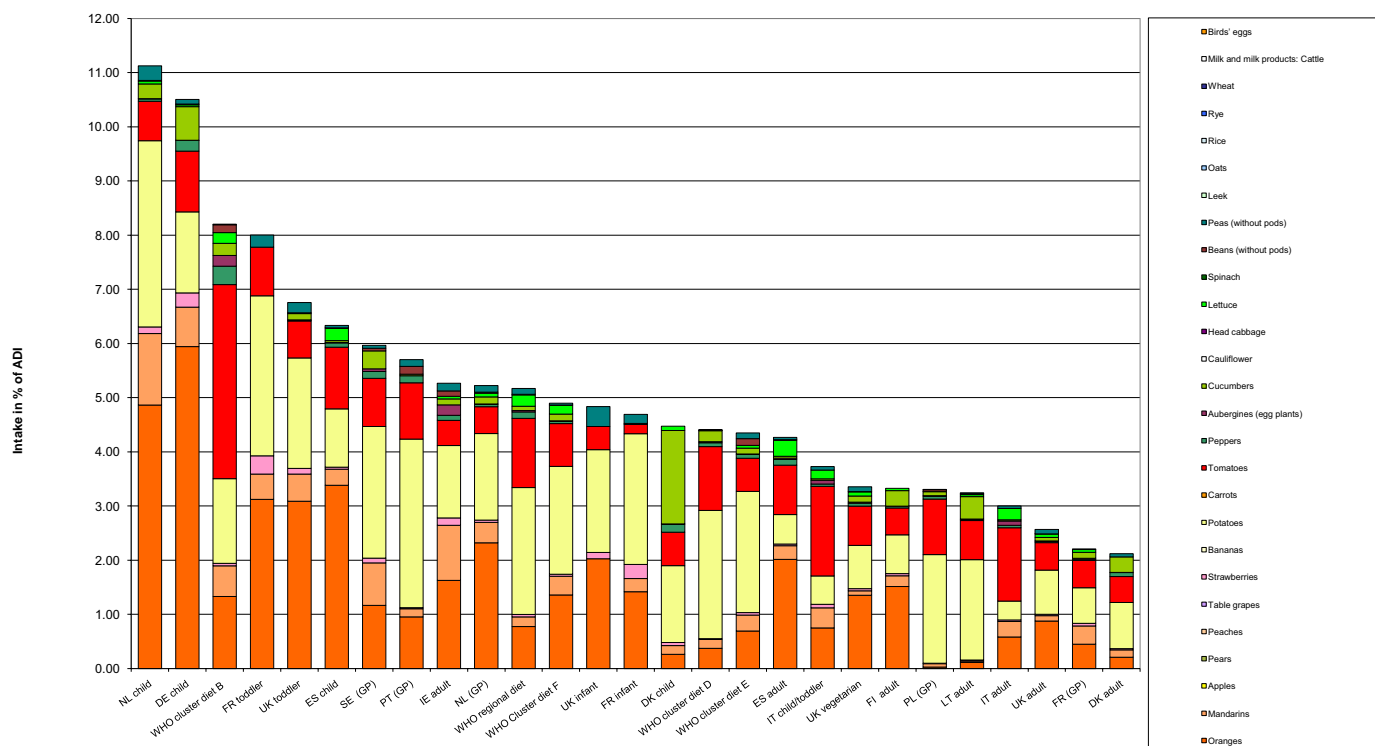
		Exposure (range) in % of ADI minimum - maximum					
		2 11					
		No of diets exceeding ADI: 2 ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
11.1	NL child	4.9	Oranges	3.4	Potatoes	1.3	Mandarins
10.5	DE child	5.9	Oranges	1.5	Potatoes	1.1	Tomatoes
8.2	WHO cluster diet B	3.6	Tomatoes	1.6	Potatoes	1.3	Oranges
8.0	FR toddler	3.1	Oranges	3.0	Potatoes	0.9	Tomatoes
6.8	UK toddler	3.1	Oranges	2.0	Potatoes	0.7	Tomatoes
6.3	ES child	3.4	Oranges	1.1	Tomatoes	1.1	Potatoes
6.0	SE (GP)	2.4	Potatoes	1.2	Oranges	0.9	Tomatoes
5.7	PT (GP)	3.1	Potatoes	1.0	Tomatoes	1.0	Oranges
5.3	IE adult	1.6	Oranges	1.3	Potatoes	1.0	Mandarins
5.2	NL (GP)	2.3	Oranges	1.6	Potatoes	0.5	Tomatoes
5.2	WHO regional diet	2.3	Potatoes	1.3	Tomatoes	0.8	Oranges
4.9	WHO Cluster diet F	2.0	Potatoes	1.4	Oranges	0.8	Tomatoes
4.8	UK infant	2.0	Oranges	1.9	Potatoes	0.4	Tomatoes
4.7	FR infant	2.4	Potatoes	1.4	Oranges	0.3	Strawberries
4.5	DK child	1.7	Cucumbers	1.4	Potatoes	0.6	Tomatoes
4.4	WHO cluster diet D	2.4	Potatoes	1.2	Tomatoes	0.4	Oranges
4.3	WHO cluster diet E	2.2	Potatoes	0.7	Oranges	0.6	Tomatoes
4.3	ES adult	2.0	Oranges	0.9	Tomatoes	0.5	Potatoes
3.7	IT child/toddler	1.7	Tomatoes	0.8	Oranges	0.5	Potatoes
3.4	UK vegetarian	1.4	Oranges	0.8	Potatoes	0.7	Tomatoes
3.3	FI adult	1.5	Oranges	0.7	Potatoes	0.5	Tomatoes
3.3	PL (GP)	2.0	Potatoes	1.0	Tomatoes	0.1	Cucumbers
3.2	LT adult	1.9	Potatoes	0.7	Tomatoes	0.4	Cucumbers
3.0	IT adult	1.4	Tomatoes	0.6	Oranges	0.4	Potatoes
2.6	UK adult	0.9	Oranges	0.8	Potatoes	0.5	Tomatoes
2.2	FR (GP)	0.7	Potatoes	0.5	Tomatoes	0.5	Oranges
2.1	DK adult	0.9	Potatoes	0.5	Tomatoes	0.3	Cucumbers

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	2	1240							
2009	Bananas	0.02	943							
2009	Peppers	0.02	1195	0.08		0.02		0.84	DE child	
2009	Aubergines (egg plants)	0.02	796	0.25		0.02		0.33	UK 4-6 yr	
2009	Cauliflower	0.02	662							
2009	Peas (without pods)	0.02	591	0.34		0.01		0.05	UK infant	
2009	Wheat	0.02	839							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Dicofol**



Dieldrin			
Status of the active substance:	Excluded		
Code number:	43		
Toxicological end points			
ADI (mg/kg bw/day):	0.0001	ARID (mg/kg bw):	0.0001
Source of ADI:	JMPR	Source of ARID:	
Year of evaluation:	1977	Year of evaluation:	

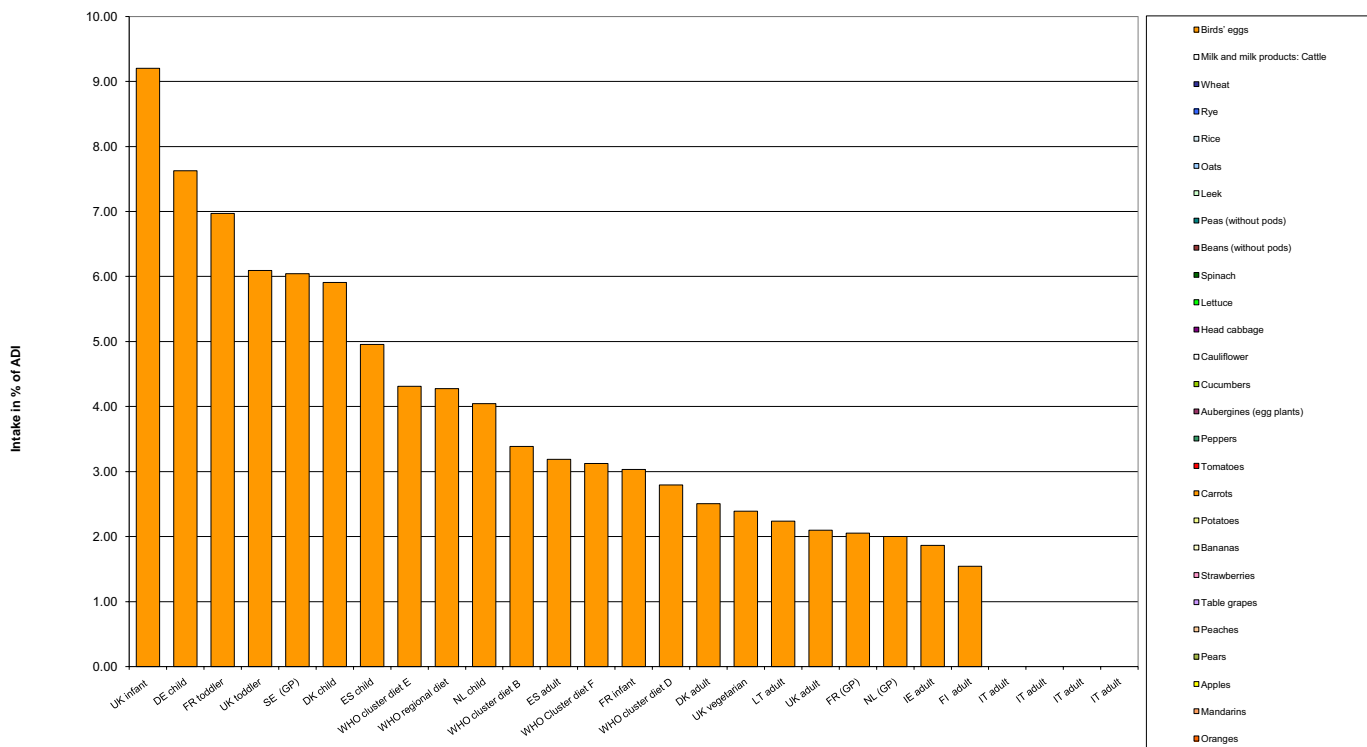
For aldrin the same ADI is applicable (JMPR, 1977). Aldrin and dieldrin were not assessed regarding the setting of an ARID.  
The acute risk assessment was performed with the ADI.

Chronic risk assessment							
Exposure (range) in % of ADI minimum - maximum							
g							
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	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
9.2	UK infant	9.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
7.6	DE child	7.6	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
7.0	FR toddler	7.0	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
6.1	UK toddler	6.1	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
6.0	SE (GP)	6.0	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
5.9	DK child	5.9	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
5.0	ES child	5.0	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
4.3	WHO cluster diet E	4.3	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
4.3	WHO regional diet	4.3	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
4.0	NL child	4.0	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
3.4	WHO cluster diet B	3.4	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
3.2	ES adult	3.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
3.1	WHO Cluster diet F	3.1	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
3.0	FR infant	3.0	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
2.8	WHO cluster diet D	2.8	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
2.5	DK adult	2.5	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
2.4	UK vegetarian	2.4	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
2.2	LT adult	2.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
2.1	UK adult	2.1	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
2.1	FR (GP)	2.1	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
2.0	NL (GP)	2.0	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
1.9	IE adult	1.9	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
1.5	FI adult	1.5	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	IT adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	IT adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	IT adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	IT adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
2009	Milk and milk products: Cattle	0.006	282	2.48		0.0002		24.84	UK infant	
2009	Birds' eggs	0.02	336	0.30		0.0020		24.83	UK infant	

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Dieldrin



Difenoconazole			
Status of the active substance:	Included		
Code number:	44		
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARID (mg/kg bw):	0.16
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2010	Year of evaluation:	2010

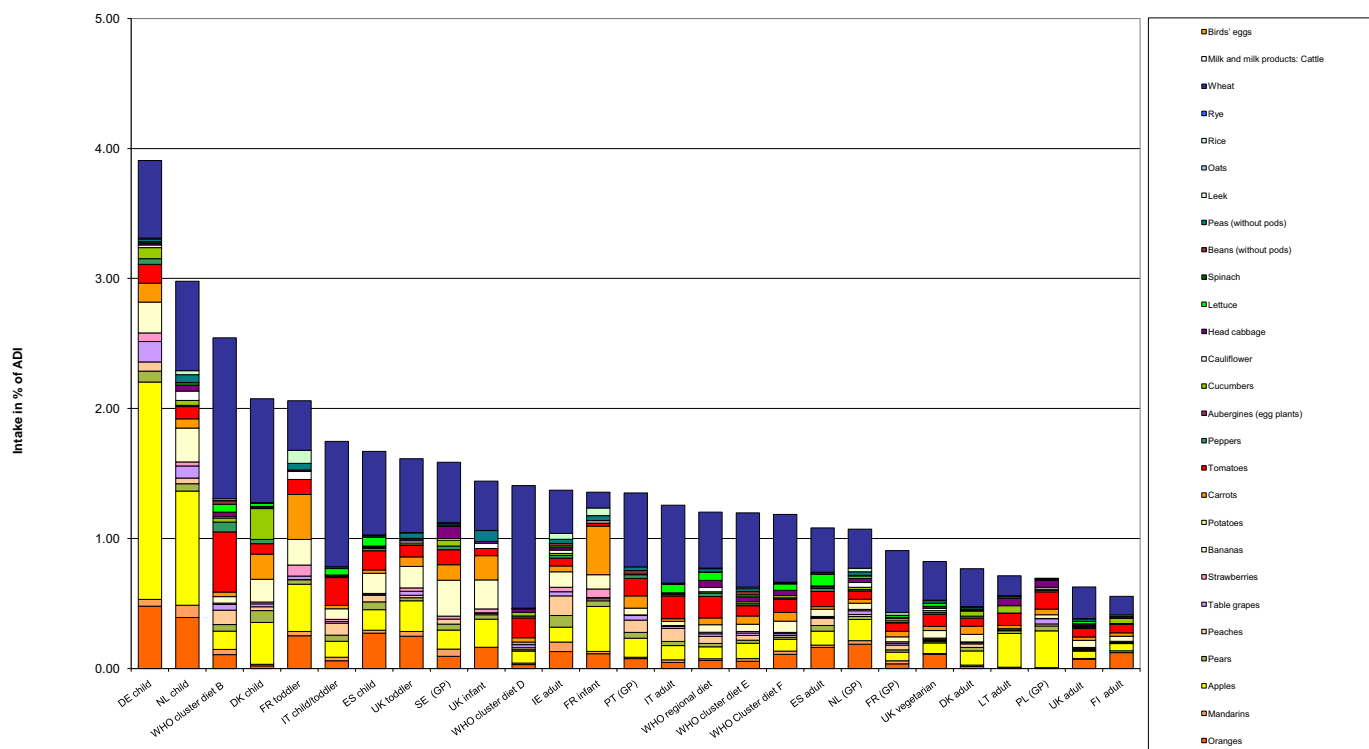
**Chronic risk assessment**

Highest calculated exposure in % of ADI		MS Diet		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	
3.9	DE child	1.7	Apples	0.6	Wheat	0.5	Oranges	0.7	Wheat	0.4	Oranges	0.2	Apples	0.1	Apples
3.0	NL child	1.2	Wheat	0.5	Tomatoes	0.3	Apples	0.2	Oranges	0.2	Apples	0.1	Apples	0.1	Apples
2.5	WHO cluster diet B	0.9	Apples	0.3	Apples	0.2	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
2.1	DK child	0.8	Wheat	0.3	Apples	0.2	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
2.1	FR toddler	0.4	Wheat	0.2	Apples	0.1	Apples	0.1	Apples	0.1	Apples	0.1	Apples	0.1	Apples
1.7	IT child/toddler	1.0	Wheat	0.2	Tomatoes	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
1.7	ES child	0.6	Wheat	0.3	Oranges	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
1.6	UK toddler	0.6	Wheat	0.2	Oranges	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
1.6	SE (GP)	0.5	Wheat	0.3	Bananas	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
1.4	UK infant	0.4	Wheat	0.2	Bananas	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
1.4	WHO cluster diet D	0.9	Wheat	0.2	Tomatoes	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
1.4	IE adult	0.3	Wheat	0.2	Tomatoes	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
1.4	FR infant	0.4	Carrots	0.3	Apples	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
1.4	PT (GP)	0.6	Wheat	0.1	Apples	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
1.3	IT adult	0.6	Wheat	0.2	Tomatoes	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
1.2	WHO regional diet	0.4	Wheat	0.2	Tomatoes	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
1.2	WHO cluster diet E	0.6	Wheat	0.1	Apples	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
1.2	WHO Cluster diet F	0.5	Wheat	0.1	Oranges	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
1.1	ES adult	0.3	Wheat	0.2	Oranges	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
1.1	NL (GP)	0.3	Wheat	0.2	Oranges	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
0.9	FR (GP)	0.5	Wheat	0.1	Apples	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
0.8	UK vegetarian	0.3	Wheat	0.1	Oranges	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
0.8	DK adult	0.3	Wheat	0.1	Apples	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
0.7	LT adult	0.3	Apples	0.1	Wheat	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
0.7	PL (GP)	0.3	Apples	0.1	Tomatoes	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
0.6	UK adult	0.2	Wheat	0.1	Tomatoes	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
0.6	FI adult	0.1	Wheat	0.1	Oranges	0.1	Apples	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples

Acute risk assessment										
Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.5	1353	0.81		0.031		1.27	DE child	
2009	Bananas	0.1	1119	0.1		0.03		1.57	UK infant	
2009	Peppers	0.05	1357	0.22	0.37	0.46		18.11	DE child	
2009	Aubergines (egg plants)	0.05	851							
2009	Cauliflower	0.2	760	0.26		0.02		0.95	NL child	
2009	Peas (without pods)	1	670	0.15		0.05		0.26	UK infant	
2009	Wheat	0.1	991		0.10	0.16		1.44	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Difenoconazole**





Dimethoate			
Status of the active substance:	Excluded		
Code number:	45		
Toxicological end points			
ADI (mg/kg bw/day):	0.0003	ARID (mg/kg bw):	0.01
Source of ADI:	EFSA 2006	Source of ARID:	EFSA 2006
Year of evaluation:	2006	Year of evaluation:	2006

**Chronic risk assessment**

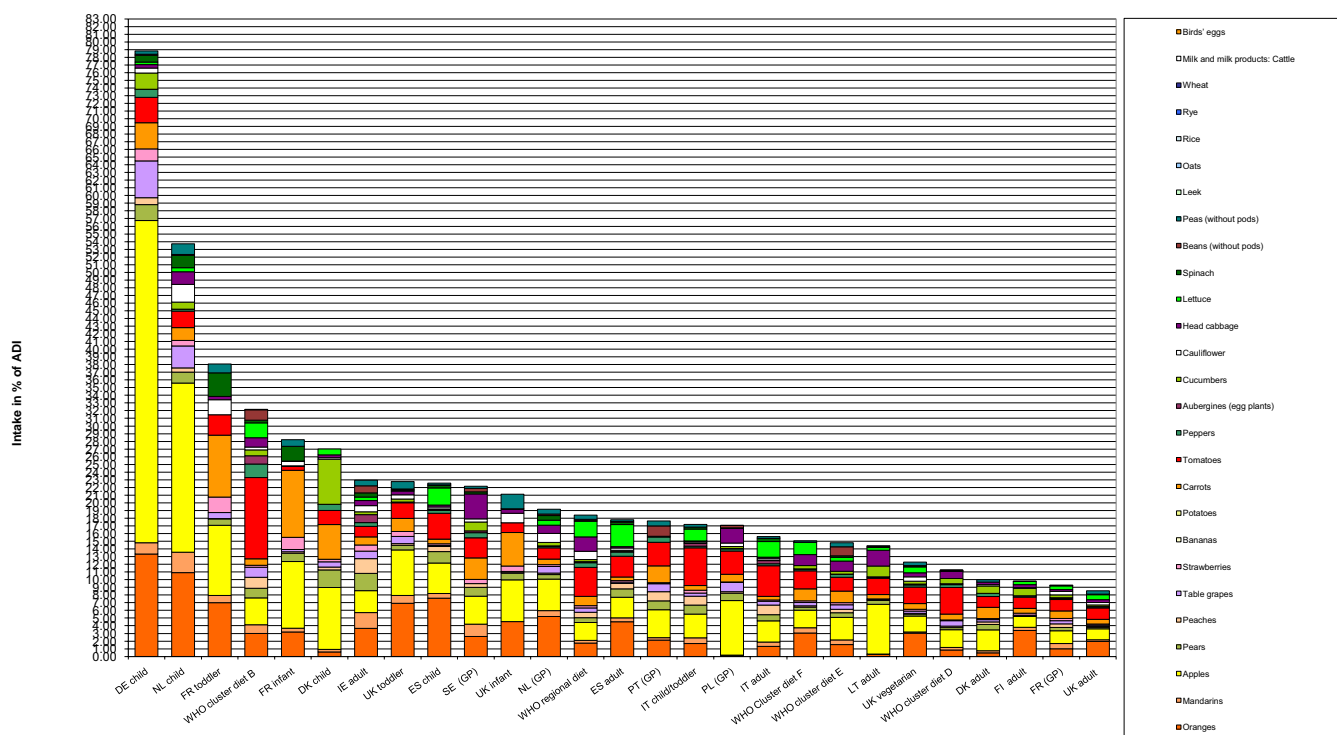
		Exposure (range) in % of ADI minimum - maximum					
		9	79				
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
78.8	DE child	41.9	Apples	13.3	Oranges	4.8	Table grapes
53.7	NL child	22.0	Apples	10.9	Oranges	2.9	Table grapes
38.1	FR toddler	9.1	Apples	8.1	Carrots	7.0	Oranges
32.2	WHO cluster diet B	10.6	Tomatoes	3.5	Apples	3.0	Oranges
28.2	FR infant	8.7	Carrots	8.7	Apples	3.2	Oranges
27.0	DK child	8.1	Apples	5.9	Cucumbers	4.5	Carrots
22.9	IE adult	3.7	Oranges	2.9	Apples	2.3	Pears
22.8	UK toddler	6.9	Oranges	5.9	Apples	2.0	Tomatoes
22.6	ES child	7.6	Oranges	4.0	Apples	3.4	Tomatoes
22.2	SE (GP)	3.6	Apples	3.2	Head cabbage	2.8	Carrots
21.1	UK infant	5.4	Apples	4.5	Oranges	4.4	Carrots
19.2	NL (GP)	5.2	Oranges	4.1	Apples	1.5	Tomatoes
18.4	WHO regional diet	3.8	Tomatoes	2.3	Apples	2.0	Lettuce
17.8	ES adult	4.5	Oranges	2.9	Lettuce	2.7	Tomatoes
17.6	PT (GP)	3.6	Apples	3.1	Tomatoes	2.2	Carrots
17.2	IT child/toddler	4.9	Tomatoes	3.1	Apples	1.7	Oranges
17.1	PL (GP)	7.1	Apples	3.0	Tomatoes	1.9	Head cabbage
15.6	IT adult	4.0	Tomatoes	2.8	Apples	2.0	Lettuce
15.1	WHO Cluster diet F	3.0	Oranges	2.3	Tomatoes	2.3	Apples
14.8	WHO cluster diet E	2.9	Apples	1.8	Tomatoes	1.6	Oranges
14.4	LT adult	6.5	Apples	2.1	Tomatoes	2.1	Head cabbage
12.3	UK vegetarian	3.0	Oranges	2.1	Tomatoes	2.1	Apples
11.3	WHO cluster diet D	3.5	Tomatoes	2.3	Apples	0.9	Head cabbage
10.0	DK adult	2.7	Apples	1.5	Carrots	1.4	Tomatoes
9.8	FI adult	3.4	Oranges	1.5	Tomatoes	1.4	Apples
9.3	FR (GP)	1.7	Apples	1.5	Tomatoes	1.0	Oranges
8.5	UK adult	2.0	Oranges	1.5	Tomatoes	1.4	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.02	1024	0.20	0.49	0.41		268.47	DE child	
2009	Bananas	0.02	834							
2009	Peppers	0.02	1051	0.10	0.10	0.08		50.38	DE child	
2009	Aubergines (egg plants)	0.02	688	0.15	0.87	0.15		37.50	UK 4-6 yr	
2009	Cauliflower	0.2	616	0.97	0.18	0.18		118.95	NL child	
2009	Peas (without pods)	0.02	519	0.77	0.19	0.07		5.74	UK infant	
2009	Wheat	0.3	711							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Dimethoate**



Dimethoate			
Status of the active substance:	Excluded		
Code number:	45		
Toxicological end points			
ADI (mg/kg bw/day):	0.0003	ARID (mg/kg bw):	0.002
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

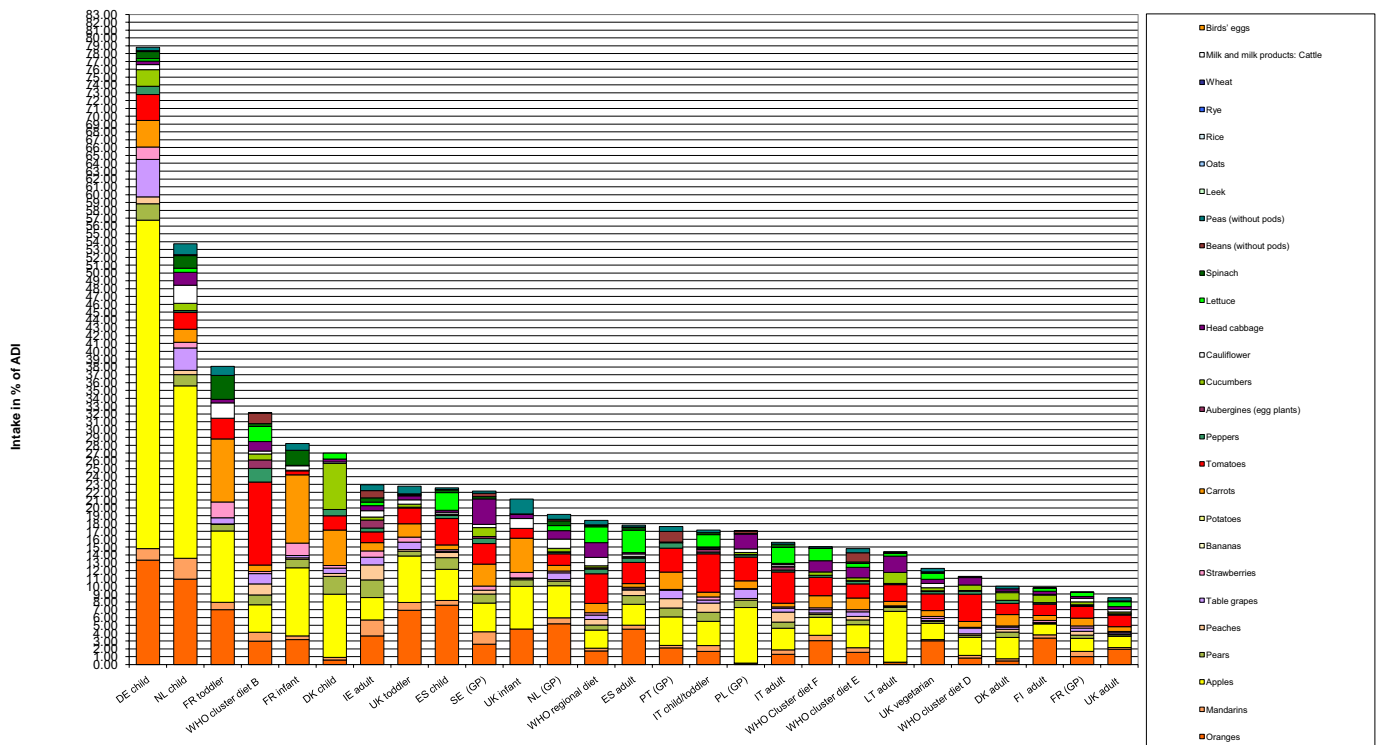
A second risk assessment scenario was calculated with the toxicological reference values of dimethoate (ADI: 0.001 mg/kg bw/d, ARID: 0.01 mg/kg bw).

Chronic risk assessment							
			Exposure (range) in % of ADI minimum - maximum 9				
			No of diets exceeding ADI: ---				
Highest calculated exposure in % of ADI	MS Diet	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
78.8	DE child	41.9	Apples	13.3	Oranges	4.8	Table grapes
53.7	NL child	22.0	Apples	10.9	Oranges	2.9	Table grapes
38.1	FR toddler	9.1	Apples	8.1	Carrots	7.0	Oranges
32.2	WHO cluster diet B	10.6	Tomatoes	3.5	Apples	3.0	Oranges
28.2	FR infant	8.7	Carrots	8.7	Apples	3.2	Oranges
27.0	DK child	8.1	Apples	5.9	Cucumbers	4.5	Carrots
22.9	IE adult	3.7	Oranges	2.9	Apples	2.3	Pears
22.8	UK toddler	6.9	Oranges	5.9	Apples	2.0	Tomatoes
22.6	ES child	7.6	Oranges	4.0	Apples	3.4	Tomatoes
22.2	SE (GP)	3.6	Apples	3.2	Head cabbage	2.8	Carrots
21.1	UK infant	5.4	Apples	4.5	Oranges	4.4	Carrots
19.2	NL (GP)	5.2	Oranges	4.1	Apples	1.5	Tomatoes
18.4	WHO regional diet	3.8	Tomatoes	2.3	Apples	2.0	Lettuce
17.8	ES adult	4.5	Oranges	2.9	Lettuce	2.7	Tomatoes
17.6	PT (GP)	3.6	Apples	3.1	Tomatoes	2.2	Carrots
17.2	IT child/toddler	4.9	Tomatoes	3.1	Apples	1.7	Oranges
17.1	PL (GP)	7.1	Apples	3.0	Tomatoes	1.9	Head cabbage
15.6	IT adult	4.0	Tomatoes	2.8	Apples	2.0	Lettuce
15.1	WHO Cluster diet F	3.0	Oranges	2.3	Tomatoes	2.3	Apples
14.8	WHO cluster diet E	2.9	Apples	1.8	Tomatoes	1.6	Oranges
14.4	LT adult	6.5	Apples	2.1	Tomatoes	2.1	Head cabbage
12.3	UK vegetarian	3.0	Oranges	2.1	Tomatoes	2.1	Apples
11.3	WHO cluster diet D	3.5	Tomatoes	2.3	Apples	0.9	Head cabbage
10.0	DK adult	2.7	Apples	1.5	Carrots	1.4	Tomatoes
9.8	FI adult	3.4	Oranges	1.5	Tomatoes	1.4	Apples
9.3	FR (GP)	1.7	Apples	1.5	Tomatoes	1.0	Oranges
8.5	UK adult	2.0	Oranges	1.5	Tomatoes	1.4	Apples

Acute risk assessment										
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.02	1024	0.20	0.49	0.41	5	1342.34	DE child	
2009	Bananas	0.02	834							
2009	Peppers	0.02	1051		0.10	0.08	1	251.91	DE child	
2009	Aubergines (egg plants)	0.02	688	0.15	0.87	0.15	2	187.50	UK 4-6 yr	
2009	Cauliflower	0.2	616	0.97		0.18	2	607.95	NL child	
2009	Peas (without pods)	0.02	519	0.77	0.19	0.07		28.44	UK infant	
2009	Wheat	0.3	711							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Dimethoate



Dimethomorph			
Status of the active substance:	Included		
Code number:	46		
Toxicological end points			
ADI (mg/kg bw/day):	0.05	ARID (mg/kg bw):	0.6
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

**Chronic risk assessment**

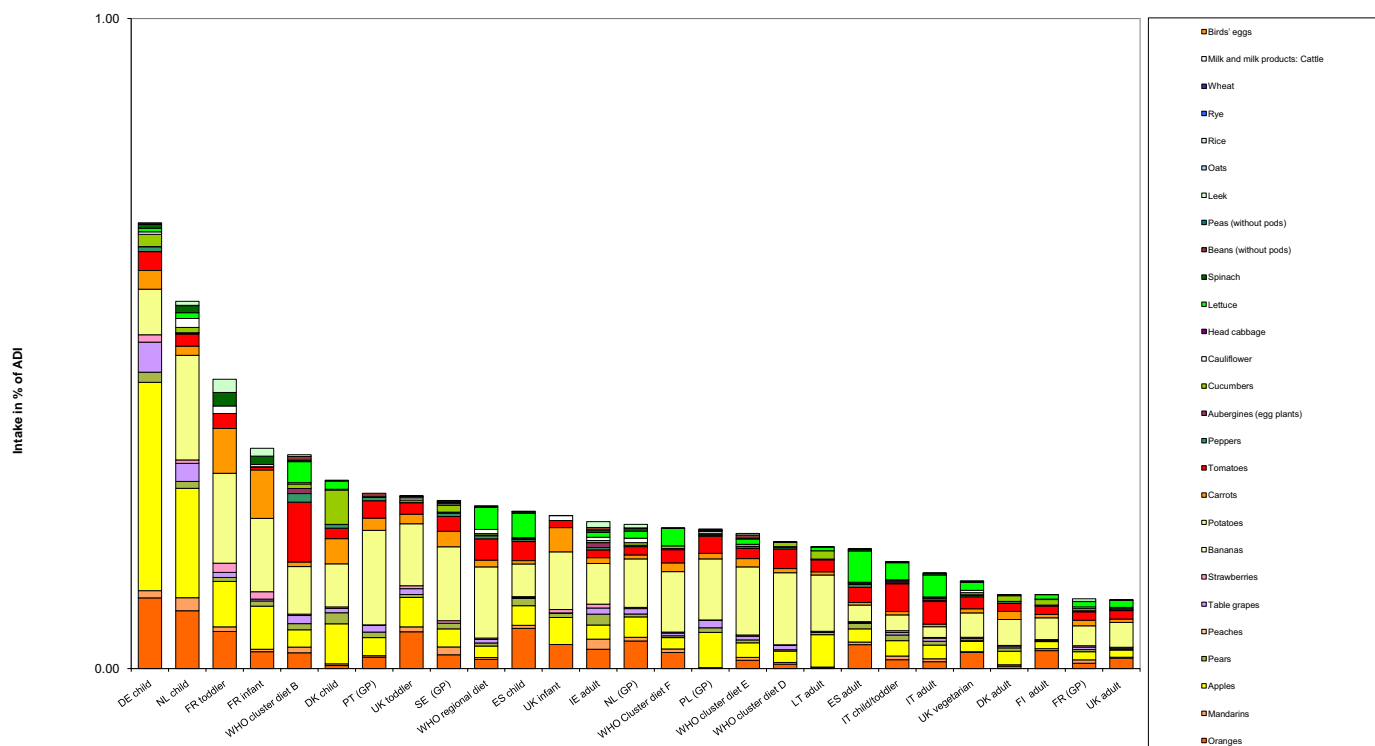
Exposure (range) in % of ADI minimum - maximum		1					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.7	DE child	0.3	Apples	0.1	Oranges	0.1	Potatoes
0.6	NL child	0.2	Apples	0.2	Potatoes	0.1	Oranges
0.4	FR toddler	0.1	Potatoes	0.1	Apples	0.1	Carrots
0.3	FR infant	0.1	Potatoes	0.1	Carrots	0.1	Apples
0.3	WHO cluster diet B	0.1	Tomatoes	0.1	Potatoes	0.0	Lettuce
0.3	DK child	0.1	Potatoes	0.1	Apples	0.1	Cucumbers
0.3	PT (GP)	0.1	Potatoes	0.0	Apples	0.0	Tomatoes
0.3	UK toddler	0.1	Potatoes	0.1	Oranges	0.0	Apples
0.3	SE (GP)	0.1	Potatoes	0.0	Apples	0.0	Carrots
0.3	WHO regional diet	0.1	Potatoes	0.0	Lettuce	0.0	Tomatoes
0.2	ES child	0.1	Oranges	0.1	Potatoes	0.0	Lettuce
0.2	UK infant	0.1	Potatoes	0.0	Apples	0.0	Carrots
0.2	IE adult	0.1	Potatoes	0.0	Oranges	0.0	Apples
0.2	NL (GP)	0.1	Potatoes	0.0	Oranges	0.0	Apples
0.2	WHO Cluster diet F	0.1	Potatoes	0.0	Lettuce	0.0	Oranges
0.2	PL (GP)	0.1	Potatoes	0.1	Apples	0.0	Tomatoes
0.2	WHO cluster diet E	0.1	Potatoes	0.0	Apples	0.0	Tomatoes
0.2	WHO cluster diet D	0.1	Potatoes	0.0	Tomatoes	0.0	Apples
0.2	LT adult	0.1	Potatoes	0.0	Apples	0.0	Tomatoes
0.2	ES adult	0.0	Lettuce	0.0	Oranges	0.0	Potatoes
0.2	IT child/toddler	0.0	Tomatoes	0.0	Lettuce	0.0	Potatoes
0.1	IT adult	0.0	Tomatoes	0.0	Lettuce	0.0	Apples
0.1	UK vegetarian	0.0	Potatoes	0.0	Oranges	0.0	Tomatoes
0.1	DK adult	0.0	Potatoes	0.0	Apples	0.0	Carrots
0.1	FI adult	0.0	Potatoes	0.0	Oranges	0.0	Tomatoes
0.1	FR (GP)	0.0	Potatoes	0.0	Tomatoes	0.0	Apples
0.1	UK adult	0.0	Potatoes	0.0	Oranges	0.0	Tomatoes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	3	1137	8.09		0.83		9.06	DE child	
2009	Bananas	0.05	1015							
2009	Peppers	0.5	1173	0.34		0.06		0.59	DE child	
2009	Aubergines (egg plants)	0.05	755	0.13		0.00		0.01	UK 4-6 yr	
2009	Cauliflower	0.05	686	0.44		0.01		0.14	NL child	
2009	Peas (without pods)	0.05	597							
2009	Wheat	0.05	714							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Dimethomorph**



Diphenylamine			
Status of the active substance:	Excluded		
Code number:	47		
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**

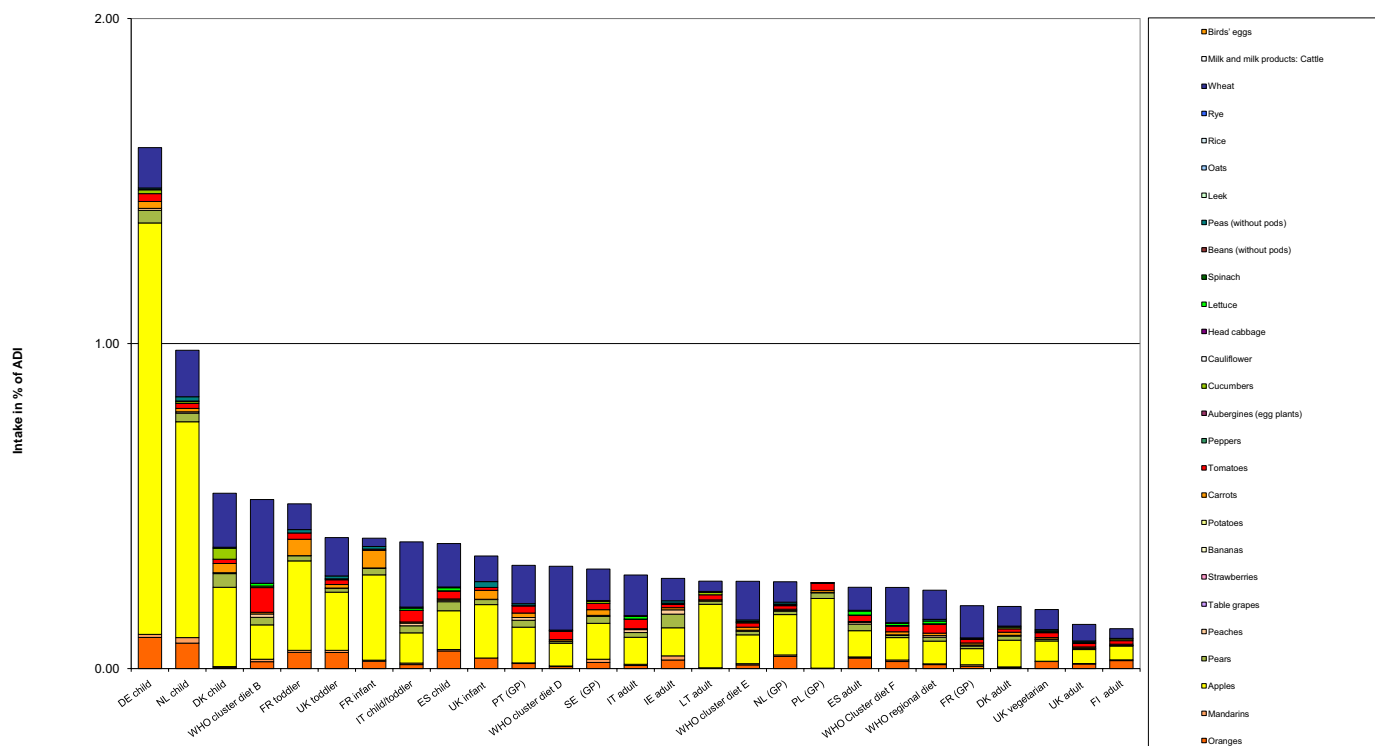
		Exposure (range) in % of ADI minimum - maximum					
		2					
		No of diets exceeding ADI:		---			
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.6	DE child	1.3	Apples	0.1	Wheat	0.1	Oranges
1.0	NL child	0.7	Apples	0.1	Wheat	0.1	Oranges
0.5	DK child	0.2	Apples	0.2	Wheat	0.0	Pears
0.5	WHO cluster diet B	0.3	Wheat	0.1	Apples	0.1	Tomatoes
0.5	FR toddler	0.3	Apples	0.1	Wheat	0.1	Carrots
0.4	UK toddler	0.2	Apples	0.1	Wheat	0.0	Oranges
0.4	FR infant	0.3	Apples	0.1	Carrots	0.0	Wheat
0.4	IT child/toddler	0.2	Wheat	0.1	Apples	0.0	Tomatoes
0.4	ES child	0.1	Wheat	0.1	Apples	0.1	Oranges
0.3	UK infant	0.2	Apples	0.1	Wheat	0.0	Oranges
0.3	PT (GP)	0.1	Wheat	0.1	Apples	0.0	Tomatoes
0.3	WHO cluster diet D	0.2	Wheat	0.1	Apples	0.0	Tomatoes
0.3	SE (GP)	0.1	Apples	0.1	Wheat	0.0	Pears
0.3	IT adult	0.1	Wheat	0.1	Apples	0.0	Tomatoes
0.3	IE adult	0.1	Apples	0.1	Wheat	0.0	Pears
0.3	LT adult	0.2	Apples	0.0	Wheat	0.0	Tomatoes
0.3	WHO cluster diet E	0.1	Wheat	0.1	Apples	0.0	Tomatoes
0.3	NL (GP)	0.1	Apples	0.1	Wheat	0.0	Oranges
0.3	PL (GP)	0.2	Apples	0.0	Tomatoes	0.0	Pears
0.3	ES adult	0.1	Apples	0.1	Wheat	0.0	Oranges
0.2	WHO Cluster diet F	0.1	Wheat	0.1	Apples	0.0	Oranges
0.2	WHO regional diet	0.1	Wheat	0.1	Apples	0.0	Tomatoes
0.2	FR (GP)	0.1	Wheat	0.0	Apples	0.0	Tomatoes
0.2	DK adult	0.1	Apples	0.1	Wheat	0.0	Pears
0.2	UK vegetarian	0.1	Apples	0.1	Wheat	0.0	Oranges
0.1	UK adult	0.1	Wheat	0.0	Apples	0.0	Oranges
0.1	FI adult	0.0	Apples	0.0	Wheat	0.0	Oranges

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	1347							
2009	Bananas	0.05	1138							
2009	Peppers	0.05	1428							
2009	Aubergines (egg plants)	0.05	905							
2009	Cauliflower	0.05	788							
2009	Peas (without pods)	0.05	702	0.14	0.14	0.07				
2009	Wheat	0.05	866	0.12		0.00				
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Diphenylamine**



Dithiocarbamates			
Status of the active substance:	Included		
Code number:	87		
Toxicological end points			
ADI (mg/kg bw/day):	0.05	ARID (mg/kg bw):	0.6
Source of ADI:	COM 2005	Source of ARID:	COM 2004
Year of evaluation:	2005		

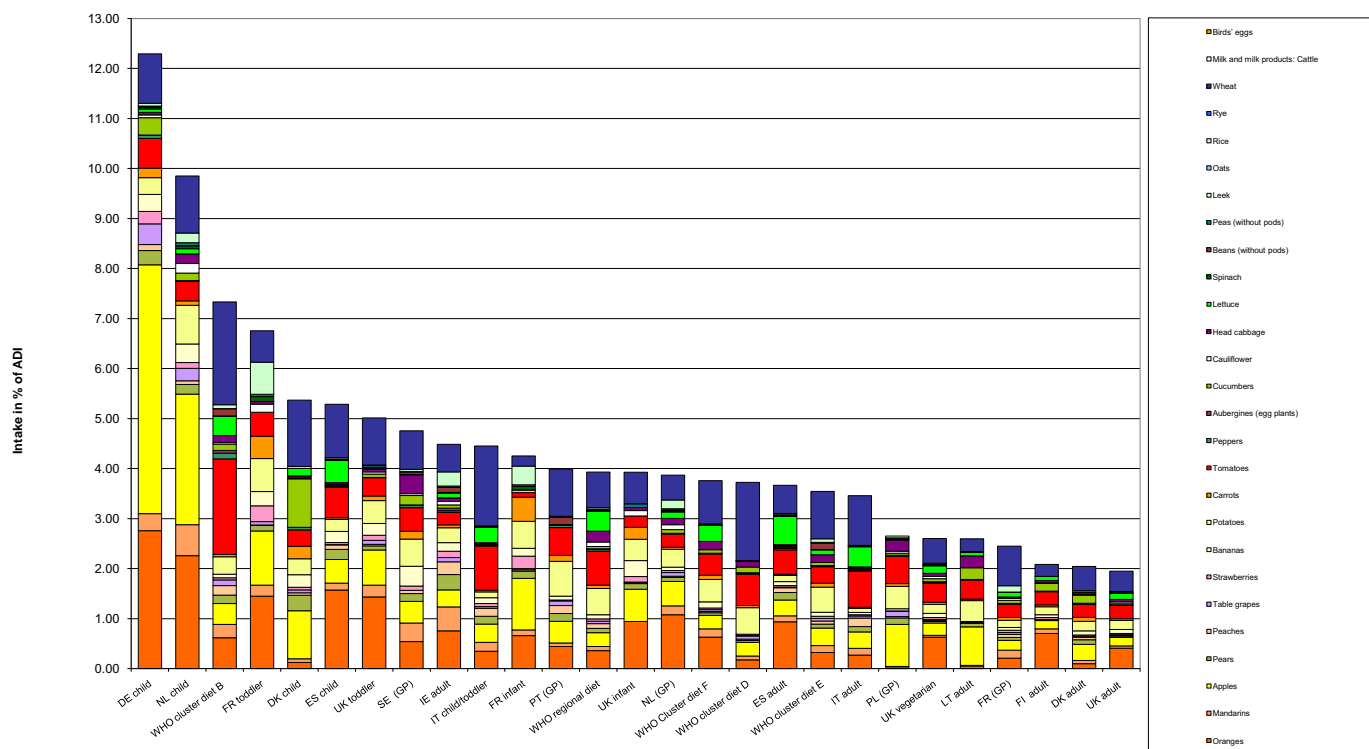
For the chronic risk assessment the orange and banana residue figures were corrected by the peeling factor (0.88 and 0.87, respectively). The ADI of mancozeb (COM 2005) of 0.05 mg/kg bw day was used. Residue levels reported as CS2 were recalculated to mancozeb (molecular weight CF 1.78).

Chronic risk assessment							
		Exposure (range) in % of ADI		minimum - maximum			
		2		12			
		No of diets exceeding ADI:		2		---	
Highest calculated exposure in % of ADI	MS Diet	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
12.3	DE child	5.0	Apples	2.8	Oranges	1.0	Wheat
9.8	NL child	2.6	Apples	2.3	Oranges	1.1	Wheat
7.3	WHO cluster diet B	2.1	Wheat	1.9	Tomatoes	0.6	Oranges
6.8	FR toddler	1.4	Oranges	1.1	Apples	0.7	Potatoes
5.4	DK child	1.3	Wheat	1.0	Cucumbers	1.0	Apples
5.3	ES child	1.6	Oranges	1.1	Wheat	0.6	Tomatoes
5.0	UK toddler	1.4	Oranges	0.9	Wheat	0.7	Apples
4.8	SE (GP)	0.8	Wheat	0.5	Potatoes	0.5	Oranges
4.5	IE adult	0.8	Oranges	0.6	Wheat	0.5	Mandarins
4.5	IT child/toddler	1.6	Wheat	0.9	Tomatoes	0.4	Apples
4.3	FR infant	1.0	Apples	0.7	Oranges	0.5	Potatoes
4.0	PT (GP)	0.9	Wheat	0.7	Potatoes	0.6	Tomatoes
3.9	WHO regional diet	0.7	Wheat	0.7	Tomatoes	0.5	Potatoes
3.9	UK infant	0.9	Oranges	0.6	Apples	0.6	Wheat
3.9	NL (GP)	1.1	Oranges	0.5	Wheat	0.5	Apples
3.8	WHO Cluster diet F	0.9	Wheat	0.6	Oranges	0.4	Potatoes
3.7	WHO cluster diet D	1.6	Wheat	0.6	Tomatoes	0.5	Potatoes
3.7	ES adult	0.9	Oranges	0.6	Lettuce	0.6	Wheat
3.5	WHO cluster diet E	0.9	Wheat	0.5	Potatoes	0.3	Apples
3.5	IT adult	1.0	Wheat	0.7	Tomatoes	0.4	Lettuce
2.7	PL (GP)	0.8	Apples	0.5	Tomatoes	0.4	Potatoes
2.6	UK vegetarian	0.6	Oranges	0.5	Wheat	0.4	Tomatoes
2.6	LT adult	0.8	Apples	0.4	Potatoes	0.4	Tomatoes
2.4	FR (GP)	0.8	Wheat	0.3	Tomatoes	0.2	Oranges
2.1	FI adult	0.7	Oranges	0.3	Tomatoes	0.2	Wheat
2.0	DK adult	0.5	Wheat	0.3	Apples	0.3	Tomatoes
1.9	UK adult	0.4	Oranges	0.4	Wheat	0.3	Tomatoes

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	5	690	17.83		4.094		44.68	DE child	
2009	Bananas	2	572	3.1		0.71		9.92	UK infant	
2009	Peppers	5	783	3.96		1.33		13.98	DE child	
2009	Aubergines (egg plants)	3	545	3.67	0.25	0.43		1.78	UK 4-6 yr	
2009	Cauliflower	1	396	52.27		2.72		29.99	NL child	
2009	Peas (without pods)	0.1	511	1.76		0.17		0.23	UK infant	
2009	Wheat	1	355	2.25		0.96		2.31	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Dithiocarbamates



Dithiocarbamates			
Status of the active substance:	Included		
Code number:	87		
Toxicological end points			
ADI (mg/kg bw/day):	0.006	ARID (mg/kg bw):	0.08
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2004	Year of evaluation:	2004

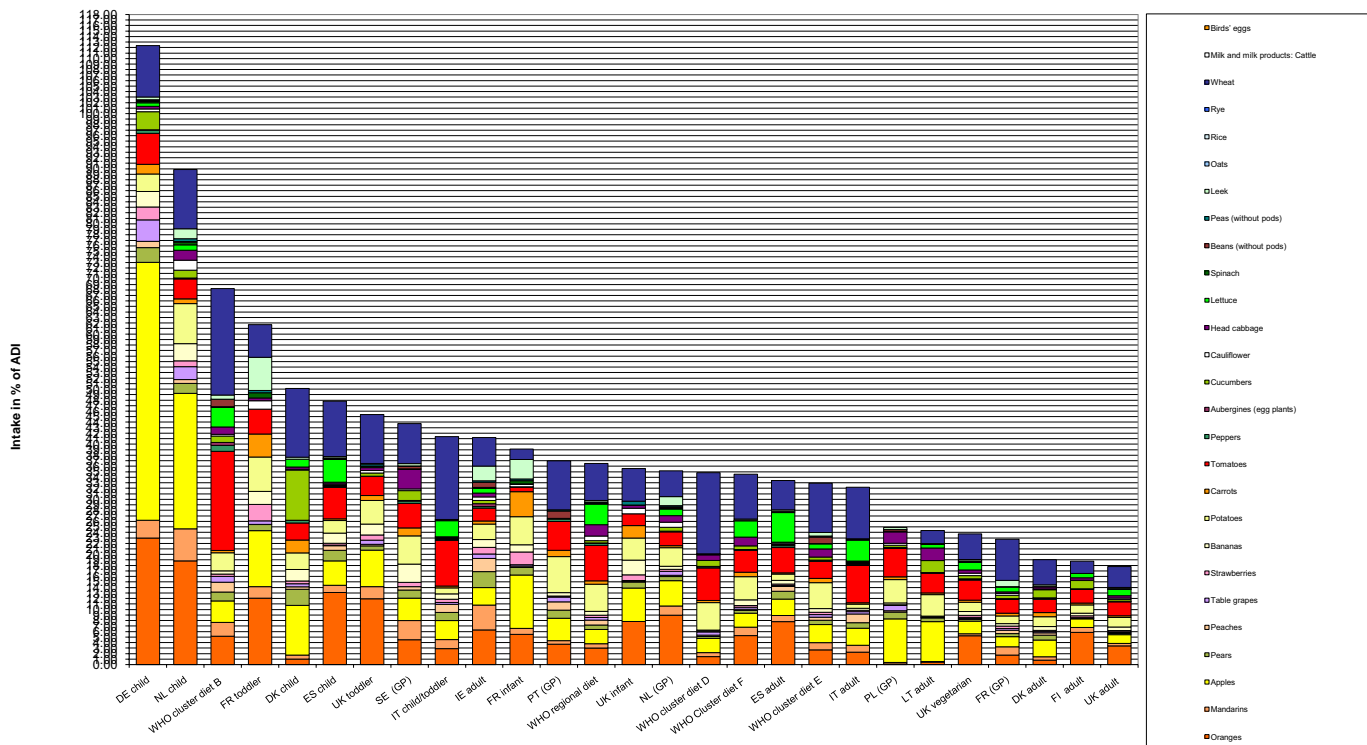
For the risk assessment of the dithiocarbamates the ADI and ARID of ziram were selected. For the other compounds belonging to the "maneb" group, higher toxicological reference values have been established. Residue levels reported as CS<sub>2</sub> were recalculated to Ziram (molecular weight CF 2.01). For the chronic exposure assessment, the mean residue levels in oranges and banana have been corrected by the peeling Processing Factors.

Chronic risk assessment							
		Exposure (range) in % of ADI		minimum - maximum			
		18			112		
No of diets exceeding ADI:		1					
Highest calculated exposure in % of ADI	MS Diet	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
112.3	DE child	46.8	Apples	23.0	Oranges	9.3	Wheat
89.9	NL child	24.6	Apples	18.8	Oranges	10.7	Wheat
68.3	WHO cluster diet B	19.3	Wheat	18.0	Tomatoes	5.1	Oranges
61.7	FR toddler	12.1	Oranges	10.2	Apples	6.2	Potatoes
50.1	DK child	12.5	Wheat	9.1	Cucumbers	9.0	Apples
47.8	ES child	13.1	Oranges	10.0	Wheat	5.7	Tomatoes
45.4	UK toddler	11.9	Oranges	8.9	Wheat	6.6	Apples
43.7	SE (GP)	7.3	Wheat	5.1	Potatoes	4.5	Oranges
41.4	IT child/toddler	15.1	Wheat	8.3	Tomatoes	3.4	Apples
41.2	IE adult	6.3	Oranges	5.2	Wheat	4.5	Mandarins
39.1	FR infant	9.7	Apples	5.5	Oranges	5.1	Potatoes
37.0	PT (GP)	8.9	Wheat	6.6	Potatoes	5.2	Tomatoes
36.5	WHO regional diet	6.7	Wheat	6.4	Tomatoes	4.9	Potatoes
35.6	UK infant	7.8	Oranges	6.1	Apples	5.9	Wheat
35.2	NL (GP)	9.0	Oranges	4.7	Wheat	4.6	Apples
34.8	WHO cluster diet D	14.7	Wheat	5.9	Tomatoes	5.0	Potatoes
34.6	WHO Cluster diet F	8.2	Wheat	5.3	Oranges	4.2	Potatoes
33.4	ES adult	7.8	Oranges	5.4	Lettuce	5.3	Wheat
32.9	WHO cluster diet E	8.9	Wheat	4.7	Potatoes	3.3	Apples
32.2	IT adult	9.4	Wheat	6.8	Tomatoes	3.8	Lettuce
24.9	PL (GP)	7.9	Apples	5.1	Tomatoes	4.2	Potatoes
24.3	LT adult	7.2	Apples	3.9	Potatoes	3.6	Tomatoes
23.7	UK vegetarian	5.2	Oranges	4.6	Wheat	3.6	Tomatoes
22.7	FR (GP)	7.4	Wheat	2.5	Tomatoes	1.8	Apples
19.0	DK adult	4.6	Wheat	3.0	Apples	2.4	Tomatoes
18.8	FI adult	5.9	Oranges	2.5	Tomatoes	2.2	Wheat
17.8	UK adult	3.8	Wheat	3.4	Oranges	2.5	Tomatoes

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	5	690	17.83		4.623	1	378.39	DE child	level corrected by PF = 0.52
2009	Bananas	2	572	3.1		0.80		84.02	UK infant	
2009	Peppers	5	783	3.96		1.50	1	118.36	DE child	
2009	Aubergines (egg plants)	3	545	3.67	0.25	0.48		15.08	UK 4-6 yr	
2009	Cauliflower	1	396	52.27		3.08	1	254.03	NL child	
2009	Peas (without pods)	0.1	511	1.76		0.19		1.98	UK infant	
2009	Wheat	1	355	2.25		1.08		19.57	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Dithiocarbamates



Endosulfan			
Status of the active substance:	Excluded		
Code number:	48		
Toxicological end points			
ADI (mg/kg bw/day):	0.006	ARID (mg/kg bw):	0.02
Source of ADI:	ECCO	Source of ARID:	JMPR
Year of evaluation:	2001	Year of evaluation:	1998

**Chronic risk assessment**

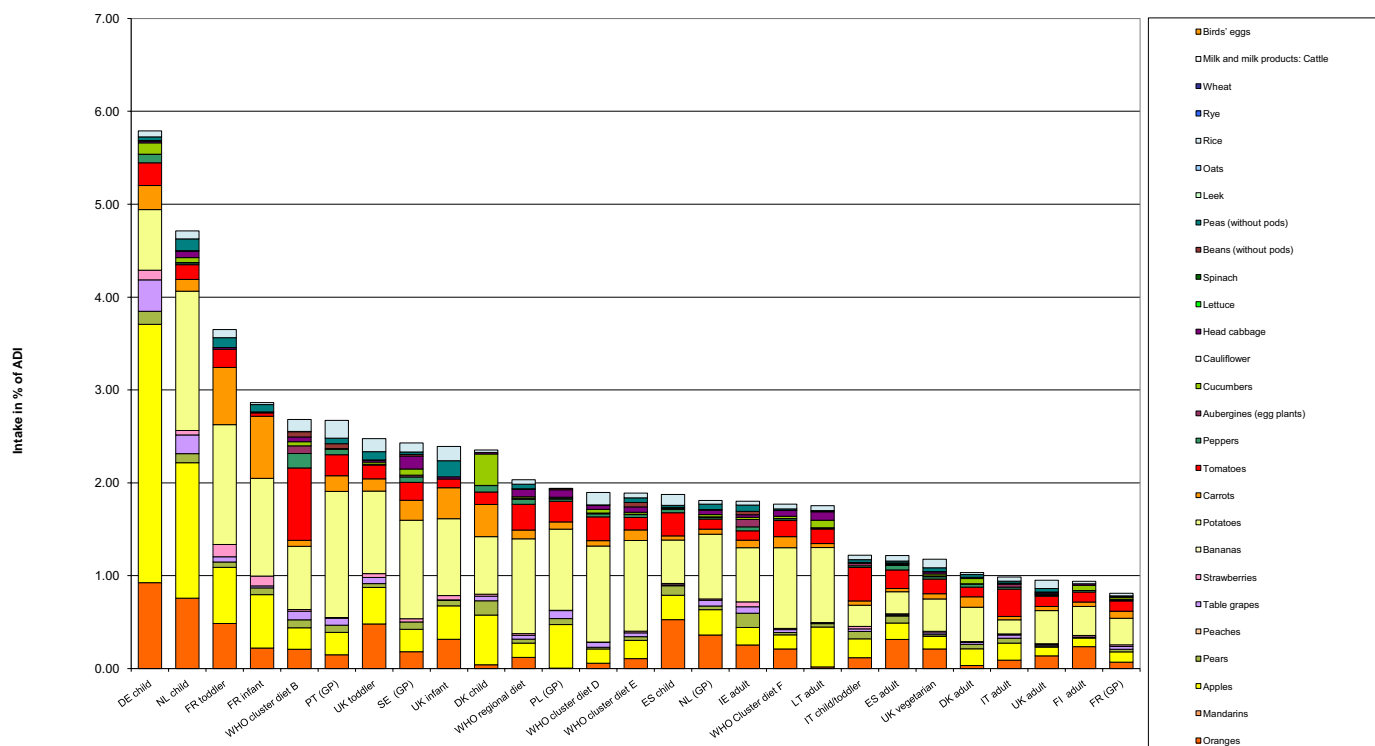
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities
5.8	DE child	2.8	Apples	0.9	Oranges	0.7	Potatoes
4.7	NL child	1.5	Potatoes	1.5	Apples	0.8	Oranges
3.7	FR toddler	1.3	Potatoes	0.6	Carrots	0.6	Apples
2.9	FR infant	1.1	Potatoes	0.7	Carrots	0.6	Apples
2.7	WHO cluster diet B	0.8	Tomatoes	0.7	Potatoes	0.2	Apples
2.7	PT (GP)	1.4	Potatoes	0.2	Apples	0.2	Tomatoes
2.5	UK toddler	0.9	Potatoes	0.5	Oranges	0.4	Apples
2.4	SE (GP)	1.1	Potatoes	0.2	Apples	0.2	Carrots
2.4	UK infant	0.8	Potatoes	0.4	Apples	0.3	Carrots
2.4	DK child	0.6	Potatoes	0.5	Apples	0.3	Carrots
2.0	WHO regional diet	1.0	Potatoes	0.3	Tomatoes	0.2	Apples
1.9	PL (GP)	0.9	Potatoes	0.5	Apples	0.2	Tomatoes
1.9	WHO cluster diet D	1.0	Potatoes	0.3	Tomatoes	0.2	Apples
1.9	WHO cluster diet E	1.0	Potatoes	0.2	Apples	0.1	Tomatoes
1.9	ES child	0.5	Oranges	0.5	Potatoes	0.3	Apples
1.8	NL (GP)	0.7	Potatoes	0.4	Oranges	0.3	Apples
1.8	IE adult	0.6	Potatoes	0.3	Oranges	0.2	Apples
1.8	WHO Cluster diet F	0.9	Potatoes	0.2	Oranges	0.2	Tomatoes
1.8	LT adult	0.8	Potatoes	0.4	Apples	0.2	Tomatoes
1.2	IT child/toddler	0.4	Tomatoes	0.2	Potatoes	0.2	Apples
1.2	ES adult	0.3	Oranges	0.2	Potatoes	0.2	Tomatoes
1.2	UK vegetarian	0.3	Potatoes	0.2	Oranges	0.2	Tomatoes
1.0	DK adult	0.4	Potatoes	0.2	Apples	0.1	Carrots
1.0	IT adult	0.3	Tomatoes	0.2	Apples	0.2	Potatoes
1.0	UK adult	0.4	Potatoes	0.1	Oranges	0.1	Tomatoes
0.9	FI adult	0.3	Potatoes	0.2	Oranges	0.1	Tomatoes
0.8	FR (GP)	0.3	Potatoes	0.1	Tomatoes	0.1	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.5	1582	0.19		0.077		25.21	DE child	
2009	Bananas	0.05	1276							
2009	Peppers	1	1550	0.26	0.06	2.40	1	755.74	DE child	
2009	Aubergines (egg plants)	0.05	1026		0.10	0.14		17.50	UK 4-6 yr	
2009	Cauliflower	0.05	873							
2009	Peas (without pods)	0.05	793	0.13		0.04		1.64	UK infant	
2009	Wheat	0.05	1208							
2009	Milk and milk products: Cattle	0.05	412	0.24	0.24	0.0026		1.58	UK infant	
2009	Birds' eggs	0.05	483							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Endosulfan**



Endrin	
Status of the active substance:	Excluded
Code number:	49
Toxicological end points	
ADI (mg/kg bw/day):	0.0002 ARID (mg/kg bw):
Source of ADI:	JMPR Source of ARID:
Year of evaluation:	1994 Year of evaluation:

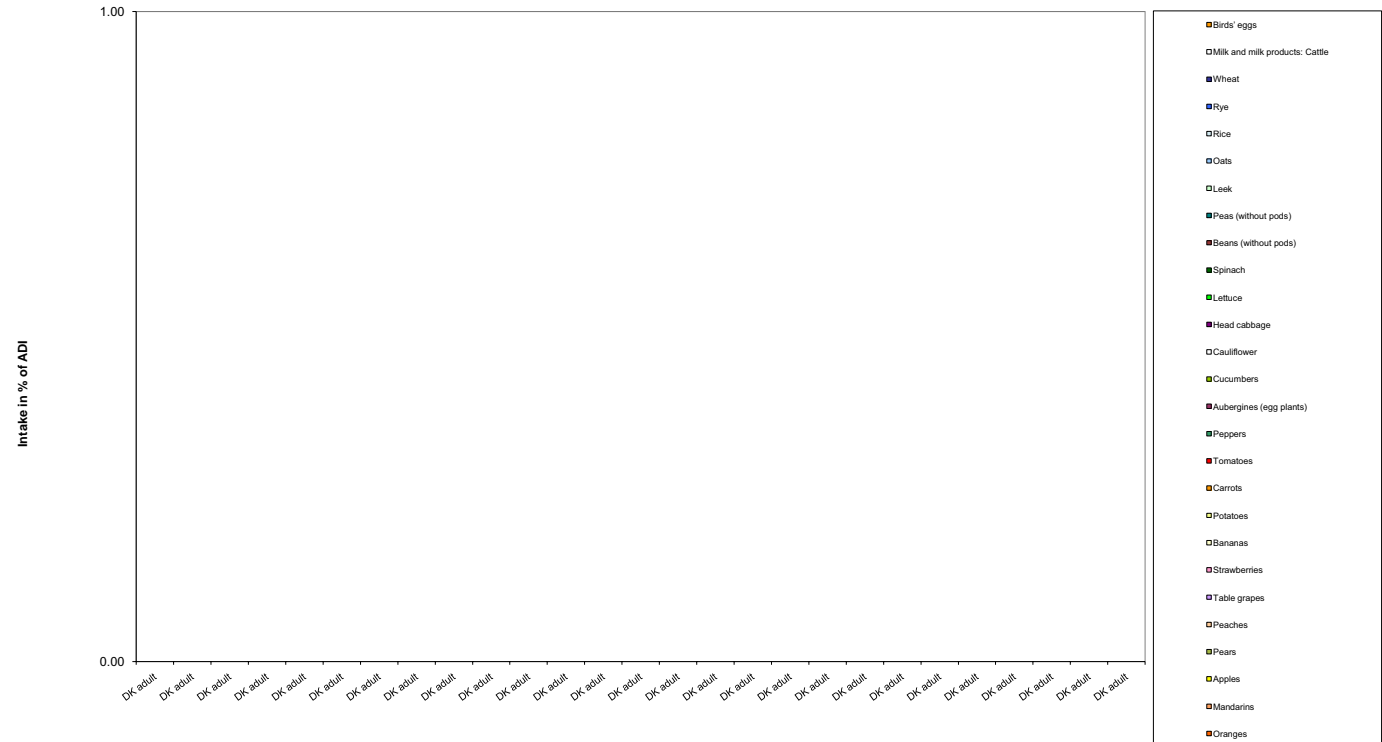
Active substance was not assessed regarding the setting of an ARID.  
No measurements above the LOQ were reported for the food commodities included in the EU programme.

Chronic risk assessment								
		Exposure (range) in % of ADI minimum - maximum						
No of diets exceeding ADI: ---								
	Highest calculated exposure in % of ADI	MS Diet	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)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
2009	Milk and milk products: Cattle	0.0008	463							
2009	Birds' eggs	0.005	554							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

### Chronic risk assessment: Endrin





Ethion (aka diethion)			
Status of the active substance:	Excluded		
Code number:	50		
Toxicological end points			
ADI (mg/kg bw/day):	0.002	ARID (mg/kg bw):	0.002
Source of ADI:	JMPR	Source of ARID:	
Year of evaluation:	1990	Year of evaluation:	

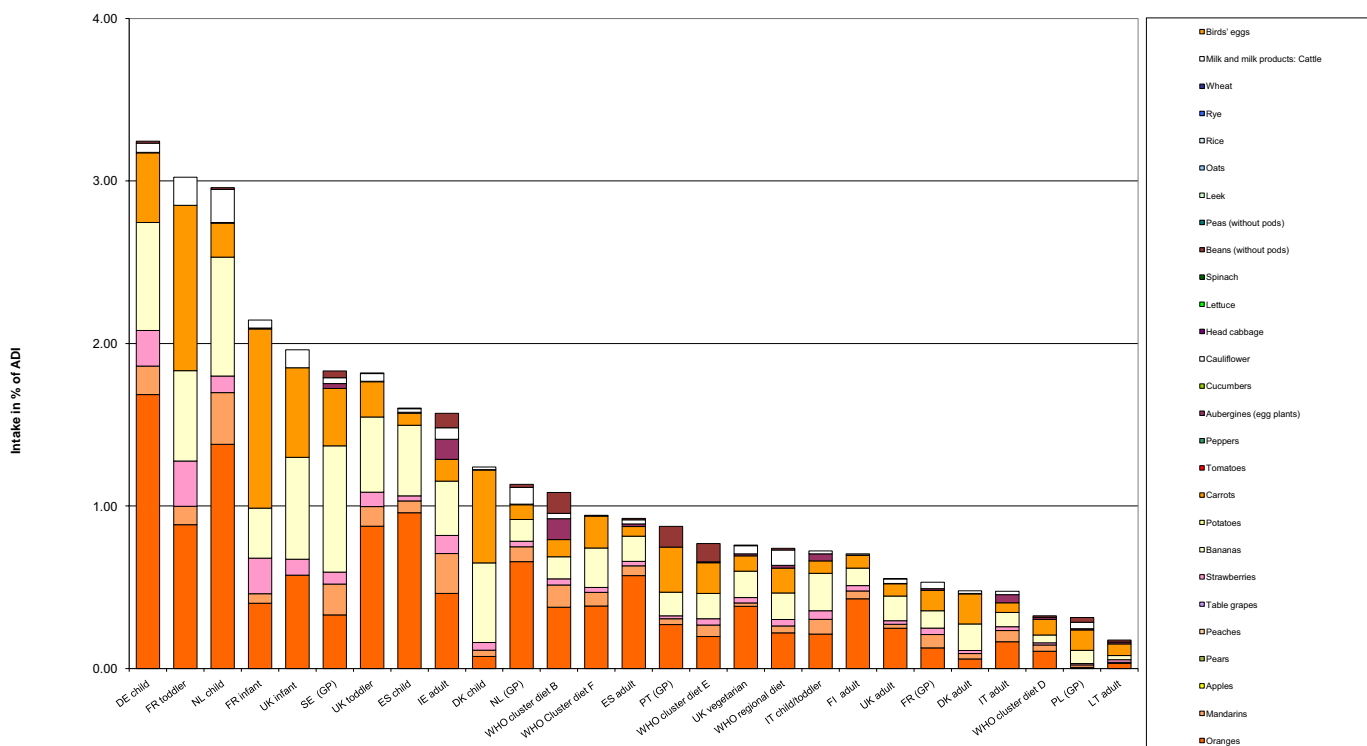
Active substance was not assessed regarding the setting of an ARID.  
The acute risk assessment was performed on the basis of the ADI.

Chronic risk assessment							
			Exposure (range) in % of ADI minimum - maximum 3				
			No of diets exceeding ADI: ---				
Highest calculated exposure in % of ADI	MS Diet	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
3.2	DE child	1.7	Oranges	0.7	Bananas	0.4	Carrots
3.0	FR toddler	1.0	Carrots	0.9	Oranges	0.6	Bananas
3.0	NL child	1.4	Oranges	0.7	Bananas	0.3	Mandarins
2.1	FR infant	1.1	Carrots	0.4	Oranges	0.3	Bananas
2.0	UK infant	0.6	Bananas	0.6	Oranges	0.6	Carrots
1.8	SE (GP)	0.8	Bananas	0.4	Carrots	0.3	Oranges
1.8	UK toddler	0.9	Oranges	0.5	Bananas	0.2	Carrots
1.6	ES child	1.0	Oranges	0.4	Bananas	0.1	Carrots
1.6	IE adult	0.5	Oranges	0.3	Bananas	0.2	Mandarins
1.2	DK child	0.6	Carrots	0.5	Bananas	0.1	Oranges
1.1	NL (GP)	0.7	Oranges	0.1	Bananas	0.1	Cauliflower
1.1	WHO cluster diet B	0.4	Oranges	0.1	Bananas	0.1	Mandarins
0.9	WHO Cluster diet F	0.4	Oranges	0.2	Bananas	0.2	Carrots
0.9	ES adult	0.6	Oranges	0.2	Bananas	0.1	Mandarins
0.9	PT (GP)	0.3	Carrots	0.3	Oranges	0.1	Bananas
0.8	WHO cluster diet E	0.2	Oranges	0.2	Carrots	0.2	Bananas
0.8	UK vegetarian	0.4	Oranges	0.2	Bananas	0.1	Carrots
0.7	WHO regional diet	0.2	Oranges	0.2	Bananas	0.2	Carrots
0.7	IT child/toddler	0.2	Bananas	0.2	Oranges	0.1	Mandarins
0.7	FI adult	0.4	Oranges	0.1	Bananas	0.1	Carrots
0.6	UK adult	0.2	Oranges	0.2	Bananas	0.1	Carrots
0.5	FR (GP)	0.1	Oranges	0.1	Carrots	0.1	Bananas
0.5	DK adult	0.2	Carrots	0.2	Bananas	0.1	Oranges
0.5	IT adult	0.2	Oranges	0.1	Bananas	0.1	Mandarins
0.3	WHO cluster diet D	0.1	Oranges	0.1	Carrots	0.0	Bananas
0.3	PL (GP)	0.1	Carrots	0.1	Bananas	0.0	Cauliflower
0.2	LT adult	0.1	Carrots	0.0	Oranges	0.0	Bananas

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	0.01	1429							
2009	Bananas	0.01	1187	0.1		0.01		29.26	UK infant	
2009	Peppers	0.01	1453							
2009	Aubergines (egg plants)	0.01	915	0.11		0.01		12.50	UK 4-6 yr	
2009	Cauliflower	0.01	725	0.14		0.01		29.74	NL child	
2009	Peas (without pods)	0.01	671							
2009	Wheat	0.01	926							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Ethion (aka diethion)



Ethoprophos			
Status of the active substance:		Included	
Code number:		51	
Toxicological end points			
ADI (mg/kg bw/day):		0.0004	ARID (mg/kg bw):
Source of ADI:		EFSA	Source of ARID:
Year of evaluation:		2006	Year of evaluation:
		0.01	EFSA
			2006

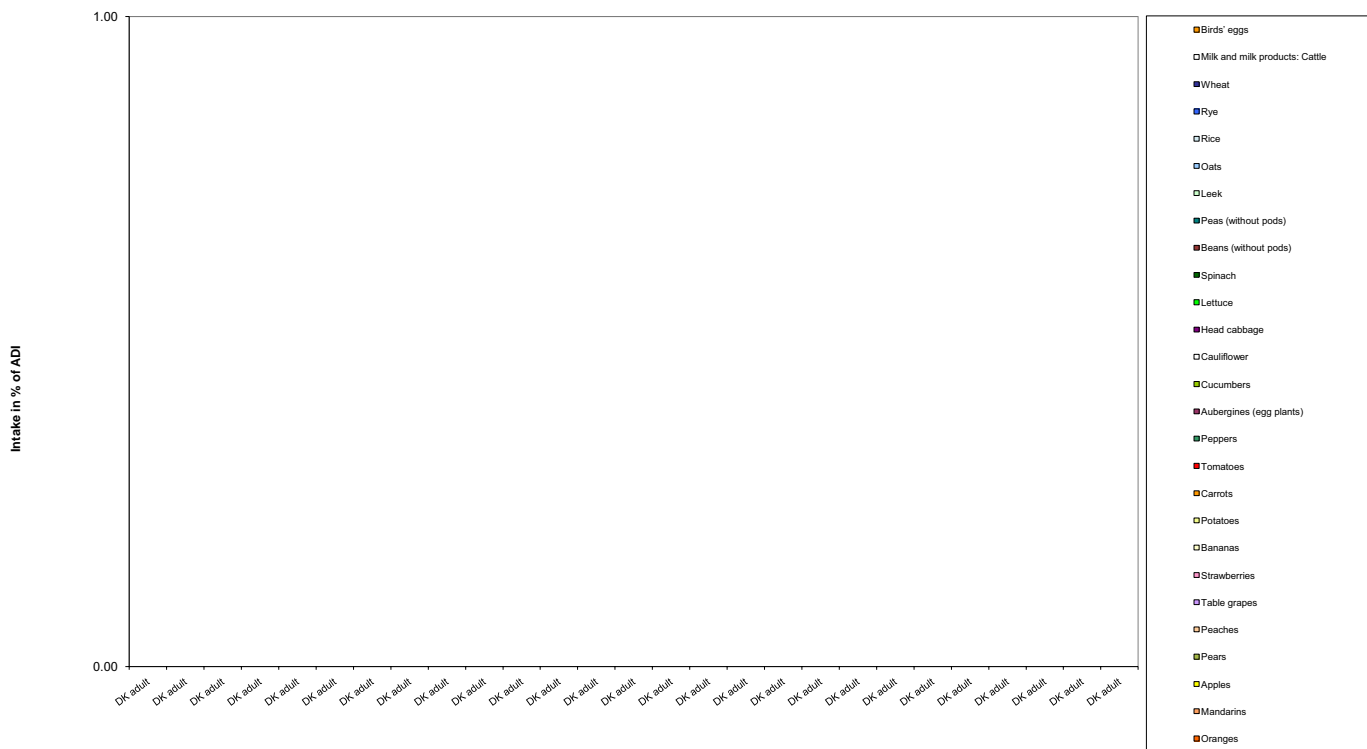
Chronic risk assessment
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Exposure (range) in % of ADI minimum - maximum							
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor 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)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity <sup>a</sup>	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	0.02	1079							
2009	Bananas	0.02	950							
2009	Peppers	0.05	1094							
2009	Aubergines (egg plants)	0.02	764							
2009	Cauliflower	0.02	686							
2009	Peas (without pods)	0.02	646							
2009	Wheat	0.02	668							
	Milk and milk products:									
2009	Cattle									
2009	Birds' eggs									

<sup>a)</sup> The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

### Chronic risk assessment: Ethoprophos



Fenamiphos (aka phenamiphos)			
Status of the active substance:	Included		
Code number:	52		
Toxicological end points			
ADI (mg/kg bw/day):	0.0008	ARID (mg/kg bw):	0.0025
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

**Chronic risk assessment**

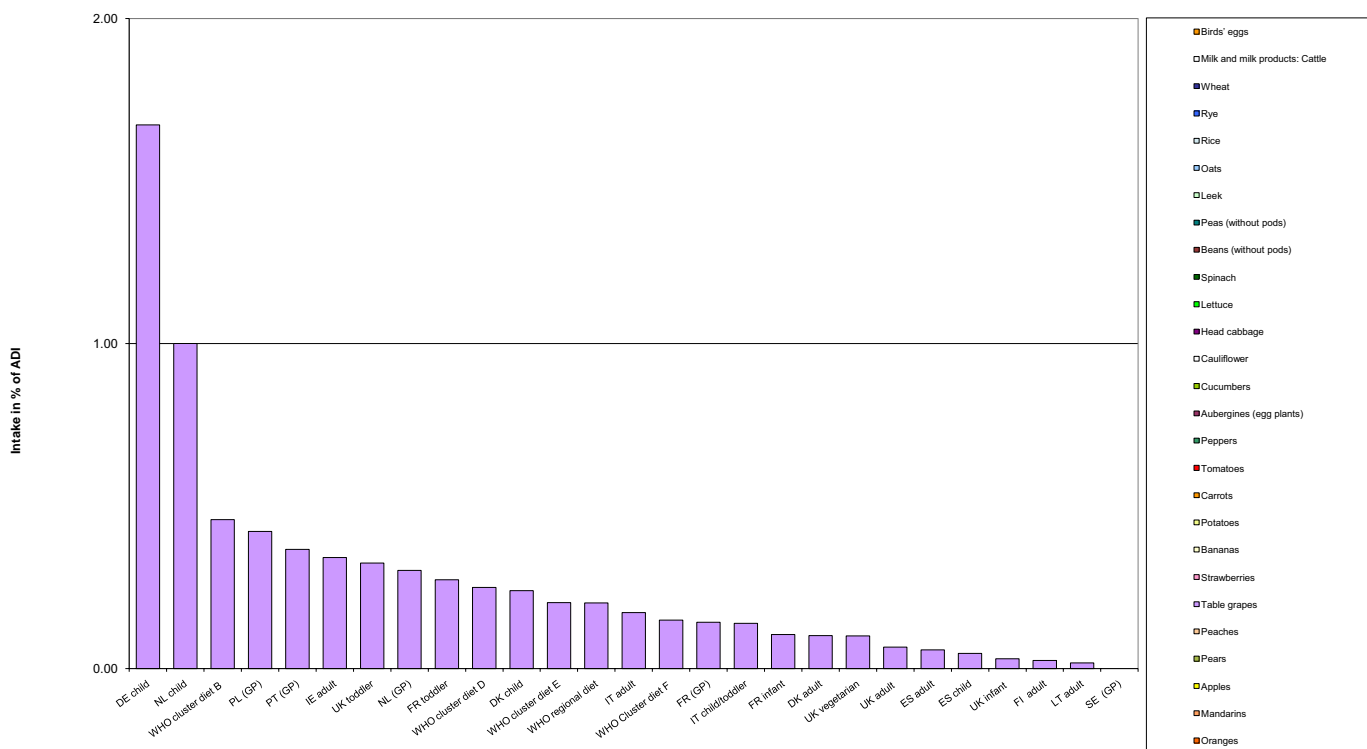
		Exposure (range) in % of ADI minimum - maximum					
		2					
		No of diets exceeding ADI:		---			
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.7	DE child	1.7	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.0	NL child	1.0	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.5	WHO cluster diet B	0.5	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.4	PL (GP)	0.4	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.4	PT (GP)	0.4	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.3	IE adult	0.3	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.3	UK toddler	0.3	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.3	NL (GP)	0.3	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.3	FR toddler	0.3	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.2	WHO cluster diet D	0.2	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.2	DK child	0.2	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.2	WHO cluster diet E	0.2	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.2	WHO regional diet	0.2	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.2	IT adult	0.2	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	WHO Cluster diet F	0.1	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	FR (GP)	0.1	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	IT child/toddler	0.1	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	FR infant	0.1	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	DK adult	0.1	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	UK vegetarian	0.1	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	UK adult	0.1	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.1	ES adult	0.1	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	ES child	0.0	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	UK infant	0.0	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	FI adult	0.0	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	LT adult	0.0	Table grapes	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.0	SE (GP)	0.0	FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.02	470	0.21		0.0078		20.43	DE child	
2009	Bananas	0.05	416							
2009	Peppers	0.1	465							
2009	Aubergines (egg plants)	0.05	308							
2009	Cauliflower	0.02	350							
2009	Peas (without pods)	0.02	299							
2009	Wheat	0.02	265							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

<sup>a)</sup> The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Fenamiphos (aka phenamiphos)**



Fenarimol			
Status of the active substance:	Included		
Code number:	53		
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARID (mg/kg bw):	0.02
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2007	Year of evaluation:	2007

**Chronic risk assessment**

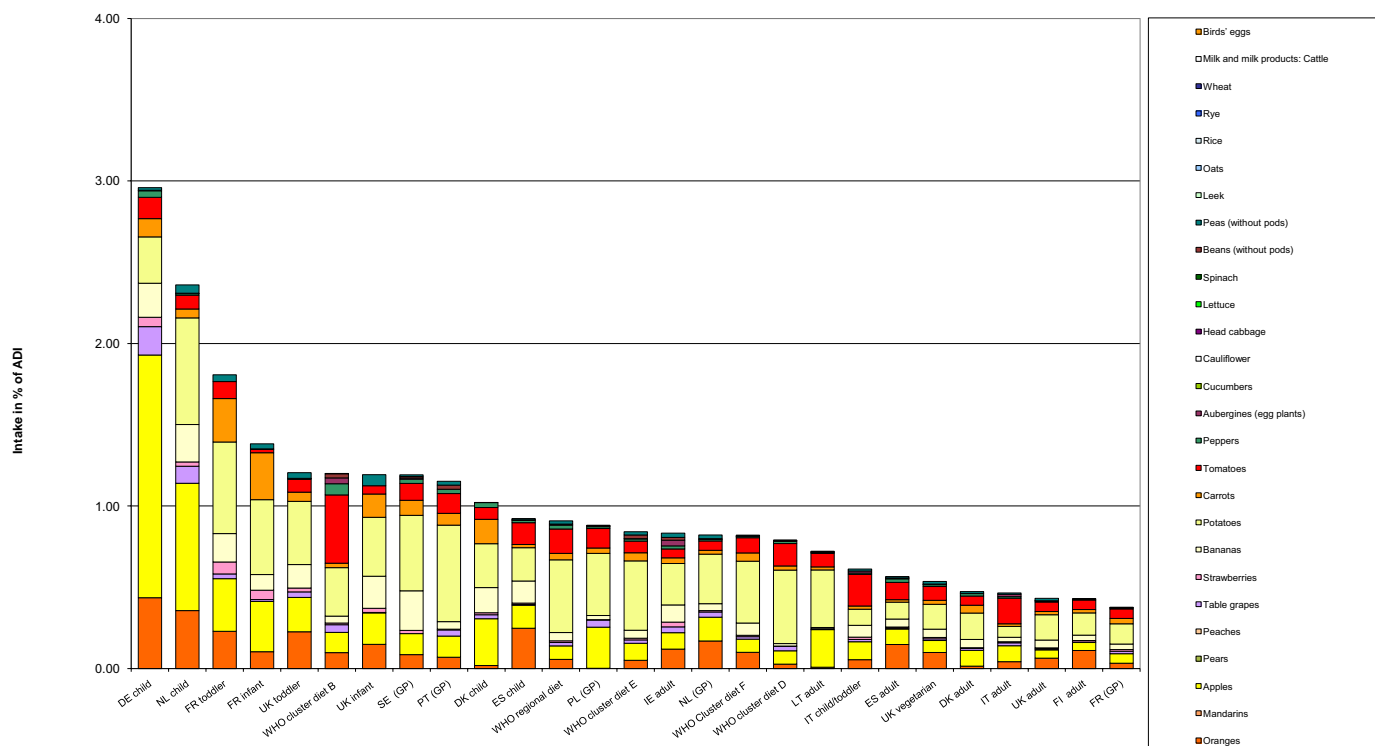
Highest calculated exposure in % of ADI		MS Diet		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
3.0	DE child	1.5	Apples	0.4	Oranges	0.3	Potatoes	0.3	Potatoes	0.4	Oranges	0.3	Potatoes	0.4	Oranges
2.4	NL child	0.8	Apples	0.7	Potatoes	0.3	Apples	0.3	Potatoes	0.2	Bananas	0.2	Apples	0.2	Apples
1.8	FR toddler	0.6	Potatoes	0.3	Apples	0.3	Apples	0.3	Apples	0.1	Apples	0.1	Apples	0.1	Apples
1.4	FR infant	0.5	Potatoes	0.2	Oranges	0.3	Potatoes	0.2	Bananas	0.1	Apples	0.1	Apples	0.1	Apples
1.2	UK toddler	0.4	Potatoes	0.2	Oranges	0.3	Potatoes	0.2	Bananas	0.1	Apples	0.1	Apples	0.1	Apples
1.2	WHO cluster diet B	0.4	Tomatoes	0.3	Potatoes	0.2	Bananas	0.2	Bananas	0.1	Apples	0.1	Apples	0.1	Apples
1.2	UK infant	0.4	Potatoes	0.2	Bananas	0.2	Bananas	0.2	Bananas	0.1	Apples	0.1	Apples	0.1	Apples
1.2	SE (GP)	0.5	Potatoes	0.2	Bananas	0.2	Bananas	0.2	Bananas	0.1	Apples	0.1	Apples	0.1	Apples
1.2	PT (GP)	0.6	Potatoes	0.1	Apples	0.3	Potatoes	0.2	Apples	0.1	Apples	0.1	Apples	0.1	Apples
1.0	DK child	0.3	Apples	0.3	Potatoes	0.1	Apples	0.3	Potatoes	0.1	Apples	0.1	Apples	0.1	Apples
0.9	ES child	0.2	Oranges	0.1	Potatoes	0.3	Potatoes	0.2	Potatoes	0.1	Apples	0.1	Apples	0.1	Apples
0.9	WHO regional diet	0.4	Potatoes	0.1	Tomatoes	0.3	Potatoes	0.1	Tomatoes	0.1	Apples	0.1	Apples	0.1	Apples
0.9	PL (GP)	0.4	Potatoes	0.3	Apples	0.1	Apples	0.1	Apples	0.1	Apples	0.1	Apples	0.1	Apples
0.8	WHO cluster diet E	0.4	Potatoes	0.1	Apples	0.1	Apples	0.1	Apples	0.1	Apples	0.1	Apples	0.1	Apples
0.8	IE adult	0.3	Potatoes	0.1	Oranges	0.2	Oranges	0.1	Oranges	0.1	Bananas	0.1	Bananas	0.1	Bananas
0.8	NL (GP)	0.3	Potatoes	0.2	Oranges	0.1	Oranges	0.2	Oranges	0.1	Apples	0.1	Apples	0.1	Apples
0.8	WHO Cluster diet F	0.4	Potatoes	0.1	Oranges	0.1	Oranges	0.1	Oranges	0.1	Tomatoes	0.1	Tomatoes	0.1	Tomatoes
0.8	WHO cluster diet D	0.5	Potatoes	0.1	Tomatoes	0.1	Tomatoes	0.1	Tomatoes	0.1	Apples	0.1	Apples	0.1	Apples
0.7	LT adult	0.4	Potatoes	0.2	Apples	0.1	Apples	0.1	Apples	0.1	Tomatoes	0.1	Tomatoes	0.1	Tomatoes
0.6	IT child/toddler	0.2	Tomatoes	0.1	Apples	0.1	Apples	0.1	Apples	0.1	Potatoes	0.1	Potatoes	0.1	Potatoes
0.6	ES adult	0.1	Oranges	0.1	Tomatoes	0.1	Tomatoes	0.1	Tomatoes	0.1	Potatoes	0.1	Potatoes	0.1	Potatoes
0.5	UK vegetarian	0.2	Potatoes	0.1	Oranges	0.1	Oranges	0.1	Oranges	0.1	Tomatoes	0.1	Tomatoes	0.1	Tomatoes
0.5	DK adult	0.2	Potatoes	0.1	Apples	0.1	Apples	0.1	Apples	0.1	Tomatoes	0.1	Tomatoes	0.1	Tomatoes
0.5	IT adult	0.2	Potatoes	0.1	Apples	0.1	Apples	0.1	Apples	0.1	Potatoes	0.1	Potatoes	0.1	Potatoes
0.4	UK adult	0.2	Potatoes	0.1	Oranges	0.1	Oranges	0.1	Oranges	0.1	Tomatoes	0.1	Tomatoes	0.1	Tomatoes
0.4	FI adult	0.1	Potatoes	0.1	Oranges	0.1	Oranges	0.1	Oranges	0.1	Tomatoes	0.1	Tomatoes	0.1	Tomatoes
0.4	FR (GP)	0.1	Potatoes	0.1	Tomatoes	0.1	Tomatoes	0.1	Tomatoes	0.1	Apples	0.1	Apples	0.1	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.3	1322	0.23		0.027		8.84	DE child	
2009	Bananas	0.3	1167	0.2		0.10		41.80	UK infant	
2009	Peppers	0.5	1396	0.36		0.10		31.49	DE child	
2009	Aubergines (egg plants)	0.02	903	0.22		0.02		2.50	UK 4-6 yr	
2009	Cauliflower	0.02	816							
2009	Peas (without pods)	0.02	734	0.27		0.02		0.82	UK infant	
2009	Wheat	0.02	877							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Fenarimol**



Fenbuconazole			
Status of the active substance:	Excluded		
Code number:	54		
Toxicological end points			
ADI (mg/kg bw/day):	0.006	ARID (mg/kg bw):	0.3
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2010	Year of evaluation:	2010

**Chronic risk assessment**

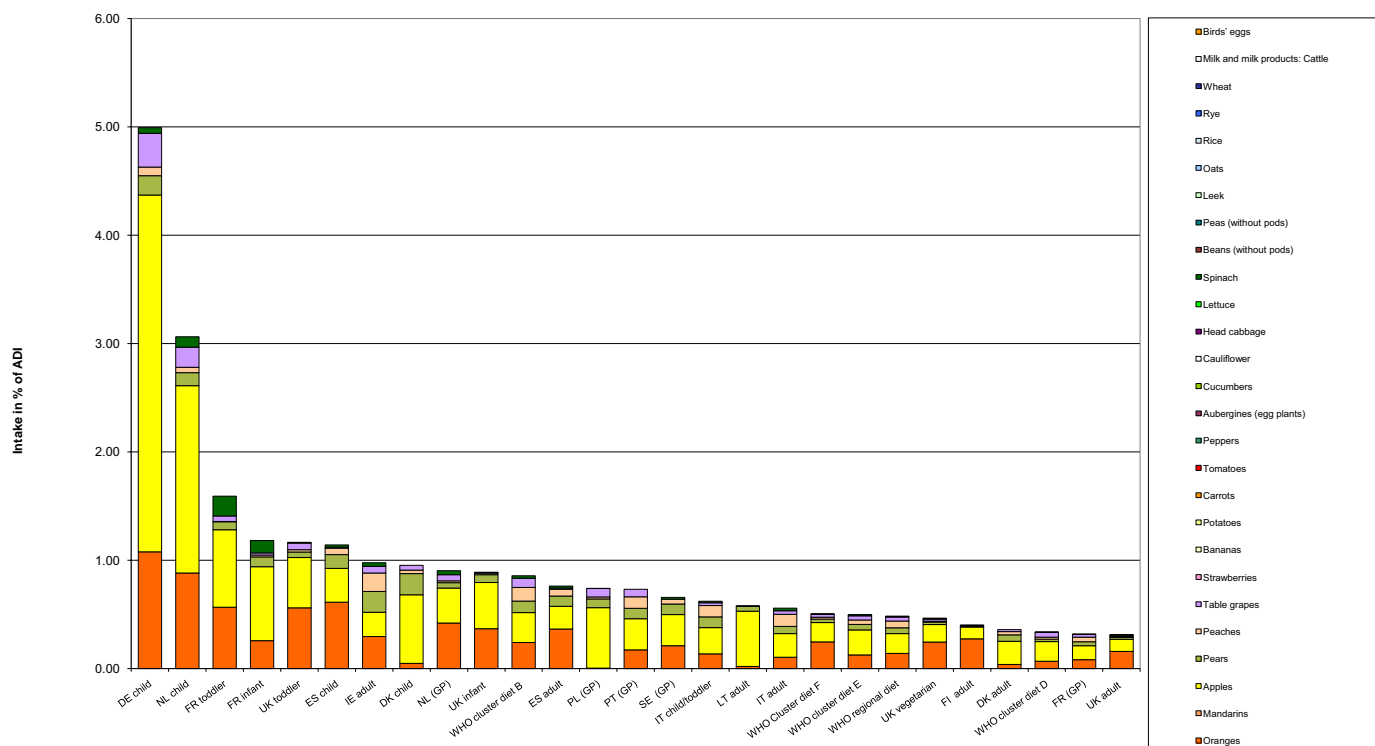
Highest calculated exposure in % of ADI		MS Diet		Exposure (range) in % of ADI minimum - maximum			
				5			
				No of diets exceeding ADI: ---			
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
5.0	DE child	3.3	Apples	1.1	Oranges	0.3	Table grapes
3.1	NL child	1.7	Apples	0.9	Oranges	0.2	Table grapes
1.6	FR toddler	0.7	Apples	0.6	Oranges	0.2	Spinach
1.2	FR infant	0.7	Apples	0.3	Oranges	0.1	Spinach
1.2	UK toddler	0.6	Oranges	0.5	Apples	0.1	Table grapes
1.1	ES child	0.6	Oranges	0.3	Apples	0.1	Pears
1.0	IE adult	0.3	Oranges	0.2	Apples	0.2	Pears
1.0	DK child	0.6	Apples	0.2	Pears	0.0	Oranges
0.9	NL (GP)	0.4	Oranges	0.3	Apples	0.1	Table grapes
0.9	UK infant	0.4	Apples	0.4	Oranges	0.1	Pears
0.9	WHO cluster diet B	0.3	Apples	0.2	Oranges	0.1	Peaches
0.8	ES adult	0.4	Oranges	0.2	Apples	0.1	Pears
0.7	PL (GP)	0.6	Apples	0.1	Pears	0.1	Table grapes
0.7	PT (GP)	0.3	Apples	0.2	Oranges	0.1	Peaches
0.7	SE (GP)	0.3	Apples	0.2	Oranges	0.1	Pears
0.6	IT child/toddler	0.2	Apples	0.1	Oranges	0.1	Peaches
0.6	LT adult	0.5	Apples	0.0	Pears	0.0	Oranges
0.6	IT adult	0.2	Apples	0.1	Peaches	0.1	Oranges
0.5	WHO Cluster diet F	0.2	Oranges	0.2	Apples	0.0	Pears
0.5	WHO cluster diet E	0.2	Apples	0.1	Oranges	0.1	Pears
0.5	WHO regional diet	0.2	Apples	0.1	Oranges	0.1	Peaches
0.5	UK vegetarian	0.2	Oranges	0.2	Apples	0.0	Pears
0.4	FI adult	0.3	Oranges	0.1	Apples	0.0	Pears
0.4	DK adult	0.2	Apples	0.1	Pears	0.0	Oranges
0.3	WHO cluster diet D	0.2	Apples	0.1	Oranges	0.0	Table grapes
0.3	FR (GP)	0.1	Apples	0.1	Oranges	0.0	Peaches
0.3	UK adult	0.2	Oranges	0.1	Apples	0.0	Pears

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	1	939	0.43		0.023		0.50	DE child	
2009	Bananas	0.05	799							
2009	Peppers	0.05	926							
2009	Aubergines (egg plants)	0.05	591							
2009	Cauliflower	0.05	567							
2009	Peas (without pods)	0.05	498							
2009	Wheat	0.1	655							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Fenbuconazole**



Fenhexamid			
Status of the active substance:	Included		
Code number:	55		
Toxicological end points			
ADI (mg/kg bw/day):	0.2	ARID (mg/kg bw):	n.n.
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	1998	Year of evaluation:	1998

**Chronic risk assessment**

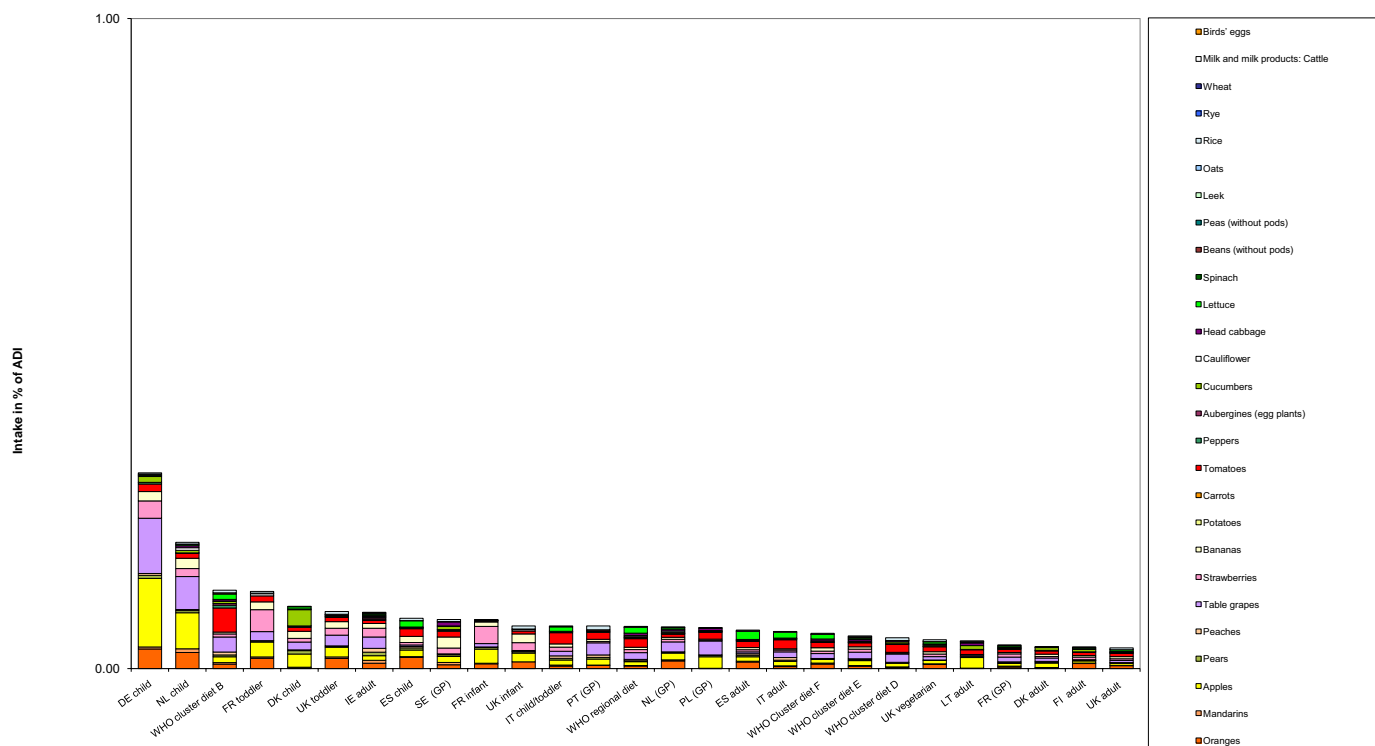
Highest calculated exposure in % of ADI		MS Diet		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
0.3	DE child	0.1	Apples	0.1	Table grapes	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.2	NL child	0.1	Apples	0.1	Table grapes	0.0	Oranges	0.1	Table grapes	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.1	WHO cluster diet B	0.0	Tomatoes	0.0	Table grapes	0.0	Apples	0.0	Table grapes	0.0	Apples	0.0	Table grapes	0.0	Apples
0.1	FR toddler	0.0	Strawberries	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.1	DK child	0.0	Cucumbers	0.0	Table grapes	0.0	Oranges	0.0	Strawberries	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.1	UK toddler	0.0	Table grapes	0.0	Oranges	0.0	Tomatoes	0.0	Oranges	0.0	Tomatoes	0.0	Apples	0.0	Oranges
0.1	IE adult	0.0	Table grapes	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.1	ES child	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.1	SE (GP)	0.0	Bananas	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.1	FR infant	0.0	Strawberries	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.1	UK infant	0.0	Apples	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.1	IT child/toddler	0.0	Tomatoes	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.1	PT (GP)	0.0	Table grapes	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.1	WHO regional diet	0.0	Tomatoes	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.1	NL (GP)	0.0	Table grapes	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.1	PL (GP)	0.0	Table grapes	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.1	ES adult	0.0	Lettuce	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.1	IT adult	0.0	Tomatoes	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.1	WHO Cluster diet F	0.0	Tomatoes	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.1	WHO cluster diet E	0.0	Table grapes	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.0	WHO cluster diet D	0.0	Table grapes	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.0	UK vegetarian	0.0	Tomatoes	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.0	LT adult	0.0	Apples	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.0	FR (GP)	0.0	Table grapes	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.0	DK adult	0.0	Apples	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.0	FI adult	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples
0.0	UK adult	0.0	Tomatoes	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Table grapes	0.0	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	5	1394	23.82		4.77				
2009	Bananas	0.05	1059	0.3		0.02				
2009	Peppers	2	1358	0.81		0.05				
2009	Aubergines (egg plants)	1	881	0.57		0.18				
2009	Cauliflower	0.05	785	0.13		0.02				
2009	Peas (without pods)	0.05	685							
2009	Wheat	0.05	963							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Fenhexamid**



Fenitrothion			
Status of the active substance:	Excluded		
Code number:	56		
Toxicological end points			
ADI (mg/kg bw/day):	0.005	ARID (mg/kg bw):	0.013
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

**Chronic risk assessment**

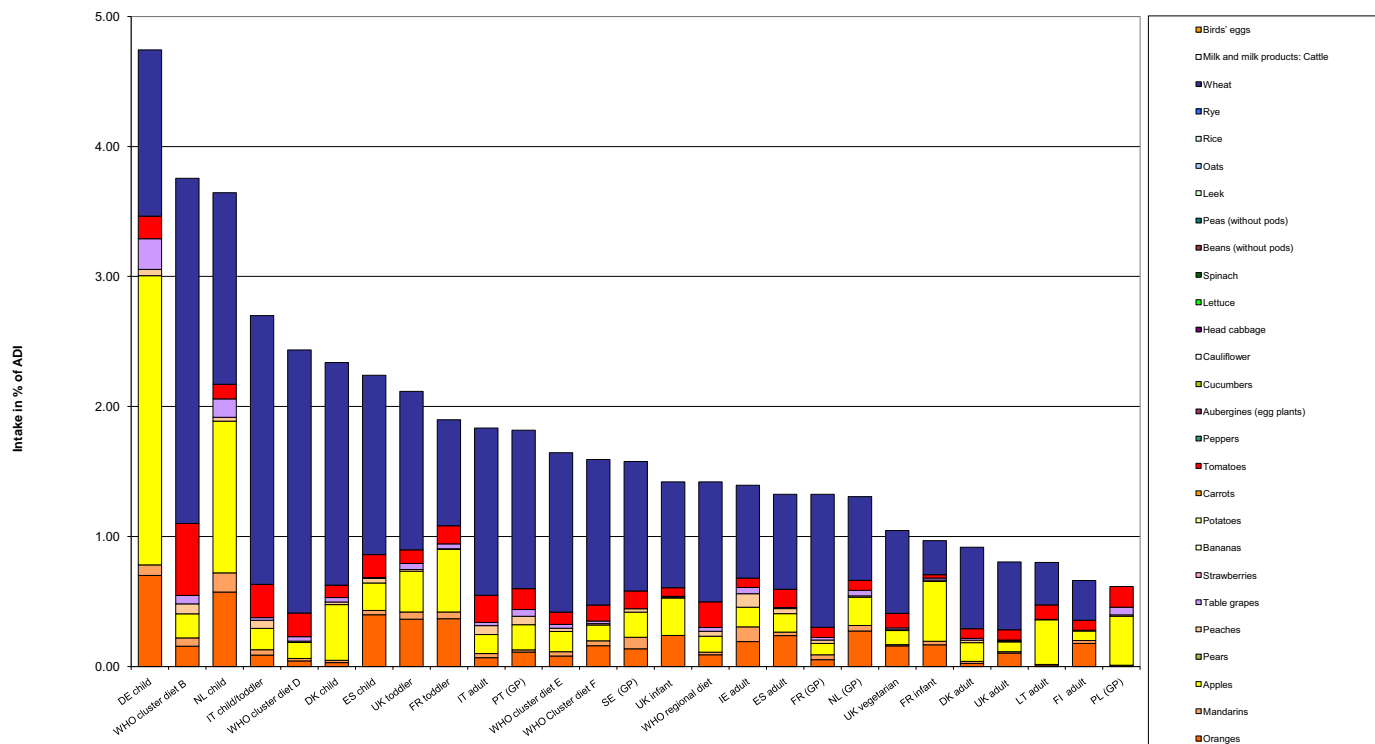
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities
4.7	DE child	2.2	Apples	1.3	Wheat	0.7	Oranges
3.8	WHO cluster diet B	2.7	Wheat	0.6	Tomatoes	0.2	Apples
3.6	NL child	1.5	Wheat	1.2	Apples	0.6	Oranges
2.7	IT child/toddler	2.1	Wheat	0.3	Tomatoes	0.2	Apples
2.4	WHO cluster diet D	2.0	Wheat	0.2	Tomatoes	0.1	Apples
2.3	DK child	1.7	Wheat	0.4	Apples	0.1	Tomatoes
2.2	ES child	1.4	Wheat	0.4	Oranges	0.2	Apples
2.1	UK toddler	1.2	Wheat	0.4	Oranges	0.3	Apples
1.9	FR toddler	0.8	Wheat	0.5	Apples	0.4	Oranges
1.8	IT adult	1.3	Wheat	0.2	Tomatoes	0.1	Apples
1.8	PT (GP)	1.2	Wheat	0.2	Apples	0.2	Tomatoes
1.6	WHO cluster diet E	1.2	Wheat	0.2	Apples	0.1	Tomatoes
1.6	WHO Cluster diet F	1.1	Wheat	0.2	Oranges	0.1	Tomatoes
1.6	SE (GP)	1.0	Wheat	0.2	Apples	0.1	Tomatoes
1.4	UK infant	0.8	Wheat	0.3	Apples	0.2	Oranges
1.4	WHO regional diet	0.9	Wheat	0.2	Tomatoes	0.1	Apples
1.4	IE adult	0.7	Wheat	0.2	Oranges	0.2	Apples
1.3	ES adult	0.7	Wheat	0.2	Oranges	0.1	Apples
1.3	FR (GP)	1.0	Wheat	0.1	Apples	0.1	Tomatoes
1.3	NL (GP)	0.6	Wheat	0.3	Oranges	0.2	Apples
1.0	UK vegetarian	0.6	Wheat	0.2	Oranges	0.1	Tomatoes
1.0	FR infant	0.5	Apples	0.3	Wheat	0.2	Oranges
0.9	DK adult	0.6	Wheat	0.1	Apples	0.1	Tomatoes
0.8	UK adult	0.5	Wheat	0.1	Oranges	0.1	Tomatoes
0.8	LT adult	0.3	Apples	0.3	Wheat	0.1	Tomatoes
0.7	FI adult	0.3	Wheat	0.2	Oranges	0.1	Tomatoes
0.6	PL (GP)	0.4	Apples	0.2	Tomatoes	0.1	Table grapes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.01	1556	0.06		0.03		15.11	DE child	
2009	Bananas	0.01	1215							
2009	Peppers	0.01	1545							
2009	Aubergines (egg plants)	0.01	987							
2009	Cauliflower	0.01	846							
2009	Peas (without pods)	0.01	747							
2009	Wheat	0.5	1197	0.25		0.15		16.67	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Fenitrothion**



Fenoxycarb			
Status of the active substance:	Excluded		
Code number:	57		
Toxicological end points			
ADI (mg/kg bw/day):	0.053	ARID (mg/kg bw):	2
Source of ADI:	PRAPeR 79	Source of ARID:	PRAPeR 79
Year of evaluation:	2010	Year of evaluation:	2010

**Chronic risk assessment**

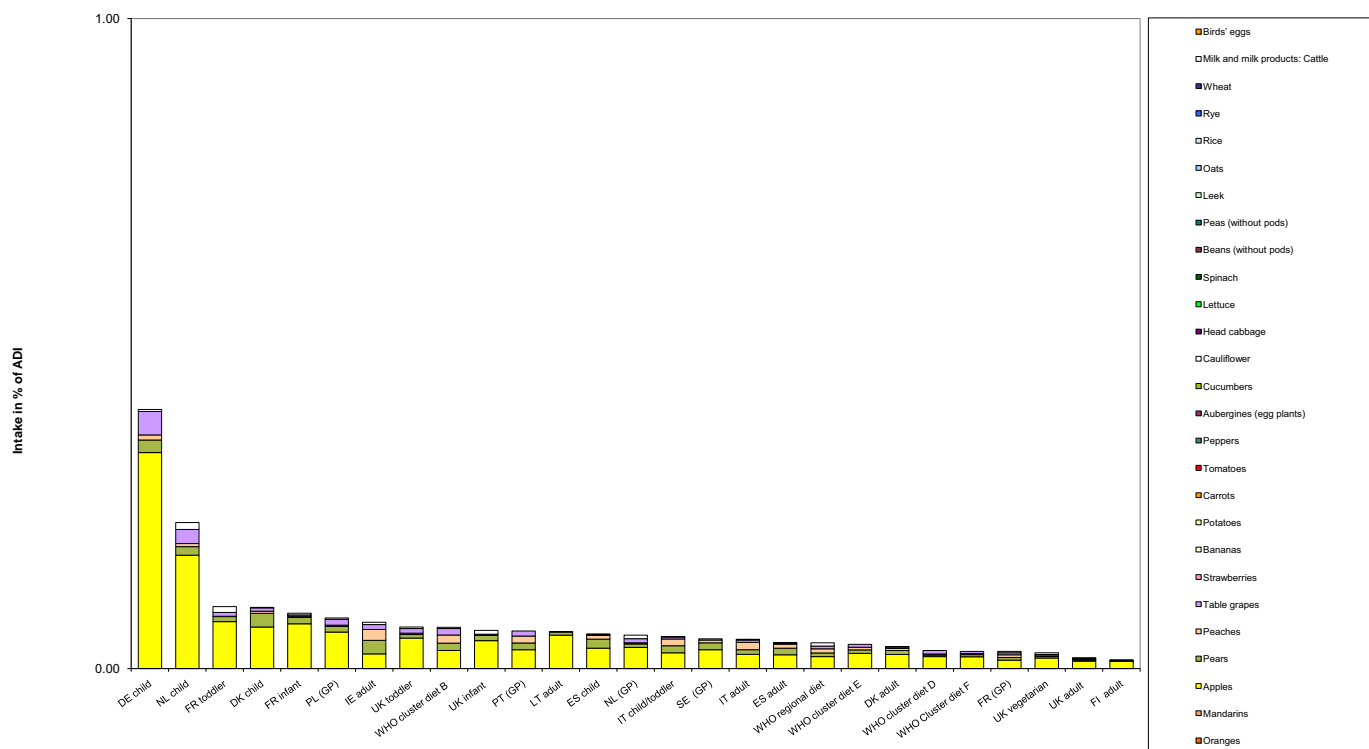
Highest calculated exposure in % of ADI		Exposure (range) in % of ADI minimum - maximum					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.4	DE child	0.3	Apples	0.0	Table grapes	0.0	Pears
0.2	NL child	0.2	Apples	0.0	Table grapes	0.0	Pears
0.1	FR toddler	0.1	Apples	0.0	Cauliflower	0.0	Pears
0.1	DK child	0.1	Apples	0.0	Pears	0.0	Table grapes
0.1	FR infant	0.1	Apples	0.0	Pears	0.0	Cauliflower
0.1	PL (GP)	0.1	Apples	0.0	Table grapes	0.0	Pears
0.1	IE adult	0.0	Apples	0.0	Pears	0.0	Peaches
0.1	UK toddler	0.0	Apples	0.0	Table grapes	0.0	Pears
0.1	WHO cluster diet B	0.0	Apples	0.0	Peaches	0.0	Pears
0.1	UK infant	0.0	Apples	0.0	Pears	0.0	Cauliflower
0.1	PT (GP)	0.0	Apples	0.0	Peaches	0.0	Pears
0.1	LT adult	0.1	Apples	0.0	Pears	0.0	Table grapes
0.1	ES child	0.0	Apples	0.0	Pears	0.0	Peaches
0.1	NL (GP)	0.0	Apples	0.0	Table grapes	0.0	Cauliflower
0.0	IT child/toddler	0.0	Apples	0.0	Pears	0.0	Peaches
0.0	SE (GP)	0.0	Apples	0.0	Pears	0.0	Peaches
0.0	IT adult	0.0	Apples	0.0	Peaches	0.0	Pears
0.0	ES adult	0.0	Apples	0.0	Pears	0.0	Peaches
0.0	WHO regional diet	0.0	Apples	0.0	Peaches	0.0	Pears
0.0	WHO cluster diet E	0.0	Apples	0.0	Pears	0.0	Table grapes
0.0	DK adult	0.0	Apples	0.0	Pears	0.0	Peaches
0.0	WHO cluster diet D	0.0	Apples	0.0	Table grapes	0.0	Pears
0.0	WHO Cluster diet F	0.0	Apples	0.0	Pears	0.0	Table grapes
0.0	FR (GP)	0.0	Apples	0.0	Peaches	0.0	Pears
0.0	UK vegetarian	0.0	Apples	0.0	Cauliflower	0.0	Pears
0.0	UK adult	0.0	Apples	0.0	Pears	0.0	Cauliflower
0.0	FI adult	0.0	Apples	0.0	Pears	0.0	Table grapes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	1	1048	1.81		0.57		1.87	DE child	
2009	Bananas	0.05	813							
2009	Peppers	0.05	1073							
2009	Aubergines (egg plants)	0.05	714							
2009	Cauliflower	0.05	649	0.15		0.02		0.06	NL child	
2009	Peas (without pods)	0.05	577							
2009	Wheat	0.05	492							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Fenoxycarb**





Fenpropathrin			
Status of the active substance:	Excluded		
Code number:	58		
Toxicological end points			
ADI (mg/kg bw/day):	0.03	ARID (mg/kg bw):	0.03
Source of ADI:	UK	Source of ARID:	UK
Year of evaluation:	2006	Year of evaluation:	2006

**Chronic risk assessment**

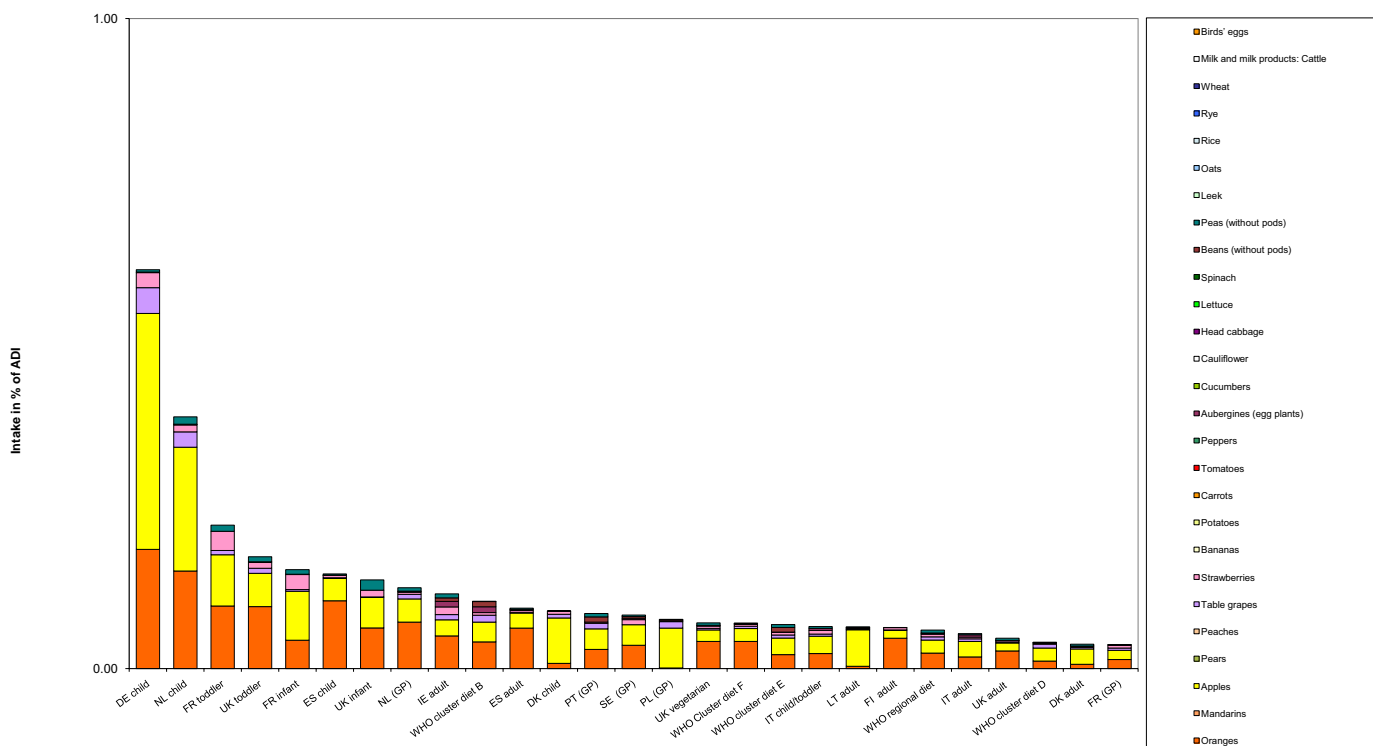
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities
0.6	DE child	0.4	Apples	0.2	Oranges	0.0	Table grapes
0.4	NL child	0.2	Apples	0.2	Oranges	0.0	Table grapes
0.2	FR toddler	0.1	Oranges	0.1	Apples	0.0	Strawberries
0.2	UK toddler	0.1	Oranges	0.1	Apples	0.0	Strawberries
0.2	FR infant	0.1	Apples	0.0	Oranges	0.0	Strawberries
0.1	ES child	0.1	Oranges	0.0	Apples	0.0	Strawberries
0.1	UK infant	0.1	Oranges	0.0	Apples	0.0	Peas (without pods)
0.1	NL (GP)	0.1	Oranges	0.0	Apples	0.0	Table grapes
0.1	IE adult	0.1	Oranges	0.0	Apples	0.0	Strawberries
0.1	WHO cluster diet B	0.0	Oranges	0.0	Apples	0.0	Table grapes
0.1	ES adult	0.1	Oranges	0.0	Apples	0.0	Strawberries
0.1	DK child	0.1	Apples	0.0	Oranges	0.0	Table grapes
0.1	PT (GP)	0.0	Apples	0.0	Oranges	0.0	Table grapes
0.1	SE (GP)	0.0	Oranges	0.0	Apples	0.0	Strawberries
0.1	PL (GP)	0.1	Apples	0.0	Table grapes	0.0	Beans (without pods)
0.1	UK vegetarian	0.0	Oranges	0.0	Apples	0.0	Peas (without pods)
0.1	WHO Cluster diet F	0.0	Oranges	0.0	Apples	0.0	Table grapes
0.1	WHO cluster diet E	0.0	Apples	0.0	Oranges	0.0	Beans (without pods)
0.1	IT child/toddler	0.0	Apples	0.0	Oranges	0.0	Strawberries
0.1	LT adult	0.1	Apples	0.0	Oranges	0.0	Strawberries
0.1	FI adult	0.0	Oranges	0.0	Apples	0.0	Strawberries
0.1	WHO regional diet	0.0	Oranges	0.0	Apples	0.0	Table grapes
0.1	IT adult	0.0	Apples	0.0	Oranges	0.0	Table grapes
0.0	UK adult	0.0	Oranges	0.0	Apples	0.0	Peas (without pods)
0.0	WHO cluster diet D	0.0	Apples	0.0	Oranges	0.0	Table grapes
0.0	DK adult	0.0	Apples	0.0	Oranges	0.0	Peas (without pods)
0.0	FR (GP)	0.0	Apples	0.0	Oranges	0.0	Strawberries

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.01	1208		0.08	0.014		3.06	DE child	
2009	Bananas	0.01	1061							
2009	Peppers	0.01	1209		0.12	0.01		1.17	UK 4-6 yr	
2009	Aubergines (egg plants)	0.01	824							
2009	Cauliflower	0.01	749							
2009	Peas (without pods)	0.01	675	0.15		0.00		0.08	UK infant	
2009	Wheat	0.01	766							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Fenpropathrin**



Fenthion			
Status of the active substance:	Excluded		
Code number:	59		
Toxicological end points			
ADI (mg/kg bw/day):	0.007	ARID (mg/kg bw):	0.01
Source of ADI:	ECCO 2001	Source of ARID:	ECCO 2001

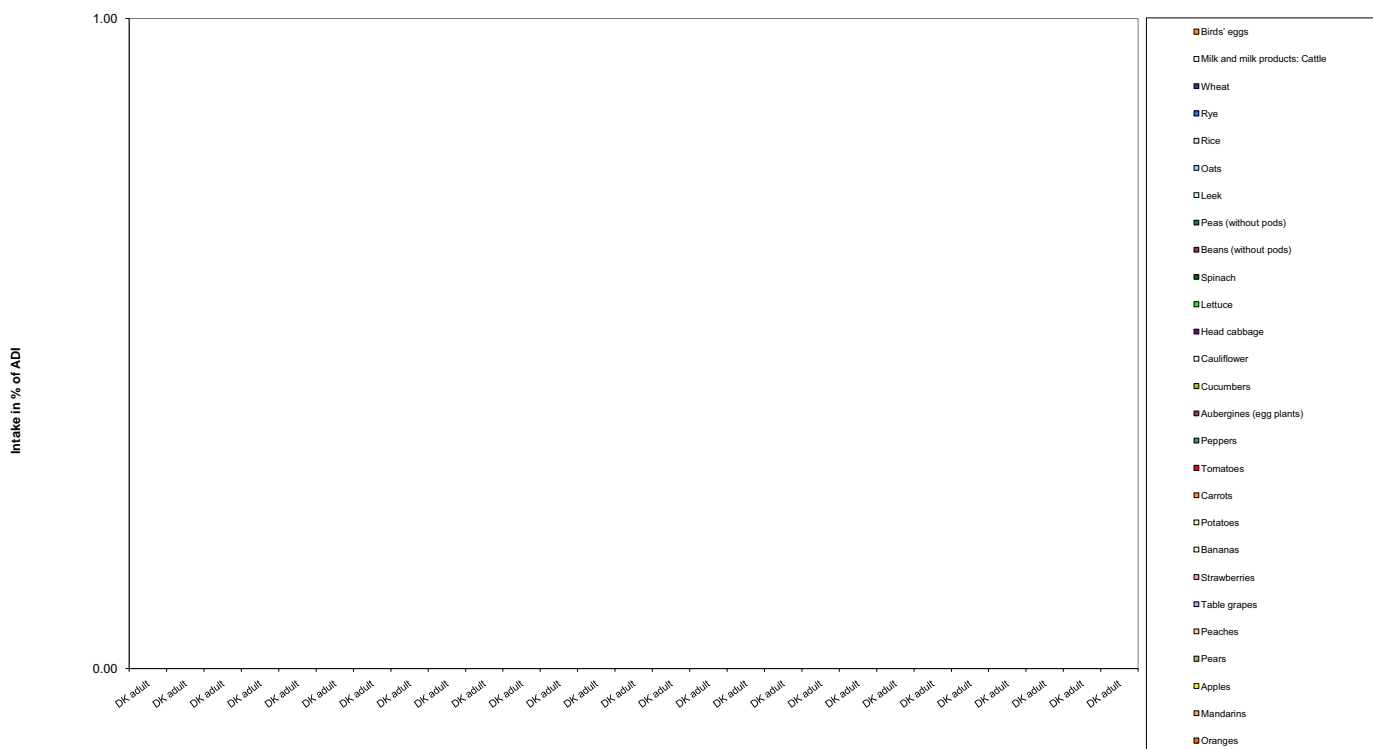
No residues above the LOQ were reported for the commodities included in the EU programme.

Chronic risk assessment							
		Exposure (range) in % of ADI minimum - maximum					
				No of diets exceeding ADI: ---			
Highest calculated exposure in % of ADI	MS Diet	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	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	
DK adult			FRUIT (FRESH	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
2009	Milk and milk products: Cattle	0.01	186							
2009	Birds' eggs	0.01	177							

<sup>a)</sup> The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

### Chronic risk assessment: Fenthion



<b>Esfenvalerate</b>			
Status of the active substance:	Included		
Code number:	60		
Toxicological end points			
ADI (mg/kg bw/day):	0.02	ARID (mg/kg bw):	0.05
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2005	Year of evaluation:	2005

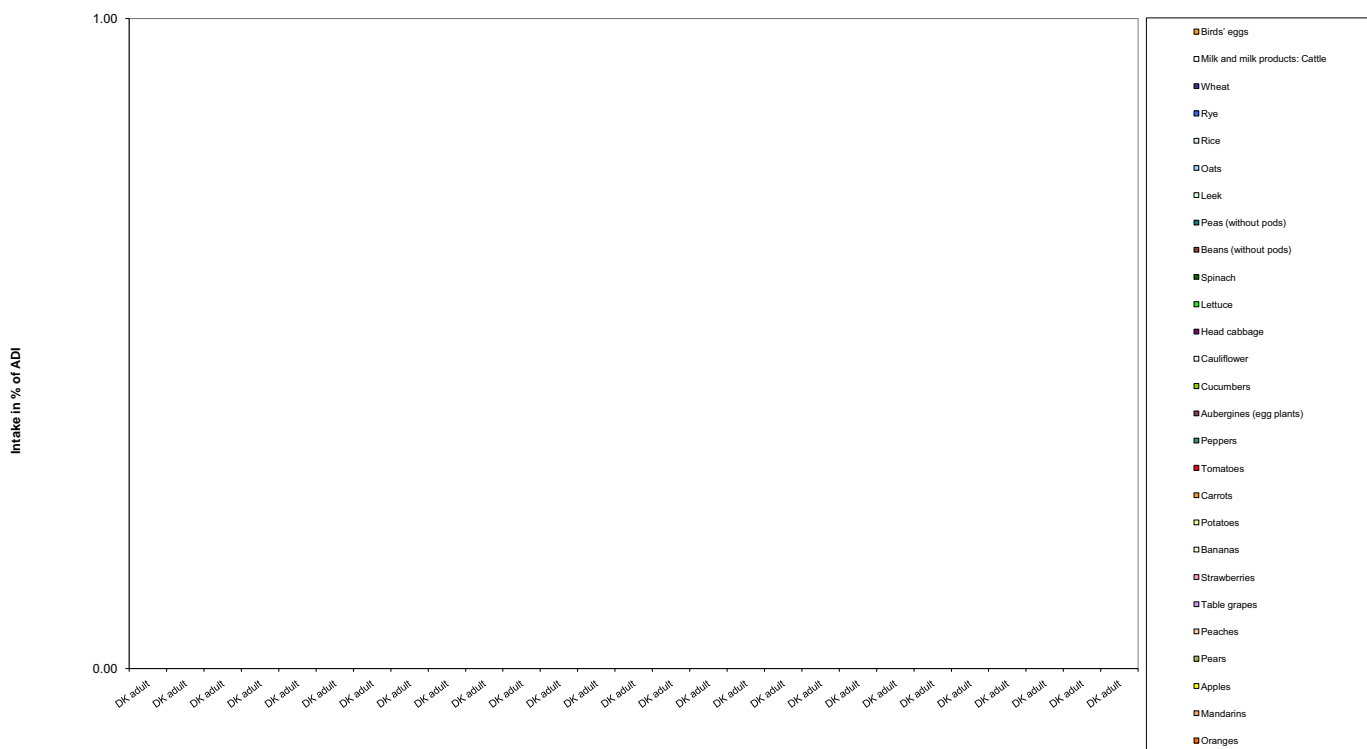
For fenvalerate the same ADI was established (DE, 1991). For fenvalerate no ARID was derived.  
No residues above the LOQ were reported for the commodities included in the EU programme.

Chronic risk assessment															
				Exposure (range) in % of ADI minimum - maximum											
				No of diets exceeding ADI: ---											
Highest calculated exposure in % of ADI		MS Diet		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)
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											
								Acute exposure expressed in % of the ARfD			
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment	
2009	Table grapes										
2009	Bananas										
2009	Peppers										
2009	Aubergines (egg plants)										
2009	Cauliflower										
2009	Peas (without pods)										
2009	Wheat										
2009	Milk and milk products: Cattle		188								
2009	Birds' eggs		254								

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Esfenvalerate



Fipronil			
Status of the active substance:	Included		
Code number:	61		
Toxicological end points			
ADI (mg/kg bw/day):	0.0002	ARID (mg/kg bw):	0.009
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

**Chronic risk assessment**

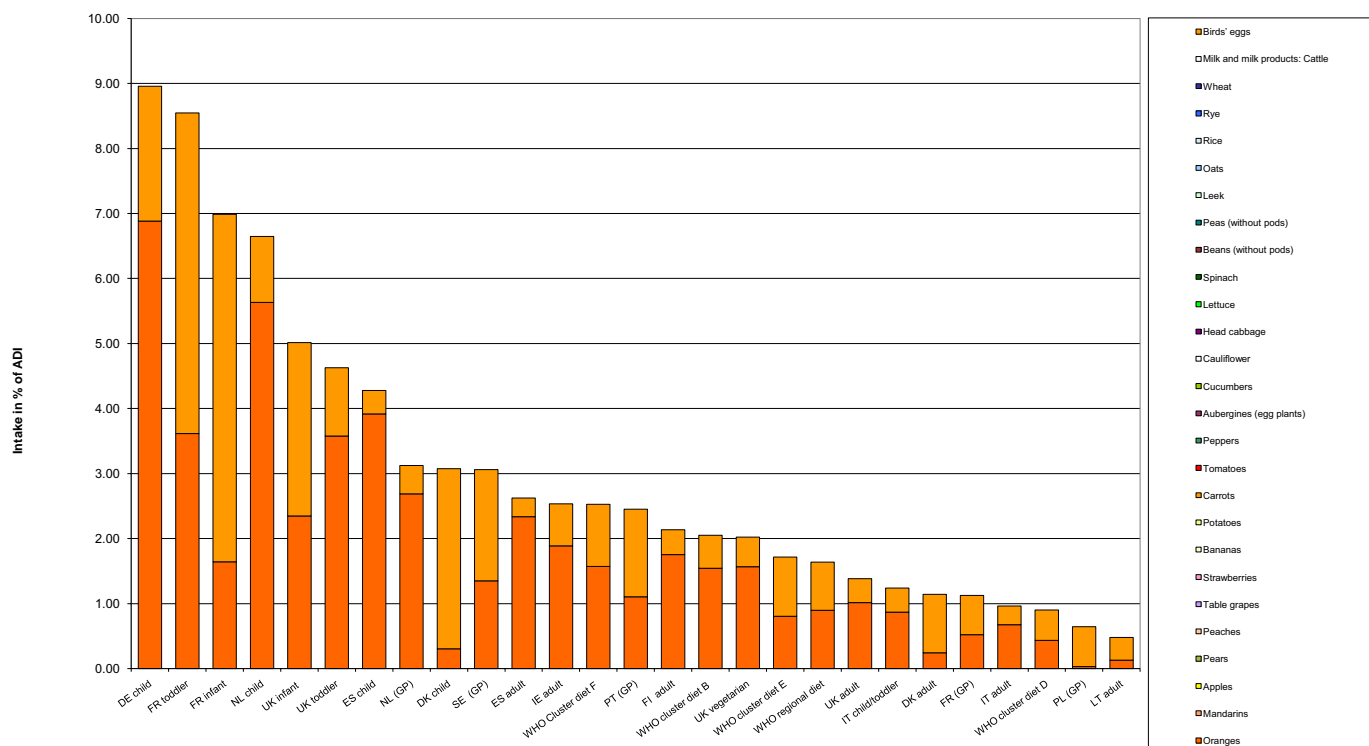
		Exposure (range) in % of ADI minimum - maximum					
		9					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
9.0	DE child	6.9	Oranges	2.1	Carrots		FRUIT (FRESH OR FROZEN)
8.5	FR toddler	4.9	Carrots	3.6	Oranges		FRUIT (FRESH OR FROZEN)
7.0	FR infant	5.3	Carrots	1.6	Oranges		FRUIT (FRESH OR FROZEN)
6.6	NL child	5.6	Oranges	1.0	Carrots		FRUIT (FRESH OR FROZEN)
5.0	UK infant	2.7	Carrots	2.3	Oranges		FRUIT (FRESH OR FROZEN)
4.6	UK toddler	3.6	Oranges	1.1	Carrots		FRUIT (FRESH OR FROZEN)
4.3	ES child	3.9	Oranges	0.4	Carrots		FRUIT (FRESH OR FROZEN)
3.1	NL (GP)	2.7	Oranges	0.4	Carrots		FRUIT (FRESH OR FROZEN)
3.1	DK child	2.8	Carrots	0.3	Oranges		FRUIT (FRESH OR FROZEN)
3.1	SE (GP)	1.7	Carrots	1.3	Oranges		FRUIT (FRESH OR FROZEN)
2.6	ES adult	2.3	Oranges	0.3	Carrots		FRUIT (FRESH OR FROZEN)
2.5	IE adult	1.9	Oranges	0.6	Carrots		FRUIT (FRESH OR FROZEN)
2.5	WHO Cluster diet F	1.6	Oranges	1.0	Carrots		FRUIT (FRESH OR FROZEN)
2.5	PT (GP)	1.3	Carrots	1.1	Oranges		FRUIT (FRESH OR FROZEN)
2.1	FI adult	1.8	Oranges	0.4	Carrots		FRUIT (FRESH OR FROZEN)
2.1	WHO cluster diet B	1.5	Oranges	0.5	Carrots		FRUIT (FRESH OR FROZEN)
2.0	UK vegetarian	1.6	Oranges	0.5	Carrots		FRUIT (FRESH OR FROZEN)
1.7	WHO cluster diet E	0.9	Carrots	0.8	Oranges		FRUIT (FRESH OR FROZEN)
1.6	WHO regional diet	0.9	Oranges	0.7	Carrots		FRUIT (FRESH OR FROZEN)
1.4	UK adult	1.0	Oranges	0.4	Carrots		FRUIT (FRESH OR FROZEN)
1.2	IT child/toddler	0.9	Oranges	0.4	Carrots		FRUIT (FRESH OR FROZEN)
1.1	DK adult	0.9	Carrots	0.2	Oranges		FRUIT (FRESH OR FROZEN)
1.1	FR (GP)	0.6	Carrots	0.5	Oranges		FRUIT (FRESH OR FROZEN)
1.0	IT adult	0.7	Oranges	0.3	Carrots		FRUIT (FRESH OR FROZEN)
0.9	WHO cluster diet D	0.5	Carrots	0.4	Oranges		FRUIT (FRESH OR FROZEN)
0.6	PL (GP)	0.6	Carrots	0.0	Oranges		FRUIT (FRESH OR FROZEN)
0.5	LT adult	0.3	Carrots	0.1	Oranges		FRUIT (FRESH OR FROZEN)

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.005	315							
2009	Bananas	0.005	280							
2009	Peppers	0.005	297							
2009	Aubergines (egg plants)	0.005	272							
2009	Cauliflower	0.02	263							
2009	Peas (without pods)	0.005	297							
2009	Wheat		312							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Fipronil**



Fludioxonil			
Status of the active substance:	Included		
Code number:	62		
Toxicological end points			
ADI (mg/kg bw/day):	0.37	ARID (mg/kg bw):	n.n.
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2007	Year of evaluation:	2007

**Chronic risk assessment**

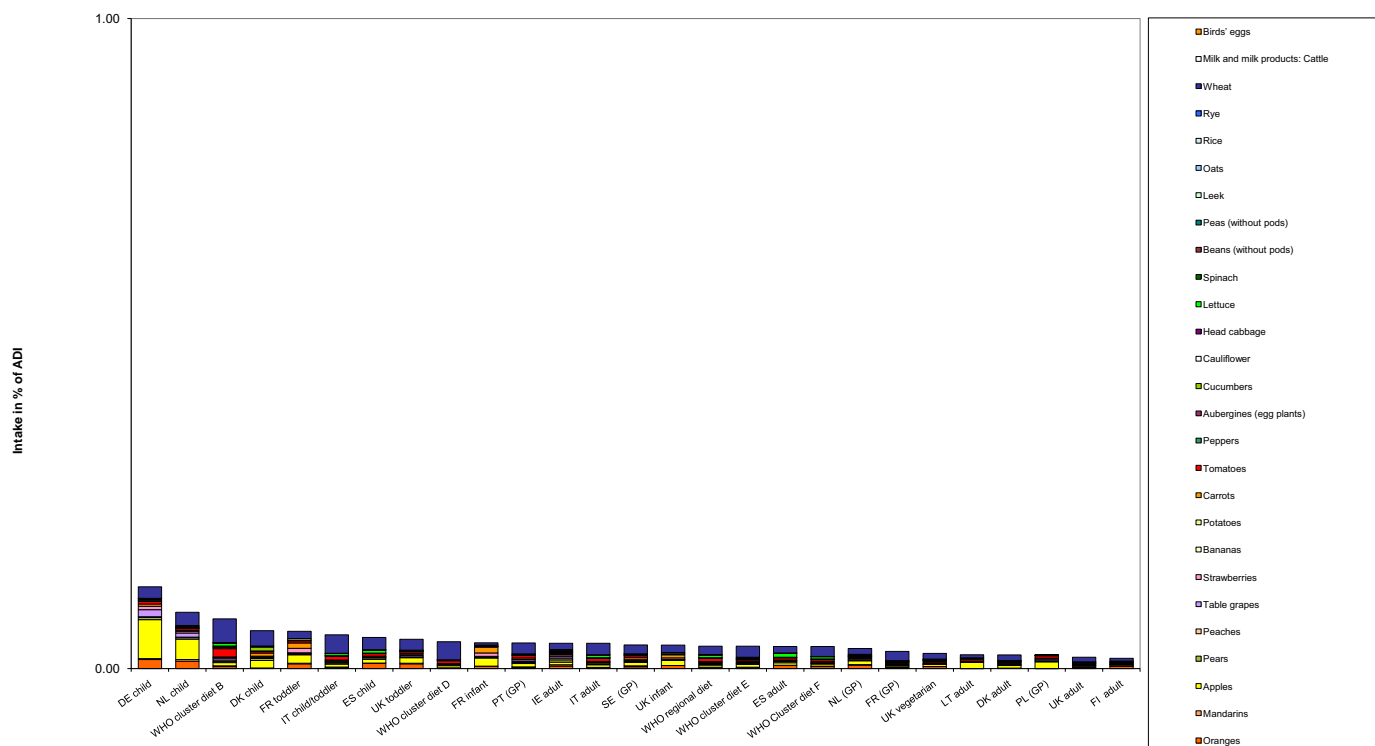
Highest calculated exposure in % of ADI		Exposure (range) in % of ADI minimum - maximum	
MS Diet		No of diets exceeding ADI: ---	
Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.1	DE child	0.0	Wheat
0.1	NL child	0.0	Wheat
0.1	WHO cluster diet B	0.0	Tomatoes
0.1	DK child	0.0	Apples
0.1	FR toddler	0.0	Wheat
0.1	IT child/toddler	0.0	Tomatoes
0.0	ES child	0.0	Oranges
0.0	UK toddler	0.0	Apples
0.0	WHO cluster diet D	0.0	Tomatoes
0.0	FR infant	0.0	Apples
0.0	PT (GP)	0.0	Apples
0.0	IE adult	0.0	Apples
0.0	IT adult	0.0	Tomatoes
0.0	SE (GP)	0.0	Apples
0.0	UK infant	0.0	Apples
0.0	WHO regional diet	0.0	Tomatoes
0.0	WHO cluster diet E	0.0	Apples
0.0	ES adult	0.0	Lettuce
0.0	WHO Cluster diet F	0.0	Apples
0.0	NL (GP)	0.0	Apples
0.0	FR (GP)	0.0	Apples
0.0	UK vegetarian	0.0	Oranges
0.0	LT adult	0.0	Wheat
0.0	DK adult	0.0	Wheat
0.0	PL (GP)	0.0	Tomatoes
0.0	UK adult	0.0	Wheat
0.0	FI adult	0.0	Oranges

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	2	1380	15.29		0.885				
2009	Bananas	0.05	1099							
2009	Peppers	2	1349	5.56		0.22				
2009	Aubergines (egg plants)	1	851	4.11		0.11				
2009	Cauliflower	0.05	733		0.15					
2009	Peas (without pods)	0.05	670	3.58		0.06				
2009	Wheat	0.2	943	0.11		0.00				
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Fludioxonil**



Flufenoxuron			
Status of the active substance:	Excluded		
Code number:	63		
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARID (mg/kg bw):	n.n.
Source of ADI:	DAR	Source of ARID:	EFSA
Year of evaluation:	2010	Year of evaluation:	2011

**Chronic risk assessment**

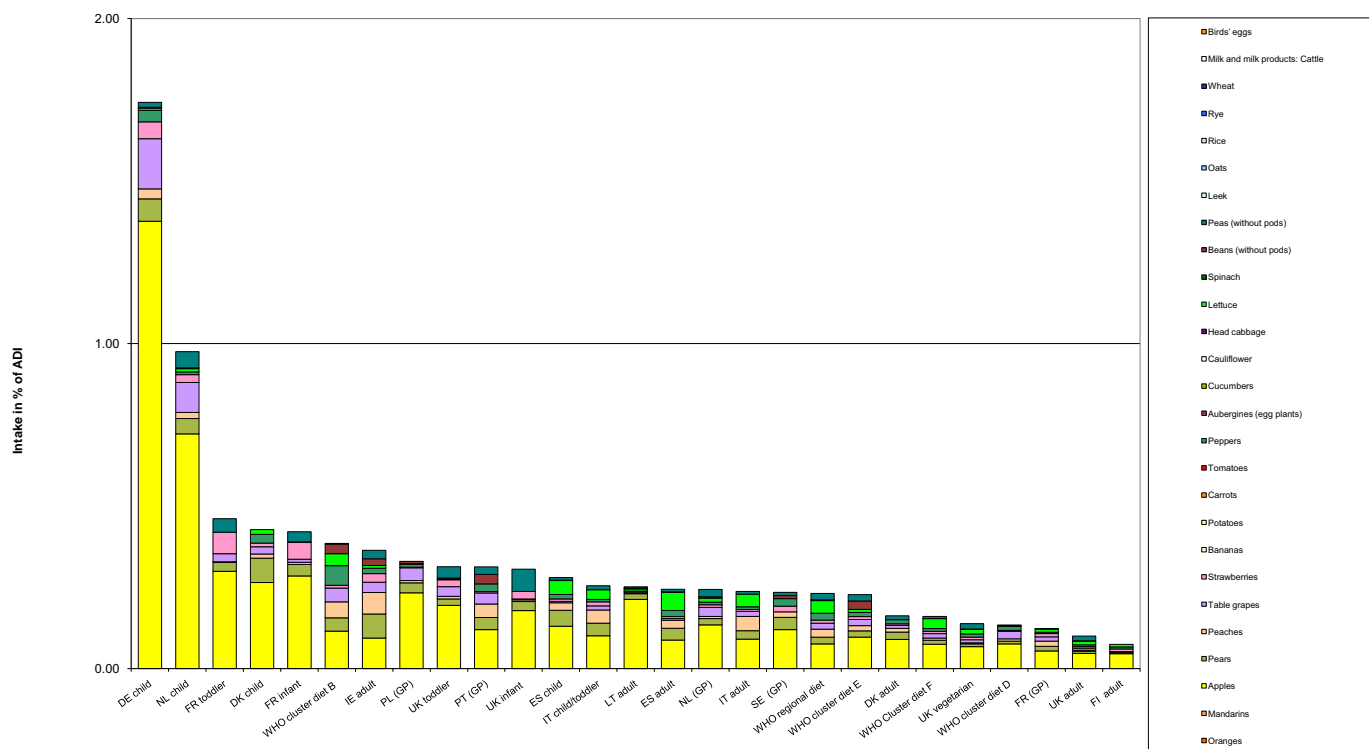
		Exposure (range) in % of ADI minimum - maximum					
		2					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.7	DE child	1.4	Apples	0.2	Table grapes	0.1	Pears
1.0	NL child	0.7	Apples	0.1	Table grapes	0.0	Peas (without pods)
0.5	FR toddler	0.3	Apples	0.1	Strawberries	0.0	Peas (without pods)
0.4	DK child	0.3	Apples	0.1	Pears	0.0	Peppers
0.4	FR infant	0.3	Apples	0.1	Strawberries	0.0	Pears
0.4	WHO cluster diet B	0.1	Apples	0.1	Peppers	0.0	Peaches
0.4	IE adult	0.1	Apples	0.1	Pears	0.1	Peaches
0.3	PL (GP)	0.2	Apples	0.0	Table grapes	0.0	Pears
0.3	UK toddler	0.2	Apples	0.0	Peas (without pods)	0.0	Table grapes
0.3	PT (GP)	0.1	Apples	0.0	Peaches	0.0	Pears
0.3	UK infant	0.2	Apples	0.1	Peas (without pods)	0.0	Pears
0.3	ES child	0.1	Apples	0.0	Pears	0.0	Lettuce
0.3	IT child/toddler	0.1	Apples	0.0	Peaches	0.0	Pears
0.3	LT adult	0.2	Apples	0.0	Pears	0.0	Lettuce
0.2	ES adult	0.1	Apples	0.1	Lettuce	0.0	Pears
0.2	NL (GP)	0.1	Apples	0.0	Table grapes	0.0	Peas (without pods)
0.2	IT adult	0.1	Apples	0.0	Peaches	0.0	Lettuce
0.2	SE (GP)	0.1	Apples	0.0	Pears	0.0	Peppers
0.2	WHO regional diet	0.1	Apples	0.0	Lettuce	0.0	Peaches
0.2	WHO cluster diet E	0.1	Apples	0.0	Beans (without pods)	0.0	Pears
0.2	DK adult	0.1	Apples	0.0	Pears	0.0	Peppers
0.2	WHO Cluster diet F	0.1	Apples	0.0	Lettuce	0.0	Table grapes
0.1	UK vegetarian	0.1	Apples	0.0	Peas (without pods)	0.0	Lettuce
0.1	WHO cluster diet D	0.1	Apples	0.0	Table grapes	0.0	Peppers
0.1	FR (GP)	0.1	Apples	0.0	Peaches	0.0	Pears
0.1	UK adult	0.0	Apples	0.0	Peas (without pods)	0.0	Lettuce
0.1	FI adult	0.0	Apples	0.0	Lettuce	0.0	Strawberries

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	1	913	2.74		0.5				
2009	Bananas	0.05	730							
2009	Peppers	0.5	935	0.11		0.02				
2009	Aubergines (egg plants)	0.5	610							
2009	Cauliflower	0.05	571							
2009	Peas (without pods)	0.05	538	0.19		0.02				
2009	Wheat	0.05	443							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Flufenoxuron**



Fluquinconazole			
Status of the active substance:	Excluded		
Code number:	64		
Toxicological end points			
ADI (mg/kg bw/day):	0.002	ARID (mg/kg bw):	0.02
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2011	Year of evaluation:	2011

**Chronic risk assessment**

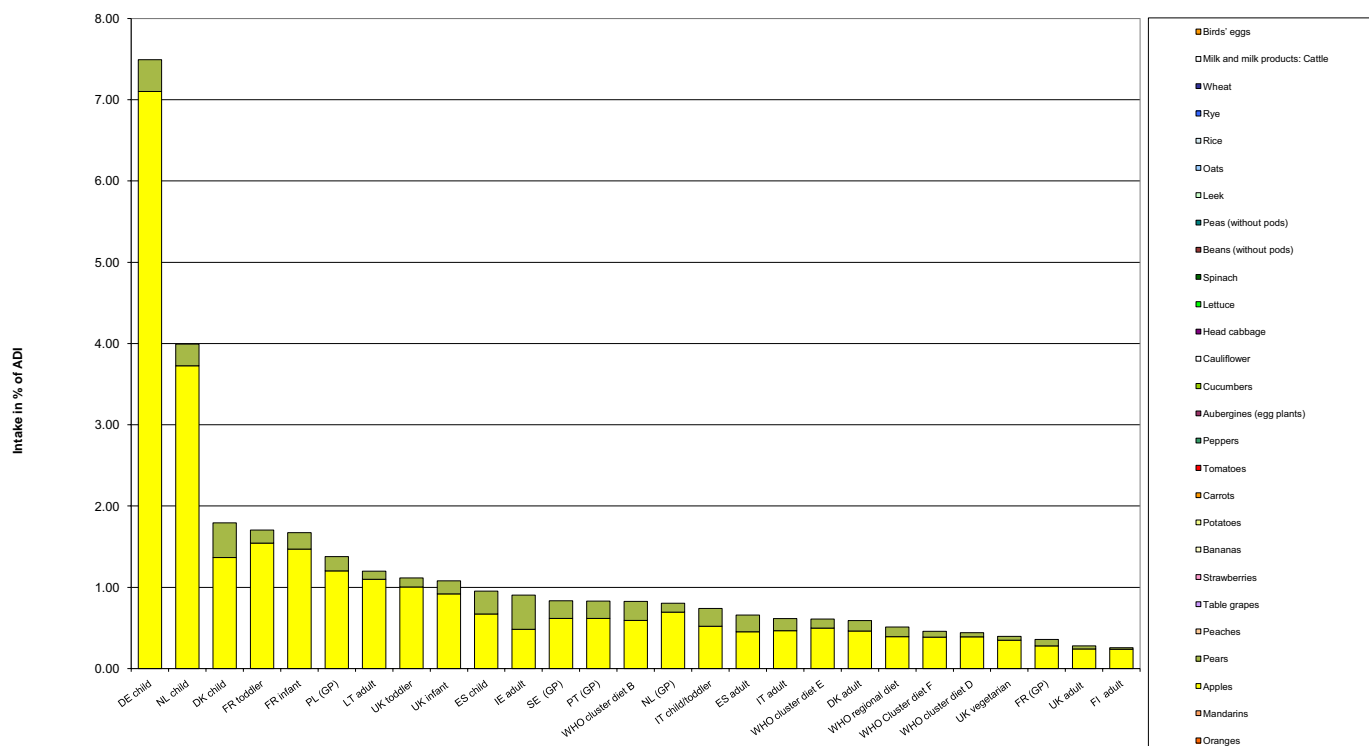
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities
7.5	DE child	7.1	Apples	0.4	Pears		FRUIT (FRESH OR FROZEN)
4.0	NL child	3.7	Apples	0.3	Pears		FRUIT (FRESH OR FROZEN)
1.8	DK child	1.4	Apples	0.4	Pears		FRUIT (FRESH OR FROZEN)
1.7	FR toddler	1.5	Apples	0.2	Pears		FRUIT (FRESH OR FROZEN)
1.7	FR infant	1.5	Apples	0.2	Pears		FRUIT (FRESH OR FROZEN)
1.4	PL (GP)	1.2	Apples	0.2	Pears		FRUIT (FRESH OR FROZEN)
1.2	LT adult	1.1	Apples	0.1	Pears		FRUIT (FRESH OR FROZEN)
1.1	UK toddler	1.0	Apples	0.1	Pears		FRUIT (FRESH OR FROZEN)
1.1	UK infant	0.9	Apples	0.2	Pears		FRUIT (FRESH OR FROZEN)
1.0	ES child	0.7	Apples	0.3	Pears		FRUIT (FRESH OR FROZEN)
0.9	IE adult	0.5	Apples	0.4	Pears		FRUIT (FRESH OR FROZEN)
0.8	SE (GP)	0.6	Apples	0.2	Pears		FRUIT (FRESH OR FROZEN)
0.8	PT (GP)	0.6	Apples	0.2	Pears		FRUIT (FRESH OR FROZEN)
0.8	WHO cluster diet B	0.6	Apples	0.2	Pears		FRUIT (FRESH OR FROZEN)
0.8	NL (GP)	0.7	Apples	0.1	Pears		FRUIT (FRESH OR FROZEN)
0.7	IT child/toddler	0.5	Apples	0.2	Pears		FRUIT (FRESH OR FROZEN)
0.7	ES adult	0.5	Apples	0.2	Pears		FRUIT (FRESH OR FROZEN)
0.6	IT adult	0.5	Apples	0.1	Pears		FRUIT (FRESH OR FROZEN)
0.6	WHO cluster diet E	0.5	Apples	0.1	Pears		FRUIT (FRESH OR FROZEN)
0.6	DK adult	0.5	Apples	0.1	Pears		FRUIT (FRESH OR FROZEN)
0.5	WHO regional diet	0.4	Apples	0.1	Pears		FRUIT (FRESH OR FROZEN)
0.5	WHO Cluster diet F	0.4	Apples	0.1	Pears		FRUIT (FRESH OR FROZEN)
0.4	WHO cluster diet D	0.4	Apples	0.1	Pears		FRUIT (FRESH OR FROZEN)
0.4	UK vegetarian	0.3	Apples	0.0	Pears		FRUIT (FRESH OR FROZEN)
0.4	FR (GP)	0.3	Apples	0.1	Pears		FRUIT (FRESH OR FROZEN)
0.3	UK adult	0.2	Apples	0.0	Pears		FRUIT (FRESH OR FROZEN)
0.3	FI adult	0.2	Apples	0.0	Pears		FRUIT (FRESH OR FROZEN)

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.1	883							
2009	Bananas	0.05	685							
2009	Peppers	0.05	904							
2009	Aubergines (egg plants)	0.05	596							
2009	Cauliflower	0.05	565							
2009	Peas (without pods)	0.05	493							
2009	Wheat	0.1	587							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Fluquinconazole**



Flusilazole			
Status of the active substance:	Included		
Code number:	65		
Toxicological end points			
ADI (mg/kg bw/day):	0.002	ARID (mg/kg bw):	0.005
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2007	Year of evaluation:	2007

**Chronic risk assessment**

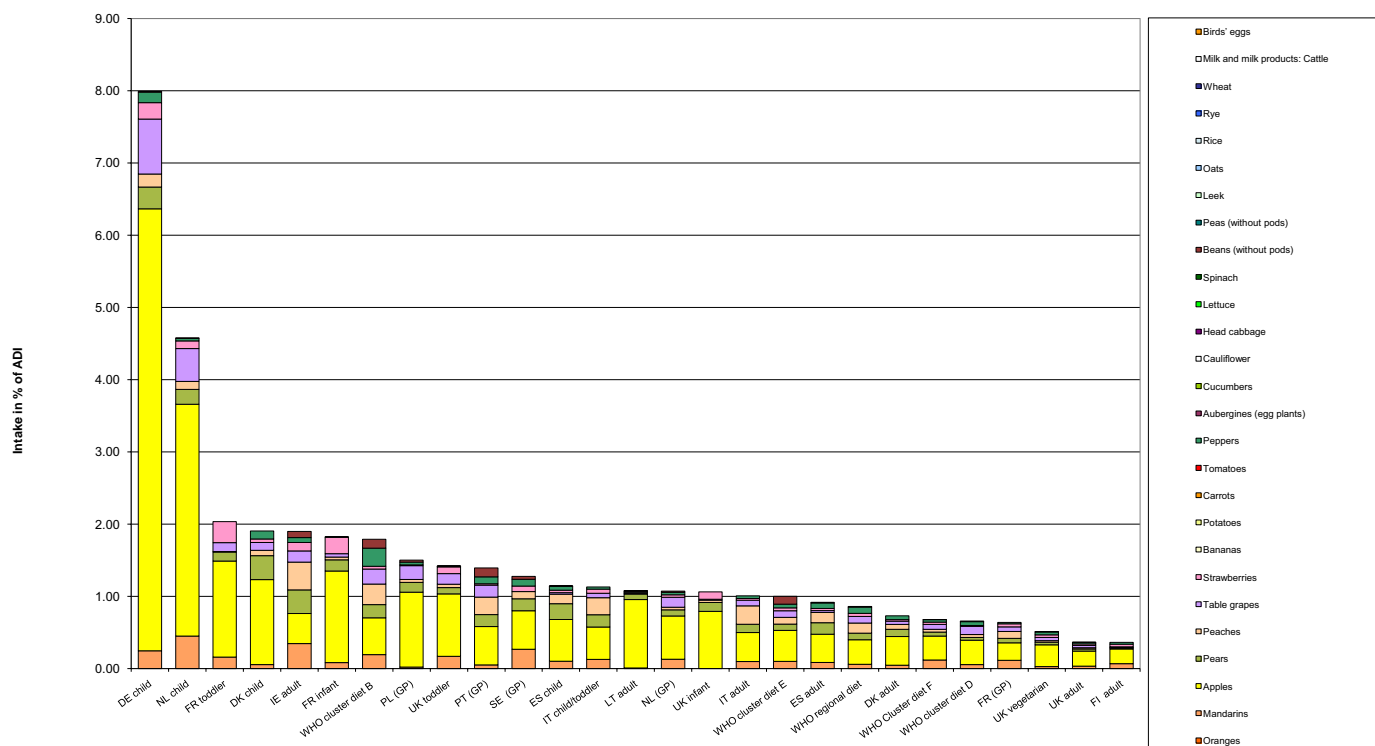
Highest calculated exposure in % of ADI		MS Diet		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
8.0	DE child	6.1	Apples	0.8	Table grapes	0.3	Pears	0.3	Pears	0.3	Pears	0.3	Pears	0.3	Pears
4.6	NL child	3.2	Apples	0.5	Table grapes	0.4	Mandarins	0.5	Table grapes	0.4	Mandarins	0.4	Mandarins	0.4	Mandarins
2.0	FR toddler	1.3	Apples	0.3	Strawberries	0.2	Mandarins	0.3	Strawberries	0.2	Pears	0.2	Mandarins	0.2	Mandarins
1.9	DK child	1.2	Apples	0.3	Pears	0.1	Peppers	0.3	Pears	0.1	Peppers	0.1	Peppers	0.1	Peppers
1.9	IE adult	0.4	Apples	0.4	Peaches	0.3	Mandarins	0.4	Peaches	0.3	Mandarins	0.3	Mandarins	0.3	Mandarins
1.8	FR infant	1.3	Apples	0.2	Strawberries	0.2	Pears	0.2	Strawberries	0.2	Pears	0.2	Pears	0.2	Pears
1.8	WHO cluster diet B	0.5	Apples	0.3	Peaches	0.2	Peppers	0.3	Peaches	0.2	Peppers	0.2	Peppers	0.2	Peppers
1.5	PL (GP)	1.0	Apples	0.2	Table grapes	0.1	Pears	0.2	Table grapes	0.1	Pears	0.1	Pears	0.1	Pears
1.4	UK toddler	0.9	Apples	0.2	Mandarins	0.1	Table grapes	0.2	Mandarins	0.1	Table grapes	0.1	Table grapes	0.1	Table grapes
1.4	PT (GP)	0.5	Apples	0.2	Peaches	0.2	Table grapes	0.2	Peaches	0.2	Table grapes	0.2	Table grapes	0.2	Table grapes
1.3	SE (GP)	0.5	Apples	0.3	Mandarins	0.2	Pears	0.3	Mandarins	0.2	Pears	0.2	Pears	0.2	Pears
1.1	ES child	0.6	Apples	0.2	Pears	0.1	Peaches	0.2	Pears	0.1	Peaches	0.1	Peaches	0.1	Peaches
1.1	IT child/toddler	0.4	Apples	0.2	Peaches	0.2	Pears	0.2	Peaches	0.2	Pears	0.2	Pears	0.2	Pears
1.1	LT adult	0.9	Apples	0.1	Pears	0.0	Strawberries	0.1	Pears	0.0	Strawberries	0.0	Strawberries	0.0	Strawberries
1.1	NL (GP)	0.6	Apples	0.1	Table grapes	0.1	Mandarins	0.1	Table grapes	0.1	Mandarins	0.1	Mandarins	0.1	Mandarins
1.1	UK infant	0.8	Apples	0.1	Pears	0.1	Strawberries	0.1	Pears	0.1	Strawberries	0.1	Strawberries	0.1	Strawberries
1.0	IT adult	0.4	Apples	0.3	Peaches	0.1	Pears	0.3	Peaches	0.1	Pears	0.1	Pears	0.1	Pears
1.0	WHO cluster diet E	0.4	Apples	0.1	Beans (without pods)	0.1	Mandarins	0.1	Beans (without pods)	0.1	Mandarins	0.1	Mandarins	0.1	Mandarins
0.9	ES adult	0.4	Apples	0.2	Pears	0.1	Peaches	0.2	Pears	0.1	Peaches	0.1	Peaches	0.1	Peaches
0.9	WHO regional diet	0.3	Apples	0.1	Peaches	0.1	Peaches	0.1	Peaches	0.1	Peaches	0.1	Peaches	0.1	Peaches
0.7	DK adult	0.4	Apples	0.1	Pears	0.1	Peaches	0.1	Pears	0.1	Peaches	0.1	Peaches	0.1	Peaches
0.7	WHO Cluster diet F	0.3	Apples	0.1	Mandarins	0.1	Table grapes	0.1	Mandarins	0.1	Table grapes	0.1	Mandarins	0.1	Mandarins
0.7	WHO cluster diet D	0.3	Apples	0.1	Table grapes	0.1	Mandarins	0.1	Table grapes	0.1	Mandarins	0.1	Mandarins	0.1	Mandarins
0.6	FR (GP)	0.2	Apples	0.1	Mandarins	0.1	Peaches	0.1	Mandarins	0.1	Peaches	0.1	Peaches	0.1	Peaches
0.5	UK vegetarian	0.3	Apples	0.0	Table grapes	0.0	Peppers	0.0	Table grapes	0.0	Peppers	0.0	Peppers	0.0	Peppers
0.4	UK adult	0.2	Apples	0.0	Mandarins	0.0	Table grapes	0.0	Mandarins	0.0	Table grapes	0.0	Table grapes	0.0	Table grapes
0.4	FI adult	0.2	Apples	0.1	Mandarins	0.0	Strawberries	0.1	Mandarins	0.0	Strawberries	0.0	Strawberries	0.0	Strawberries

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	1132	0.62		0.025		32.74	DE child	
2009	Bananas	0.1	974							
2009	Peppers	0.02	1146		0.09	0.23	1	289.70	DE child	
2009	Aubergines (egg plants)	0.02	767							
2009	Cauliflower	0.02	684							
2009	Peas (without pods)	0.02	607							
2009	Wheat	0.1	789							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Flusilazole**





Flutriafol			
Status of the active substance:	Excluded		
Code number:	66		
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARID (mg/kg bw):	0.05
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2010	Year of evaluation:	2010

**Chronic risk assessment**

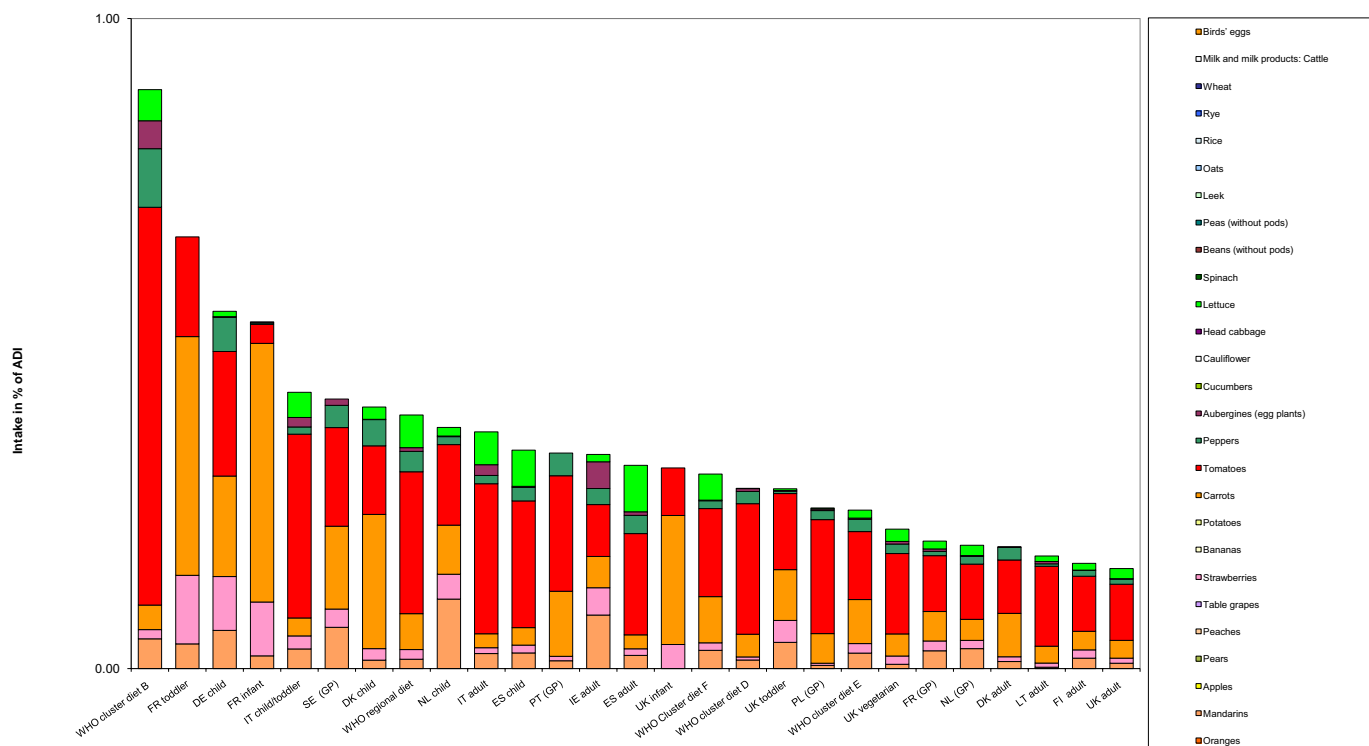
Highest calculated exposure in % of ADI		MS Diet		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities																																																																																																																																																																																																	
0.9	WHO cluster diet B	0.6	Tomatoes	0.1	Peppers	0.0	Lettuce	0.7	FR toddler	0.2	Tomatoes	0.1	Strawberries	0.5	DE child	0.2	Carrots	0.1	Strawberries	0.5	FR infant	0.4	Carrots	0.1	Strawberries	0.4	IT child/toddler	0.3	Tomatoes	0.0	Lettuce	0.4	SE (GP)	0.2	Tomatoes	0.1	Carrots	0.1	Mandarins	0.4	DK child	0.2	Carrots	0.1	Tomatoes	0.0	Peppers	0.4	WHO regional diet	0.2	Tomatoes	0.1	Carrots	0.1	Lettuce	0.4	NL child	0.1	Tomatoes	0.1	Mandarins	0.1	Carrots	0.4	IT adult	0.2	Tomatoes	0.1	Lettuce	0.0	Mandarins	0.3	ES child	0.2	Tomatoes	0.1	Lettuce	0.0	Carrots	0.3	PT (GP)	0.2	Tomatoes	0.1	Carrots	0.0	Peppers	0.3	IE adult	0.1	Mandarins	0.1	Tomatoes	0.0	Carrots	0.3	ES adult	0.2	Tomatoes	0.1	Lettuce	0.0	Peppers	0.3	UK infant	0.2	Carrots	0.1	Tomatoes	0.0	Strawberries	0.3	WHO Cluster diet F	0.1	Tomatoes	0.1	Carrots	0.0	Lettuce	0.3	WHO cluster diet D	0.2	Tomatoes	0.0	Carrots	0.0	Peppers	0.3	UK toddler	0.1	Tomatoes	0.1	Carrots	0.0	Mandarins	0.2	PL (GP)	0.2	Tomatoes	0.0	Carrots	0.0	Peppers	0.2	WHO cluster diet E	0.1	Tomatoes	0.1	Carrots	0.0	Mandarins	0.2	UK vegetarian	0.1	Tomatoes	0.0	Carrots	0.0	Lettuce	0.2	FR (GP)	0.1	Tomatoes	0.0	Carrots	0.0	Mandarins	0.2	NL (GP)	0.1	Tomatoes	0.0	Carrots	0.0	Mandarins	0.2	DK adult	0.1	Tomatoes	0.1	Carrots	0.0	Peppers	0.2	LT adult	0.1	Tomatoes	0.0	Carrots	0.0	Lettuce	0.2	FI adult	0.1	Tomatoes	0.0	Carrots	0.0	Mandarins	0.2	UK adult	0.1	Tomatoes	0.0	Carrots	0.0	Lettuce

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	728							
2009	Bananas	0.05	605							
2009	Peppers	1	783	7.28		0.58		73.18	DE child	
2009	Aubergines (egg plants)	0.3	503	0.20		0.01		0.55	UK 4-6 yr	
2009	Cauliflower	0.05	500							
2009	Peas (without pods)	0.1	468							
2009	Wheat	0.5	522							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Flutriafol**



Folpet			
Status of the active substance:	Included		
Code number:	67		
Toxicological end points			
ADI (mg/kg bw/day):	0.1	ARID (mg/kg bw):	0.2
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2009	Year of evaluation:	2009

**Chronic risk assessment**

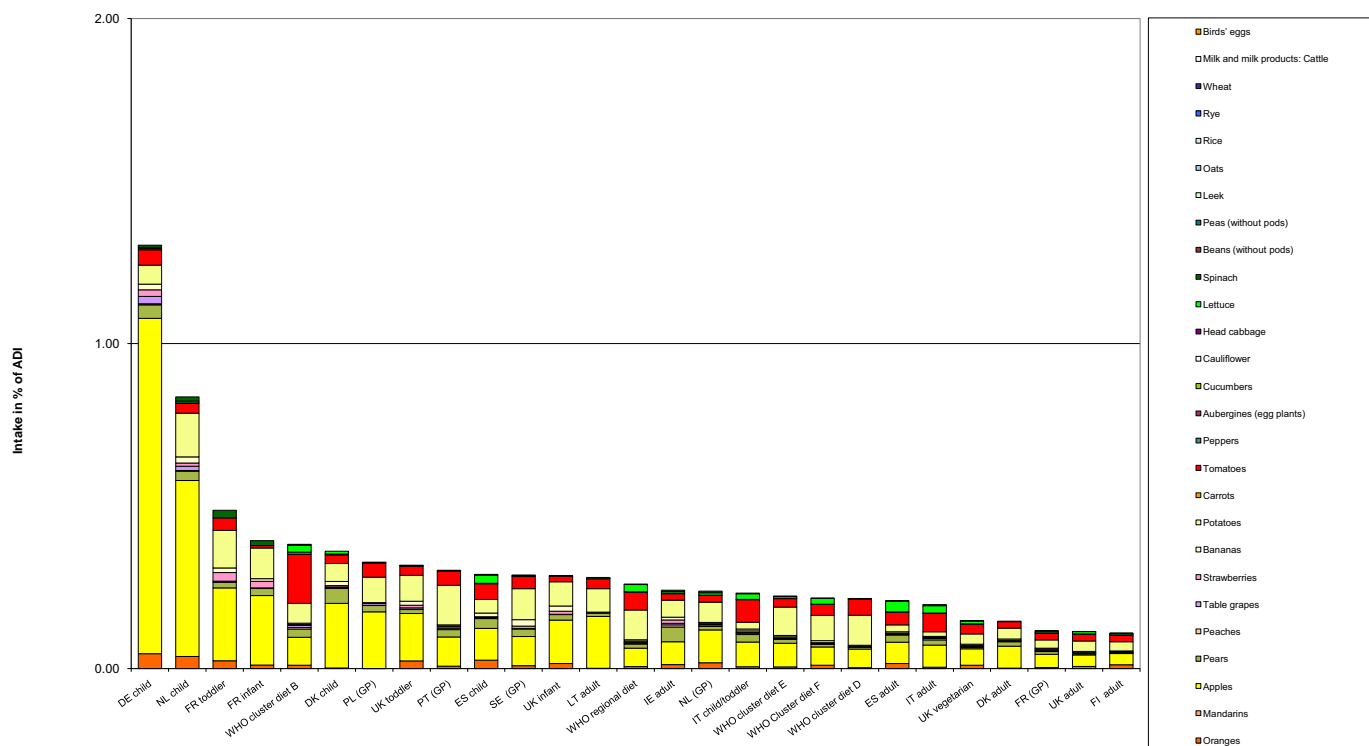
		Exposure (range) in % of ADI minimum - maximum					
		1					
No of diets exceeding ADI:		---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.3	DE child	1.0	Apples	0.1	Potatoes	0.0	Tomatoes
0.8	NL child	0.5	Apples	0.1	Potatoes	0.0	Oranges
0.5	FR toddler	0.2	Apples	0.1	Potatoes	0.0	Tomatoes
0.4	FR infant	0.2	Apples	0.1	Potatoes	0.0	Pears
0.4	WHO cluster diet B	0.2	Tomatoes	0.1	Apples	0.1	Potatoes
0.4	DK child	0.2	Apples	0.1	Potatoes	0.0	Pears
0.3	PL (GP)	0.2	Apples	0.1	Potatoes	0.0	Tomatoes
0.3	UK toddler	0.1	Apples	0.1	Potatoes	0.0	Tomatoes
0.3	PT (GP)	0.1	Potatoes	0.1	Apples	0.0	Tomatoes
0.3	ES child	0.1	Apples	0.0	Tomatoes	0.0	Potatoes
0.3	SE (GP)	0.1	Potatoes	0.1	Apples	0.0	Tomatoes
0.3	UK infant	0.1	Apples	0.1	Potatoes	0.0	Tomatoes
0.3	LT adult	0.2	Apples	0.1	Potatoes	0.0	Tomatoes
0.3	WHO regional diet	0.1	Potatoes	0.1	Apples	0.1	Tomatoes
0.2	IE adult	0.1	Apples	0.1	Potatoes	0.0	Pears
0.2	NL (GP)	0.1	Apples	0.1	Potatoes	0.0	Tomatoes
0.2	IT child/toddler	0.1	Apples	0.1	Tomatoes	0.0	Pears
0.2	WHO cluster diet E	0.1	Potatoes	0.1	Apples	0.0	Tomatoes
0.2	WHO Cluster diet F	0.1	Potatoes	0.1	Apples	0.0	Tomatoes
0.2	WHO cluster diet D	0.1	Potatoes	0.1	Apples	0.0	Tomatoes
0.2	ES adult	0.1	Apples	0.0	Tomatoes	0.0	Lettuce
0.2	IT adult	0.1	Apples	0.1	Tomatoes	0.0	Lettuce
0.1	UK vegetarian	0.1	Apples	0.0	Potatoes	0.0	Tomatoes
0.1	DK adult	0.1	Apples	0.0	Potatoes	0.0	Tomatoes
0.1	FR (GP)	0.0	Apples	0.0	Potatoes	0.0	Tomatoes
0.1	UK adult	0.0	Apples	0.0	Potatoes	0.0	Tomatoes
0.1	FI adult	0.0	Apples	0.0	Potatoes	0.0	Tomatoes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.02	1024	0.010	0.59	0.6		13.10	DE child	
2009	Bananas	0.02	815	0.1		0.02		0.84	UK infant	
2009	Peppers	0.02	1064	0.28	0.09	0.46		14.49	DE child	
2009	Aubergines (egg plants)	0.02	656	0.30		0.02		0.25	UK 4-6 yr	
2009	Cauliflower	0.02	588							
2009	Peas (without pods)	0.02	465							
2009	Wheat	2	857							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Folpet**



Formetanate			
Status of the active substance:	Included		
Code number:	68		
Toxicological end points			
ADI (mg/kg bw/day):	0.004	ARID (mg/kg bw):	0.005
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

**Chronic risk assessment**

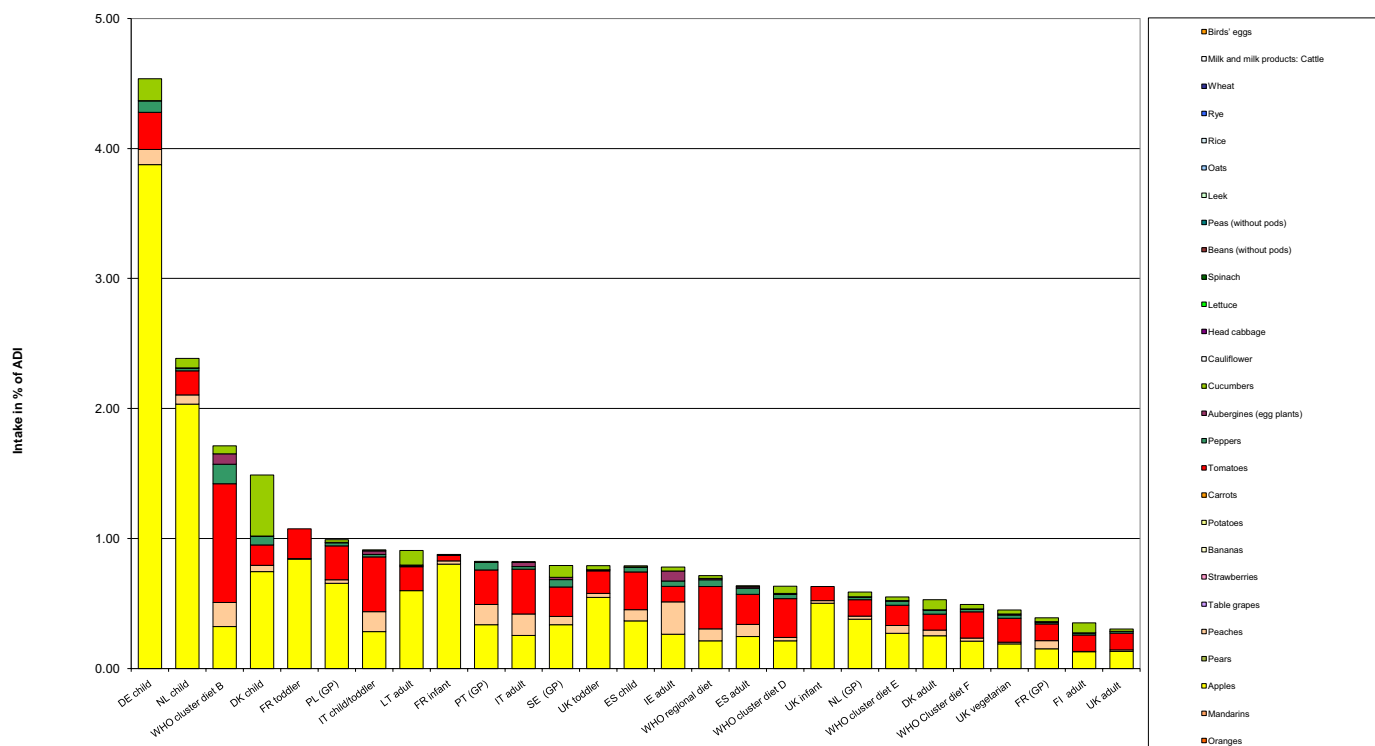
Exposure (range) in % of ADI minimum - maximum		5					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
4.5	DE child	3.9	Apples	0.3	Tomatoes	0.2	Cucumbers
2.4	NL child	2.0	Apples	0.2	Tomatoes	0.1	Cucumbers
1.7	WHO cluster diet B	0.9	Tomatoes	0.3	Apples	0.2	Peaches
1.5	DK child	0.7	Apples	0.5	Cucumbers	0.2	Tomatoes
1.1	FR toddler	0.8	Apples	0.2	Tomatoes	0.0	Peaches
1.0	PL (GP)	0.7	Apples	0.3	Tomatoes	0.0	Peaches
0.9	IT child/toddler	0.4	Tomatoes	0.3	Apples	0.2	Peaches
0.9	LT adult	0.6	Apples	0.2	Tomatoes	0.1	Cucumbers
0.9	FR infant	0.8	Apples	0.0	Tomatoes	0.0	Peaches
0.8	PT (GP)	0.3	Apples	0.3	Tomatoes	0.2	Peaches
0.8	IT adult	0.3	Tomatoes	0.3	Apples	0.2	Peaches
0.8	SE (GP)	0.3	Apples	0.2	Tomatoes	0.1	Cucumbers
0.8	UK toddler	0.5	Apples	0.2	Tomatoes	0.0	Cucumbers
0.8	ES child	0.4	Apples	0.3	Tomatoes	0.1	Peaches
0.8	IE adult	0.3	Apples	0.2	Peaches	0.1	Tomatoes
0.7	WHO regional diet	0.3	Tomatoes	0.2	Apples	0.1	Peaches
0.6	ES adult	0.2	Apples	0.2	Tomatoes	0.1	Peaches
0.6	WHO cluster diet D	0.3	Tomatoes	0.2	Apples	0.1	Cucumbers
0.6	UK infant	0.5	Apples	0.1	Tomatoes	0.0	Peaches
0.6	NL (GP)	0.4	Apples	0.1	Tomatoes	0.0	Cucumbers
0.6	WHO cluster diet E	0.3	Apples	0.2	Tomatoes	0.1	Peaches
0.5	DK adult	0.3	Apples	0.1	Tomatoes	0.1	Cucumbers
0.5	WHO Cluster diet F	0.2	Apples	0.2	Tomatoes	0.0	Cucumbers
0.5	UK vegetarian	0.2	Apples	0.2	Tomatoes	0.0	Cucumbers
0.4	FR (GP)	0.2	Apples	0.1	Tomatoes	0.1	Peaches
0.4	FI adult	0.1	Apples	0.1	Tomatoes	0.1	Cucumbers
0.3	UK adult	0.1	Apples	0.1	Tomatoes	0.0	Cucumbers

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	333							
2009	Bananas	0.05	327							
2009	Peppers	0.05	398	0.25	0.30	0.02	1	23.48	DE child	
2009	Aubergines (egg plants)	0.2	328	1.52		0.26		130.00	UK 4-6 yr	
2009	Cauliflower	0.05	277							
2009	Peas (without pods)	0.05	289							
2009	Wheat	0.05	189							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Formetanate**



Fosthiazate			
Status of the active substance:	Included		
Code number:	69		
Toxicological end points			
ADI (mg/kg bw/day):	0.004	ARID (mg/kg bw):	0.005
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2003	Year of evaluation:	2003

**Chronic risk assessment**

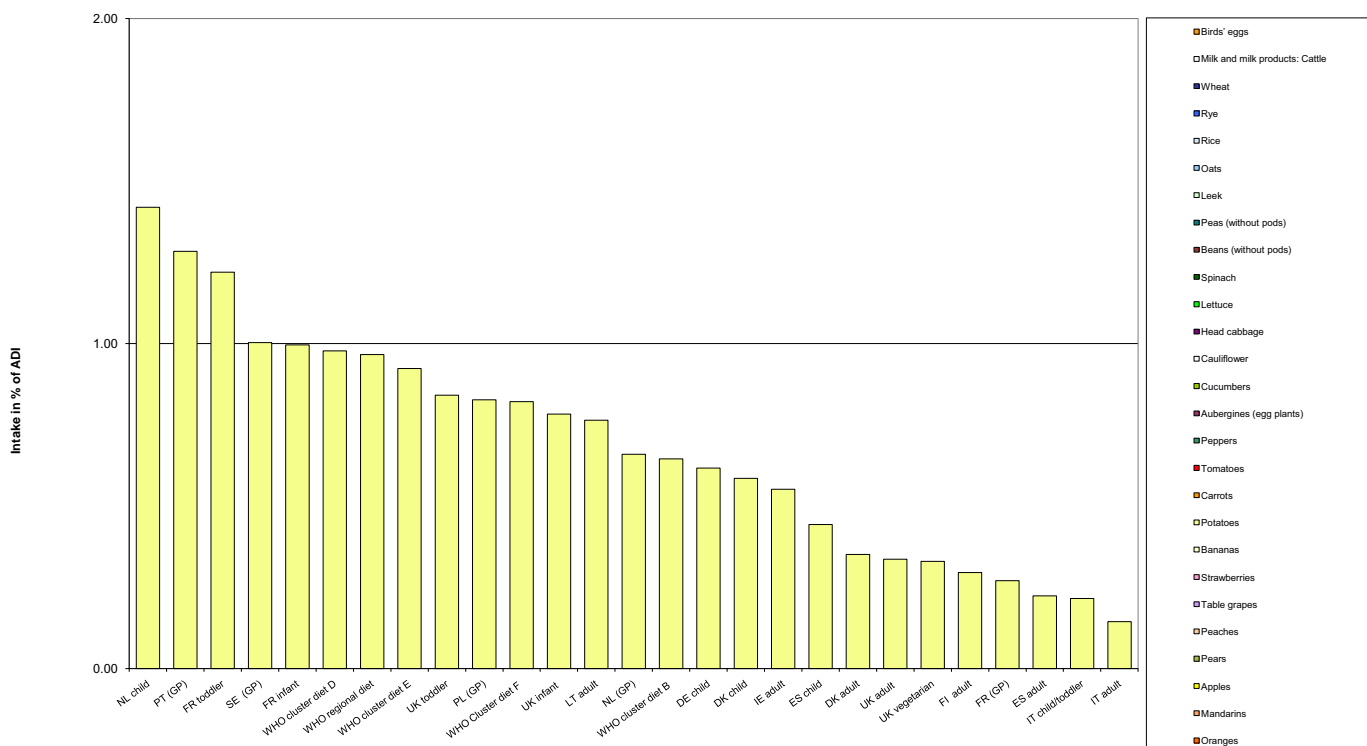
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
1.4	NL child	1.4	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
1.3	PT (GP)	1.3	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
1.2	FR toddler	1.2	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
1.0	SE (GP)	1.0	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
1.0	FR infant	1.0	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
1.0	WHO cluster diet D	1.0	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
1.0	WHO regional diet	1.0	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.9	WHO cluster diet E	0.9	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.8	UK toddler	0.8	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.8	PL (GP)	0.8	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.8	WHO Cluster diet F	0.8	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.8	UK infant	0.8	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.8	LT adult	0.8	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.7	NL (GP)	0.7	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.6	WHO cluster diet B	0.6	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.6	DE child	0.6	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.6	DK child	0.6	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.6	IE adult	0.6	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.4	ES child	0.4	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.4	DK adult	0.4	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.3	UK adult	0.3	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.3	UK vegetarian	0.3	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.3	FI adult	0.3	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.3	FR (GP)	0.3	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.2	ES adult	0.2	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.2	IT child/toddler	0.2	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	
0.1	IT adult	0.1	Potatoes	FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)	

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	0.02	565							
2009	Bananas	0.05	398							
2009	Peppers	0.02	586							
2009	Aubergines (egg plants)	0.02	362							
2009	Cauliflower	0.02	351							
2009	Peas (without pods)	0.02	300							
2009	Wheat	0.02	248							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Fosthiazate**



Hexachlorobenzene	
Status of the active substance:	Excluded
Code number:	70
Toxicological end points	
ADI (mg/kg bw/day):	ARfD (mg/kg bw):
Source of ADI:	Source of ARfD:
Year of evaluation:	Year of evaluation:

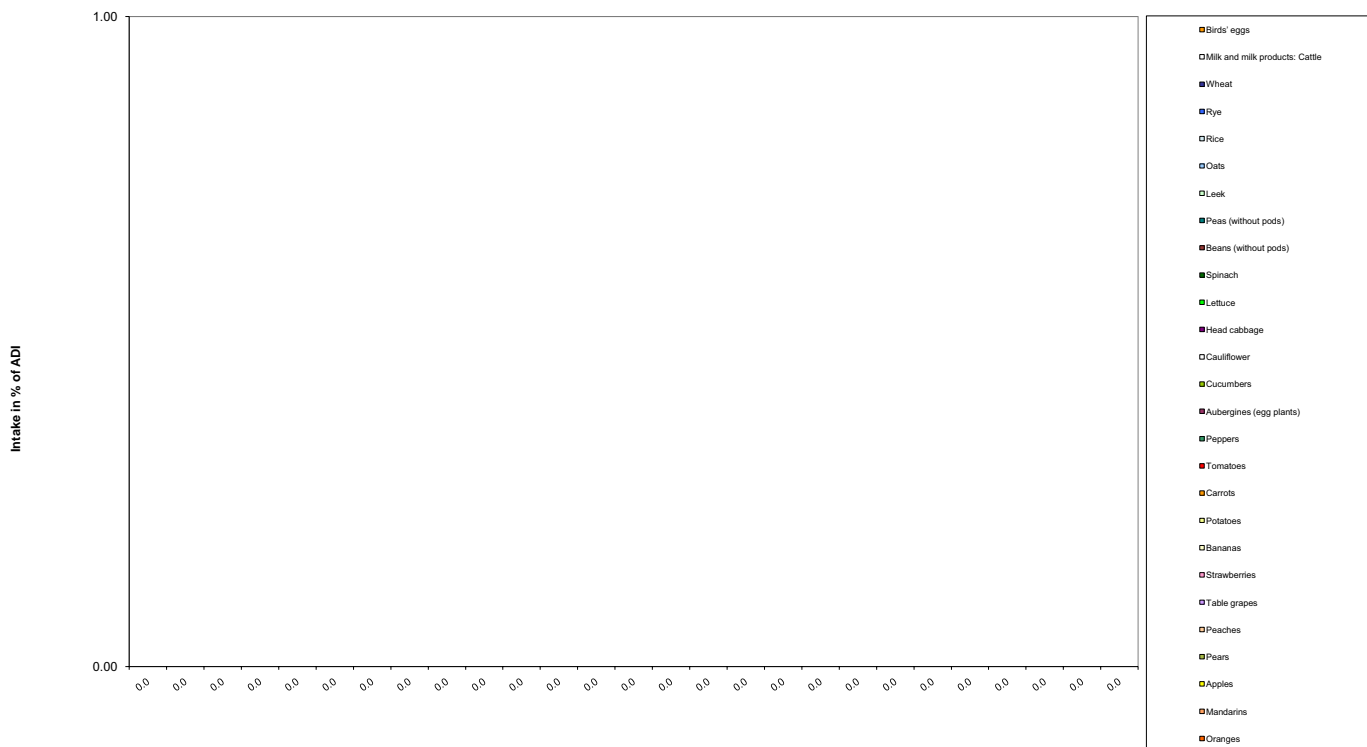
No agreed ADI/ARfD available for this substance. The chronic and acute risk assessment could not be performed.

Chronic risk assessment							
		Exposure (range) in % of ADI minimum - maximum #DIV/0!					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	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										
								Acute exposure expressed in % of the ARfD		
Year	Commodity <sup>a)</sup>	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
2009	Milk and milk products: Cattle	0.01	392	16.58		0.0002				
2009	Birds' eggs	0.02	523	0.76		0.0044				

<sup>a)</sup> The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Hexachlorobenzene



Heptachlor		
Status of the active substance:	Excluded	
Code number:	71	
Toxicological end points		
ADI (mg/kg bw/day):	0.0001	ARID (mg/kg bw):
Source of ADI:	JMPR	Source of ARID:
Year of evaluation:	1991	Year of evaluation:

Active substance was not assessed regarding the setting of an ARID.

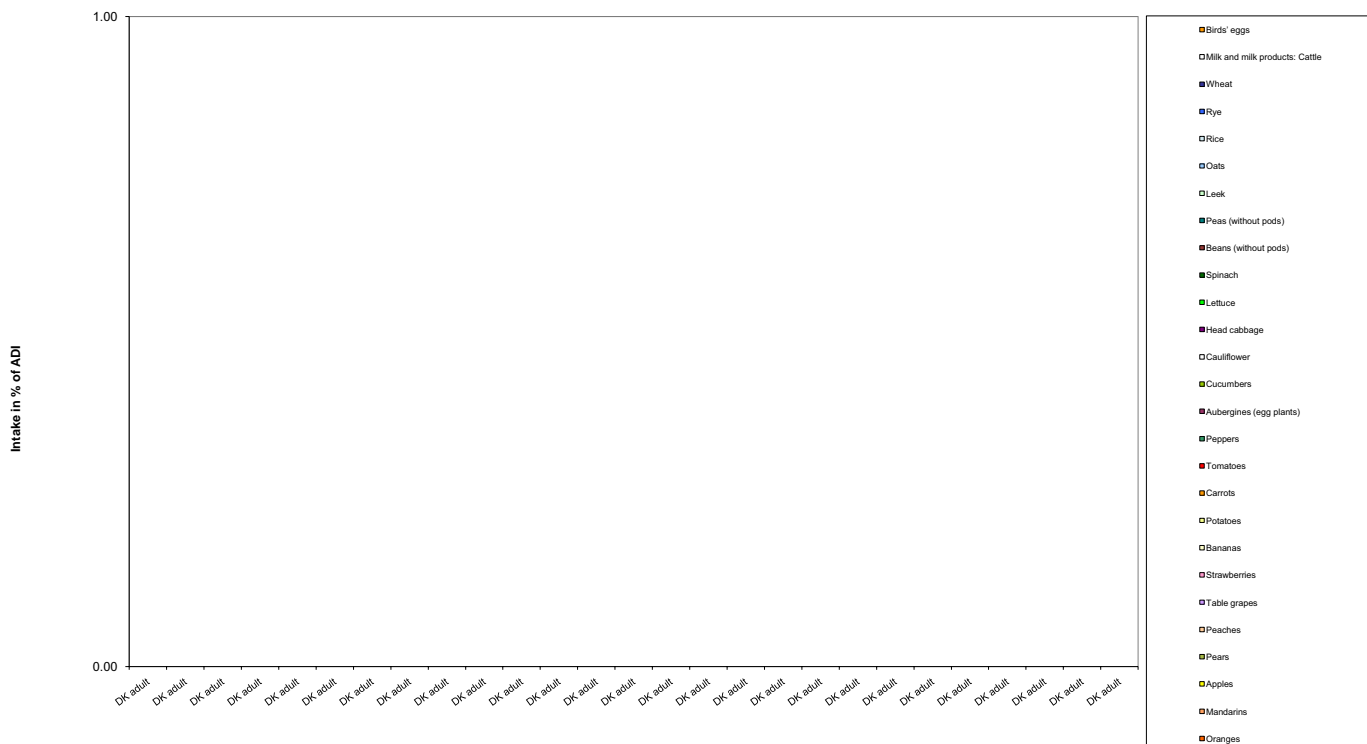
No measurements above the LOQ were reported for the food commodities included in the EU programme.

Chronic risk assessment							
				Exposure (range) in % of ADI minimum - maximum			
				No of diets exceeding ADI: ---			
Highest calculated exposure in % of ADI	MS Diet	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		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
2009	Milk and milk products: Cattle	0.004	263							
2009	Birds' eggs	0.02	428							

<sup>a)</sup> The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Heptachlor



<b>HCH</b>	
Status of the active substance:	Excluded
Code number:	72
<b>Toxicological end points</b>	
ADI (mg/kg bw/day):	ARfD (mg/kg bw):
Source of ADI:	Source of ARfD:
Year of evaluation:	Year of evaluation:

Results for HCH-alpha isomer.  
No agreed ADI/ARfD available for this substance. The risk assessment could not be performed.

**Chronic risk assessment**

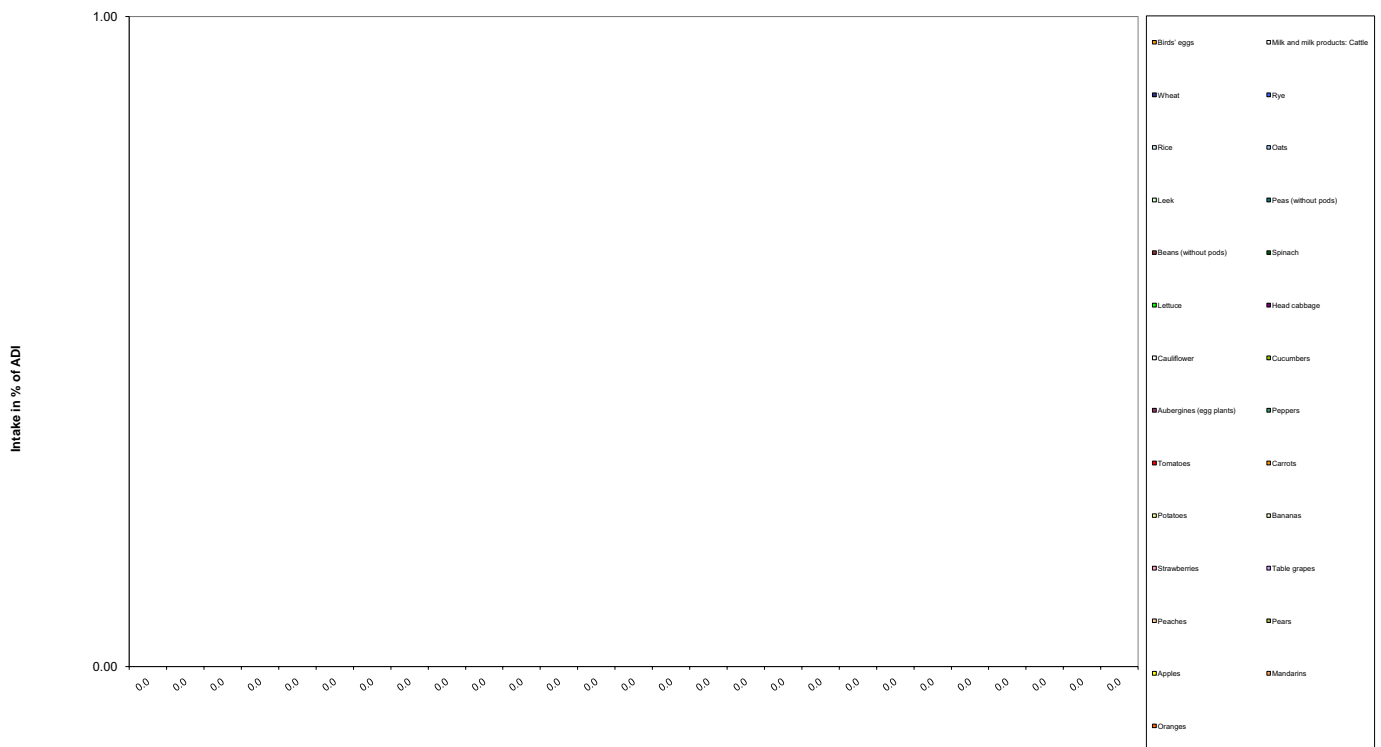
Exposure (range) in % of ADI minimum - maximum #DIV/0!		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities

**Acute risk assessment**

Year	Commodity <sup>a)</sup>	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
2009	Milk and milk products: Cattle	0.004	386	0.51		0.0200				
2009	Birds' eggs	0.02	375							

<sup>a)</sup> The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: HCH**



HCH	
Status of the active substance:	Excluded
Code number:	72
Toxicological end points	
ADI (mg/kg bw/day):	ARID (mg/kg bw):
Source of ADI:	Source of ARID:
Year of evaluation:	Year of evaluation:

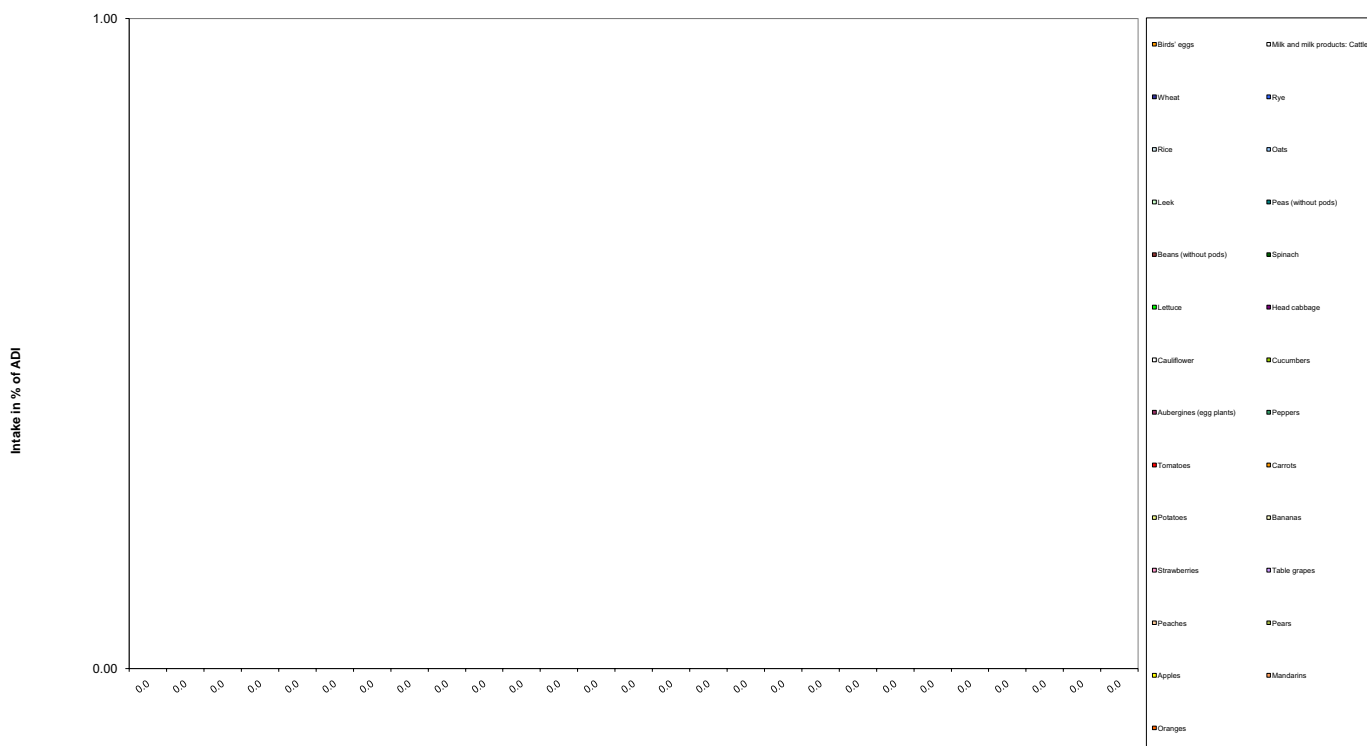
Results for HCH-beta isomer.  
No agreed ADI/ARID available for this substance. The risk assessment could not be performed.

Chronic risk assessment							
		Exposure (range) in % of ADI minimum - maximum #DIV/0!		No of diets exceeding ADI:		---	
Highest calculated exposure in % of ADI	MS Diet	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)</sup>	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
2009	Milk and milk products: Cattle	0.004	386	0.77		0.0010				
2009	Birds' eggs	0.02	375							

<sup>a)</sup> The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: HCH





Lindane			
Status of the active substance:	Excluded		
Code number:	74		
Toxicological end points			
ADI (mg/kg bw/day):	0.001	ARID (mg/kg bw):	0.01
Source of ADI:	ECCO	Source of ARID:	ECCO
Year of evaluation:	1999	Year of evaluation:	1999

**Chronic risk assessment**

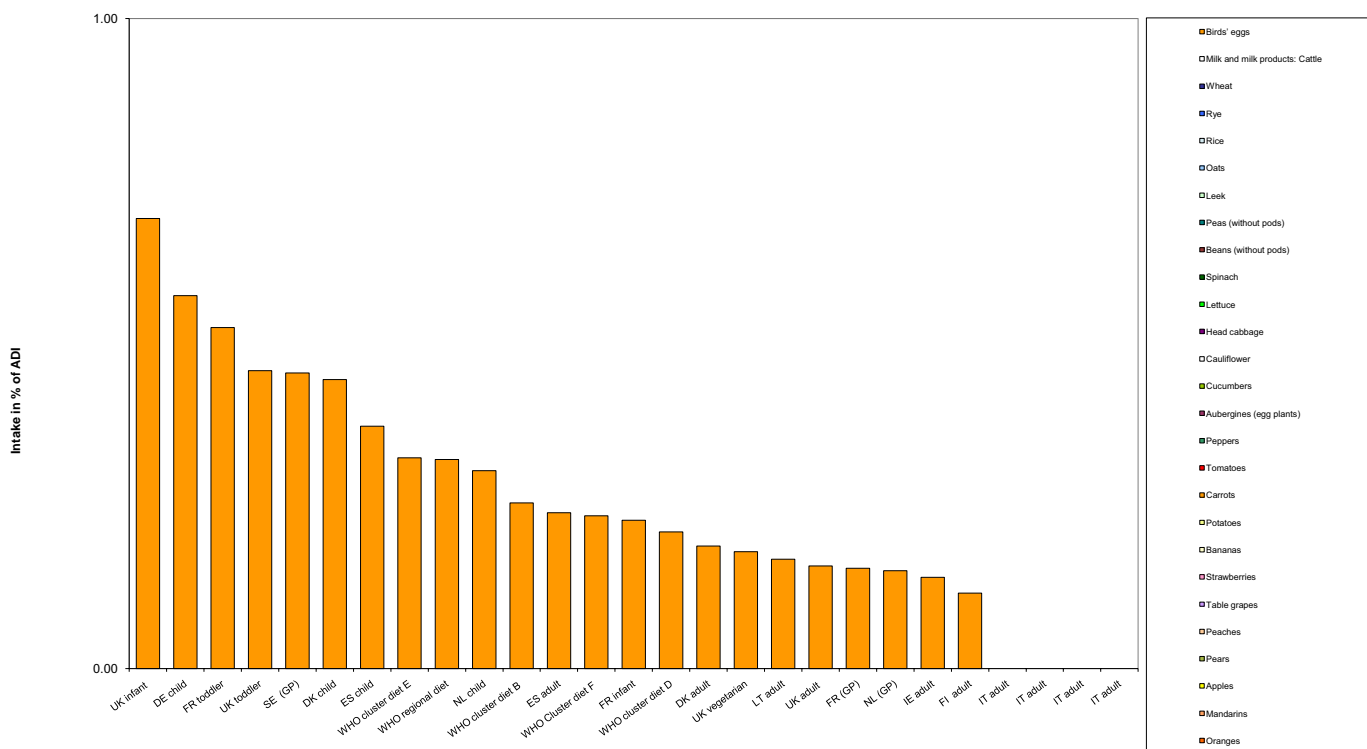
		Exposure (range) in % of ADI minimum - maximum					
		1					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.7	UK infant	0.7	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.6	DE child	0.6	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.5	FR toddler	0.5	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.5	UK toddler	0.5	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.5	SE (GP)	0.5	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.4	DK child	0.4	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.4	ES child	0.4	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.3	WHO cluster diet E	0.3	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.3	WHO regional diet	0.3	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.3	NL child	0.3	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.3	WHO cluster diet B	0.3	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	ES adult	0.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	WHO Cluster diet F	0.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	FR infant	0.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	WHO cluster diet D	0.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	DK adult	0.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	UK vegetarian	0.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	LT adult	0.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	UK adult	0.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	FR (GP)	0.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	NL (GP)	0.2	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.1	IE adult	0.1	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.1	FI adult	0.1	Birds' eggs		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	IT adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	IT adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	IT adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	IT adult		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
2009	Milk and milk products: Cattle	0.001	384							
2009	Birds' eggs	0.01	526	0.76		0.00		0.25	UK infant	

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Lindane**



Hexaconazole			
Status of the active substance:	Excluded		
Code number:	75		
Toxicological end points			
ADI (mg/kg bw/day):	0.005	ARID (mg/kg bw):	0.005
Source of ADI:	JMPR	Source of ARID:	JMPR 1990
Year of evaluation:	1990	Year of evaluation:	

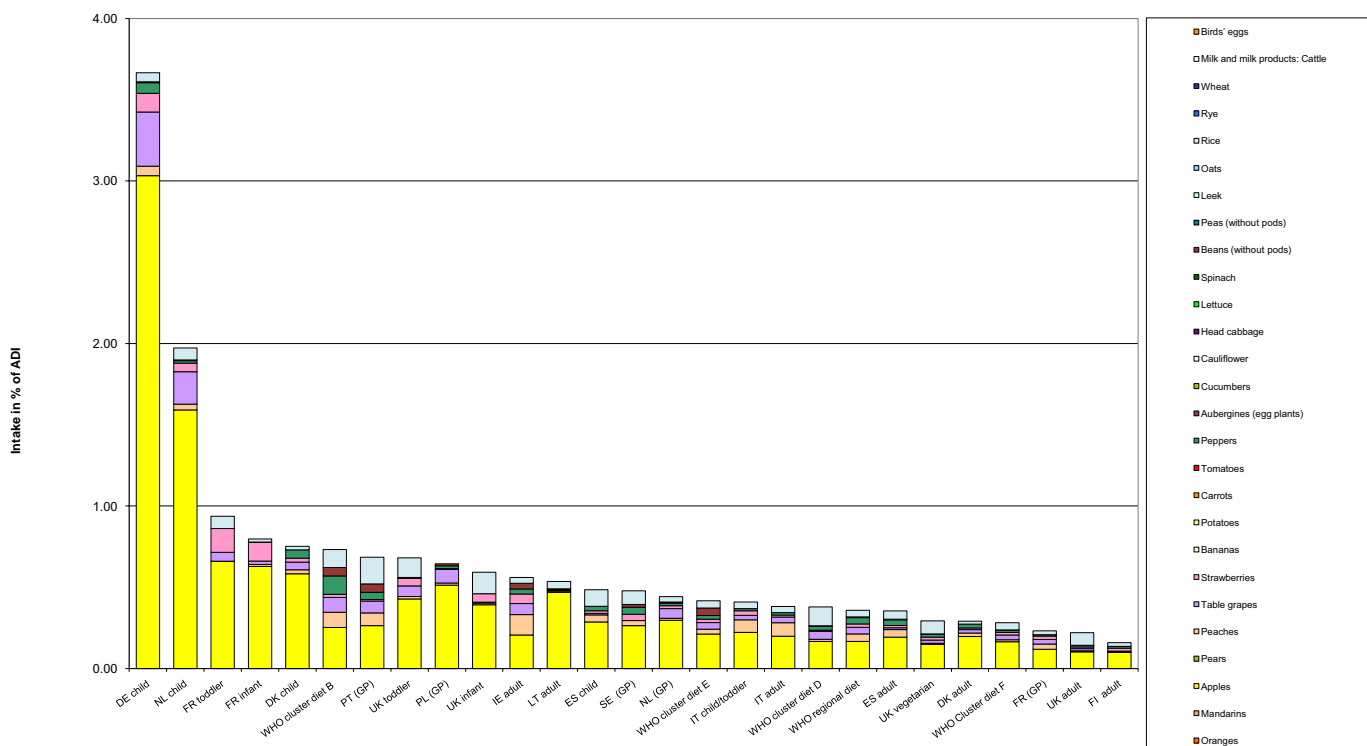
Active substance was not assessed regarding the setting of an ARID.  
The acute risk assessment was performed on the basis of the ADI.

Chronic risk assessment							
				Exposure (range) in % of ADI minimum - maximum			
				4			
No of diets exceeding ADI:				---			
Highest calculated exposure in % of ADI	MS Diet	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
3.7	DE child	3.0	Apples	0.3	Table grapes	0.1	Strawberries
2.0	NL child	1.6	Apples	0.2	Table grapes	0.1	Rice
0.9	FR toddler	0.7	Apples	0.1	Strawberries	0.1	Rice
0.8	FR infant	0.6	Apples	0.1	Strawberries	0.0	Table grapes
0.8	DK child	0.6	Apples	0.1	Peppers	0.0	Table grapes
0.7	WHO cluster diet B	0.3	Apples	0.1	Peppers	0.1	Rice
0.7	PT (GP)	0.3	Apples	0.2	Rice	0.1	Peaches
0.7	UK toddler	0.4	Apples	0.1	Rice	0.1	Table grapes
0.6	PL (GP)	0.5	Apples	0.1	Table grapes	0.0	Peppers
0.6	UK infant	0.4	Apples	0.1	Rice	0.1	Strawberries
0.6	IE adult	0.2	Apples	0.1	Peaches	0.1	Table grapes
0.5	LT adult	0.5	Apples	0.0	Rice	0.0	Strawberries
0.5	ES child	0.3	Apples	0.1	Rice	0.0	Peaches
0.5	SE (GP)	0.3	Apples	0.1	Rice	0.0	Peppers
0.4	NL (GP)	0.3	Apples	0.1	Table grapes	0.0	Rice
0.4	WHO cluster diet E	0.2	Apples	0.0	Beans (without pods)	0.0	Rice
0.4	IT child/toddler	0.2	Apples	0.1	Peaches	0.0	Rice
0.4	IT adult	0.2	Apples	0.1	Peaches	0.0	Rice
0.4	WHO cluster diet D	0.2	Apples	0.1	Rice	0.0	Table grapes
0.4	WHO regional diet	0.2	Apples	0.0	Peaches	0.0	Rice
0.4	ES adult	0.2	Apples	0.1	Rice	0.0	Peaches
0.3	UK vegetarian	0.1	Apples	0.1	Rice	0.0	Table grapes
0.3	DK adult	0.2	Apples	0.0	Peppers	0.0	Peaches
0.3	WHO Cluster diet F	0.2	Apples	0.0	Rice	0.0	Table grapes
0.2	FR (GP)	0.1	Apples	0.0	Peaches	0.0	Table grapes
0.2	UK adult	0.1	Apples	0.1	Rice	0.0	Table grapes
0.2	FI adult	0.1	Apples	0.0	Rice	0.0	Strawberries

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	0.1	1225	0.08		0.08	1	104.77	DE child	
2009	Bananas	0.1	1075							
2009	Peppers	0.02	1278	0.16		0.01		16.37	DE child	
2009	Aubergines (egg plants)	0.02	856							
2009	Cauliflower	0.02	746							
2009	Peas (without pods)	0.02	652							
2009	Wheat	0.1	804							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Hexaconazole



Hexythiazox			
Status of the active substance:	Excluded		
Code number:	76		
Toxicological end points			
ADI (mg/kg bw/day):	0.03	ARID (mg/kg bw):	n.n.
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2010	Year of evaluation:	2010

**Chronic risk assessment**

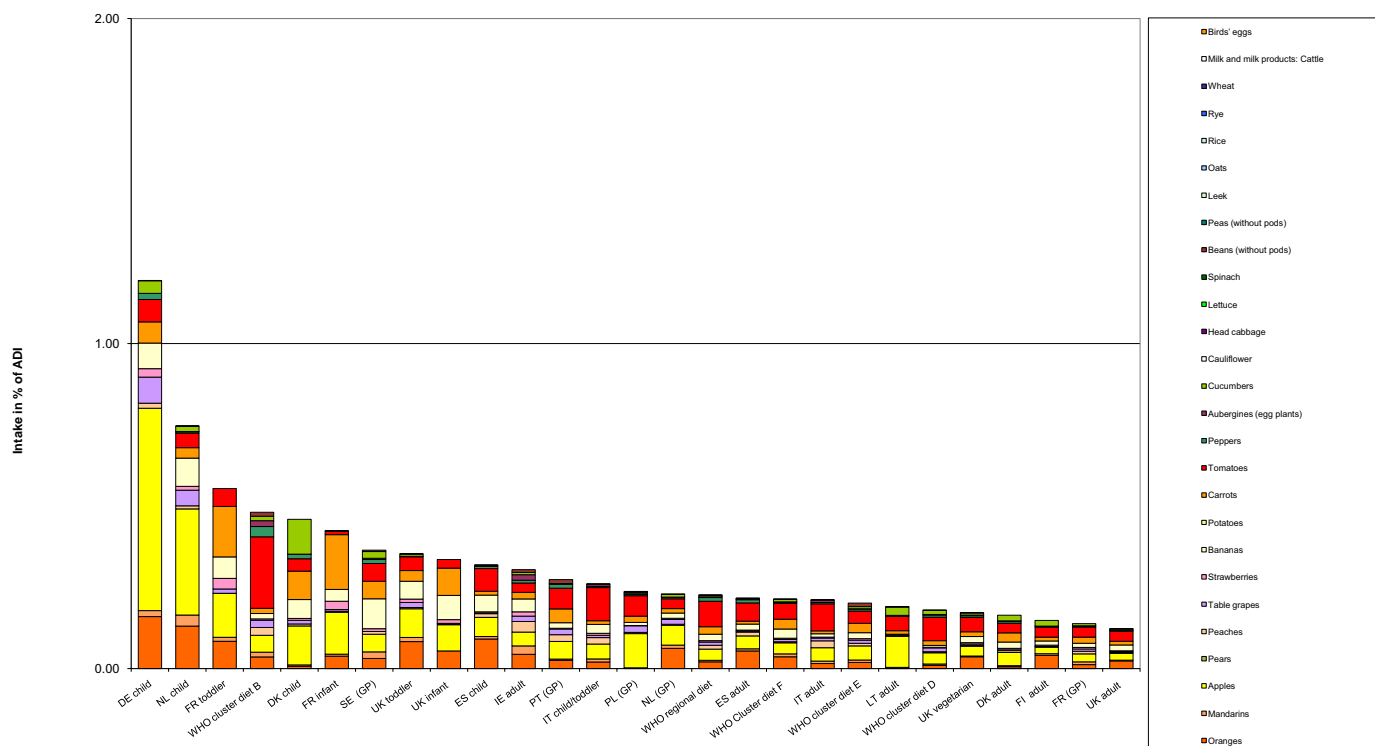
		Exposure (range) in % of ADI minimum - maximum					
		1					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.2	DE child	0.6	Apples	0.2	Oranges	0.1	Table grapes
0.7	NL child	0.3	Apples	0.1	Oranges	0.1	Bananas
0.6	FR toddler	0.2	Carrots	0.1	Apples	0.1	Oranges
0.5	WHO cluster diet B	0.2	Tomatoes	0.1	Apples	0.0	Oranges
0.5	DK child	0.1	Apples	0.1	Cucumbers	0.1	Carrots
0.4	FR infant	0.2	Carrots	0.1	Apples	0.0	Oranges
0.4	SE (GP)	0.1	Bananas	0.1	Tomatoes	0.1	Apples
0.4	UK toddler	0.1	Apples	0.1	Oranges	0.1	Bananas
0.3	UK infant	0.1	Carrots	0.1	Apples	0.1	Bananas
0.3	ES child	0.1	Oranges	0.1	Tomatoes	0.1	Apples
0.3	IE adult	0.0	Oranges	0.0	Apples	0.0	Bananas
0.3	PT (GP)	0.1	Tomatoes	0.1	Apples	0.0	Carrots
0.3	IT child/toddler	0.1	Tomatoes	0.0	Apples	0.0	Bananas
0.2	PL (GP)	0.1	Apples	0.1	Tomatoes	0.0	Table grapes
0.2	NL (GP)	0.1	Oranges	0.1	Apples	0.0	Tomatoes
0.2	WHO regional diet	0.1	Tomatoes	0.0	Apples	0.0	Carrots
0.2	ES adult	0.1	Tomatoes	0.1	Oranges	0.0	Apples
0.2	WHO Cluster diet F	0.0	Tomatoes	0.0	Oranges	0.0	Apples
0.2	IT adult	0.1	Tomatoes	0.0	Apples	0.0	Peaches
0.2	WHO cluster diet E	0.0	Apples	0.0	Tomatoes	0.0	Carrots
0.2	LT adult	0.1	Apples	0.0	Tomatoes	0.0	Cucumbers
0.2	WHO cluster diet D	0.1	Tomatoes	0.0	Apples	0.0	Carrots
0.2	UK vegetarian	0.0	Tomatoes	0.0	Oranges	0.0	Apples
0.2	DK adult	0.0	Apples	0.0	Tomatoes	0.0	Carrots
0.1	FI adult	0.0	Oranges	0.0	Tomatoes	0.0	Apples
0.1	FR (GP)	0.0	Tomatoes	0.0	Apples	0.0	Carrots
0.1	UK adult	0.0	Tomatoes	0.0	Oranges	0.0	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	1	1116	1.34		0.054				
2009	Bananas	0.5	862	0.3		0.03				
2009	Peppers	0.5	1130	0.88		0.03				
2009	Aubergines (egg plants)	0.5	733	0.14		0.004				
2009	Cauliflower	2	639							
2009	Peas (without pods)	0.5	568							
2009	Wheat	0.5	581							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Hexythiazox**



Imazalil			
Status of the active substance:	Included		
Code number:	77		
Toxicological end points			
ADI (mg/kg bw/day):	0.025	ARID (mg/kg bw):	0.05
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2010	Year of evaluation:	2010

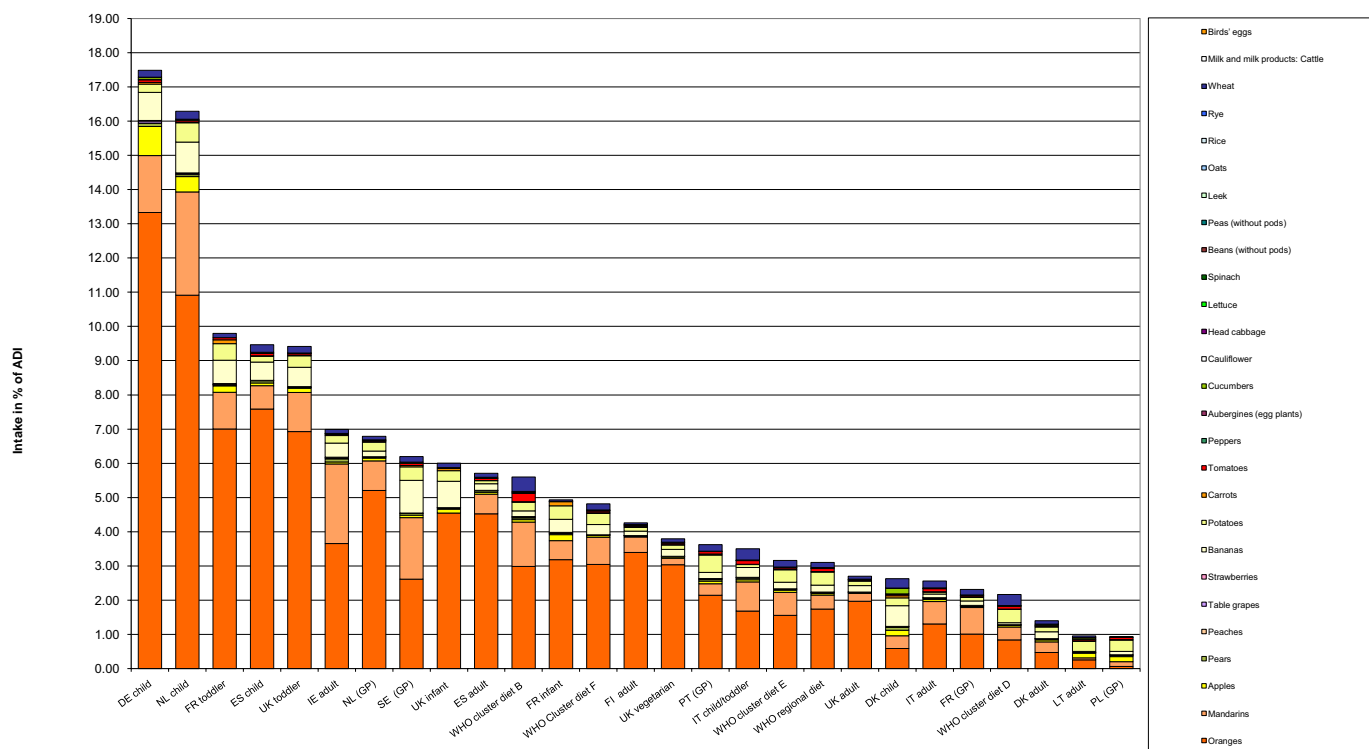
**Chronic risk assessment**

		Exposure (range) in % of ADI minimum - maximum					
		1	17				
No of diets exceeding ADI:							
		1	---				
Highest calculated exposure in % of ADI	MS Diet	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
17.5	DE child	13.3	Oranges	1.7	Mandarins	0.9	Apples
16.3	NL child	10.9	Oranges	3.0	Mandarins	0.9	Bananas
9.8	FR toddler	7.0	Oranges	1.1	Mandarins	0.7	Bananas
9.5	ES child	7.6	Oranges	0.7	Mandarins	0.5	Bananas
9.4	UK toddler	6.9	Oranges	1.1	Mandarins	0.6	Bananas
7.0	IE adult	3.7	Oranges	2.3	Mandarins	0.4	Bananas
6.8	NL (GP)	5.2	Oranges	0.9	Mandarins	0.3	Potatoes
6.2	SE (GP)	2.6	Oranges	1.8	Mandarins	1.0	Bananas
6.0	UK infant	4.5	Oranges	0.8	Bananas	0.3	Potatoes
5.7	ES adult	4.5	Oranges	0.6	Mandarins	0.2	Bananas
5.6	WHO cluster diet B	3.0	Oranges	1.3	Mandarins	0.4	Wheat
4.9	FR infant	3.2	Oranges	0.6	Mandarins	0.4	Potatoes
4.8	WHO Cluster diet F	3.0	Oranges	0.8	Mandarins	0.3	Potatoes
4.3	FI adult	3.4	Oranges	0.5	Mandarins	0.1	Bananas
3.8	UK vegetarian	3.0	Oranges	0.2	Bananas	0.2	Mandarins
3.6	PT (GP)	2.1	Oranges	0.5	Potatoes	0.3	Mandarins
3.5	IT child/toddler	1.7	Oranges	0.9	Mandarins	0.3	Wheat
3.2	WHO cluster diet E	1.6	Oranges	0.7	Mandarins	0.4	Potatoes
3.1	WHO regional diet	1.7	Oranges	0.4	Mandarins	0.4	Potatoes
2.7	UK adult	2.0	Oranges	0.2	Mandarins	0.2	Bananas
2.6	DK child	0.6	Bananas	0.6	Oranges	0.4	Mandarins
2.6	IT adult	1.3	Oranges	0.7	Mandarins	0.2	Wheat
2.3	FR (GP)	1.0	Oranges	0.8	Mandarins	0.2	Wheat
2.2	WHO cluster diet D	0.8	Oranges	0.4	Potatoes	0.4	Mandarins
1.4	DK adult	0.5	Oranges	0.3	Mandarins	0.2	Bananas
1.0	LT adult	0.3	Potatoes	0.3	Oranges	0.1	Apples
0.9	PL (GP)	0.3	Potatoes	0.1	Apples	0.1	Mandarins

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	0.02	1354	0.07	0.37	0.2431		31.84	DE child	HRM corrected by PF (0.52)
2009	Bananas	2	1185	49.5	0.08	1.25	4	208.66	UK infant	
2009	Peppers	0.02	1456	0.07	0.07	0.03		3.78	DE child	
2009	Aubergines (egg plants)	0.02	910							
2009	Cauliflower	0.02	813							
2009	Peas (without pods)	0.02	709							
2009	Wheat	0.02	1015	0.20	0.20	0.02		0.69	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Imazalil**



Imidacloprid			
Status of the active substance:	Included		
Code number:	78		
Toxicological end points			
ADI (mg/kg bw/day):	0.06	ARID (mg/kg bw):	0.08
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2008	Year of evaluation:	2008

**Chronic risk assessment**

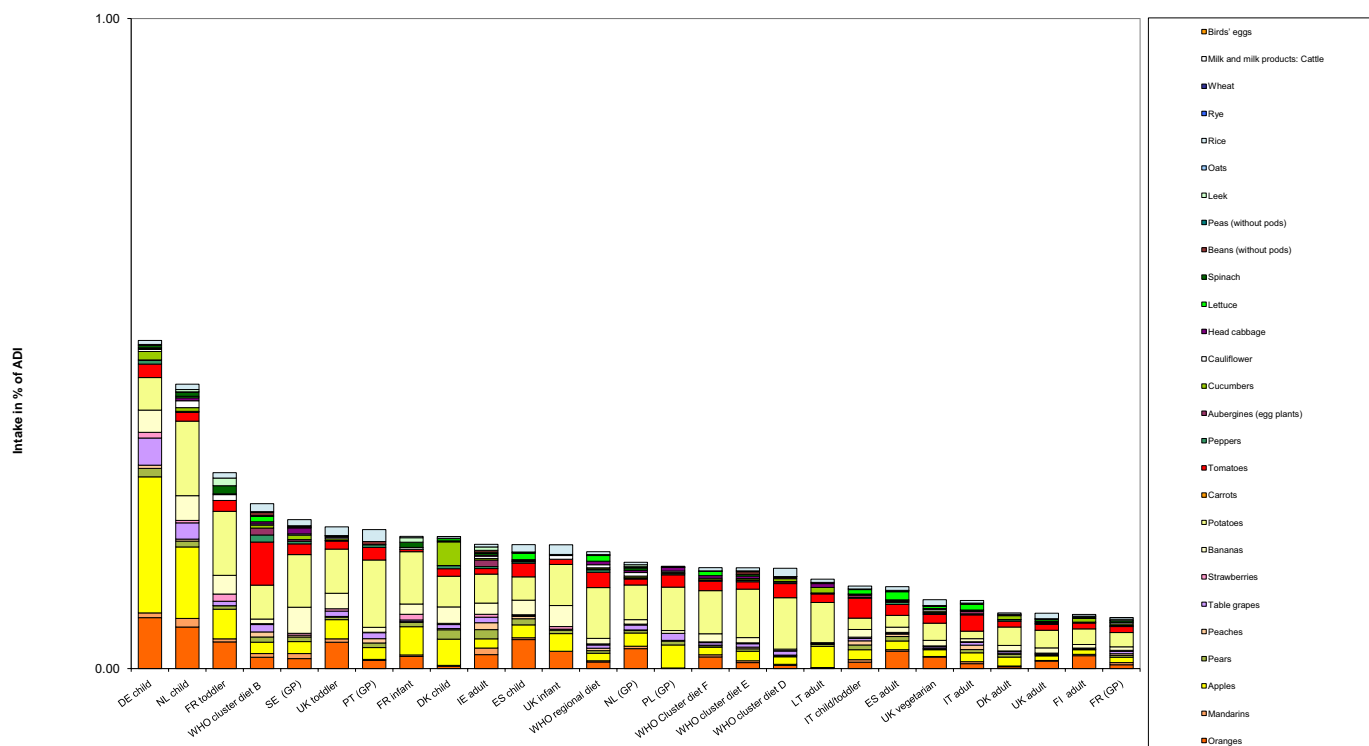
Exposure (range) in % of ADI minimum - maximum		1					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.5	DE child	0.2	Apples	0.1	Oranges	0.0	Potatoes
0.4	NL child	0.1	Potatoes	0.1	Apples	0.1	Oranges
0.3	FR toddler	0.1	Potatoes	0.0	Apples	0.0	Oranges
0.3	WHO cluster diet B	0.1	Tomatoes	0.1	Potatoes	0.0	Oranges
0.2	SE (GP)	0.1	Potatoes	0.0	Bananas	0.0	Apples
0.2	UK toddler	0.1	Potatoes	0.0	Oranges	0.0	Apples
0.2	PT (GP)	0.1	Potatoes	0.0	Tomatoes	0.0	Rice
0.2	FR infant	0.1	Potatoes	0.0	Apples	0.0	Oranges
0.2	DK child	0.0	Potatoes	0.0	Apples	0.0	Cucumbers
0.2	IE adult	0.0	Potatoes	0.0	Oranges	0.0	Bananas
0.2	ES child	0.0	Oranges	0.0	Potatoes	0.0	Bananas
0.2	UK infant	0.1	Potatoes	0.0	Bananas	0.0	Apples
0.2	WHO regional diet	0.1	Potatoes	0.0	Tomatoes	0.0	Apples
0.2	NL (GP)	0.1	Potatoes	0.0	Oranges	0.0	Apples
0.2	PL (GP)	0.1	Potatoes	0.0	Apples	0.0	Tomatoes
0.2	WHO Cluster diet F	0.1	Potatoes	0.0	Oranges	0.0	Tomatoes
0.2	WHO cluster diet E	0.1	Potatoes	0.0	Apples	0.0	Tomatoes
0.2	WHO cluster diet D	0.1	Potatoes	0.0	Tomatoes	0.0	Rice
0.1	LT adult	0.1	Potatoes	0.0	Apples	0.0	Tomatoes
0.1	IT child/toddler	0.0	Tomatoes	0.0	Potatoes	0.0	Apples
0.1	ES adult	0.0	Oranges	0.0	Potatoes	0.0	Tomatoes
0.1	UK vegetarian	0.0	Potatoes	0.0	Oranges	0.0	Tomatoes
0.1	IT adult	0.0	Tomatoes	0.0	Apples	0.0	Potatoes
0.1	DK adult	0.0	Potatoes	0.0	Apples	0.0	Tomatoes
0.1	UK adult	0.0	Potatoes	0.0	Oranges	0.0	Tomatoes
0.1	FI adult	0.0	Potatoes	0.0	Oranges	0.0	Tomatoes
0.1	FR (GP)	0.0	Potatoes	0.0	Tomatoes	0.0	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	1	1211	13.38		0.4		32.74	DE child	
2009	Bananas	0.05	979	0.1		0.01		1.04	UK infant	
2009	Peppers	1	1243	7.80	0.13	0.37		29.13	DE child	
2009	Aubergines (egg plants)	0.5	788	15.36		0.56		17.50	UK 4-6 yr	
2009	Cauliflower	0.5	704	0.43		0.05		3.96	NL child	
2009	Peas (without pods)	0.05	652							
2009	Wheat	0.1	676							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Imidacloprid**



Indoxacarb			
Status of the active substance:	Included		
Code number:	79		
Toxicological end points			
ADI (mg/kg bw/day):	0.006	ARID (mg/kg bw):	0.125
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2005	Year of evaluation:	2005

**Chronic risk assessment**

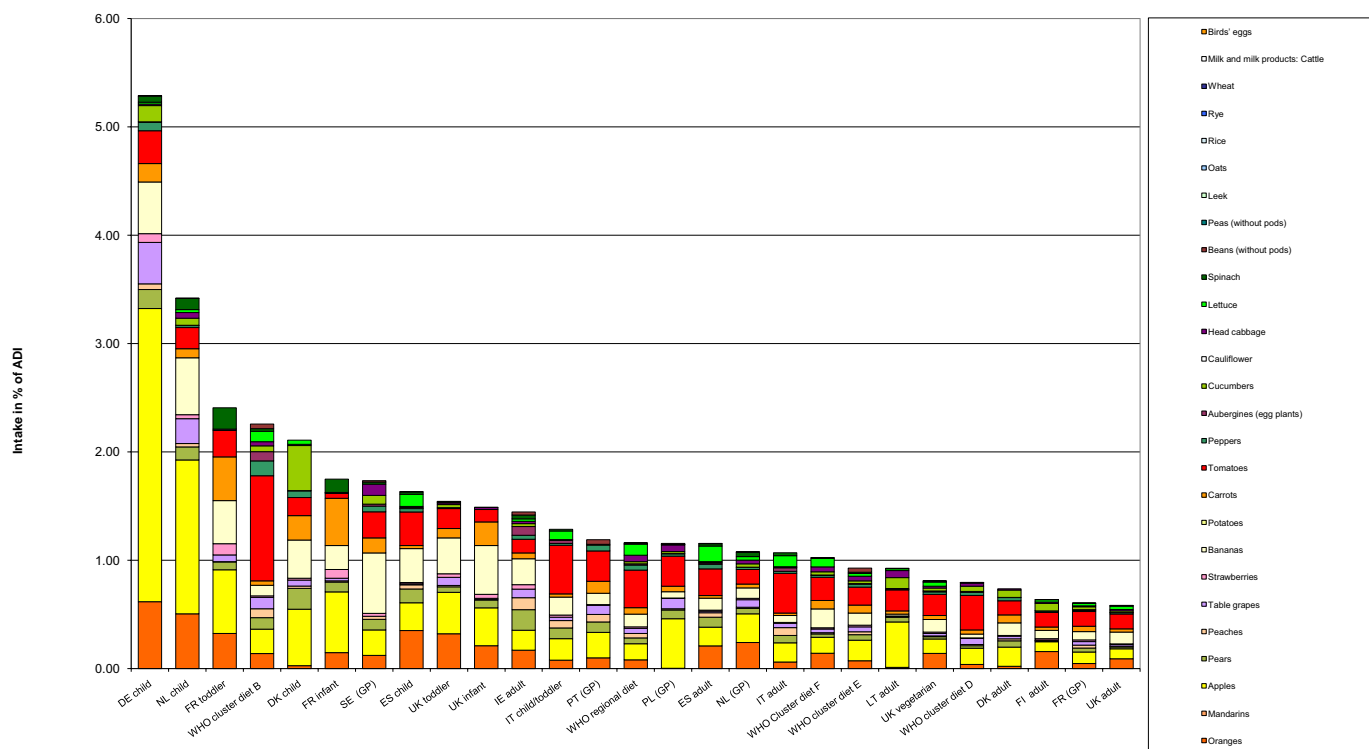
		Exposure (range) in % of ADI minimum - maximum					
		1	5				
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
5.3	DE child	2.7	Apples	0.6	Oranges	0.5	Bananas
3.4	NL child	1.4	Apples	0.5	Bananas	0.5	Oranges
2.4	FR toddler	0.6	Apples	0.4	Carrots	0.4	Bananas
2.3	WHO cluster diet B	1.0	Tomatoes	0.2	Apples	0.1	Oranges
2.1	DK child	0.5	Apples	0.4	Cucumbers	0.4	Bananas
1.7	FR infant	0.6	Apples	0.4	Carrots	0.2	Bananas
1.7	SE (GP)	0.6	Bananas	0.2	Tomatoes	0.2	Apples
1.6	ES child	0.4	Oranges	0.3	Bananas	0.3	Tomatoes
1.5	UK toddler	0.4	Apples	0.3	Bananas	0.3	Oranges
1.5	UK infant	0.5	Bananas	0.4	Apples	0.2	Carrots
1.4	IE adult	0.2	Bananas	0.2	Pears	0.2	Apples
1.3	IT child/toddler	0.4	Tomatoes	0.2	Apples	0.2	Bananas
1.2	PT (GP)	0.3	Tomatoes	0.2	Apples	0.1	Carrots
1.2	WHO regional diet	0.3	Tomatoes	0.1	Apples	0.1	Bananas
1.2	PL (GP)	0.5	Apples	0.3	Tomatoes	0.1	Table grapes
1.2	ES adult	0.2	Tomatoes	0.2	Oranges	0.2	Apples
1.1	NL (GP)	0.3	Apples	0.2	Oranges	0.1	Tomatoes
1.1	IT adult	0.4	Tomatoes	0.2	Apples	0.1	Lettuce
1.0	WHO Cluster diet F	0.2	Tomatoes	0.2	Bananas	0.1	Apples
0.9	WHO cluster diet E	0.2	Apples	0.2	Tomatoes	0.1	Bananas
0.9	LT adult	0.4	Apples	0.2	Tomatoes	0.1	Cucumbers
0.8	UK vegetarian	0.2	Tomatoes	0.1	Oranges	0.1	Apples
0.8	WHO cluster diet D	0.3	Tomatoes	0.1	Apples	0.1	Table grapes
0.7	DK adult	0.2	Apples	0.1	Tomatoes	0.1	Bananas
0.6	FI adult	0.2	Oranges	0.1	Tomatoes	0.1	Apples
0.6	FR (GP)	0.1	Tomatoes	0.1	Apples	0.1	Bananas
0.6	UK adult	0.1	Tomatoes	0.1	Bananas	0.1	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	2	1065	5.35		0.69		36.14	DE child	
2009	Bananas	0.2	866	0.8	0.12	0.21		14.04	UK infant	
2009	Peppers	0.3	1071	5.79		0.19		9.57	DE child	
2009	Aubergines (egg plants)	0.5	721	0.83		0.01		0.20	UK 4-6 yr	
2009	Cauliflower	0.3	656							
2009	Peas (without pods)	0.02	600							
2009	Wheat	0.02	617							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Indoxacarb**



<b>Iprodione</b>			
Status of the active substance:	<b>Included</b>		
Code number:	<b>80</b>		
<b>Toxicological end points</b>			
ADI (mg/kg bw/day):	<b>0.06</b>	ARID (mg/kg bw):	<b>n.n.</b>
Source of ADI:	<b>COM</b>	Source of ARID:	<b>COM</b>
Year of evaluation:	<b>2002</b>	Year of evaluation:	<b>2002</b>

**Chronic risk assessment**

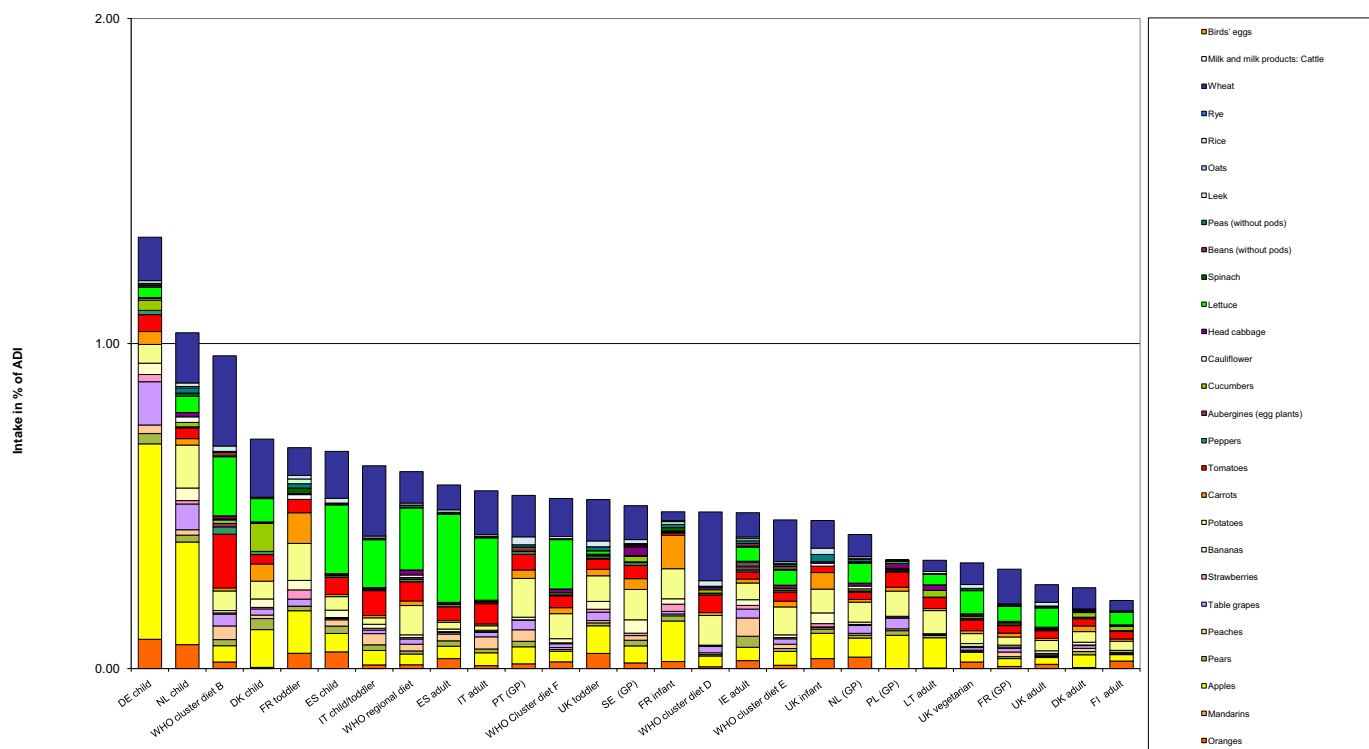
		Exposure (range) in % of ADI minimum - maximum					
		1					
		<b>No of diets exceeding ADI:</b>					
		---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.3	DE child	0.6	Apples	0.1	Wheat	0.1	Table grapes
1.0	NL child	0.3	Apples	0.2	Wheat	0.1	Potatoes
1.0	WHO cluster diet B	0.3	Wheat	0.2	Lettuce	0.2	Tomatoes
0.7	DK child	0.2	Wheat	0.1	Apples	0.1	Cucumbers
0.7	FR toddler	0.1	Apples	0.1	Potatoes	0.1	Carrots
0.7	ES child	0.2	Lettuce	0.1	Wheat	0.1	Apples
0.6	IT child/toddler	0.2	Wheat	0.1	Lettuce	0.1	Tomatoes
0.6	WHO regional diet	0.2	Lettuce	0.1	Wheat	0.1	Potatoes
0.6	ES adult	0.3	Lettuce	0.1	Wheat	0.0	Tomatoes
0.5	IT adult	0.2	Lettuce	0.1	Wheat	0.1	Tomatoes
0.5	PT (GP)	0.1	Wheat	0.1	Potatoes	0.1	Apples
0.5	WHO Cluster diet F	0.2	Lettuce	0.1	Wheat	0.1	Potatoes
0.5	UK toddler	0.1	Wheat	0.1	Apples	0.1	Potatoes
0.5	SE (GP)	0.1	Wheat	0.1	Potatoes	0.1	Apples
0.5	FR infant	0.1	Apples	0.1	Carrots	0.1	Potatoes
0.5	WHO cluster diet D	0.2	Wheat	0.1	Potatoes	0.1	Tomatoes
0.5	IE adult	0.1	Wheat	0.1	Peaches	0.1	Potatoes
0.5	WHO cluster diet E	0.1	Wheat	0.1	Potatoes	0.0	Lettuce
0.5	UK infant	0.1	Wheat	0.1	Apples	0.1	Potatoes
0.4	NL (GP)	0.1	Wheat	0.1	Potatoes	0.1	Lettuce
0.3	PL (GP)	0.1	Apples	0.1	Potatoes	0.0	Tomatoes
0.3	LT adult	0.1	Apples	0.1	Potatoes	0.0	Wheat
0.3	UK vegetarian	0.1	Lettuce	0.1	Wheat	0.0	Tomatoes
0.3	FR (GP)	0.1	Wheat	0.0	Lettuce	0.0	Potatoes
0.3	UK adult	0.1	Lettuce	0.1	Wheat	0.0	Potatoes
0.2	DK adult	0.1	Wheat	0.0	Apples	0.0	Potatoes
0.2	FI adult	0.0	Lettuce	0.0	Wheat	0.0	Potatoes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	10	1558	14.31		3.517				
2009	Bananas	0.02	1262	0.1	0.08	0.02				
2009	Peppers	5	1560	2.82		2.20				
2009	Aubergines (egg plants)	5	991	1.82		0.27				
2009	Cauliflower	0.1	852	0.35	0.13	0.08				
2009	Peas (without pods)	0.3	748	5.08		0.34				
2009	Wheat	0.5	1209	0.17		0.06				
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Iprodione**



Iprovalicarb			
Status of the active substance:	Included		
Code number:	81		
Toxicological end points			
ADI (mg/kg bw/day):	0.015	ARID (mg/kg bw):	n.n.
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2002	Year of evaluation:	2002

**Chronic risk assessment**

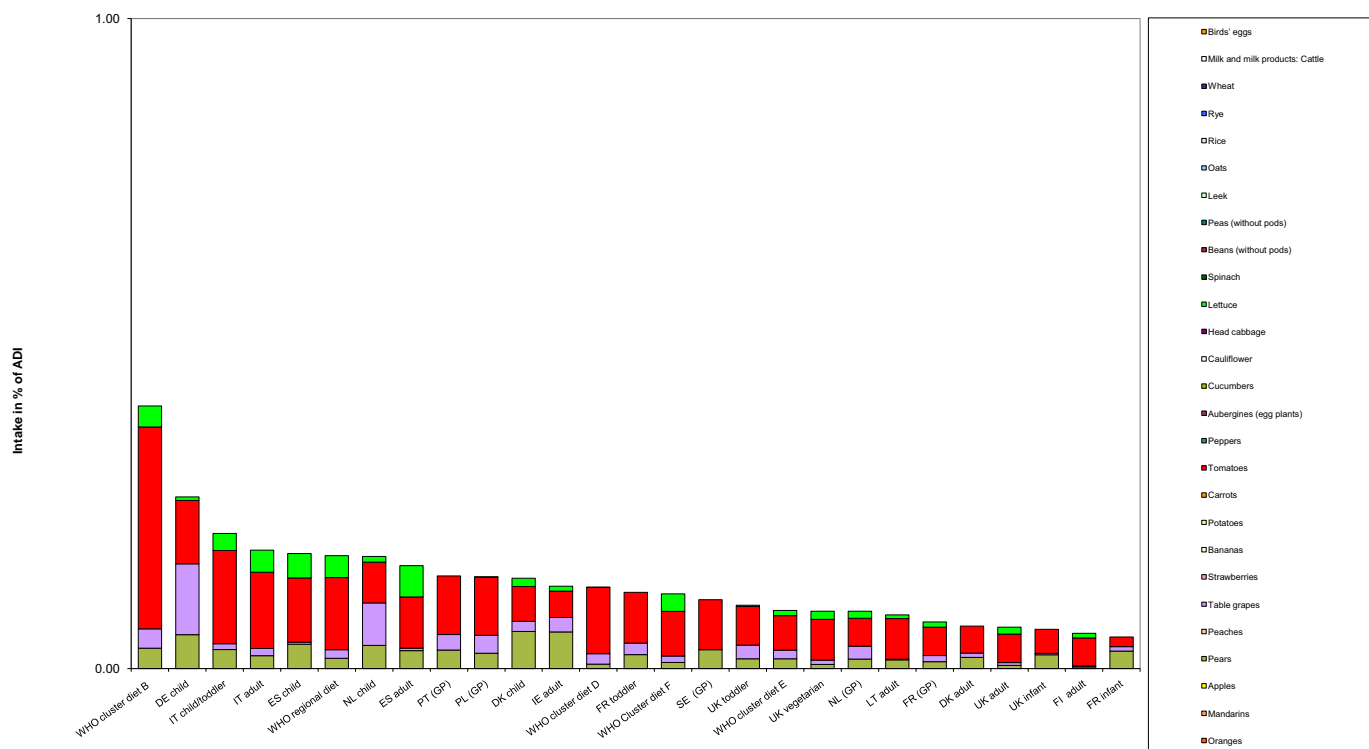
Highest calculated exposure in % of ADI		MS Diet		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
0.4	WHO cluster diet B	0.3	Tomatoes	0.0	Lettuce	0.0	Pears	0.1	Table grapes	0.1	Pears	0.0	Lettuce	0.0	Pears
0.3	DE child	0.1	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Pears	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.2	IT child/toddler	0.1	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.2	IT adult	0.1	Tomatoes	0.0	Pears	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.2	ES child	0.1	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.2	WHO regional diet	0.1	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.2	NL child	0.1	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Pears	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.2	ES adult	0.1	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	PT (GP)	0.1	Tomatoes	0.0	Pears	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	PL (GP)	0.1	Tomatoes	0.0	Pears	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	DK child	0.1	Pears	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	IE adult	0.1	Pears	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	WHO cluster diet D	0.1	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	FR toddler	0.1	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	WHO Cluster diet F	0.1	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	SE (GP)	0.1	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	UK toddler	0.1	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	WHO cluster diet E	0.1	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	UK vegetarian	0.1	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	NL (GP)	0.0	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	LT adult	0.1	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	FR (GP)	0.0	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	DK adult	0.0	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	UK adult	0.0	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	UK infant	0.0	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.1	FI adult	0.0	Tomatoes	0.0	Lettuce	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears
0.0	FR infant	0.0	Pears	0.0	Tomatoes	0.0	Table grapes	0.0	Tomatoes	0.0	Table grapes	0.0	Lettuce	0.0	Pears

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	2	1179	1.87		0.187				
2009	Bananas	0.05	931							
2009	Peppers	0.05	1228							
2009	Aubergines (egg plants)	0.05	748							
2009	Cauliflower	0.05	679							
2009	Peas (without pods)	0.05	590							
2009	Wheat	0.05	572							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Iprovalicarb**





Kresoxim-methyl			
Status of the active substance:	Included		
Code number:	82		
Toxicological end points			
ADI (mg/kg bw/day):	0.4	ARID (mg/kg bw):	n.n.
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2010	Year of evaluation:	2010

**Chronic risk assessment**

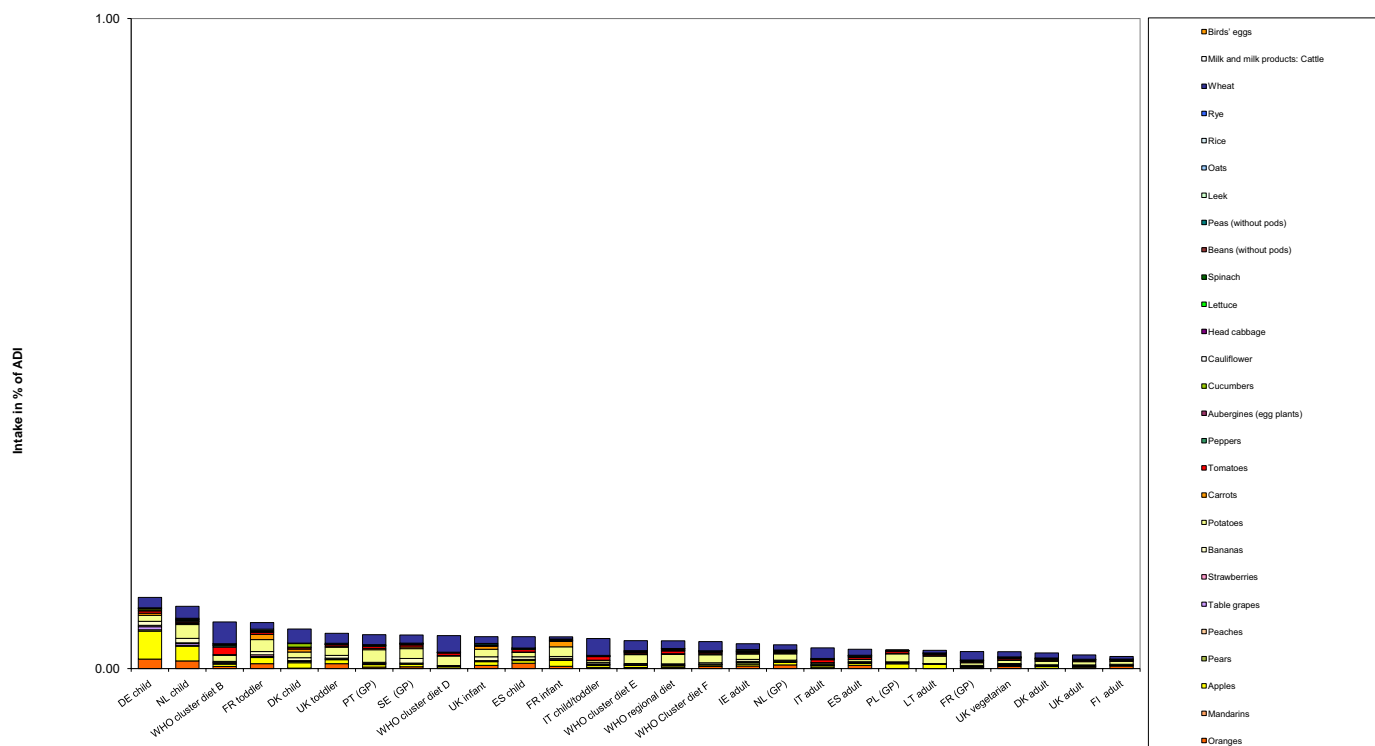
Highest calculated exposure in % of ADI		Exposure (range) in % of ADI minimum - maximum					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.1	DE child	0.0	Apples	0.0	Wheat	0.0	Oranges
0.1	NL child	0.0	Apples	0.0	Potatoes	0.0	Wheat
0.1	WHO cluster diet B	0.0	Wheat	0.0	Tomatoes	0.0	Potatoes
0.1	FR toddler	0.0	Potatoes	0.0	Wheat	0.0	Apples
0.1	DK child	0.0	Wheat	0.0	Potatoes	0.0	Apples
0.1	UK toddler	0.0	Wheat	0.0	Potatoes	0.0	Oranges
0.1	PT (GP)	0.0	Potatoes	0.0	Wheat	0.0	Apples
0.1	SE (GP)	0.0	Potatoes	0.0	Wheat	0.0	Bananas
0.1	WHO cluster diet D	0.0	Wheat	0.0	Potatoes	0.0	Tomatoes
0.0	UK infant	0.0	Potatoes	0.0	Wheat	0.0	Bananas
0.0	ES child	0.0	Wheat	0.0	Oranges	0.0	Potatoes
0.0	FR infant	0.0	Potatoes	0.0	Apples	0.0	Carrots
0.0	IT child/toddler	0.0	Wheat	0.0	Tomatoes	0.0	Potatoes
0.0	WHO cluster diet E	0.0	Wheat	0.0	Potatoes	0.0	Apples
0.0	WHO regional diet	0.0	Potatoes	0.0	Wheat	0.0	Tomatoes
0.0	WHO Cluster diet F	0.0	Wheat	0.0	Potatoes	0.0	Oranges
0.0	IE adult	0.0	Wheat	0.0	Potatoes	0.0	Oranges
0.0	NL (GP)	0.0	Potatoes	0.0	Wheat	0.0	Oranges
0.0	IT adult	0.0	Wheat	0.0	Tomatoes	0.0	Apples
0.0	ES adult	0.0	Wheat	0.0	Oranges	0.0	Potatoes
0.0	PL (GP)	0.0	Potatoes	0.0	Apples	0.0	Tomatoes
0.0	LT adult	0.0	Potatoes	0.0	Apples	0.0	Wheat
0.0	FR (GP)	0.0	Wheat	0.0	Potatoes	0.0	Apples
0.0	UK vegetarian	0.0	Wheat	0.0	Potatoes	0.0	Oranges
0.0	DK adult	0.0	Wheat	0.0	Potatoes	0.0	Apples
0.0	UK adult	0.0	Wheat	0.0	Potatoes	0.0	Oranges
0.0	FI adult	0.0	Potatoes	0.0	Wheat	0.0	Oranges

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	1	1416	1.13		0.15				
2009	Bananas	0.05	1126	0.2		0.03				
2009	Peppers	1	1443	0.55		0.17				
2009	Aubergines (egg plants)	0.5	932							
2009	Cauliflower	0.05	824	0.12		0.02				
2009	Peas (without pods)	0.05	713	0.14		0.02				
2009	Wheat	0.05	1197	0.08		0.03				
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Kresoxim-methyl**



<b>lambda-Cyhalothrin</b>			
Status of the active substance:	<b>Included</b>		
Code number:	<b>83</b>		
<b>Toxicological end points</b>			
ADI (mg/kg bw/day):	<b>0.005</b>	ARID (mg/kg bw):	<b>0.0075</b>
Source of ADI:	<b>COM</b>	Source of ARID:	<b>COM</b>
Year of evaluation:	<b>2001</b>	Year of evaluation:	<b>2001</b>

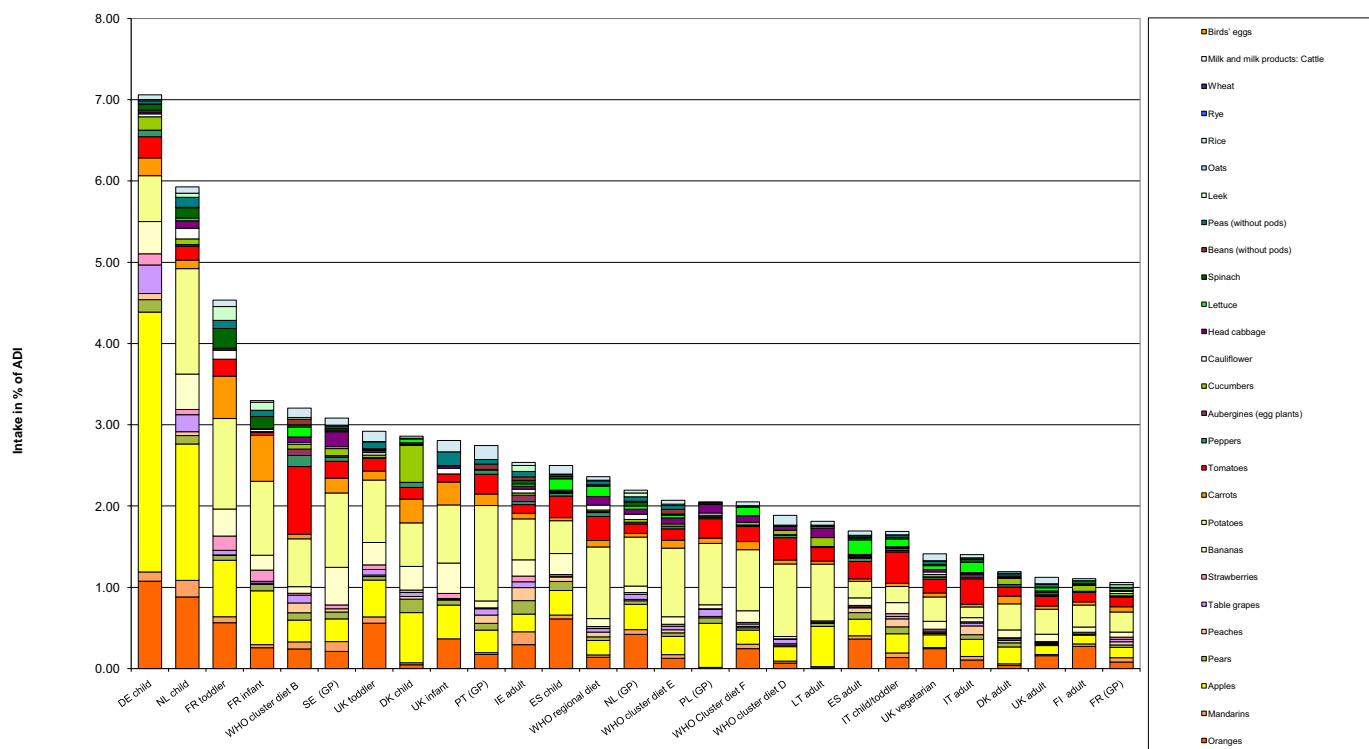
**Chronic risk assessment**

		Exposure (range) in % of ADI minimum - maximum					
		1	7				
No of diets exceeding ADI:							
		1	---				
Highest calculated exposure in % of ADI	MS Diet	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
7.1	DE child	3.2	Apples	1.1	Oranges	0.6	Potatoes
5.9	NL child	1.7	Apples	1.3	Potatoes	0.9	Oranges
4.5	FR toddler	1.1	Potatoes	0.7	Apples	0.6	Oranges
3.3	FR infant	0.9	Potatoes	0.7	Apples	0.6	Carrots
3.2	WHO cluster diet B	0.8	Tomatoes	0.6	Potatoes	0.3	Apples
3.1	SE (GP)	0.9	Potatoes	0.5	Bananas	0.3	Apples
2.9	UK toddler	0.8	Potatoes	0.6	Oranges	0.5	Apples
2.9	DK child	0.6	Apples	0.5	Potatoes	0.5	Cucumbers
2.8	UK infant	0.7	Potatoes	0.4	Apples	0.4	Bananas
2.7	PT (GP)	1.2	Potatoes	0.3	Apples	0.2	Tomatoes
2.5	IE adult	0.5	Potatoes	0.3	Oranges	0.2	Apples
2.5	ES child	0.6	Oranges	0.4	Potatoes	0.3	Apples
2.4	WHO regional diet	0.9	Potatoes	0.3	Tomatoes	0.2	Apples
2.2	NL (GP)	0.6	Potatoes	0.4	Oranges	0.3	Apples
2.1	WHO cluster diet E	0.8	Potatoes	0.2	Apples	0.1	Tomatoes
2.1	PL (GP)	0.8	Potatoes	0.5	Apples	0.2	Tomatoes
2.1	WHO Cluster diet F	0.8	Potatoes	0.2	Oranges	0.2	Tomatoes
1.9	WHO cluster diet D	0.9	Potatoes	0.3	Tomatoes	0.2	Apples
1.8	LT adult	0.7	Potatoes	0.5	Apples	0.2	Tomatoes
1.7	ES adult	0.4	Oranges	0.2	Tomatoes	0.2	Potatoes
1.7	IT child/toddler	0.4	Tomatoes	0.2	Apples	0.2	Potatoes
1.4	UK vegetarian	0.3	Potatoes	0.2	Oranges	0.2	Tomatoes
1.4	IT adult	0.3	Tomatoes	0.2	Apples	0.1	Potatoes
1.2	DK adult	0.3	Potatoes	0.2	Apples	0.1	Tomatoes
1.1	UK adult	0.3	Potatoes	0.2	Oranges	0.1	Tomatoes
1.1	FI adult	0.3	Oranges	0.3	Potatoes	0.1	Tomatoes
1.1	FR (GP)	0.2	Potatoes	0.1	Apples	0.1	Tomatoes

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	0.2	1338	3.14		0.07		61.11	DE child	
2009	Bananas	0.1	1127	0.1		0.03		35.67	UK infant	
2009	Peppers	0.1	1393	0.65		0.05		41.99	DE child	
2009	Aubergines (egg plants)	0.5	867	0.23		0.04		14.67	UK 4-6 yr	
2009	Cauliflower	0.1	767	0.91		0.06		52.87	NL child	
2009	Peas (without pods)	0.2	688	0.29		0.05		5.35	UK infant	
2009	Wheat		971							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: lambda-Cyhalothrin**



Linuron			
Status of the active substance:	Included		
Code number:	84		
Toxicological end points			
ADI (mg/kg bw/day):	0.003	ARID (mg/kg bw):	0.03
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2002	Year of evaluation:	2002

**Chronic risk assessment**

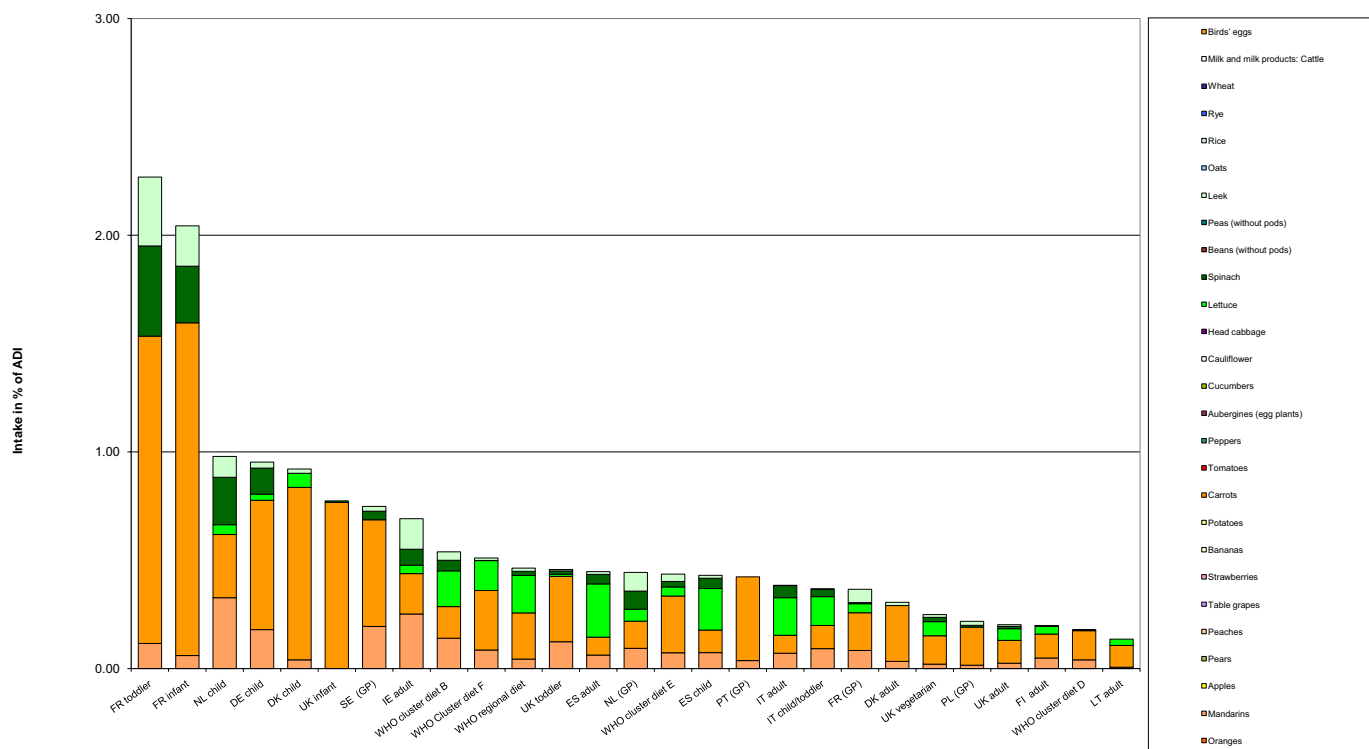
		Exposure (range) in % of ADI minimum - maximum 2					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
2.3	FR toddler	1.4	Carrots	0.4	Spinach	0.3	Leek
2.0	FR infant	1.5	Carrots	0.3	Spinach	0.2	Leek
1.0	NL child	0.3	Mandarins	0.3	Carrots	0.2	Spinach
1.0	DE child	0.6	Carrots	0.2	Mandarins	0.1	Spinach
0.9	DK child	0.8	Carrots	0.1	Lettuce	0.0	Mandarins
0.8	UK infant	0.8	Carrots	0.0	Spinach	0.0	FRUIT (FRESH OR FROZEN)
0.7	SE (GP)	0.5	Carrots	0.2	Mandarins	0.0	Spinach
0.7	IE adult	0.3	Mandarins	0.2	Carrots	0.1	Leek
0.5	WHO cluster diet B	0.2	Lettuce	0.1	Carrots	0.1	Mandarins
0.5	WHO Cluster diet F	0.3	Carrots	0.1	Lettuce	0.1	Mandarins
0.5	WHO regional diet	0.2	Carrots	0.2	Lettuce	0.0	Mandarins
0.5	UK toddler	0.3	Carrots	0.1	Mandarins	0.0	Spinach
0.4	ES adult	0.2	Lettuce	0.1	Carrots	0.1	Mandarins
0.4	NL (GP)	0.1	Carrots	0.1	Mandarins	0.1	Leek
0.4	WHO cluster diet E	0.3	Carrots	0.1	Mandarins	0.0	Lettuce
0.4	ES child	0.2	Lettuce	0.1	Carrots	0.1	Mandarins
0.4	PT (GP)	0.4	Carrots	0.0	Mandarins	0.0	FRUIT (FRESH OR FROZEN)
0.4	IT adult	0.2	Lettuce	0.1	Carrots	0.1	Mandarins
0.4	IT child/toddler	0.1	Lettuce	0.1	Carrots	0.1	Mandarins
0.4	FR (GP)	0.2	Carrots	0.1	Mandarins	0.1	Leek
0.3	DK adult	0.3	Carrots	0.0	Mandarins	0.0	Leek
0.2	UK vegetarian	0.1	Carrots	0.1	Lettuce	0.0	Mandarins
0.2	PL (GP)	0.2	Carrots	0.0	Leek	0.0	Mandarins
0.2	UK adult	0.1	Carrots	0.1	Lettuce	0.0	Mandarins
0.2	FI adult	0.1	Carrots	0.0	Mandarins	0.0	Lettuce
0.2	WHO cluster diet D	0.1	Carrots	0.0	Mandarins	0.0	Lettuce
0.1	LT adult	0.1	Carrots	0.0	Lettuce	0.0	Mandarins

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	1167							
2009	Bananas	0.05	803							
2009	Peppers	0.05	1133							
2009	Aubergines (egg plants)	0.05	728							
2009	Cauliflower	0.05	612							
2009	Peas (without pods)	0.1	546							
2009	Wheat	0.05	616							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Linuron**



Malathion			
Status of the active substance:	Included		
Code number:	85		
Toxicological end points			
ADI (mg/kg bw/day):	0.03	ARID (mg/kg bw):	0.3
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2009	Year of evaluation:	2009

**Chronic risk assessment**

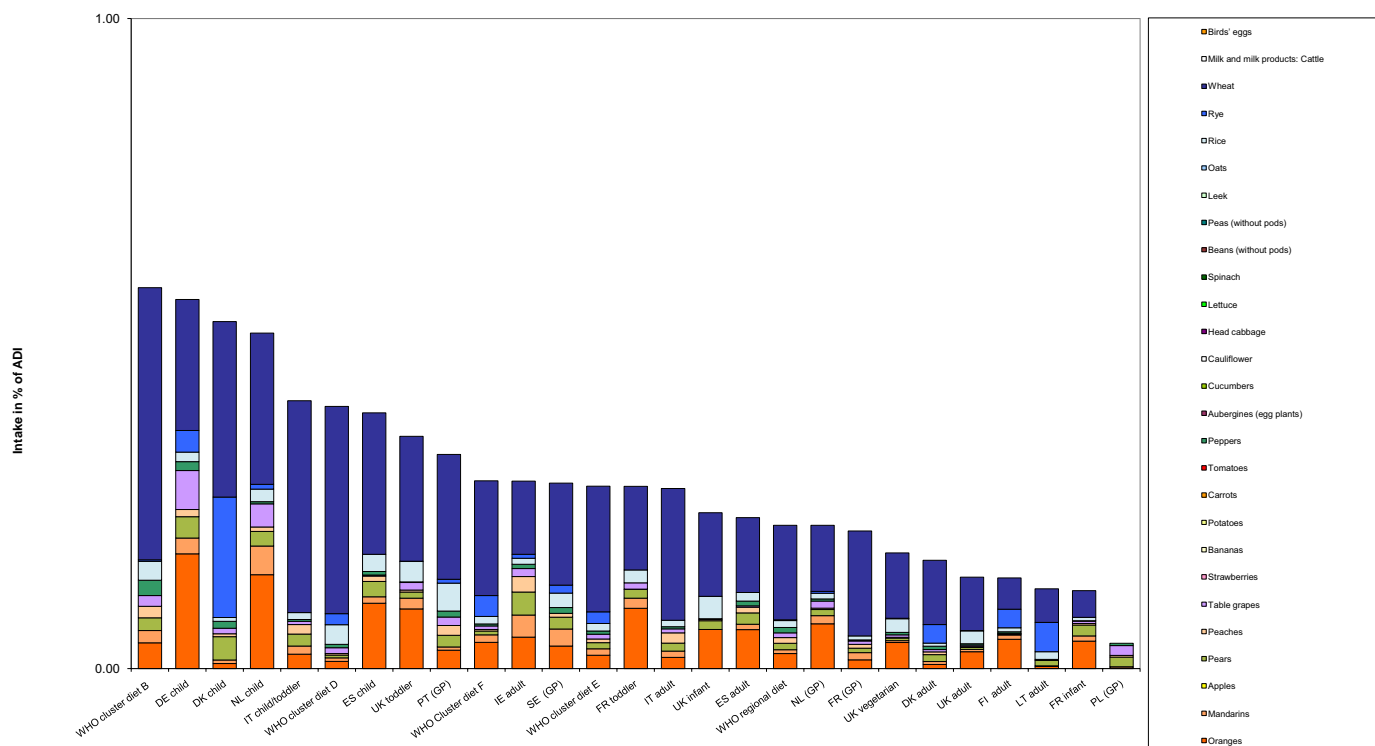
Highest calculated exposure in % of ADI		MS Diet		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
0.6	WHO cluster diet B	0.4	Wheat	0.0	Oranges	0.0	Rice	0.1	Table grapes	0.0	Pears	0.0	Mandarins	0.0	Pears
0.6	DE child	0.2	Wheat	0.2	Oranges	0.0	Rye	0.1	Oranges	0.0	Rice	0.0	Oranges	0.0	Rye
0.5	DK child	0.3	Wheat	0.2	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.5	NL child	0.2	Wheat	0.1	Oranges	0.0	Rice	0.0	Oranges	0.0	Rice	0.0	Oranges	0.0	Rice
0.4	IT child/toddler	0.3	Wheat	0.0	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.4	WHO cluster diet D	0.3	Wheat	0.0	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.4	ES child	0.2	Wheat	0.1	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.4	UK toddler	0.2	Wheat	0.1	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.3	PT (GP)	0.2	Wheat	0.0	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.3	WHO Cluster diet F	0.2	Wheat	0.0	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.3	IE adult	0.1	Wheat	0.0	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.3	SE (GP)	0.2	Wheat	0.0	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.3	WHO cluster diet E	0.2	Wheat	0.0	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.3	FR toddler	0.1	Wheat	0.1	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.3	IT adult	0.2	Wheat	0.0	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.2	UK infant	0.1	Wheat	0.1	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.2	ES adult	0.1	Wheat	0.1	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.2	WHO regional diet	0.1	Wheat	0.0	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.2	NL (GP)	0.1	Wheat	0.1	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.2	FR (GP)	0.2	Wheat	0.0	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.2	UK vegetarian	0.1	Wheat	0.0	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.2	DK adult	0.1	Wheat	0.0	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.1	UK adult	0.1	Wheat	0.0	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.1	FI adult	0.0	Wheat	0.0	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.1	LT adult	0.1	Wheat	0.0	Oranges	0.0	Rice	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.1	FR infant	0.0	Oranges	0.0	Wheat	0.0	Pears	0.0	Wheat	0.0	Pears	0.0	Wheat	0.0	Pears
0.0	PL (GP)	0.0	Table grapes	0.0	Pears	0.0	Peppers	0.0	Pears	0.0	Peppers	0.0	Pears	0.0	Peppers

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	5	1182	0.17	0.08	0.49		10.70	DE child	
2009	Bananas	0.02	852							
2009	Peppers	0.1	1217	0.41		0.03		0.57	DE child	
2009	Aubergines (egg plants)	0.02	702							
2009	Cauliflower	0.02	612							
2009	Peas (without pods)	0.02	545							
2009	Wheat	8	781	1.28		0.15		0.72	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Malathion**



Mepanipyrim			
Status of the active substance:	Included		
Code number:	86		
Toxicological end points			
ADI (mg/kg bw/day):	0.02	ARID (mg/kg bw):	n.n.
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2004	Year of evaluation:	2004

**Chronic risk assessment**

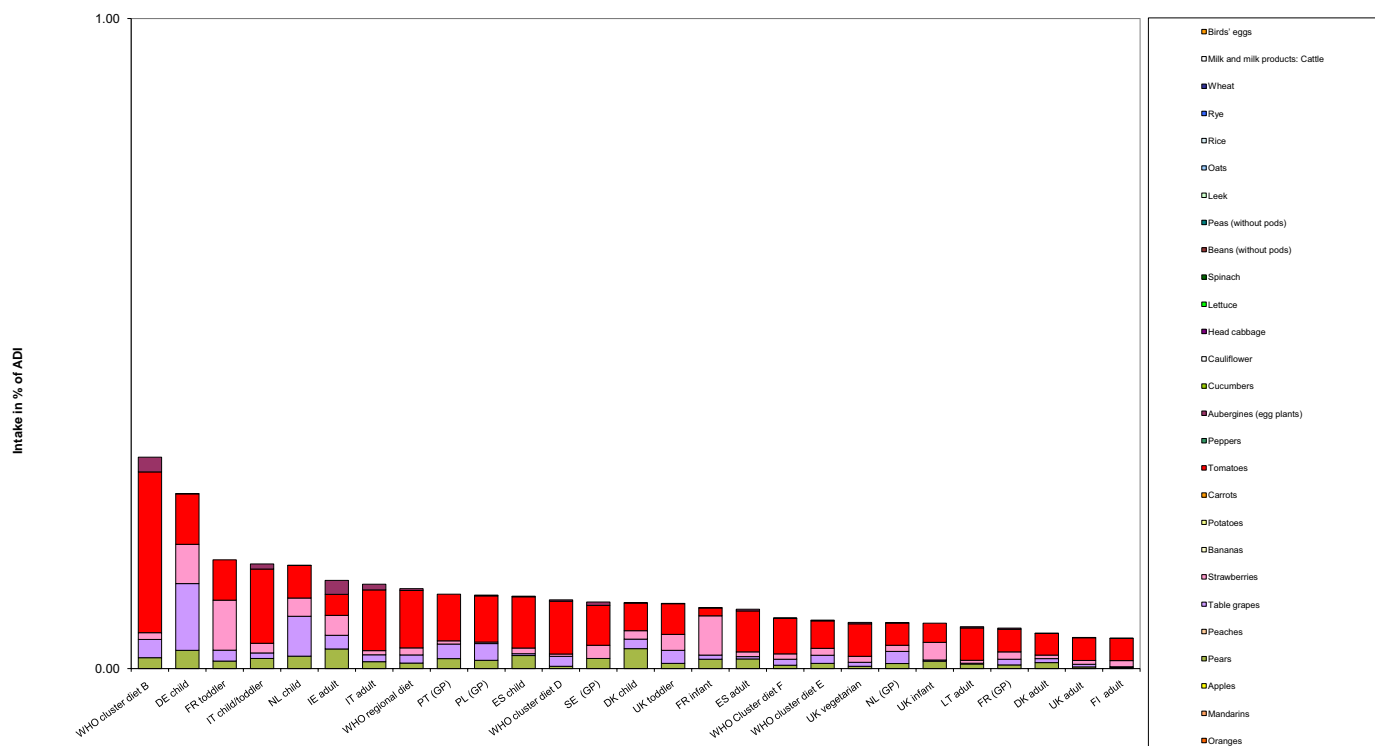
Highest calculated exposure in % of ADI		MS Diet		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities																																																																																																																																																																																																									
0.3	WHO cluster diet B	0.2	Tomatoes	0.0	Table grapes	0.0	Aubergines (egg plants)	0.3	DE child	0.1	Table grapes	0.1	Strawberries	0.2	FR toddler	0.1	Strawberries	0.0	Table grapes	0.0	Table grapes	0.0	Strawberries	0.2	IT child/toddler	0.1	Tomatoes	0.0	Pears	0.0	Strawberries	0.2	NL child	0.1	Table grapes	0.1	Tomatoes	0.0	Strawberries	0.1	IE adult	0.0	Tomatoes	0.0	Strawberries	0.0	Pears	0.1	IT adult	0.1	Tomatoes	0.0	Pears	0.0	Table grapes	0.1	WHO regional diet	0.1	Tomatoes	0.0	Table grapes	0.0	Strawberries	0.1	PT (GP)	0.1	Tomatoes	0.0	Table grapes	0.0	Pears	0.1	PL (GP)	0.1	Tomatoes	0.0	Table grapes	0.0	Pears	0.1	ES child	0.1	Tomatoes	0.0	Pears	0.0	Strawberries	0.1	WHO cluster diet D	0.1	Tomatoes	0.0	Table grapes	0.0	Pears	0.1	SE (GP)	0.1	Tomatoes	0.0	Strawberries	0.0	Pears	0.1	DK child	0.0	Tomatoes	0.0	Pears	0.0	Table grapes	0.1	UK toddler	0.0	Tomatoes	0.0	Strawberries	0.0	Table grapes	0.1	FR infant	0.1	Strawberries	0.0	Pears	0.0	Tomatoes	0.1	ES adult	0.1	Tomatoes	0.0	Pears	0.0	Strawberries	0.1	WHO Cluster diet F	0.1	Tomatoes	0.0	Table grapes	0.0	Strawberries	0.1	WHO cluster diet E	0.0	Tomatoes	0.0	Table grapes	0.0	Strawberries	0.1	UK vegetarian	0.0	Tomatoes	0.0	Table grapes	0.0	Table grapes	0.1	NL (GP)	0.0	Tomatoes	0.0	Table grapes	0.0	Strawberries	0.1	UK infant	0.0	Tomatoes	0.0	Strawberries	0.0	Pears	0.1	LT adult	0.0	Tomatoes	0.0	Pears	0.0	Strawberries	0.1	FR (GP)	0.0	Tomatoes	0.0	Strawberries	0.0	Table grapes	0.1	DK adult	0.0	Tomatoes	0.0	Pears	0.0	Table grapes	0.0	UK adult	0.0	Tomatoes	0.0	Strawberries	0.0	Table grapes	0.0	FI adult	0.0	Tomatoes	0.0	Strawberries	0.0	Table grapes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	3	925	0.65		0.28				
2009	Bananas	0.01	717							
2009	Peppers	0.01	934							
2009	Aubergines (egg plants)	1	641	0.16		0.01				
2009	Cauliflower	0.01	532							
2009	Peas (without pods)	0.01	485							
2009	Wheat	0.01	647							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Mepanipyrim**



Metalaxyl-M			
Status of the active substance:	Included		
Code number:	89		
Toxicological end points			
ADI (mg/kg bw/day):	0.08	ARID (mg/kg bw):	0.5
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2002	Year of evaluation:	2002

**Chronic risk assessment**

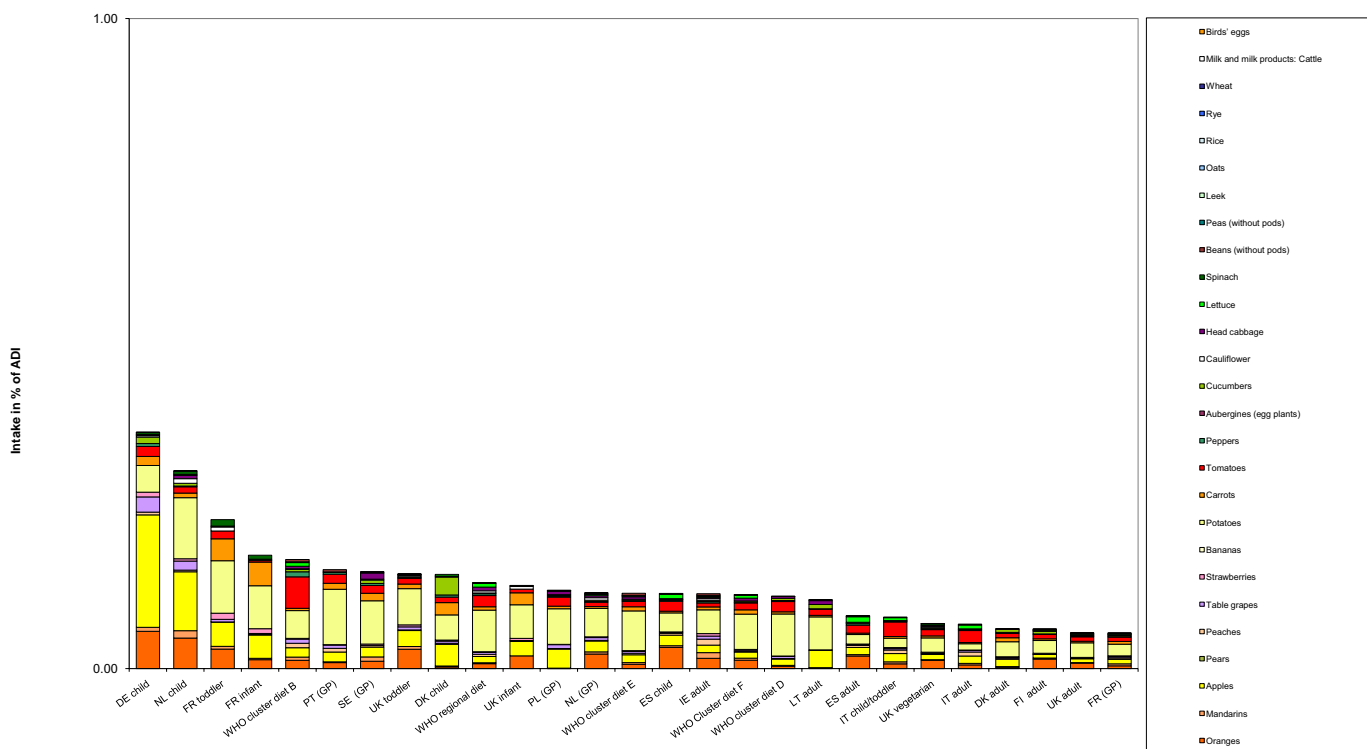
Highest calculated exposure in % of ADI		MS Diet		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
0.4	DE child	0.2	Apples	0.1	Oranges	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Oranges
0.3	NL child	0.1	Potatoes	0.1	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Oranges
0.2	FR toddler	0.1	Potatoes	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Carrots
0.2	FR infant	0.1	Potatoes	0.0	Carrots	0.0	Carrots	0.0	Carrots	0.0	Carrots	0.0	Carrots	0.0	Apples
0.2	WHO cluster diet B	0.0	Tomatoes	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Apples
0.2	PT (GP)	0.1	Potatoes	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Tomatoes
0.1	SE (GP)	0.1	Potatoes	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Tomatoes
0.1	UK toddler	0.1	Potatoes	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Apples
0.1	DK child	0.0	Potatoes	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Cucumbers
0.1	WHO regional diet	0.1	Potatoes	0.0	Tomatoes	0.0	Tomatoes	0.0	Tomatoes	0.0	Tomatoes	0.0	Tomatoes	0.0	Apples
0.1	UK infant	0.1	Potatoes	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Oranges
0.1	PL (GP)	0.1	Potatoes	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Tomatoes
0.1	NL (GP)	0.0	Potatoes	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Apples
0.1	WHO cluster diet E	0.1	Potatoes	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Tomatoes
0.1	ES child	0.0	Oranges	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Apples
0.1	IE adult	0.0	Potatoes	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Apples
0.1	WHO Cluster diet F	0.1	Potatoes	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Tomatoes
0.1	WHO cluster diet D	0.1	Potatoes	0.0	Tomatoes	0.0	Tomatoes	0.0	Tomatoes	0.0	Tomatoes	0.0	Tomatoes	0.0	Apples
0.1	LT adult	0.1	Potatoes	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Tomatoes
0.1	ES adult	0.0	Oranges	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Tomatoes
0.1	IT child/toddler	0.0	Tomatoes	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Apples
0.1	UK vegetarian	0.0	Potatoes	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Tomatoes
0.1	IT adult	0.0	Tomatoes	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Potatoes
0.1	DK adult	0.0	Potatoes	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Tomatoes
0.1	FI adult	0.0	Potatoes	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Tomatoes
0.1	UK adult	0.0	Potatoes	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Tomatoes
0.1	FR (GP)	0.0	Potatoes	0.0	Tomatoes	0.0	Tomatoes	0.0	Tomatoes	0.0	Tomatoes	0.0	Tomatoes	0.0	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	2	934	8.03		0.33		4.32	DE child	
2009	Bananas	0.05	794							
2009	Peppers	0.5	914	1.42		0.32		4.03	DE child	
2009	Aubergines (egg plants)	0.05	621							
2009	Cauliflower	0.2	578	1.04				0.05	NL child	
2009	Peas (without pods)	0.05	500			0.00				
2009	Wheat	0.05	737							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Metalaxyl-M**



Metconazole			
Status of the active substance:	Included		
Code number:	90		
Toxicological end points			
ADI (mg/kg bw/day):	0.01	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**

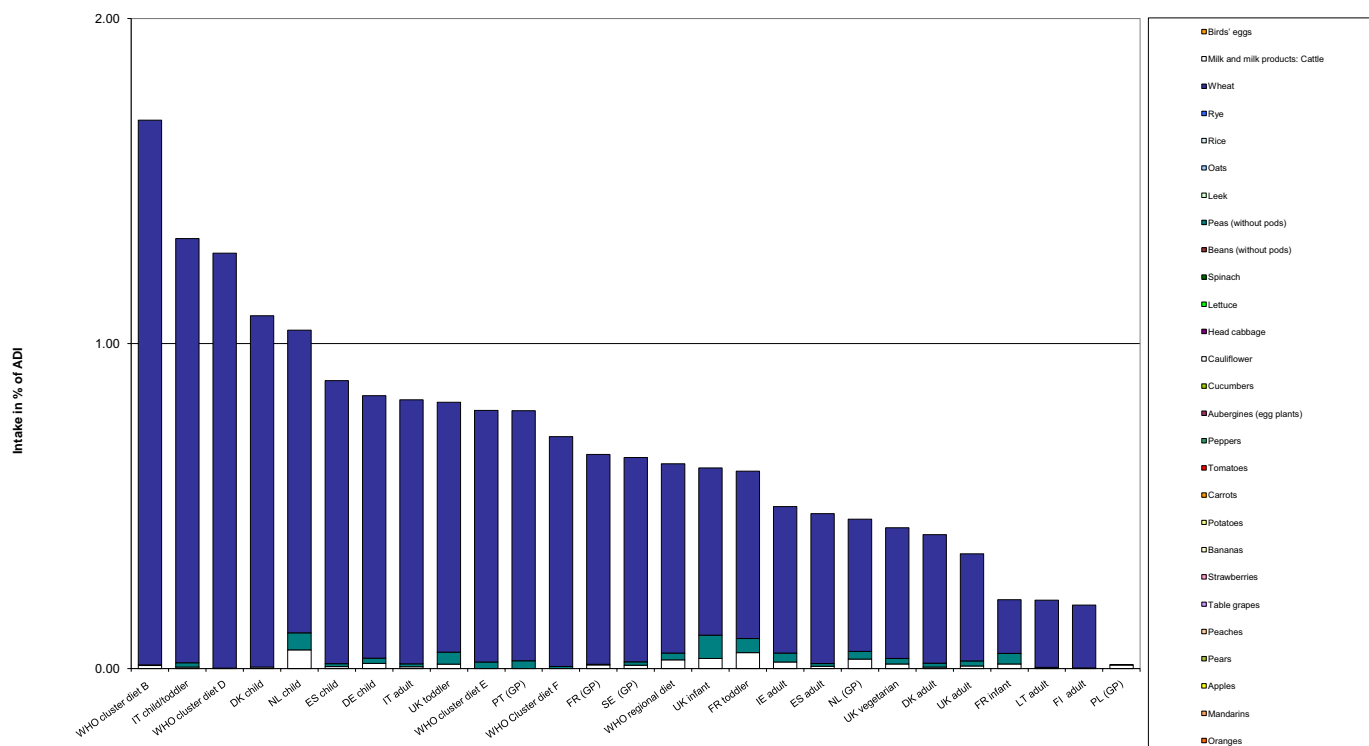
		Exposure (range) in % of ADI minimum - maximum					
		2					
		No of diets exceeding ADI:		---			
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.7	WHO cluster diet B	1.7	Wheat	0.0	Cauliflower	0.0	Peas (without pods)
1.3	IT child/toddler	1.3	Wheat	0.0	Peas (without pods)	0.0	Cauliflower
1.3	WHO cluster diet D	1.3	Wheat	0.0	Peas (without pods)	0.0	FRUIT (FRESH OR FROZEN)
1.1	DK child	1.1	Wheat	0.0	Cauliflower	0.0	FRUIT (FRESH OR FROZEN)
1.0	NL child	0.9	Wheat	0.1	Cauliflower	0.1	Peas (without pods)
0.9	ES child	0.9	Wheat	0.0	Peas (without pods)	0.0	Cauliflower
0.8	DE child	0.8	Wheat	0.0	Peas (without pods)	0.0	Cauliflower
0.8	IT adult	0.8	Wheat	0.0	Peas (without pods)	0.0	Cauliflower
0.8	UK toddler	0.8	Wheat	0.0	Peas (without pods)	0.0	Cauliflower
0.8	WHO cluster diet E	0.8	Wheat	0.0	Peas (without pods)	0.0	FRUIT (FRESH OR FROZEN)
0.8	PT (GP)	0.8	Wheat	0.0	Peas (without pods)	0.0	FRUIT (FRESH OR FROZEN)
0.7	WHO Cluster diet F	0.7	Wheat	0.0	Peas (without pods)	0.0	FRUIT (FRESH OR FROZEN)
0.7	FR (GP)	0.6	Wheat	0.0	Cauliflower	0.0	Peas (without pods)
0.6	SE (GP)	0.6	Wheat	0.0	Peas (without pods)	0.0	Cauliflower
0.6	WHO regional diet	0.6	Wheat	0.0	Cauliflower	0.0	Peas (without pods)
0.6	UK infant	0.5	Wheat	0.1	Peas (without pods)	0.0	Cauliflower
0.6	FR toddler	0.5	Wheat	0.0	Cauliflower	0.0	Peas (without pods)
0.5	IE adult	0.5	Wheat	0.0	Peas (without pods)	0.0	Cauliflower
0.5	ES adult	0.5	Wheat	0.0	Peas (without pods)	0.0	Cauliflower
0.5	NL (GP)	0.4	Wheat	0.0	Cauliflower	0.0	Peas (without pods)
0.4	UK vegetarian	0.4	Wheat	0.0	Peas (without pods)	0.0	Cauliflower
0.4	DK adult	0.4	Wheat	0.0	Peas (without pods)	0.0	Cauliflower
0.4	UK adult	0.3	Wheat	0.0	Peas (without pods)	0.0	Cauliflower
0.2	FR infant	0.2	Wheat	0.0	Peas (without pods)	0.0	Cauliflower
0.2	LT adult	0.2	Wheat	0.0	Peas (without pods)	0.0	FRUIT (FRESH OR FROZEN)
0.2	FI adult	0.2	Wheat	0.0	Cauliflower	0.0	FRUIT (FRESH OR FROZEN)
0.0	PL (GP)	0.0	Cauliflower	0.0	Peas (without pods)	0.0	FRUIT (FRESH OR FROZEN)

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.02	848							
2009	Bananas	0.02	669							
2009	Peppers	0.02	897							
2009	Aubergines (egg plants)	0.02	545							
2009	Cauliflower	0.02	554	0.18		0.01		9.25	NL child	
2009	Peas (without pods)	0.05	487	0.21		0.00		0.16	UK infant	
2009	Wheat	0.1	723	0.14		0.08		11.70	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Metconazole**



Methamidophos			
Status of the active substance:	Included		
Code number:	91		
Toxicological end points			
ADI (mg/kg bw/day):	0.001	ARID (mg/kg bw):	0.003
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2007	Year of evaluation:	2007

**Chronic risk assessment**

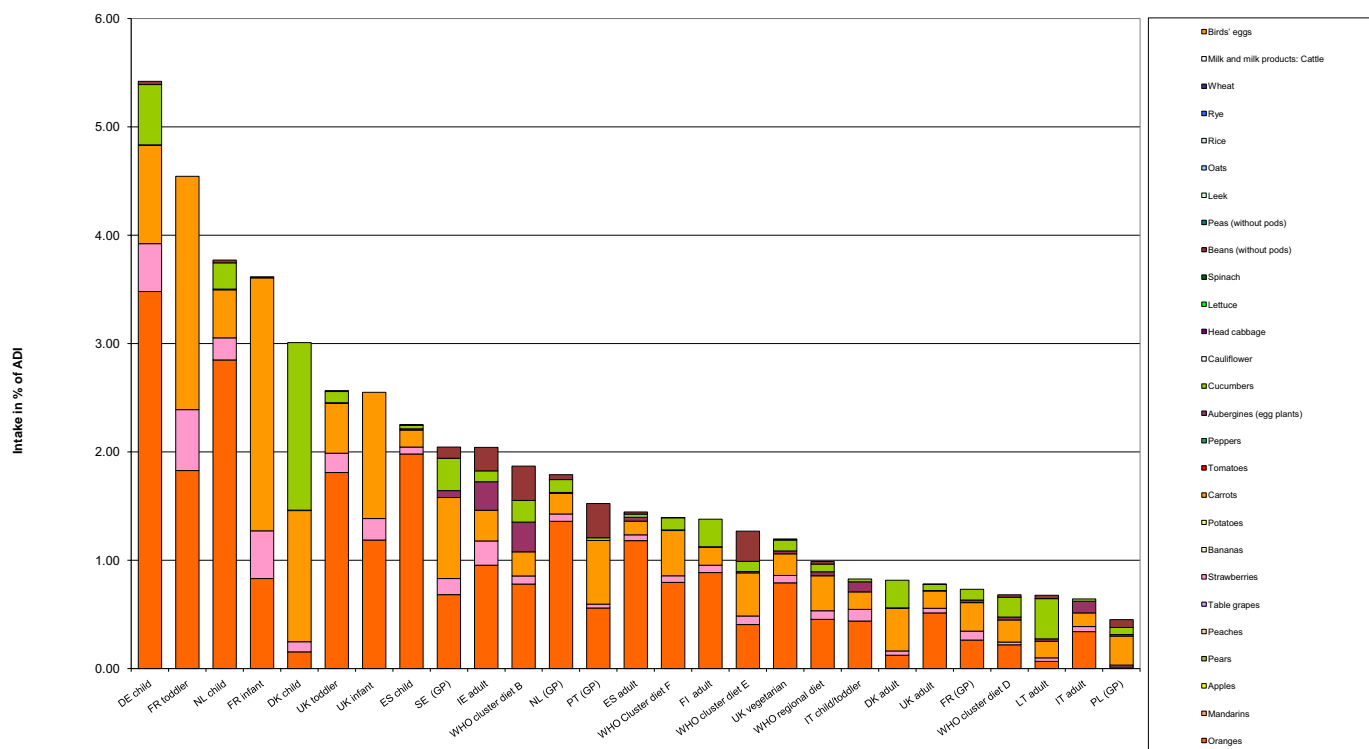
Exposure (range) in % of ADI minimum - maximum		5					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
5.4	DE child	3.5	Oranges	0.9	Carrots	0.6	Cucumbers
4.5	FR toddler	2.2	Carrots	1.8	Oranges	0.6	Strawberries
3.8	NL child	2.8	Oranges	0.4	Carrots	0.2	Cucumbers
3.6	FR infant	2.3	Carrots	0.8	Oranges	0.4	Strawberries
3.0	DK child	1.5	Cucumbers	1.2	Carrots	0.2	Oranges
2.6	UK toddler	1.8	Oranges	0.5	Carrots	0.2	Strawberries
2.5	UK infant	1.2	Oranges	1.2	Carrots	0.2	Strawberries
2.3	ES child	2.0	Oranges	0.2	Carrots	0.1	Strawberries
2.0	SE (GP)	0.7	Carrots	0.7	Oranges	0.3	Cucumbers
2.0	IE adult	1.0	Oranges	0.3	Carrots	0.3	Aubergines (egg plants)
1.9	WHO cluster diet B	0.8	Oranges	0.3	Beans (without pods)	0.3	Aubergines (egg plants)
1.8	NL (GP)	1.4	Oranges	0.2	Carrots	0.1	Cucumbers
1.5	PT (GP)	0.6	Carrots	0.6	Oranges	0.3	Beans (without pods)
1.4	ES adult	1.2	Oranges	0.1	Carrots	0.1	Strawberries
1.4	WHO Cluster diet F	0.8	Oranges	0.4	Carrots	0.1	Cucumbers
1.4	FI adult	0.9	Oranges	0.3	Cucumbers	0.2	Carrots
1.3	WHO cluster diet E	0.4	Oranges	0.4	Carrots	0.3	Beans (without pods)
1.2	UK vegetarian	0.8	Oranges	0.2	Carrots	0.1	Cucumbers
1.0	WHO regional diet	0.5	Oranges	0.3	Carrots	0.1	Strawberries
0.8	IT child/toddler	0.4	Oranges	0.2	Carrots	0.1	Strawberries
0.8	DK adult	0.4	Carrots	0.3	Cucumbers	0.1	Oranges
0.8	UK adult	0.5	Oranges	0.2	Carrots	0.1	Cucumbers
0.7	FR (GP)	0.3	Carrots	0.3	Oranges	0.1	Cucumbers
0.7	WHO cluster diet D	0.2	Oranges	0.2	Carrots	0.2	Cucumbers
0.7	LT adult	0.4	Cucumbers	0.2	Carrots	0.1	Oranges
0.6	IT adult	0.3	Oranges	0.1	Carrots	0.1	Aubergines (egg plants)
0.5	PL (GP)	0.3	Carrots	0.1	Beans (without pods)	0.1	Cucumbers

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.01	1381							
2009	Bananas	0.01	1119							
2009	Peppers	0.01	1399		0.11	0.08		65.00	UK 4-6 yr	
2009	Aubergines (egg plants)	0.01	865							
2009	Cauliflower	0.02	793							
2009	Peas (without pods)	0.01	712							
2009	Wheat	0.01	958							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Methamidophos**





Methodathion			
Status of the active substance:	Excluded		
Code number:	92		
Toxicological end points			
ADI (mg/kg bw/day):	0.001	ARID (mg/kg bw):	0.01
Source of ADI:	JMPR	Source of ARID:	JMPR
Year of evaluation:	1992	Year of evaluation:	1997

**Chronic risk assessment**

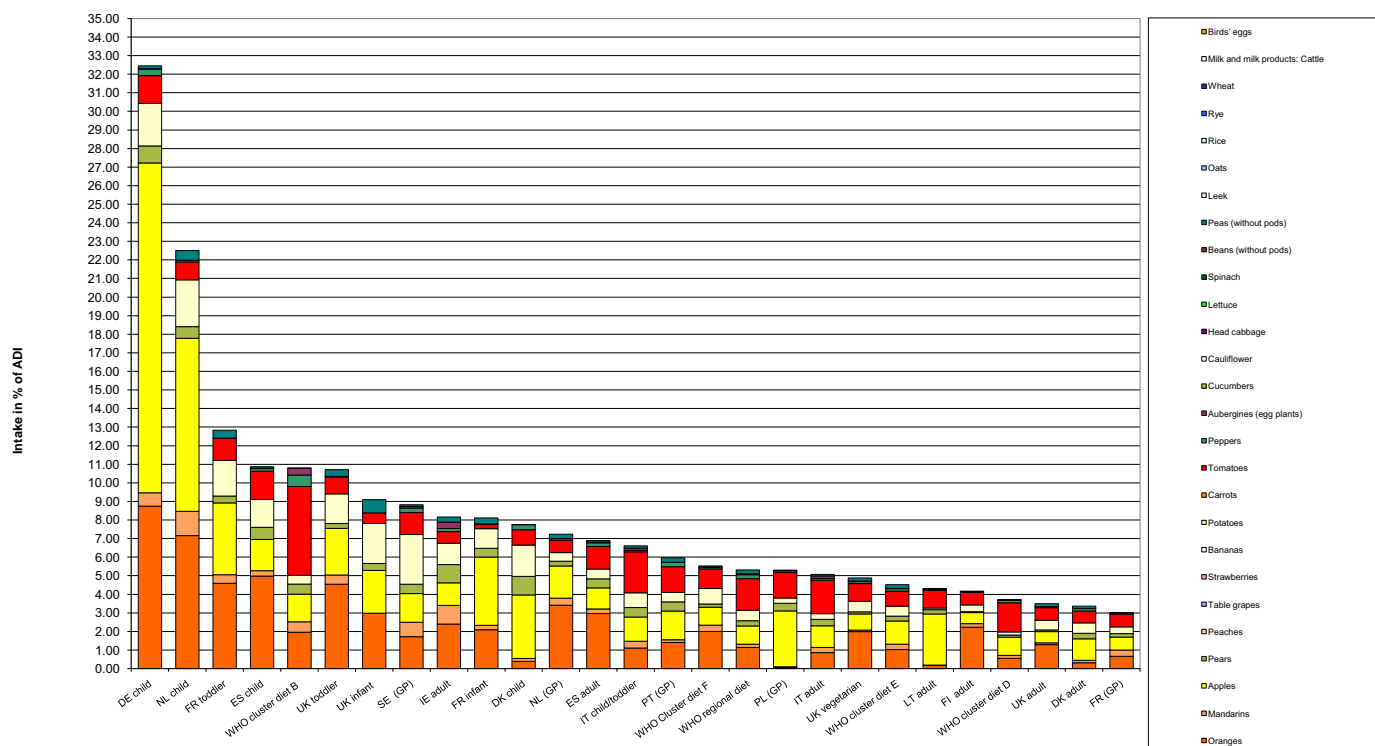
Exposure (range) in % of ADI minimum - maximum		No of diets exceeding ADI:					
3		---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
32.5	DE child	17.8	Apples	8.7	Oranges	2.3	Bananas
22.5	NL child	9.3	Apples	7.2	Oranges	2.5	Bananas
12.8	FR toddler	4.6	Oranges	3.9	Apples	1.9	Bananas
10.9	ES child	5.0	Oranges	1.7	Apples	1.5	Tomatoes
10.8	WHO cluster diet B	4.8	Tomatoes	2.0	Oranges	1.5	Apples
10.7	UK toddler	4.5	Oranges	2.5	Apples	1.6	Bananas
9.1	UK infant	3.0	Oranges	2.3	Apples	2.2	Bananas
8.8	SE (GP)	2.7	Bananas	1.7	Oranges	1.5	Apples
8.2	IE adult	2.4	Oranges	1.2	Apples	1.2	Bananas
8.1	FR infant	3.7	Apples	2.1	Oranges	1.1	Bananas
7.8	DK child	3.4	Apples	1.7	Bananas	1.0	Pears
7.2	NL (GP)	3.4	Oranges	1.7	Apples	0.7	Tomatoes
6.9	ES adult	3.0	Oranges	1.2	Tomatoes	1.1	Apples
6.6	IT child/toddler	2.2	Tomatoes	1.3	Apples	1.1	Oranges
6.0	PT (GP)	1.5	Apples	1.4	Oranges	1.4	Tomatoes
5.5	WHO Cluster diet F	2.0	Oranges	1.1	Tomatoes	1.0	Apples
5.3	WHO regional diet	1.7	Tomatoes	1.1	Oranges	1.0	Apples
5.3	PL (GP)	3.0	Apples	1.4	Tomatoes	0.4	Pears
5.1	IT adult	1.8	Tomatoes	1.2	Apples	0.9	Oranges
4.9	UK vegetarian	2.0	Oranges	1.0	Tomatoes	0.9	Apples
4.5	WHO cluster diet E	1.2	Apples	1.0	Oranges	0.8	Tomatoes
4.3	LT adult	2.7	Apples	1.0	Tomatoes	0.2	Pears
4.2	FI adult	2.2	Oranges	0.7	Tomatoes	0.6	Apples
3.7	WHO cluster diet D	1.6	Tomatoes	1.0	Apples	0.6	Oranges
3.5	UK adult	1.3	Oranges	0.7	Tomatoes	0.6	Apples
3.4	DK adult	1.2	Apples	0.6	Tomatoes	0.6	Bananas
3.0	FR (GP)	0.7	Apples	0.7	Tomatoes	0.7	Oranges

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.02	1573	0.1		0.01		8.36		
2009	Bananas		1272	0.13	0.13	0.04		25.19	UK infant	
2009	Peppers	0.02	1571	0.20		0.02		5.00	DE child	
2009	Aubergines (egg plants)	0.02	1009						UK 4-6 yr	
2009	Cauliflower	0.02	866							
2009	Peas (without pods)	0.02	771	0.13		0.02		1.64	UK infant	
2009	Wheat	0.02	1063							
2009	Milk and milk products: Cattle	0.02	365							
2009	Birds' eggs	0.02	428							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Methodathion**



Methiocarb (aka mercaptodimethur)			
Status of the active substance:	Included		
Code number:	93		
Toxicological end points			
ADI (mg/kg bw/day):	0.013	ARID (mg/kg bw):	0.013
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

**Chronic risk assessment**

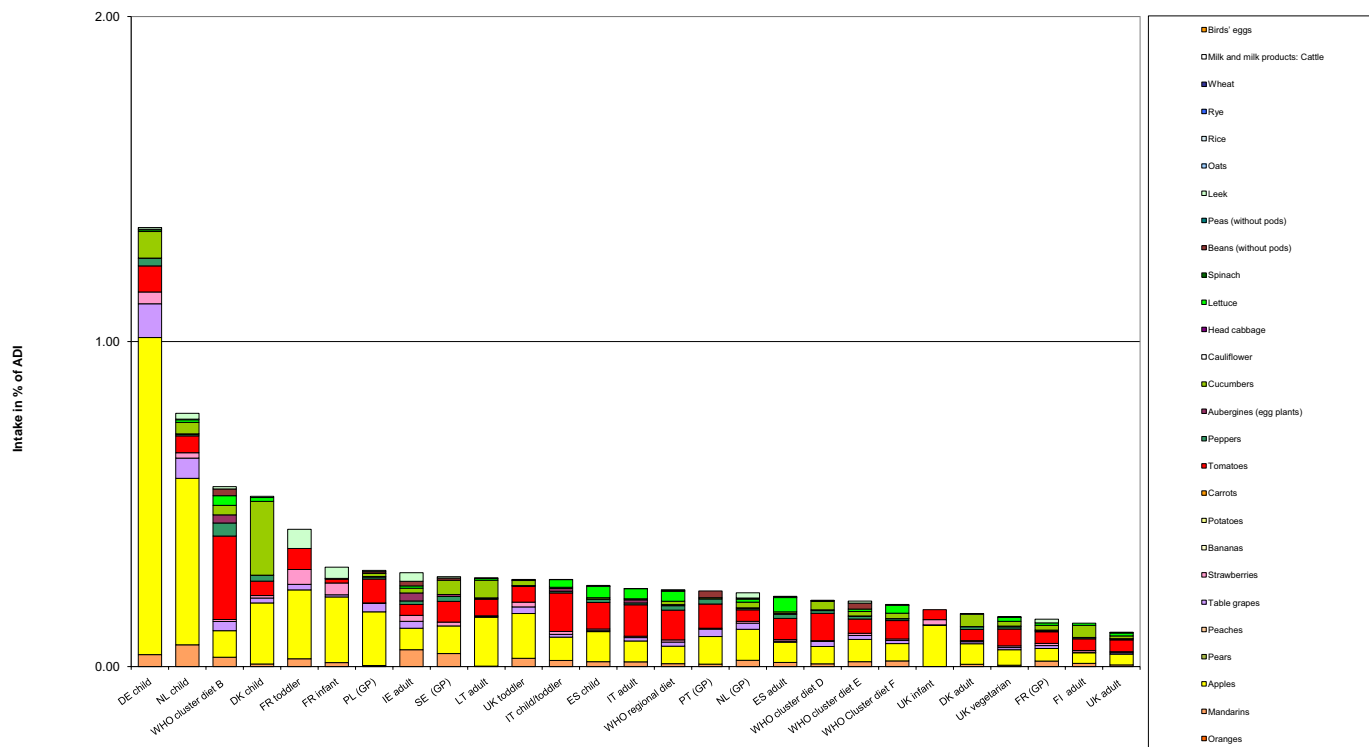
Highest calculated exposure in % of ADI		MS Diet		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
1.4	DE child	1.0	Apples	0.1	Table grapes	0.1	Cucumbers	0.1	Cucumbers	0.1	Cucumbers	0.1	Cucumbers	0.1	Cucumbers
0.8	NL child	0.5	Apples	0.1	Mandarins	0.1	Table grapes	0.1	Mandarins	0.1	Table grapes	0.1	Table grapes	0.1	Table grapes
0.6	WHO cluster diet B	0.3	Tomatoes	0.1	Apples	0.0	Peppers	0.1	Apples	0.0	Peppers	0.0	Peppers	0.0	Peppers
0.5	DK child	0.2	Cucumbers	0.2	Apples	0.0	Tomatoes	0.2	Apples	0.0	Tomatoes	0.0	Tomatoes	0.0	Tomatoes
0.4	FR toddler	0.2	Apples	0.1	Tomatoes	0.1	Leek	0.1	Tomatoes	0.1	Leek	0.1	Leek	0.1	Leek
0.3	FR infant	0.2	Apples	0.0	Strawberries	0.0	Leek	0.0	Strawberries	0.0	Leek	0.0	Leek	0.0	Leek
0.3	PL (GP)	0.2	Apples	0.1	Tomatoes	0.0	Table grapes	0.1	Tomatoes	0.0	Table grapes	0.0	Table grapes	0.0	Table grapes
0.3	IE adult	0.1	Apples	0.1	Mandarins	0.0	Tomatoes	0.1	Mandarins	0.0	Tomatoes	0.0	Tomatoes	0.0	Tomatoes
0.3	SE (GP)	0.1	Apples	0.1	Tomatoes	0.0	Cucumbers	0.1	Tomatoes	0.0	Cucumbers	0.0	Cucumbers	0.0	Cucumbers
0.3	LT adult	0.2	Apples	0.1	Cucumbers	0.1	Tomatoes	0.1	Cucumbers	0.1	Tomatoes	0.1	Tomatoes	0.1	Tomatoes
0.3	UK toddler	0.1	Apples	0.0	Tomatoes	0.0	Mandarins	0.0	Tomatoes	0.0	Mandarins	0.0	Mandarins	0.0	Mandarins
0.3	IT child/toddler	0.1	Tomatoes	0.1	Apples	0.0	Lettuce	0.1	Apples	0.0	Lettuce	0.0	Lettuce	0.0	Lettuce
0.2	ES child	0.1	Apples	0.1	Tomatoes	0.0	Lettuce	0.1	Tomatoes	0.0	Lettuce	0.0	Lettuce	0.0	Lettuce
0.2	IT adult	0.1	Tomatoes	0.1	Apples	0.0	Lettuce	0.1	Apples	0.0	Lettuce	0.0	Lettuce	0.0	Lettuce
0.2	WHO regional diet	0.1	Tomatoes	0.1	Apples	0.0	Lettuce	0.1	Apples	0.0	Lettuce	0.0	Lettuce	0.0	Lettuce
0.2	PT (GP)	0.1	Apples	0.1	Tomatoes	0.0	Table grapes	0.1	Tomatoes	0.0	Table grapes	0.0	Table grapes	0.0	Table grapes
0.2	NL (GP)	0.1	Apples	0.0	Tomatoes	0.0	Mandarins	0.0	Tomatoes	0.0	Mandarins	0.0	Mandarins	0.0	Mandarins
0.2	ES adult	0.1	Tomatoes	0.1	Apples	0.0	Lettuce	0.1	Apples	0.0	Lettuce	0.0	Lettuce	0.0	Lettuce
0.2	WHO cluster diet D	0.1	Tomatoes	0.1	Apples	0.0	Cucumbers	0.1	Apples	0.0	Cucumbers	0.0	Cucumbers	0.0	Cucumbers
0.2	WHO cluster diet E	0.1	Apples	0.0	Tomatoes	0.0	Beans (without pods)	0.0	Tomatoes	0.0	Beans (without pods)	0.0	Beans (without pods)	0.0	Beans (without pods)
0.2	WHO Cluster diet F	0.1	Tomatoes	0.1	Apples	0.0	Lettuce	0.1	Apples	0.0	Lettuce	0.0	Lettuce	0.0	Lettuce
0.2	UK infant	0.1	Apples	0.0	Tomatoes	0.0	Strawberries	0.0	Tomatoes	0.0	Strawberries	0.0	Strawberries	0.0	Strawberries
0.2	DK adult	0.1	Apples	0.0	Cucumbers	0.0	Tomatoes	0.0	Cucumbers	0.0	Tomatoes	0.0	Tomatoes	0.0	Tomatoes
0.2	UK vegetarian	0.1	Tomatoes	0.0	Apples	0.0	Cucumbers	0.0	Apples	0.0	Cucumbers	0.0	Cucumbers	0.0	Cucumbers
0.1	FR (GP)	0.0	Apples	0.0	Tomatoes	0.0	Mandarins	0.0	Tomatoes	0.0	Mandarins	0.0	Mandarins	0.0	Mandarins
0.1	FI adult	0.0	Cucumbers	0.0	Tomatoes	0.0	Apples	0.0	Tomatoes	0.0	Apples	0.0	Apples	0.0	Apples
0.1	UK adult	0.0	Tomatoes	0.0	Apples	0.0	Lettuce	0.0	Apples	0.0	Lettuce	0.0	Lettuce	0.0	Lettuce

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.3	1020	1.47		0.04		20.15	DE child	
2009	Bananas	0.1	768							
2009	Peppers	0.2	1034	0.29	0.10	0.21	1	101.73	DE child	
2009	Aubergines (egg plants)	0.1	680	0.59		0.16		30.77	UK 4-6 yr	
2009	Cauliflower	0.1	598							
2009	Peas (without pods)	0.1	556							
2009	Wheat	0.1	527							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Methiocarb (aka mercaptodimethur)**



<b>Methomyl</b>			
Status of the active substance:	<b>Included</b>		
Code number:	<b>94</b>		
<b>Toxicological end points</b>			
ADI (mg/kg bw/day):	<b>0.0025</b>	ARID (mg/kg bw):	<b>0.0025</b>
Source of ADI:	<b>EFSA 2008</b>	Source of ARID:	<b>EFSA 2008</b>
Year of evaluation:		Year of evaluation:	

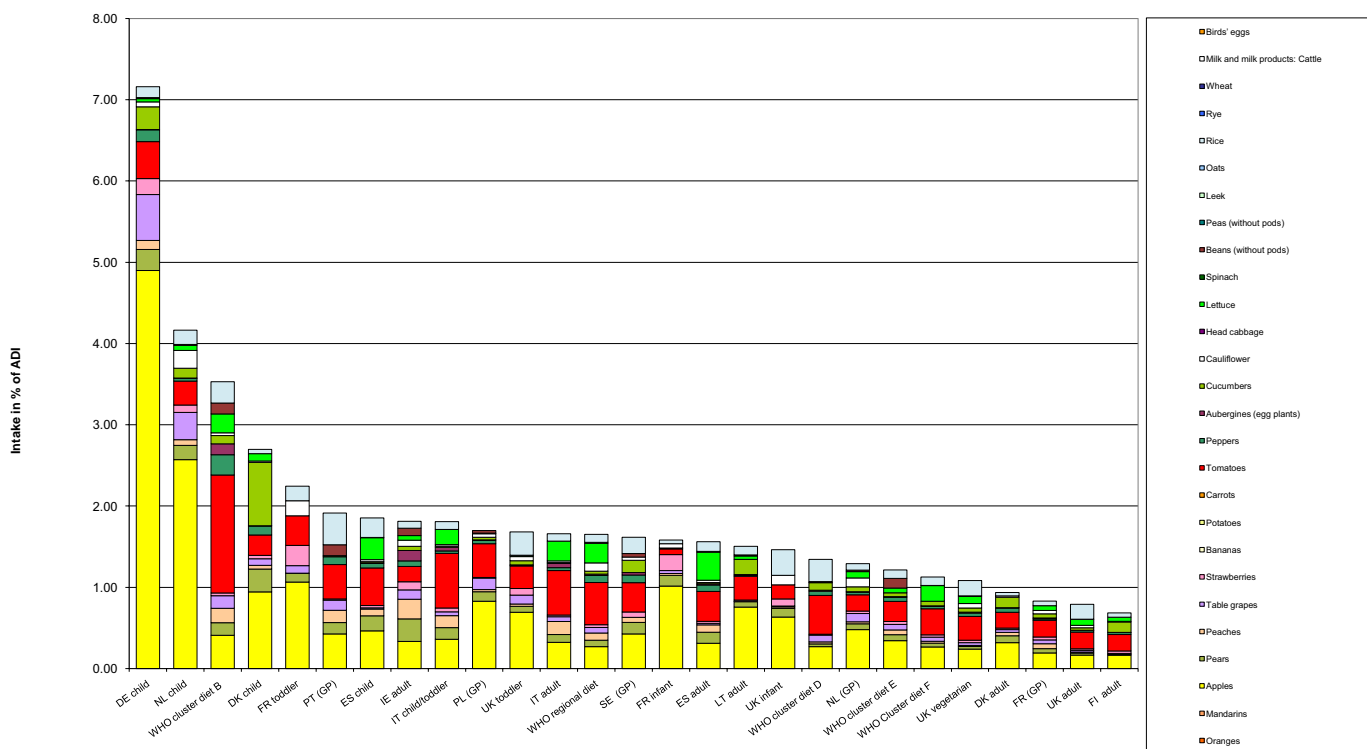
For the risk assessment the toxicological reference values for methomyl were selected. Thiodicarb: ADI: 0.01 mg/kg bw/d (EFSA, 2005); ARID: 0.01 mg/kg bw (EFSA, 2005).

<b>Chronic risk assessment</b>							
			Exposure (range) in % of ADI minimum - maximum 1 - 7				
			<b>No of diets exceeding ADI:</b> 1 - 7				
Highest calculated exposure in % of ADI	MS Diet	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
7.2	DE child	4.9	Apples	0.6	Table grapes	0.5	Tomatoes
4.2	NL child	2.6	Apples	0.3	Table grapes	0.3	Tomatoes
3.5	WHO cluster diet B	1.5	Tomatoes	0.4	Apples	0.3	Rice
2.7	DK child	0.9	Apples	0.8	Cucumbers	0.3	Pears
2.2	FR toddler	1.1	Apples	0.4	Tomatoes	0.3	Strawberries
1.9	PT (GP)	0.4	Apples	0.4	Tomatoes	0.4	Rice
1.9	ES child	0.5	Apples	0.5	Tomatoes	0.3	Lettuce
1.8	IE adult	0.3	Apples	0.3	Pears	0.2	Peaches
1.8	IT child/toddler	0.7	Tomatoes	0.4	Apples	0.2	Lettuce
1.7	PL (GP)	0.8	Apples	0.4	Tomatoes	0.1	Table grapes
1.7	UK toddler	0.7	Apples	0.3	Rice	0.3	Tomatoes
1.7	IT adult	0.5	Tomatoes	0.3	Apples	0.2	Lettuce
1.7	WHO regional diet	0.5	Tomatoes	0.3	Apples	0.2	Lettuce
1.6	SE (GP)	0.4	Apples	0.4	Tomatoes	0.2	Rice
1.6	FR infant	1.0	Apples	0.2	Strawberries	0.1	Pears
1.6	ES adult	0.4	Tomatoes	0.3	Lettuce	0.3	Apples
1.5	LT adult	0.8	Apples	0.3	Tomatoes	0.2	Cucumbers
1.5	UK infant	0.6	Apples	0.3	Rice	0.2	Tomatoes
1.3	WHO cluster diet D	0.5	Tomatoes	0.3	Rice	0.3	Apples
1.3	NL (GP)	0.5	Apples	0.2	Tomatoes	0.1	Cauliflower
1.2	WHO cluster diet E	0.3	Apples	0.2	Tomatoes	0.1	Beans (without pods)
1.1	WHO Cluster diet F	0.3	Tomatoes	0.3	Apples	0.2	Lettuce
1.1	UK vegetarian	0.3	Tomatoes	0.2	Apples	0.2	Rice
0.9	DK adult	0.3	Apples	0.2	Tomatoes	0.1	Cucumbers
0.8	FR (GP)	0.2	Tomatoes	0.2	Apples	0.1	Peaches
0.8	UK adult	0.2	Tomatoes	0.2	Rice	0.2	Apples
0.7	FI adult	0.2	Tomatoes	0.2	Apples	0.1	Cucumbers

<b>Acute risk assessment</b>										
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	845	0.36	0.24	0.111	4	290.73	DE child	
2009	Bananas	0.05	657							
2009	Peppers	0.2	841	0.95	0.24	0.75	4	1889.35	DE child	
2009	Aubergines (egg plants)	0.2	570	0.70		0.10		100.00	UK 4-6 yr	
2009	Cauliflower	0.05	505	0.20		0.01		29.08	NL child	
2009	Peas (without pods)	0.05	456							
2009	Wheat	0.05	619							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Methomyl**



Methomyl			
Status of the active substance:	Included		
Code number:	94		
Toxicological end points			
ADI (mg/kg bw/day):	0.0025	ARID (mg/kg bw):	0.01
Source of ADI:	EFSA 2008	Source of ARID:	EFSA 2008
Year of evaluation:		Year of evaluation:	

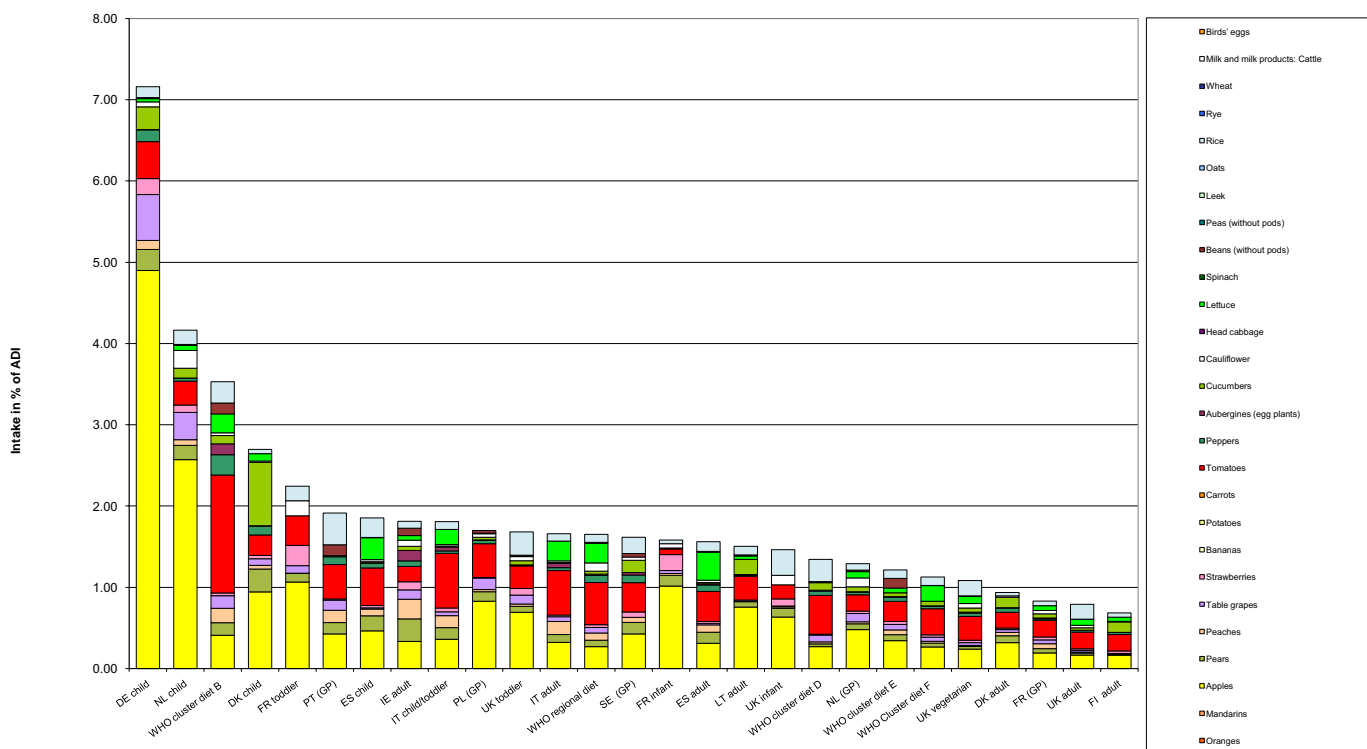
For the risk assessment the toxicological reference values for methomyl were selected. Thiodicarb: ADI: 0.01 mg/kg bw/d (EFSA, 2005); ARID: 0.01 mg/kg bw (EFSA, 2005).

Chronic risk assessment							
			Exposure (range) in % of ADI minimum - maximum 1 --- 7				
			No of diets exceeding ADI: 1 ---				
Highest calculated exposure in % of ADI	MS Diet	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
7.2	DE child	4.9	Apples	0.6	Table grapes	0.5	Tomatoes
4.2	NL child	2.6	Apples	0.3	Table grapes	0.3	Tomatoes
3.5	WHO cluster diet B	1.5	Tomatoes	0.4	Apples	0.3	Rice
2.7	DK child	0.9	Apples	0.8	Cucumbers	0.3	Pears
2.2	FR toddler	1.1	Apples	0.4	Tomatoes	0.3	Strawberries
1.9	PT (GP)	0.4	Apples	0.4	Tomatoes	0.4	Rice
1.9	ES child	0.5	Apples	0.5	Tomatoes	0.3	Lettuce
1.8	IE adult	0.3	Apples	0.3	Pears	0.2	Peaches
1.8	IT child/toddler	0.7	Tomatoes	0.4	Apples	0.2	Lettuce
1.7	PL (GP)	0.8	Apples	0.4	Tomatoes	0.1	Table grapes
1.7	UK toddler	0.7	Apples	0.3	Rice	0.3	Tomatoes
1.7	IT adult	0.5	Tomatoes	0.3	Apples	0.2	Lettuce
1.7	WHO regional diet	0.5	Tomatoes	0.3	Apples	0.2	Lettuce
1.6	SE (GP)	0.4	Apples	0.4	Tomatoes	0.2	Rice
1.6	FR infant	1.0	Apples	0.2	Strawberries	0.1	Pears
1.6	ES adult	0.4	Tomatoes	0.3	Lettuce	0.3	Apples
1.5	LT adult	0.8	Apples	0.3	Tomatoes	0.2	Cucumbers
1.5	UK infant	0.6	Apples	0.3	Rice	0.2	Tomatoes
1.3	WHO cluster diet D	0.5	Tomatoes	0.3	Rice	0.3	Apples
1.3	NL (GP)	0.5	Apples	0.2	Tomatoes	0.1	Cauliflower
1.2	WHO cluster diet E	0.3	Apples	0.2	Tomatoes	0.1	Beans (without pods)
1.1	WHO Cluster diet F	0.3	Tomatoes	0.3	Apples	0.2	Lettuce
1.1	UK vegetarian	0.3	Tomatoes	0.2	Apples	0.2	Rice
0.9	DK adult	0.3	Apples	0.2	Tomatoes	0.1	Cucumbers
0.8	FR (GP)	0.2	Tomatoes	0.2	Apples	0.1	Peaches
0.8	UK adult	0.2	Tomatoes	0.2	Rice	0.2	Apples
0.7	FI adult	0.2	Tomatoes	0.2	Apples	0.1	Cucumbers

Acute risk assessment										
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	845	0.36	0.24	0.111	4	72.68	DE child	
2009	Bananas	0.05	657							
2009	Peppers	0.2	841	0.95	0.24	0.75	4	472.34	DE child	
2009	Aubergines (egg plants)	0.2	570	0.70		0.10		25.00	UK 4-6 yr	
2009	Cauliflower	0.05	505	0.20		0.01		7.27	NL child	
2009	Peas (without pods)	0.05	456							
2009	Wheat	0.05	619							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Methomyl



<b>Methoxychlor</b>	
Status of the active substance:	<b>Excluded</b>
Code number:	<b>1</b>
Toxicological end points	
ADI (mg/kg bw/day):	<b>0.1</b>
Source of ADI:	ARID (mg/kg bw):
Year of evaluation:	Source of ARID:
	Year of evaluation:

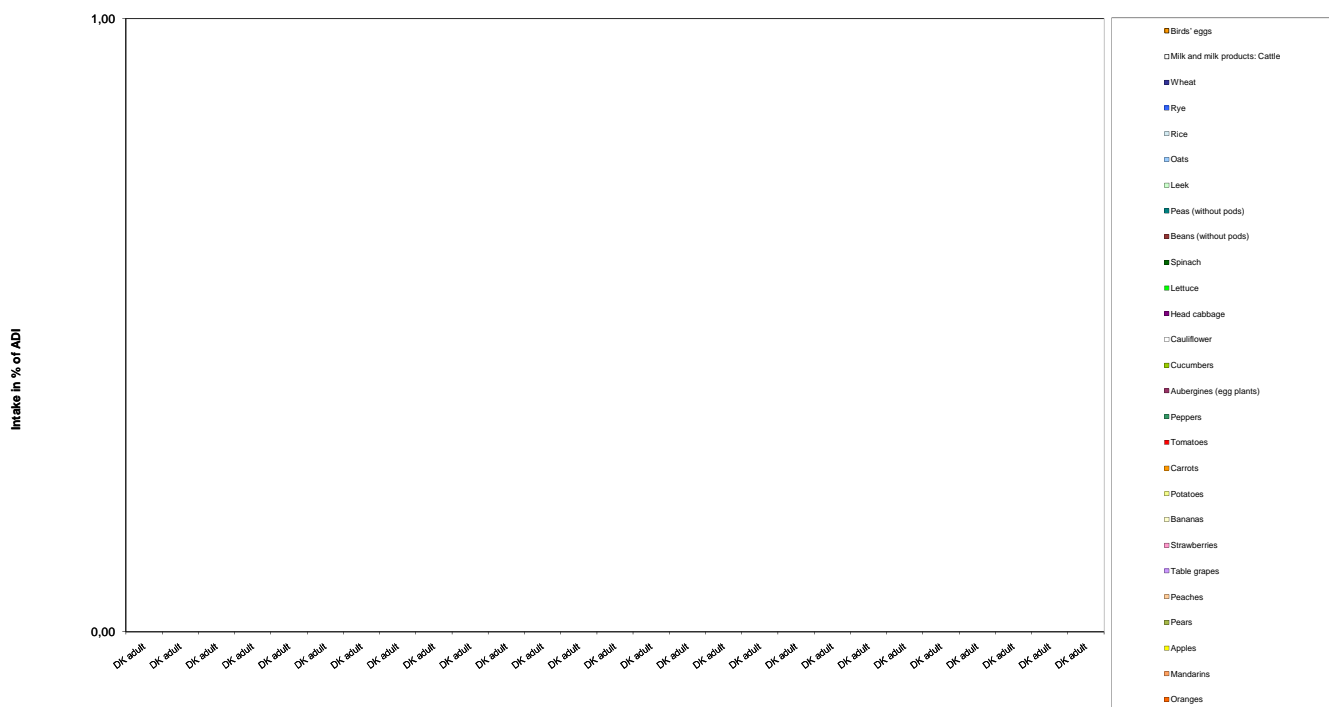
No specific toxicological reference values established for methoxychlor  
 No measurements above the LOQ were reported for the food commodities included in the EU rolling programme

Chronic risk assessment			
Exposure (range) in % of ADI minimum - maximum			
No of diets exceeding ADI: ---			
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities
	DK adult		FRUIT (FRESH OR
	DK adult		FRUIT (FRESH OR
	DK adult		FRUIT (FRESH OR
	DK adult		FRUIT (FRESH OR
	DK adult		FRUIT (FRESH OR
	DK adult		FRUIT (FRESH OR
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	DK adult		FRUIT (FRESH OR
	DK adult		FRUIT (FRESH OR

Acute risk assessment										
								Acute exposure expressed in % of the ARID		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
2009	Milk and milk products: Cattle		34							
2009	Birds' eggs		114							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Methoxychlor



Monocrotophos			
Status of the active substance:	Excluded		
Code number:	95		
Toxicological end points			
ADI (mg/kg bw/day):	0.0006	ARID (mg/kg bw):	0.002
Source of ADI:	JMPR	Source of ARID:	JMPR
Year of evaluation:	1993	Year of evaluation:	1995

**Chronic risk assessment**

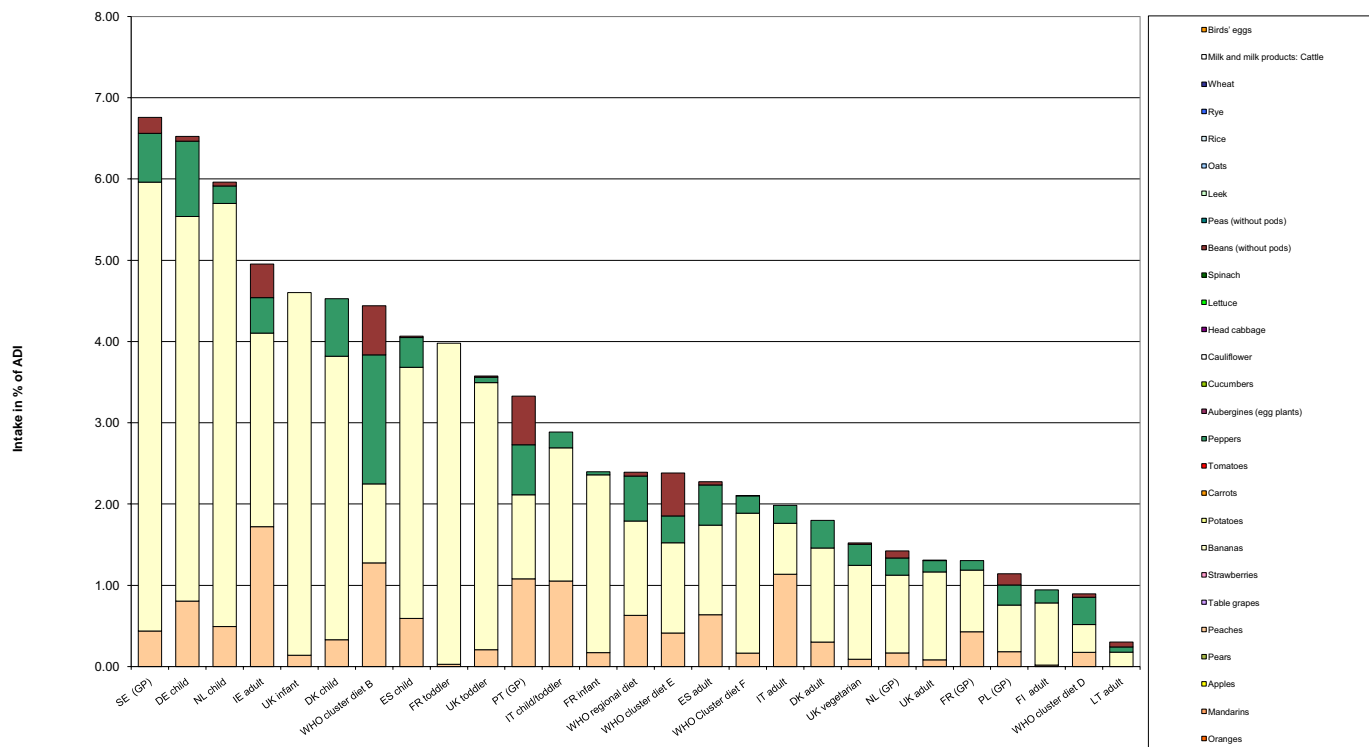
		Exposure (range) in % of ADI minimum - maximum					
		7					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
6.8	SE (GP)	5.5	Bananas	0.6	Peppers	0.4	Peaches
6.5	DE child	4.7	Bananas	0.9	Peppers	0.8	Peaches
6.0	NL child	5.2	Bananas	0.5	Peaches	0.2	Peppers
5.0	IE adult	2.4	Bananas	1.7	Peaches	0.4	Peppers
4.6	UK infant	4.5	Bananas	0.1	Peaches	FRUIT (FRESH OR FROZEN)	Peaches
4.5	DK child	3.5	Bananas	0.7	Peppers	0.3	Peaches
4.4	WHO cluster diet B	1.6	Peppers	1.3	Peaches	1.0	Bananas
4.1	ES child	3.1	Bananas	0.6	Peaches	0.4	Peppers
4.0	FR toddler	4.0	Bananas	0.0	Peaches	FRUIT (FRESH OR FROZEN)	Peppers
3.6	UK toddler	3.3	Bananas	0.2	Peaches	0.1	Peppers
3.3	PT (GP)	1.1	Peaches	1.0	Bananas	0.6	Peppers
2.9	IT child/toddler	1.6	Bananas	1.1	Peaches	0.2	Peppers
2.4	FR infant	2.2	Bananas	0.2	Peaches	0.0	Peppers
2.4	WHO regional diet	1.2	Bananas	0.6	Peaches	0.6	Peppers
2.4	WHO cluster diet E	1.1	Bananas	0.5	Beans (without pods)	0.4	Peaches
2.3	ES adult	1.1	Bananas	0.6	Peaches	0.5	Peppers
2.1	WHO Cluster diet F	1.7	Bananas	0.2	Peppers	0.2	Peaches
2.0	IT adult	1.1	Peaches	0.6	Bananas	0.2	Peppers
1.8	DK adult	1.2	Bananas	0.3	Peppers	0.3	Peaches
1.5	UK vegetarian	1.2	Bananas	0.3	Peppers	0.1	Peaches
1.4	NL (GP)	1.0	Bananas	0.2	Peppers	0.2	Peaches
1.3	UK adult	1.1	Bananas	0.1	Peppers	0.1	Peaches
1.3	FR (GP)	0.8	Bananas	0.4	Peaches	0.1	Peppers
1.1	PL (GP)	0.6	Bananas	0.2	Peppers	0.2	Peaches
0.9	FI adult	0.8	Bananas	0.2	Peppers	0.0	Peaches
0.9	WHO cluster diet D	0.3	Bananas	0.3	Peppers	0.2	Peaches
0.3	LT adult	0.2	Bananas	0.1	Peppers	0.1	Beans (without pods)

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes		1330							
2009	Bananas		1100		0.10	0.03	1			
2009	Peppers		1369		0.15	2.40	2	125.40	UK infant	
2009	Aubergines (egg plants)		851					7557.40	DE child	
2009	Cauliflower		732							
2009	Peas (without pods)		665							
2009	Wheat		825							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Monocrotophos**



<b>Myclobutanil</b>			
Status of the active substance:	Excluded		
Code number:	96		
Toxicological end points			
ADI (mg/kg bw/day):	0.025	ARID (mg/kg bw):	0.31
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2010	Year of evaluation:	2010

**Chronic risk assessment**

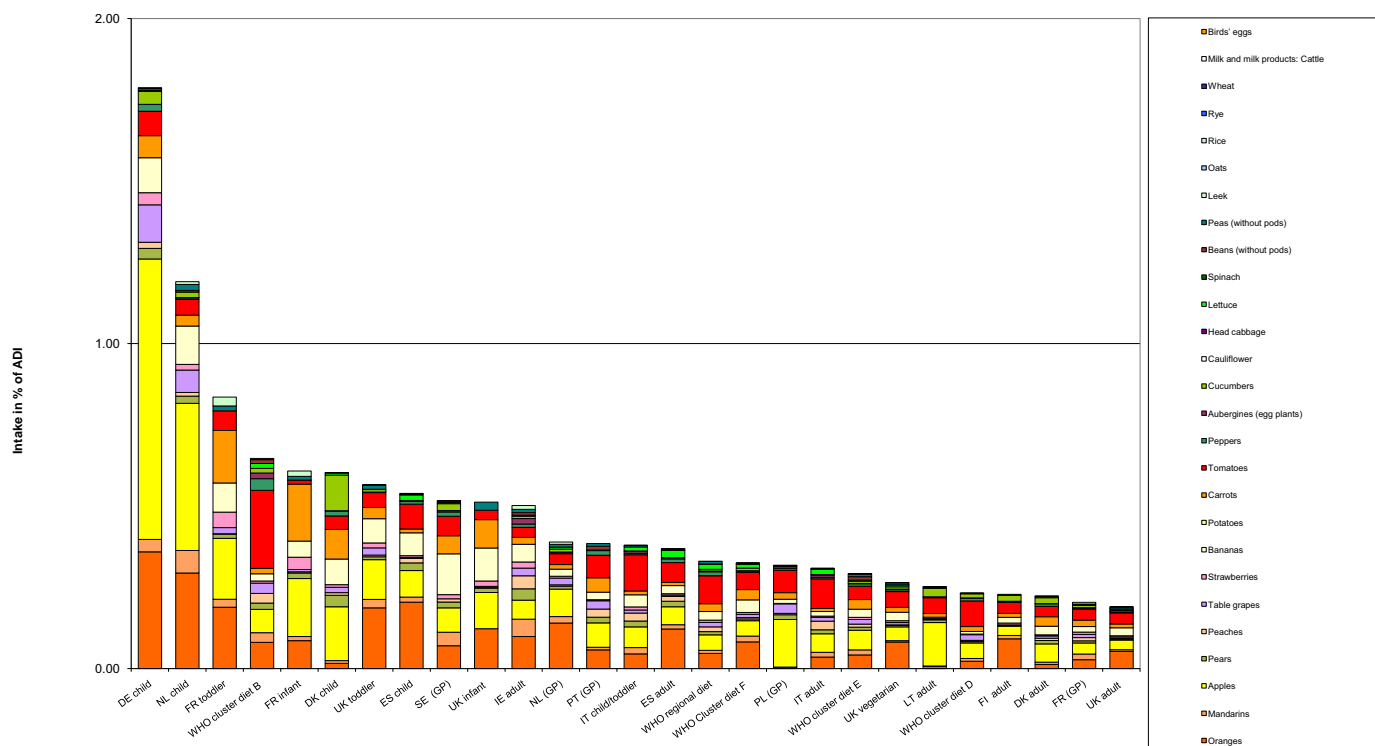
		Exposure (range) in % of ADI minimum - maximum					
		2					
		No of diets exceeding ADI:					
		---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.8	DE child	0.9	Apples	0.4	Oranges	0.1	Table grapes
1.2	NL child	0.5	Apples	0.3	Oranges	0.1	Bananas
0.8	FR toddler	0.2	Oranges	0.2	Apples	0.2	Carrots
0.6	WHO cluster diet B	0.2	Tomatoes	0.1	Oranges	0.1	Apples
0.6	FR infant	0.2	Apples	0.2	Carrots	0.1	Oranges
0.6	DK child	0.2	Apples	0.1	Cucumbers	0.1	Carrots
0.6	UK toddler	0.2	Oranges	0.1	Apples	0.1	Bananas
0.5	ES child	0.2	Oranges	0.1	Apples	0.1	Tomatoes
0.5	SE (GP)	0.1	Bananas	0.1	Apples	0.1	Oranges
0.5	UK infant	0.1	Oranges	0.1	Apples	0.1	Bananas
0.5	IE adult	0.1	Oranges	0.1	Apples	0.1	Bananas
0.4	NL (GP)	0.1	Oranges	0.1	Apples	0.0	Tomatoes
0.4	PT (GP)	0.1	Apples	0.1	Tomatoes	0.1	Oranges
0.4	IT child/toddler	0.1	Tomatoes	0.1	Apples	0.0	Oranges
0.4	ES adult	0.1	Oranges	0.1	Tomatoes	0.1	Apples
0.3	WHO regional diet	0.1	Tomatoes	0.0	Apples	0.0	Oranges
0.3	WHO Cluster diet F	0.1	Oranges	0.1	Tomatoes	0.0	Apples
0.3	PL (GP)	0.1	Apples	0.1	Tomatoes	0.0	Table grapes
0.3	IT adult	0.1	Tomatoes	0.1	Apples	0.0	Oranges
0.3	WHO cluster diet E	0.1	Apples	0.0	Oranges	0.0	Tomatoes
0.3	UK vegetarian	0.1	Oranges	0.0	Tomatoes	0.0	Apples
0.3	LT adult	0.1	Apples	0.0	Tomatoes	0.0	Cucumbers
0.2	WHO cluster diet D	0.1	Tomatoes	0.0	Apples	0.0	Oranges
0.2	FI adult	0.1	Oranges	0.0	Tomatoes	0.0	Apples
0.2	DK adult	0.1	Apples	0.0	Tomatoes	0.0	Carrots
0.2	FR (GP)	0.0	Apples	0.0	Tomatoes	0.0	Oranges
0.2	UK adult	0.1	Oranges	0.0	Tomatoes	0.0	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	1	1521	14.46		0.96		20.28	DE child	
2009	Bananas	2	1187	3.5		0.18		4.87	UK infant	
2009	Peppers	0.5	1502	3.60		0.18		3.66	DE child	
2009	Aubergines (egg plants)	0.3	962	0.21		0.02		0.16	UK 4-6 yr	
2009	Cauliflower	0.02	807							
2009	Peas (without pods)	0.02	742	0.40		0.02				
2009	Wheat	0.02	1054					0.05	UK infant	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Myclobutanil**



Oxamyl			
Status of the active substance:	Included		
Code number:	97		
Toxicological end points			
ADI (mg/kg bw/day):	0.001	ARID (mg/kg bw):	0.001
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2005	Year of evaluation:	2005

**Chronic risk assessment**

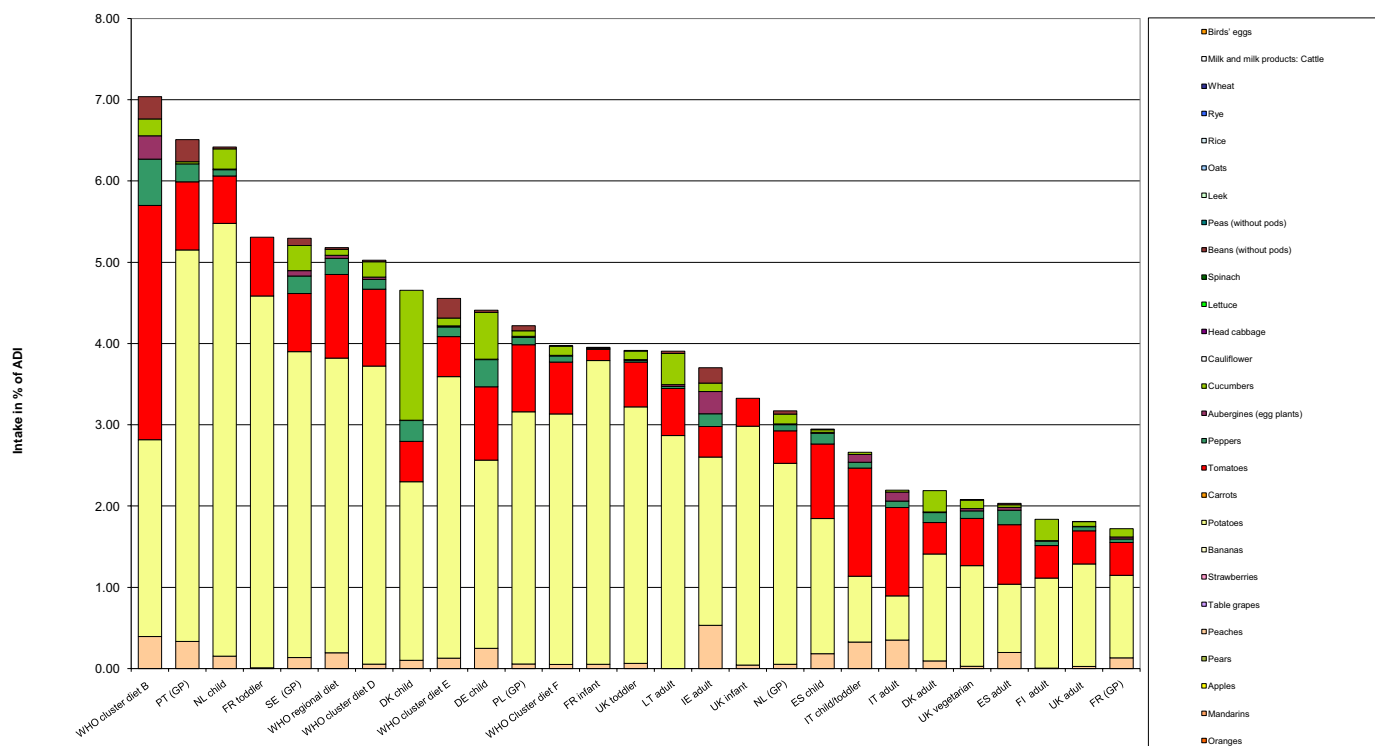
		Exposure (range) in % of ADI minimum - maximum					
		2 7					
		No of diets exceeding ADI: 2 ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
7.0	WHO cluster diet B	2.9	Potatoes	2.4	Potatoes	0.6	Peppers
6.5	PT (GP)	4.8	Potatoes	0.8	Tomatoes	0.3	Peaches
6.4	NL child	5.3	Potatoes	0.6	Tomatoes	0.3	Cucumbers
5.3	FR toddler	4.6	Potatoes	0.7	Tomatoes	0.0	Peaches
5.3	SE (GP)	3.8	Potatoes	0.7	Tomatoes	0.3	Cucumbers
5.2	WHO regional diet	3.6	Potatoes	1.0	Tomatoes	0.2	Peppers
5.0	WHO cluster diet D	3.7	Potatoes	0.9	Tomatoes	0.2	Cucumbers
4.7	DK child	2.2	Potatoes	1.6	Cucumbers	0.5	Tomatoes
4.6	WHO cluster diet E	3.5	Potatoes	0.5	Tomatoes	0.2	Beans (without pods)
4.4	DE child	2.3	Potatoes	0.9	Tomatoes	0.6	Cucumbers
4.2	PL (GP)	3.1	Potatoes	0.8	Tomatoes	0.1	Peppers
4.0	WHO Cluster diet F	3.1	Potatoes	0.6	Tomatoes	0.1	Cucumbers
4.0	FR infant	3.7	Potatoes	0.1	Tomatoes	0.1	Peaches
3.9	UK toddler	3.2	Potatoes	0.6	Tomatoes	0.1	Cucumbers
3.9	LT adult	2.9	Potatoes	0.6	Tomatoes	0.4	Cucumbers
3.7	IE adult	2.1	Potatoes	0.5	Peaches	0.4	Tomatoes
3.3	UK infant	2.9	Potatoes	0.3	Tomatoes	0.0	Peaches
3.2	NL (GP)	2.5	Potatoes	0.4	Tomatoes	0.1	Cucumbers
2.9	ES child	1.7	Potatoes	0.9	Tomatoes	0.2	Peaches
2.7	IT child/toddler	1.3	Tomatoes	0.8	Potatoes	0.3	Peaches
2.2	IT adult	1.1	Tomatoes	0.5	Potatoes	0.4	Peaches
2.2	DK adult	1.3	Potatoes	0.4	Tomatoes	0.3	Cucumbers
2.1	UK vegetarian	1.2	Potatoes	0.6	Tomatoes	0.1	Cucumbers
2.0	ES adult	0.8	Potatoes	0.7	Tomatoes	0.2	Peaches
1.8	FI adult	1.1	Potatoes	0.4	Tomatoes	0.3	Cucumbers
1.8	UK adult	1.3	Potatoes	0.4	Tomatoes	0.1	Cucumbers
1.7	FR (GP)	1.0	Potatoes	0.4	Tomatoes	0.1	Peaches

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.01	1089							
2009	Bananas	0.01	906							
2009	Peppers	0.02	1153	0.26	0.43	1.51	5	9509.73	DE child	
2009	Aubergines (egg plants)	0.02	752	0.13	0.53	0.09	4	215.00	UK 4-6 yr	
2009	Cauliflower	0.01	679							
2009	Peas (without pods)	0.01	596							
2009	Wheat	0.01	530							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Oxamyl**





Oxydemeton-methyl			
Status of the active substance:	Excluded		
Code number:	98		
Toxicological end points			
ADI (mg/kg bw/day):	0.0003	ARID (mg/kg bw):	0.0015
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

**Chronic risk assessment**

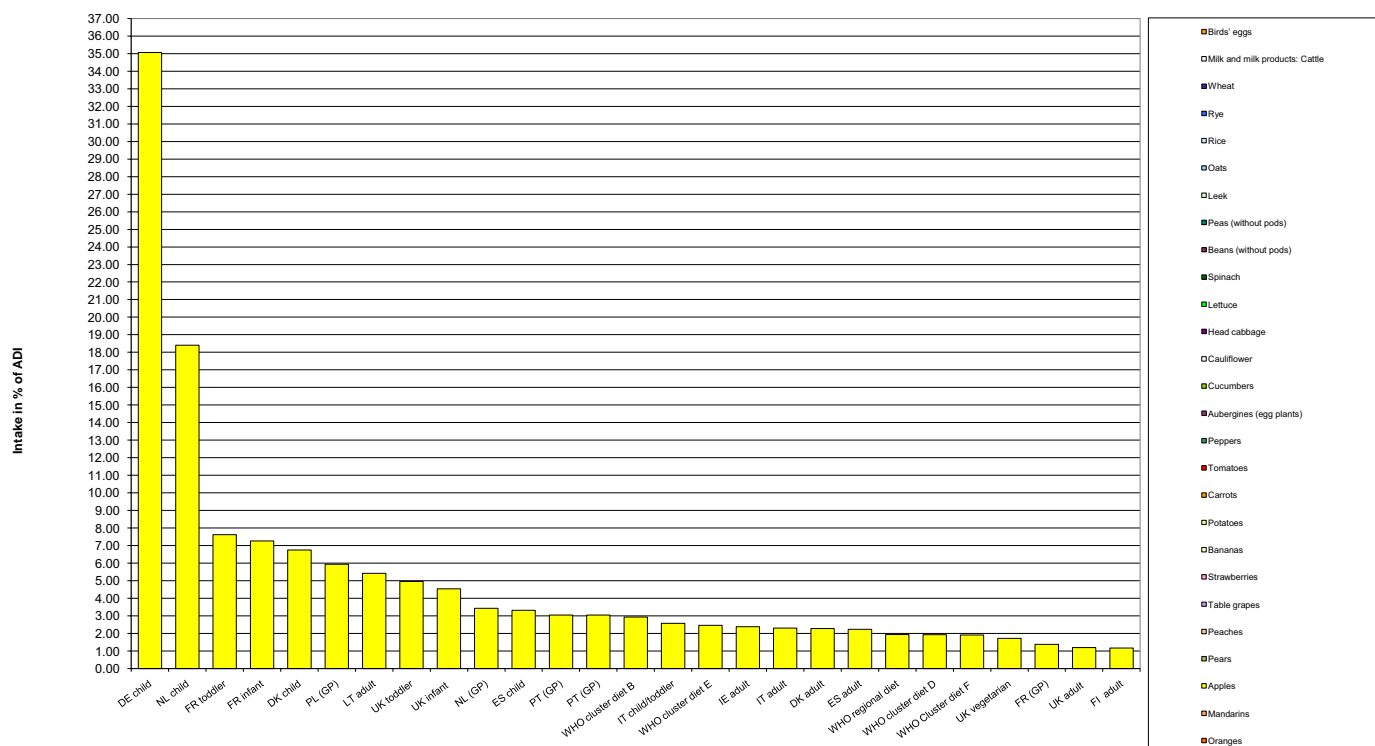
Highest calculated exposure in % of ADI		MS Diet		Exposure (range) in % of ADI minimum - maximum			
				1	35		
No of diets exceeding ADI: 1 ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
35.1	DE child	35.1	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
18.4	NL child	18.4	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
7.6	FR toddler	7.6	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
7.3	FR infant	7.3	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
6.7	DK child	6.7	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
5.9	PL (GP)	5.9	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
5.4	LT adult	5.4	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
5.0	UK toddler	5.0	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
4.5	UK infant	4.5	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
3.4	NL (GP)	3.4	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
3.3	ES child	3.3	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
3.1	PT (GP)	3.1	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
3.1	PT (GP)	3.1	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
2.9	WHO cluster diet B	2.9	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
2.6	IT child/toddler	2.6	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
2.5	WHO cluster diet E	2.5	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
2.4	IE adult	2.4	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
2.3	IT adult	2.3	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
2.3	DK adult	2.3	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
2.2	ES adult	2.2	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
1.9	WHO regional diet	1.9	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
1.9	WHO cluster diet D	1.9	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
1.9	WHO Cluster diet F	1.9	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
1.7	UK vegetarian	1.7	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
1.4	FR (GP)	1.4	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
1.2	UK adult	1.2	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
1.2	FI adult	1.2	Apples		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.02	915							
2009	Bananas	0.02	674							
2009	Peppers	0.02	925							
2009	Aubergines (egg plants)	0.02	561							
2009	Cauliflower	0.02	519							
2009	Peas (without pods)	0.02	475							
2009	Wheat	0.02	423							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Oxydemeton-methyl**



Paclobutrazol			
Status of the active substance:	Excluded		
Code number:	99		
Toxicological end points			
ADI (mg/kg bw/day):	0.022	ARID (mg/kg bw):	0.1
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2010	Year of evaluation:	2010

**Chronic risk assessment**

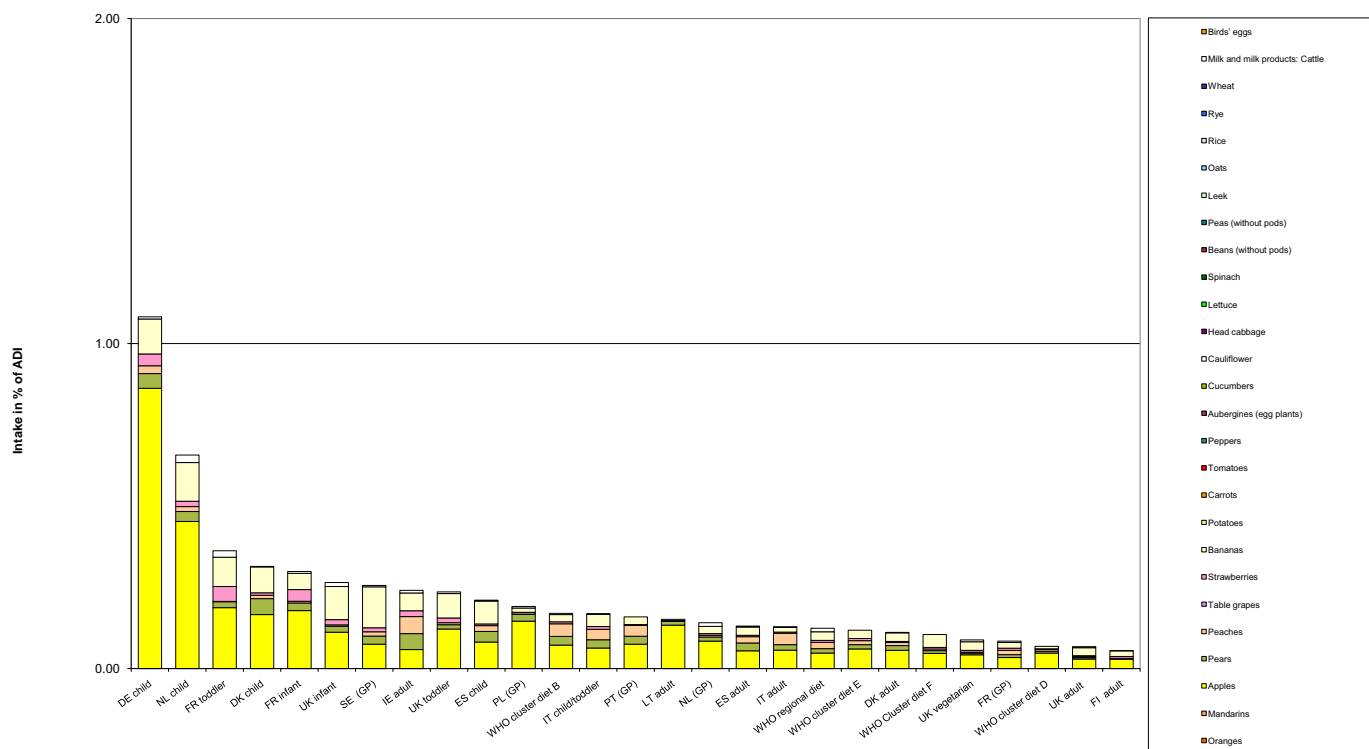
Exposure (range) in % of ADI minimum - maximum		1					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.1	DE child	0.9	Apples	0.1	Bananas	0.0	Pears
0.7	NL child	0.5	Apples	0.1	Bananas	0.0	Pears
0.4	FR toddler	0.2	Apples	0.1	Bananas	0.0	Strawberries
0.3	DK child	0.2	Apples	0.1	Bananas	0.0	Pears
0.3	FR infant	0.2	Apples	0.0	Bananas	0.0	Strawberries
0.3	UK infant	0.1	Apples	0.1	Bananas	0.0	Pears
0.3	SE (GP)	0.1	Bananas	0.1	Apples	0.0	Pears
0.2	IE adult	0.1	Apples	0.1	Bananas	0.1	Peaches
0.2	UK toddler	0.1	Apples	0.1	Bananas	0.0	Strawberries
0.2	ES child	0.1	Apples	0.1	Bananas	0.0	Pears
0.2	PL (GP)	0.1	Apples	0.0	Pears	0.0	Bananas
0.2	WHO cluster diet B	0.1	Apples	0.0	Peaches	0.0	Pears
0.2	IT child/toddler	0.1	Apples	0.0	Bananas	0.0	Peaches
0.2	PT (GP)	0.1	Apples	0.0	Peaches	0.0	Pears
0.2	LT adult	0.1	Apples	0.0	Pears	0.0	Bananas
0.1	NL (GP)	0.1	Apples	0.0	Bananas	0.0	Pears
0.1	ES adult	0.1	Apples	0.0	Bananas	0.0	Pears
0.1	IT adult	0.1	Apples	0.0	Peaches	0.0	Pears
0.1	WHO regional diet	0.0	Apples	0.0	Bananas	0.0	Peaches
0.1	WHO cluster diet E	0.1	Apples	0.0	Bananas	0.0	Pears
0.1	DK adult	0.1	Apples	0.0	Bananas	0.0	Pears
0.1	WHO Cluster diet F	0.0	Apples	0.0	Bananas	0.0	Pears
0.1	UK vegetarian	0.0	Apples	0.0	Bananas	0.0	Cauliflower
0.1	FR (GP)	0.0	Apples	0.0	Bananas	0.0	Peaches
0.1	WHO cluster diet D	0.0	Apples	0.0	Bananas	0.0	Pears
0.1	UK adult	0.0	Apples	0.0	Bananas	0.0	Pears
0.1	FI adult	0.0	Apples	0.0	Bananas	0.0	Strawberries

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	655							
2009	Bananas	0.5	548	0.4		0.24		20.23	UK infant	
2009	Peppers	0.02	662							
2009	Aubergines (egg plants)	0.02	429							
2009	Cauliflower	0.02	436	0.23		0.00		0.09	NL child	
2009	Peas (without pods)	0.02	413							
2009	Wheat	0.02	412							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Paclobutrazol**



Parathion			
Status of the active substance:	Excluded		
Code number:	100		
Toxicological end points			
ADI (mg/kg bw/day):	0.0006	ARID (mg/kg bw):	0.005
Source of ADI:	ECCO 100	Source of ARID:	ECCO 100
Year of evaluation:	2001	Year of evaluation:	2001

**Chronic risk assessment**

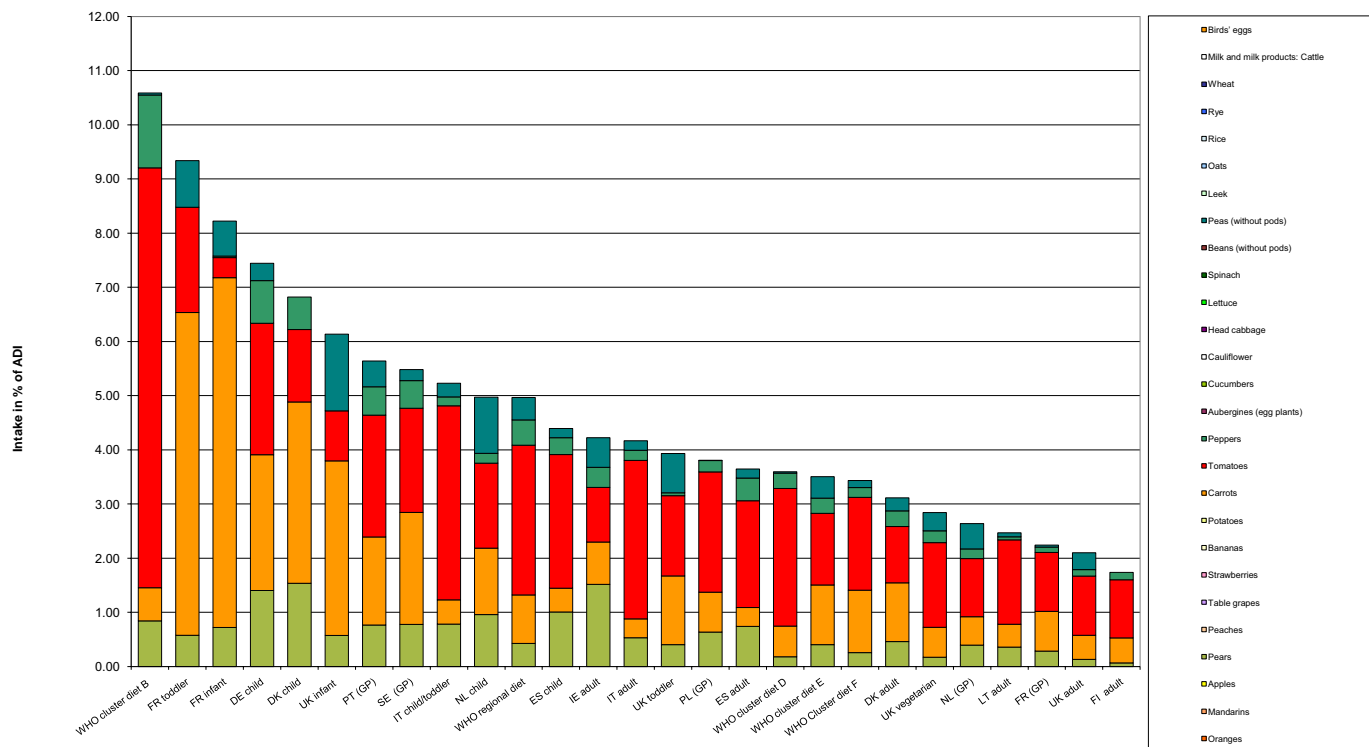
		Exposure (range) in % of ADI minimum - maximum					
		2 11					
<b>No of diets exceeding ADI:</b>							
		2 ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
10.6	WHO cluster diet B	7.7	Tomatoes	1.3	Peppers	0.8	Pears
9.3	FR toddler	6.0	Carrots	1.9	Tomatoes	0.9	Peas (without pods)
8.2	FR infant	6.5	Carrots	0.7	Pears	0.6	Peas (without pods)
7.4	DE child	2.5	Carrots	2.4	Tomatoes	1.4	Pears
6.8	DK child	3.3	Carrots	1.5	Pears	1.3	Tomatoes
6.1	UK infant	3.2	Carrots	1.4	Peas (without pods)	0.9	Tomatoes
5.6	PT (GP)	2.2	Tomatoes	1.6	Carrots	0.8	Pears
5.5	SE (GP)	2.1	Carrots	1.9	Tomatoes	0.8	Pears
5.2	IT child/toddler	3.6	Tomatoes	0.8	Pears	0.4	Carrots
5.0	NL child	1.6	Tomatoes	1.2	Carrots	1.0	Peas (without pods)
5.0	WHO regional diet	2.8	Tomatoes	0.9	Carrots	0.5	Peppers
4.4	ES child	2.5	Tomatoes	1.0	Pears	1.0	Carrots
4.2	IE adult	1.5	Pears	1.0	Tomatoes	0.8	Carrots
4.2	IT adult	2.9	Tomatoes	0.5	Pears	0.3	Carrots
3.9	UK toddler	1.5	Tomatoes	1.3	Carrots	0.7	Peas (without pods)
3.8	PL (GP)	2.2	Tomatoes	0.7	Carrots	0.6	Pears
3.6	ES adult	2.0	Tomatoes	0.7	Pears	0.4	Peppers
3.6	WHO cluster diet D	2.5	Tomatoes	0.6	Carrots	0.3	Peppers
3.5	WHO cluster diet E	1.3	Tomatoes	1.1	Carrots	0.4	Pears
3.4	WHO Cluster diet F	1.7	Tomatoes	1.2	Carrots	0.3	Pears
3.1	DK adult	1.1	Carrots	1.0	Tomatoes	0.5	Pears
2.8	UK vegetarian	1.6	Tomatoes	0.6	Carrots	0.3	Peas (without pods)
2.6	NL (GP)	1.1	Tomatoes	0.5	Carrots	0.5	Peas (without pods)
2.5	LT adult	1.6	Tomatoes	0.4	Carrots	0.4	Pears
2.2	FR (GP)	1.1	Tomatoes	0.7	Carrots	0.3	Pears
2.1	UK adult	1.1	Tomatoes	0.4	Carrots	0.3	Peas (without pods)
1.7	FI adult	1.1	Tomatoes	0.5	Carrots	0.1	Peppers

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	1303							
2009	Bananas	0.05	1052							
2009	Peppers	0.05	1305	0.31		0.01		12.60	DE child	
2009	Aubergines (egg plants)	0.05	862							
2009	Cauliflower	0.05	734							
2009	Peas (without pods)	0.05	688	0.15		0.01		1.64	UK infant	
2009	Wheat	0.05	1045							
2009	Milk and milk products: Cattle	0.05	428							
2009	Birds' eggs	0.05	435							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Parathion**



Parathion-methyl			
Status of the active substance:	Excluded		
Code number:	101		
Toxicological end points			
ADI (mg/kg bw/day):	0.001	ARID (mg/kg bw):	0.03
Source of ADI:	ECCO 127	Source of ARID:	ECCO 127
Year of evaluation:	2002	Year of evaluation:	2002

**Chronic risk assessment**

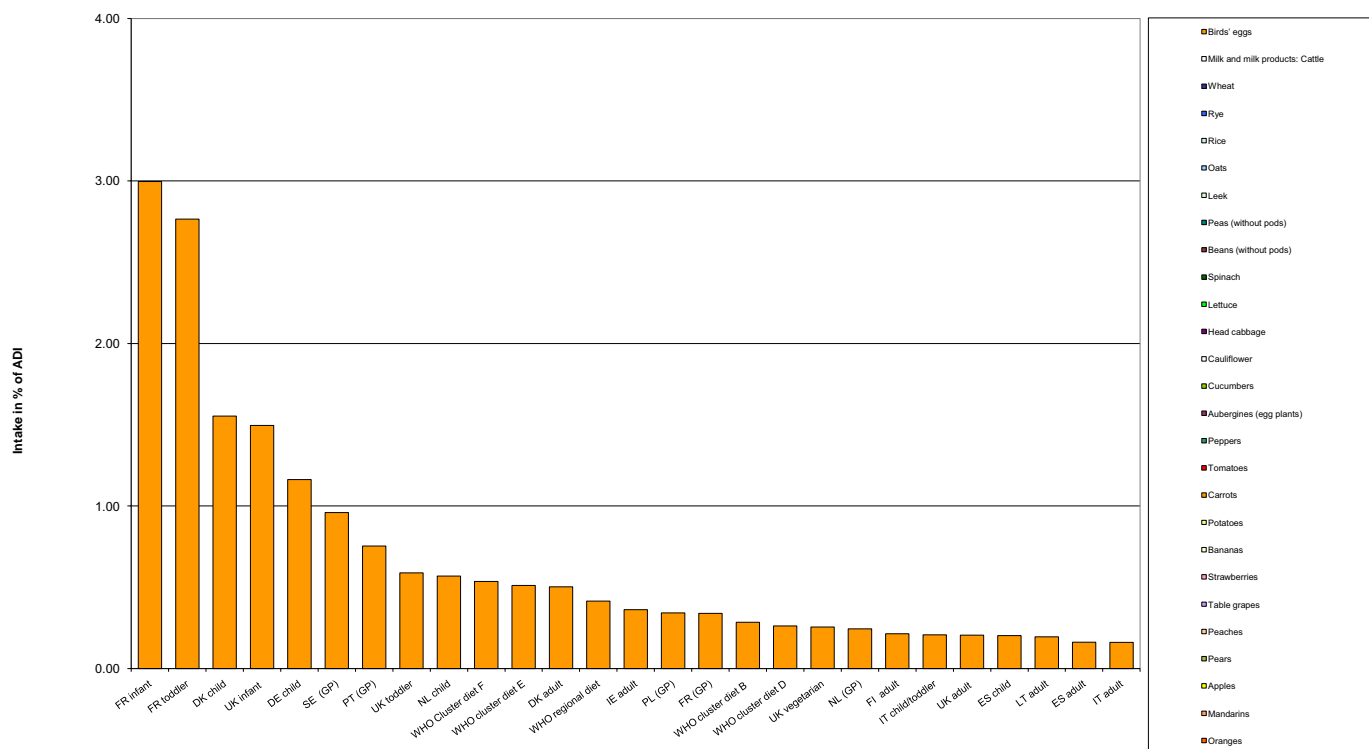
		Exposure (range) in % of ADI minimum - maximum 3					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
3.0	FR infant	3.0	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
2.8	FR toddler	2.8	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.6	DK child	1.6	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.5	UK infant	1.5	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.2	DE child	1.2	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
1.0	SE (GP)	1.0	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.8	PT (GP)	0.8	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.6	UK toddler	0.6	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.6	NL child	0.6	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.5	WHO Cluster diet F	0.5	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.5	WHO cluster diet E	0.5	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.5	DK adult	0.5	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.4	WHO regional diet	0.4	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.4	IE adult	0.4	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.3	PL (GP)	0.3	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.3	FR (GP)	0.3	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.3	WHO cluster diet B	0.3	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.3	WHO cluster diet D	0.3	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.3	UK vegetarian	0.3	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.2	NL (GP)	0.2	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.2	FI adult	0.2	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.2	IT child/toddler	0.2	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.2	UK adult	0.2	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.2	ES child	0.2	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.2	LT adult	0.2	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.2	ES adult	0.2	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		
0.2	IT adult	0.2	Carrots	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)		

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.02	1005							
2009	Bananas	0.02	746							
2009	Peppers	0.02	975							
2009	Aubergines (egg plants)	0.02	630							
2009	Cauliflower	0.02	546							
2009	Peas (without pods)	0.02	499							
2009	Wheat	0.02	606							
2009	Milk and milk products: Cattle	0.02	357							
2009	Birds' eggs	0.02	443							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Parathion-methyl**



Penconazole			
Status of the active substance:	Included		
Code number:	102		
Toxicological end points			
ADI (mg/kg bw/day):	0.03	ARID (mg/kg bw):	0.5
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2008	Year of evaluation:	2008

**Chronic risk assessment**

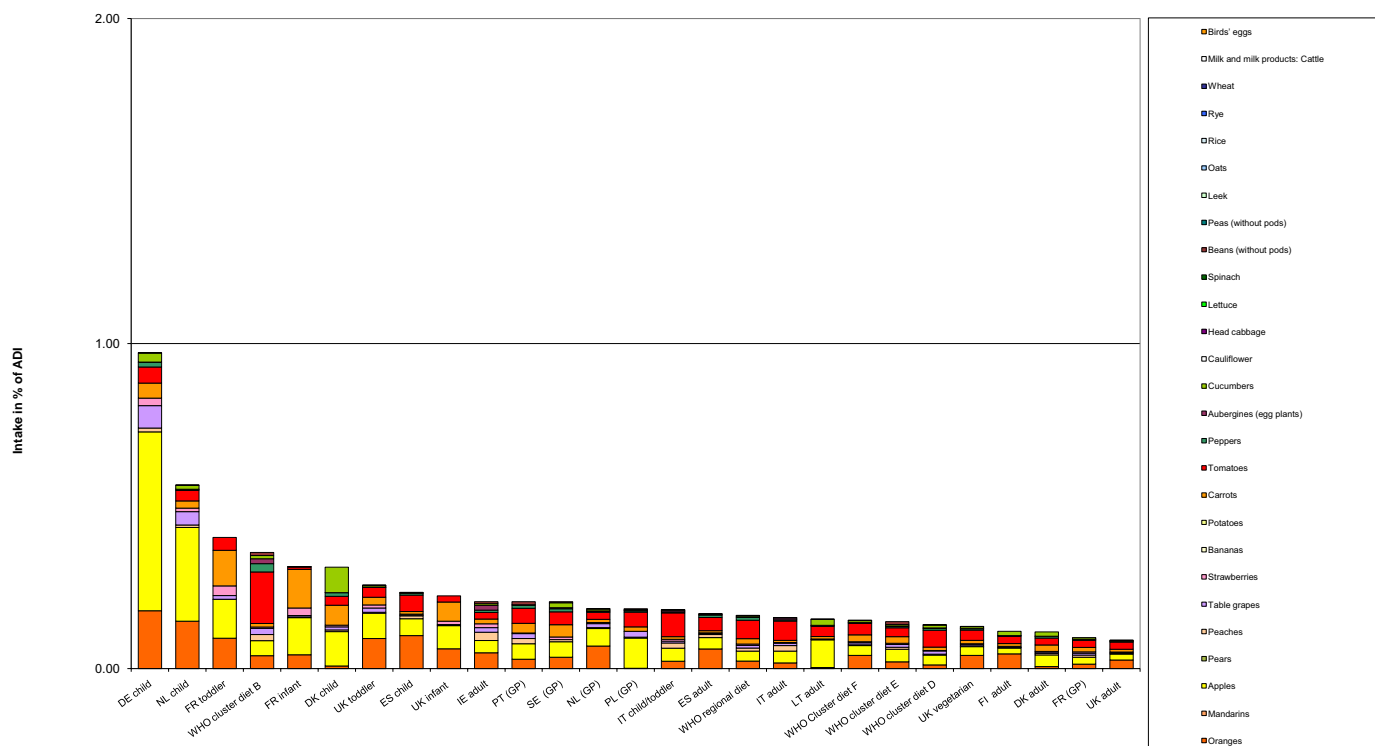
		Exposure (range) in % of ADI minimum - maximum		1			
		No of diets exceeding ADI:		---			
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.0	DE child	0.6	Apples	0.2	Oranges	0.1	Table grapes
0.6	NL child	0.3	Apples	0.1	Oranges	0.0	Table grapes
0.4	FR toddler	0.1	Apples	0.1	Carrots	0.1	Oranges
0.4	WHO cluster diet B	0.2	Tomatoes	0.0	Apples	0.0	Oranges
0.3	FR infant	0.1	Carrots	0.1	Apples	0.0	Oranges
0.3	DK child	0.1	Apples	0.1	Cucumbers	0.1	Carrots
0.3	UK toddler	0.1	Oranges	0.1	Apples	0.0	Tomatoes
0.2	ES child	0.1	Oranges	0.1	Apples	0.1	Tomatoes
0.2	UK infant	0.1	Apples	0.1	Oranges	0.1	Carrots
0.2	IE adult	0.0	Oranges	0.0	Apples	0.0	Peaches
0.2	PT (GP)	0.0	Apples	0.0	Tomatoes	0.0	Carrots
0.2	SE (GP)	0.0	Apples	0.0	Tomatoes	0.0	Carrots
0.2	NL (GP)	0.1	Oranges	0.1	Apples	0.0	Tomatoes
0.2	PL (GP)	0.1	Apples	0.0	Tomatoes	0.0	Table grapes
0.2	IT child/toddler	0.1	Tomatoes	0.0	Apples	0.0	Oranges
0.2	ES adult	0.1	Oranges	0.0	Tomatoes	0.0	Apples
0.2	WHO regional diet	0.1	Tomatoes	0.0	Apples	0.0	Oranges
0.2	IT adult	0.1	Tomatoes	0.0	Apples	0.0	Oranges
0.2	LT adult	0.1	Apples	0.0	Tomatoes	0.0	Cucumbers
0.1	WHO Cluster diet F	0.0	Oranges	0.0	Tomatoes	0.0	Apples
0.1	WHO cluster diet E	0.0	Apples	0.0	Tomatoes	0.0	Oranges
0.1	WHO cluster diet D	0.1	Tomatoes	0.0	Apples	0.0	Oranges
0.1	UK vegetarian	0.0	Oranges	0.0	Tomatoes	0.0	Apples
0.1	FI adult	0.0	Oranges	0.0	Tomatoes	0.0	Apples
0.1	DK adult	0.0	Apples	0.0	Tomatoes	0.0	Carrots
0.1	FR (GP)	0.0	Tomatoes	0.0	Apples	0.0	Oranges
0.1	UK adult	0.0	Oranges	0.0	Tomatoes	0.0	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.2	1488	8.27		0.17		2.23	DE child	
2009	Bananas	0.05	1201							
2009	Peppers	0.2	1513	1.06		0.08		1.01	DE child	
2009	Aubergines (egg plants)	0.1	990	0.10		0.02		0.08	UK 4-6 yr	
2009	Cauliflower	0.05	860							
2009	Peas (without pods)	0.05	713							
2009	Wheat	0.05	1171							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Penconazole**



Permethrin	
Status of the active substance:	Excluded
Code number:	103
Toxicological end points	
ADI (mg/kg bw/day):	0.05
Source of ADI:	JMPR
Year of evaluation:	1999
ARID (mg/kg bw):	1.5
Source of ARID:	JMPR
Year of evaluation:	2002

### Chronic risk assessment

Exposure (range) in % of ADI  
minimum - maximum

No of diets exceeding ADI: ---

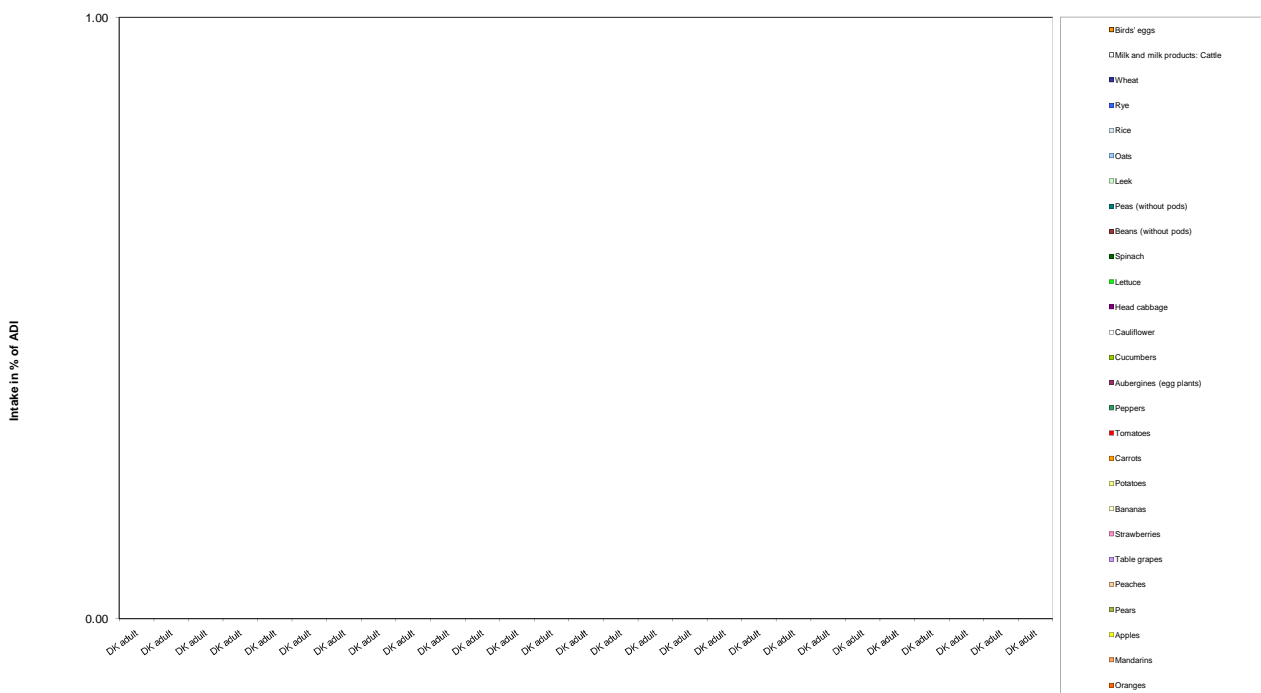
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)

### Acute risk assessment

Year	Commodity <sup>a)</sup>	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
2009	Milk and milk products: Cattle	0.05	378							
2009	Birds' eggs	0.05	441							

<sup>a)</sup> The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

### Chronic risk assessment: Permethrin



Phosalone		
Status of the active substance:	Excluded	
Code number:	104	
Toxicological end points		
ADI (mg/kg bw/day):	0.01	ARID (mg/kg bw): 0.1
Source of ADI:	EFSA	Source of ARID: EFSA
Year of evaluation:	2006	Year of evaluation: 2006

**Chronic risk assessment**

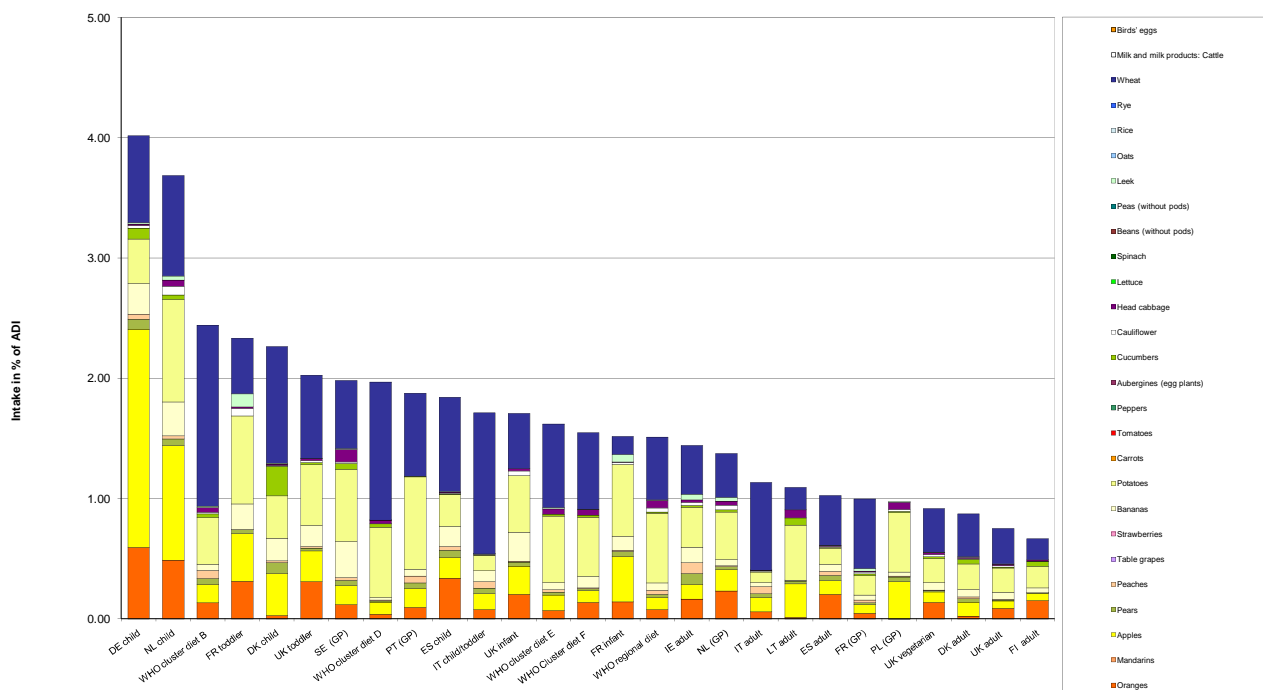
		Exposure (range) in % of ADI minimum - maximum					
		1		4			
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
4.0	DE child	1.8	Apples	0.7	Wheat	0.6	Oranges
3.7	NL child	1.0	Apples	0.9	Potatoes	0.8	Wheat
2.4	WHO cluster diet B	1.5	Wheat	0.4	Potatoes	0.2	Apples
2.3	FR toddler	0.7	Potatoes	0.5	Wheat	0.4	Apples
2.3	DK child	1.0	Wheat	0.4	Potatoes	0.3	Apples
2.0	UK toddler	0.7	Wheat	0.5	Potatoes	0.3	Oranges
2.0	SE (GP)	0.6	Potatoes	0.6	Wheat	0.3	Bananas
2.0	WHO cluster diet D	1.1	Wheat	0.6	Potatoes	0.1	Apples
1.9	PT (GP)	0.8	Potatoes	0.7	Wheat	0.2	Apples
1.8	ES child	0.8	Wheat	0.3	Oranges	0.3	Potatoes
1.7	IT child/toddler	1.2	Wheat	0.1	Apples	0.1	Potatoes
1.7	UK infant	0.5	Potatoes	0.5	Wheat	0.2	Bananas
1.6	WHO cluster diet E	0.7	Wheat	0.6	Potatoes	0.1	Apples
1.5	WHO Cluster diet F	0.6	Wheat	0.5	Potatoes	0.1	Oranges
1.5	FR infant	0.6	Potatoes	0.4	Apples	0.1	Wheat
1.5	WHO regional diet	0.6	Potatoes	0.5	Wheat	0.1	Apples
1.4	IE adult	0.4	Wheat	0.3	Potatoes	0.2	Oranges
1.4	NL (GP)	0.4	Potatoes	0.4	Wheat	0.2	Oranges
1.1	IT adult	0.7	Wheat	0.1	Apples	0.1	Potatoes
1.1	LT adult	0.5	Potatoes	0.3	Apples	0.2	Wheat
1.0	ES adult	0.4	Wheat	0.2	Oranges	0.1	Potatoes
1.0	FR (GP)	0.6	Wheat	0.2	Potatoes	0.1	Apples
1.0	PL (GP)	0.5	Potatoes	0.3	Apples	0.1	Head cabbage
0.9	UK vegetarian	0.4	Wheat	0.2	Potatoes	0.1	Oranges
0.9	DK adult	0.4	Wheat	0.2	Potatoes	0.1	Apples
0.8	UK adult	0.3	Wheat	0.2	Potatoes	0.1	Oranges
0.7	FI adult	0.2	Potatoes	0.2	Wheat	0.2	Oranges

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARID		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	1601							
2009	Bananas	0.05	1258	0.1		0.03		2.51	UK infant	
2009	Peppers	0.05	1568							
2009	Aubergines (egg plants)	0.05	938					1.32	NL child	
2009	Cauliflower	0.05	860	0.12		0.02				
2009	Peas (without pods)	0.05	756					0.43	UK 4-6 yr	
2009	Wheat	0.05	1093	0.09		0.03				
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Phosalone**



Phosmet			
Status of the active substance:	Included		
Code number:	105		
Toxicological end points			
ADI (mg/kg bw/day):	0.003	ARID (mg/kg bw):	0.045
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

**Chronic risk assessment**

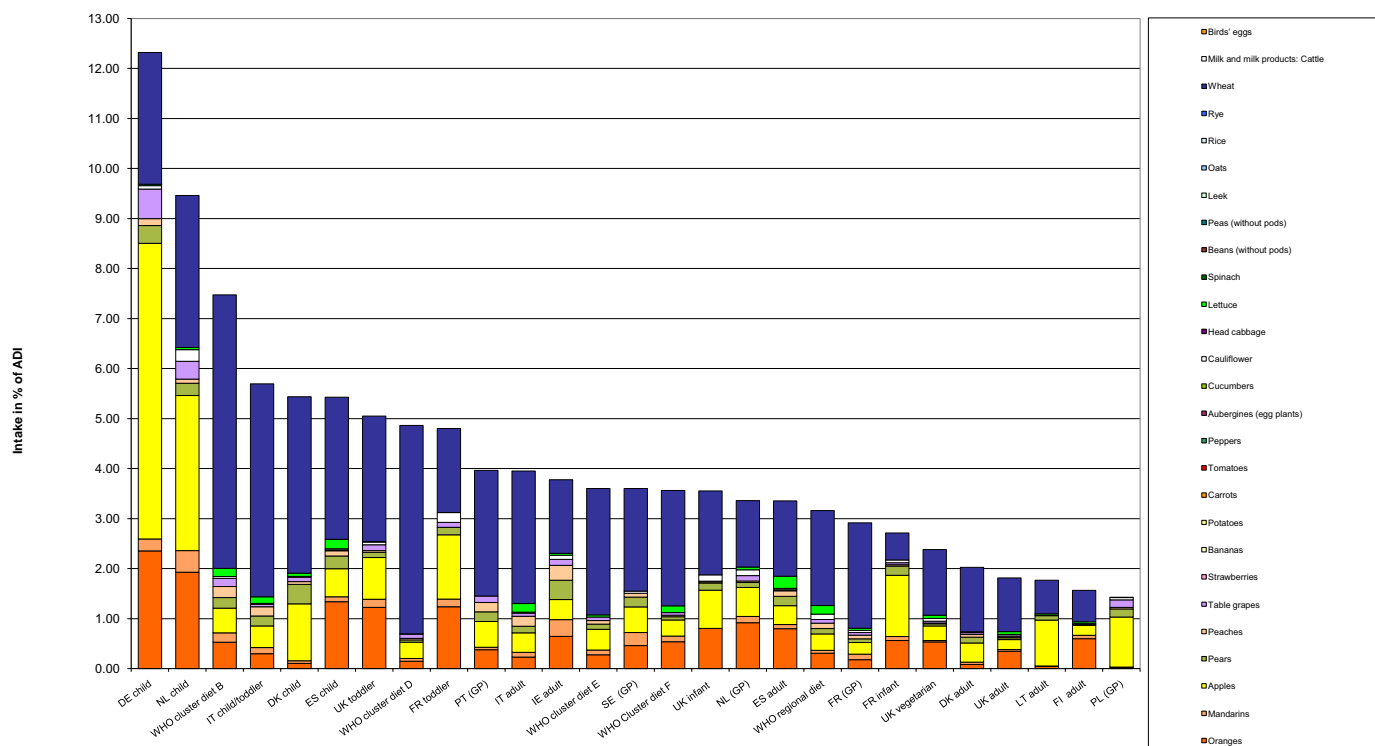
Exposure (range) in % of ADI minimum - maximum		No of diets exceeding ADI:					
1 - 12		1 ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
12.3	DE child	5.9	Apples	2.6	Wheat	2.4	Oranges
9.5	NL child	3.1	Apples	3.0	Wheat	1.9	Oranges
7.5	WHO cluster diet B	5.5	Wheat	0.5	Oranges	0.5	Apples
5.7	IT child/toddler	4.3	Wheat	0.4	Apples	0.3	Oranges
5.4	DK child	3.5	Wheat	1.1	Apples	0.4	Pears
5.4	ES child	2.8	Wheat	1.3	Oranges	0.6	Apples
5.1	UK toddler	2.5	Wheat	1.2	Oranges	0.8	Apples
4.9	WHO cluster diet D	4.2	Wheat	0.3	Apples	0.1	Oranges
4.8	FR toddler	1.7	Wheat	1.3	Apples	1.2	Oranges
4.0	PT (GP)	2.5	Wheat	0.5	Apples	0.4	Oranges
4.0	IT adult	2.6	Wheat	0.4	Apples	0.2	Oranges
3.8	IE adult	1.5	Wheat	0.6	Oranges	0.4	Apples
3.6	WHO cluster diet E	2.5	Wheat	0.4	Apples	0.3	Oranges
3.6	SE (GP)	2.1	Wheat	0.5	Apples	0.5	Oranges
3.6	WHO Cluster diet F	2.3	Wheat	0.5	Oranges	0.3	Apples
3.6	UK infant	1.7	Wheat	0.8	Oranges	0.8	Apples
3.4	NL (GP)	1.3	Wheat	0.9	Oranges	0.6	Apples
3.4	ES adult	1.5	Wheat	0.8	Oranges	0.4	Apples
3.2	WHO regional diet	1.9	Wheat	0.3	Apples	0.3	Oranges
2.9	FR (GP)	2.1	Wheat	0.2	Apples	0.2	Oranges
2.7	FR infant	1.2	Apples	0.6	Oranges	0.5	Wheat
2.4	UK vegetarian	1.3	Wheat	0.5	Oranges	0.3	Apples
2.0	DK adult	1.3	Wheat	0.4	Apples	0.1	Pears
1.8	UK adult	1.1	Wheat	0.3	Oranges	0.2	Apples
1.8	LT adult	0.9	Apples	0.7	Wheat	0.1	Pears
1.6	FI adult	0.6	Wheat	0.6	Oranges	0.2	Apples
1.4	PL (GP)	1.0	Apples	0.2	Pears	0.1	Table grapes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	1137	0.70	0.26	0.1		14.55	DE child	
2009	Bananas	0.05	737							
2009	Peppers	0.05	1030							
2009	Aubergines (egg plants)	0.05	644							
2009	Cauliflower	0.05	541	0.18		0.04		5.87	NL child	
2009	Peas (without pods)	0.05	520							
2009	Wheat	0.05	579	0.17		0.03		0.96	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Phosmet**





Phoxim			
Status of the active substance:	Excluded		
Code number:	106		
Toxicological end points			
ADI (mg/kg bw/day):	0.004	ARID (mg/kg bw):	0.004
Source of ADI:	JECFA	Source of ARID:	
Year of evaluation:	1999	Year of evaluation:	

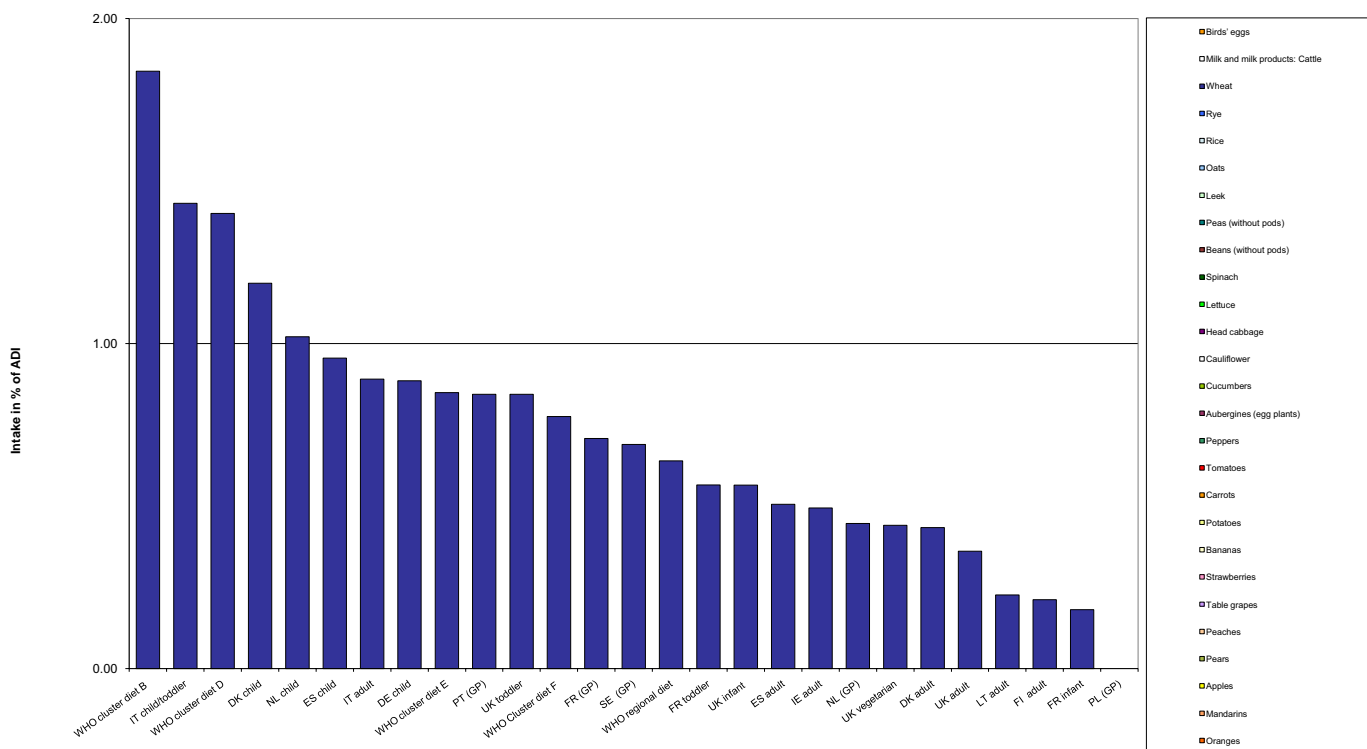
Active substance was not assessed regarding the setting of an ARID.  
Acute risk assessment performed on the basis of the ADI.

Chronic risk assessment							
			Exposure (range) in % of ADI minimum - maximum 2				
			No of diets exceeding ADI: ---				
Highest calculated exposure in % of ADI	MS Diet	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
1.8	WHO cluster diet B	1.8	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
1.4	IT child/toddler	1.4	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
1.4	WHO cluster diet D	1.4	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
1.2	DK child	1.2	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
1.0	NL child	1.0	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
1.0	ES child	1.0	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.9	IT adult	0.9	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.9	DE child	0.9	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.8	WHO cluster diet E	0.8	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.8	PT (GP)	0.8	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.8	UK toddler	0.8	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.8	WHO Cluster diet F	0.8	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.7	FR (GP)	0.7	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.7	SE (GP)	0.7	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.6	WHO regional diet	0.6	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.6	FR toddler	0.6	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.6	UK infant	0.6	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.5	ES adult	0.5	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.5	IE adult	0.5	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.4	NL (GP)	0.4	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.4	UK vegetarian	0.4	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.4	DK adult	0.4	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.4	UK adult	0.4	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	LT adult	0.2	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	FI adult	0.2	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
0.2	FR infant	0.2	Wheat		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)
	PL (GP)		FRUIT (FRESH)		FRUIT (FRESH OR FROZEN)		FRUIT (FRESH OR FROZEN)

Acute risk assessment										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	0.01	448							
2009	Bananas	0.01	381							
2009	Peppers	0.01	305							
2009	Aubergines (egg plants)	0.01	270							
2009	Cauliflower	0.01	240							
2009	Peas (without pods)	0.01	144							
2009	Wheat	0.01	453	0.22		0.00		1.44	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Phoxim



Pirimicarb			
Status of the active substance:	Included		
Code number:	107		
Toxicological end points			
ADI (mg/kg bw/day):	0.035	ARID (mg/kg bw):	0.1
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

**Chronic risk assessment**

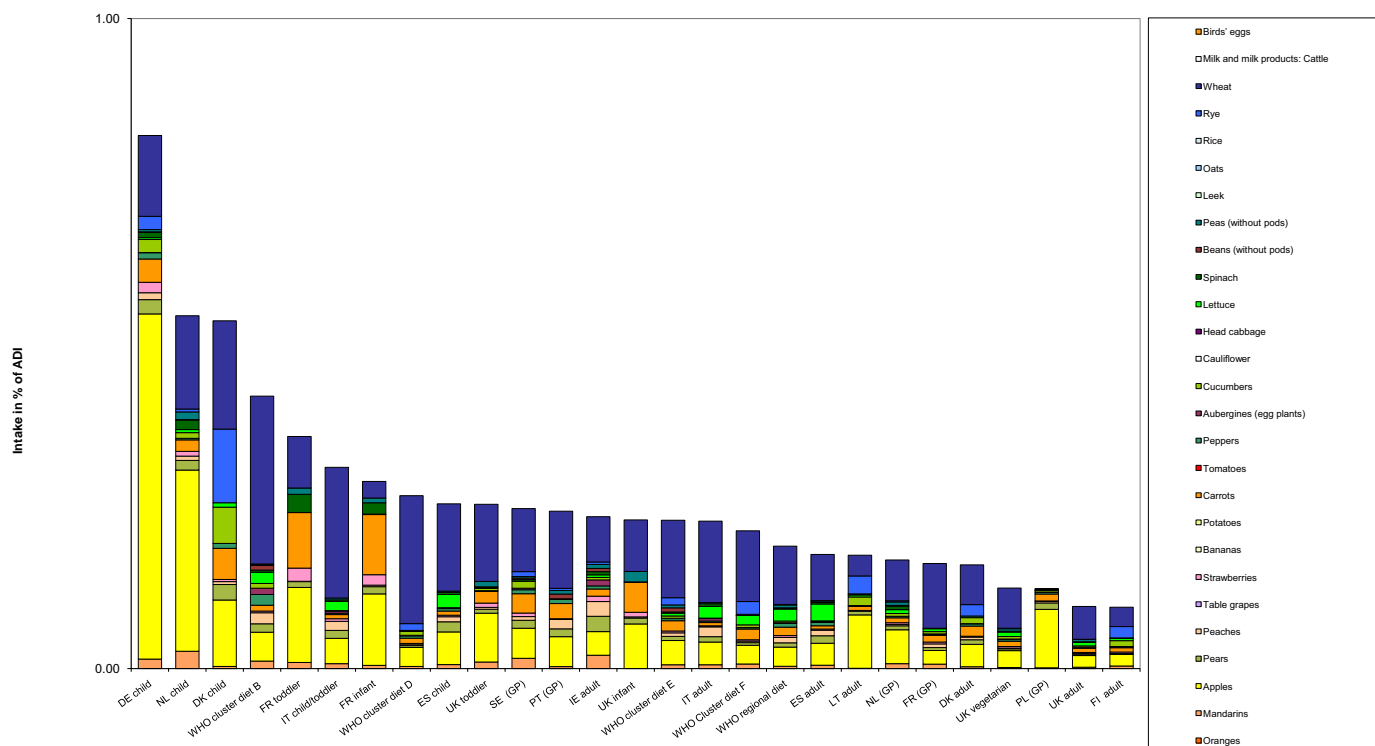
Exposure (range) in % of ADI minimum - maximum		1					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.8	DE child	0.5	Apples	0.1	Wheat	0.0	Carrots
0.5	NL child	0.3	Apples	0.1	Wheat	0.0	Mandarins
0.5	DK child	0.2	Wheat	0.1	Rye	0.1	Apples
0.4	WHO cluster diet B	0.3	Wheat	0.0	Apples	0.0	Lettuce
0.4	FR toddler	0.1	Apples	0.1	Carrots	0.1	Wheat
0.3	IT child/toddler	0.2	Wheat	0.0	Apples	0.0	Lettuce
0.3	FR infant	0.1	Apples	0.1	Carrots	0.0	Wheat
0.3	WHO cluster diet D	0.2	Wheat	0.0	Apples	0.0	Rye
0.3	ES child	0.1	Wheat	0.1	Apples	0.0	Lettuce
0.3	UK toddler	0.1	Wheat	0.1	Apples	0.0	Carrots
0.2	SE (GP)	0.1	Wheat	0.0	Apples	0.0	Carrots
0.2	PT (GP)	0.1	Wheat	0.0	Apples	0.0	Carrots
0.2	IE adult	0.1	Wheat	0.0	Apples	0.0	Pears
0.2	UK infant	0.1	Wheat	0.1	Apples	0.0	Carrots
0.2	WHO cluster diet E	0.1	Wheat	0.0	Apples	0.0	Carrots
0.2	IT adult	0.1	Wheat	0.0	Apples	0.0	Lettuce
0.2	WHO Cluster diet F	0.1	Wheat	0.0	Apples	0.0	Rye
0.2	WHO regional diet	0.1	Wheat	0.0	Apples	0.0	Lettuce
0.2	ES adult	0.1	Wheat	0.0	Apples	0.0	Lettuce
0.2	LT adult	0.1	Apples	0.0	Wheat	0.0	Rye
0.2	NL (GP)	0.1	Wheat	0.1	Apples	0.0	Mandarins
0.2	FR (GP)	0.1	Wheat	0.0	Apples	0.0	Carrots
0.2	DK adult	0.1	Wheat	0.0	Apples	0.0	Rye
0.1	UK vegetarian	0.1	Wheat	0.0	Apples	0.0	Carrots
0.1	PL (GP)	0.1	Apples	0.0	Carrots	0.0	Pears
0.1	UK adult	0.1	Wheat	0.0	Apples	0.0	Carrots
0.1	FI adult	0.0	Wheat	0.0	Apples	0.0	Rye

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	1	1084							
2009	Bananas	1	778							
2009	Peppers	1	1103	0.73		0.05		2.83	DE child	
2009	Aubergines (egg plants)	1	668	0.30		0.02		0.38	UK 4-6 yr	
2009	Cauliflower	2	609							
2009	Peas (without pods)	1	527	0.19		0.00		0.01	UK infant	
2009	Wheat	0.5	691	0.14		0.04		0.55	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Pirimicarb**



Pirimiphos-methyl			
Status of the active substance:	Included		
Code number:	108		
Toxicological end points			
ADI (mg/kg bw/day):	0.004	ARID (mg/kg bw):	0.15
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2005	Year of evaluation:	2005

### Chronic risk assessment

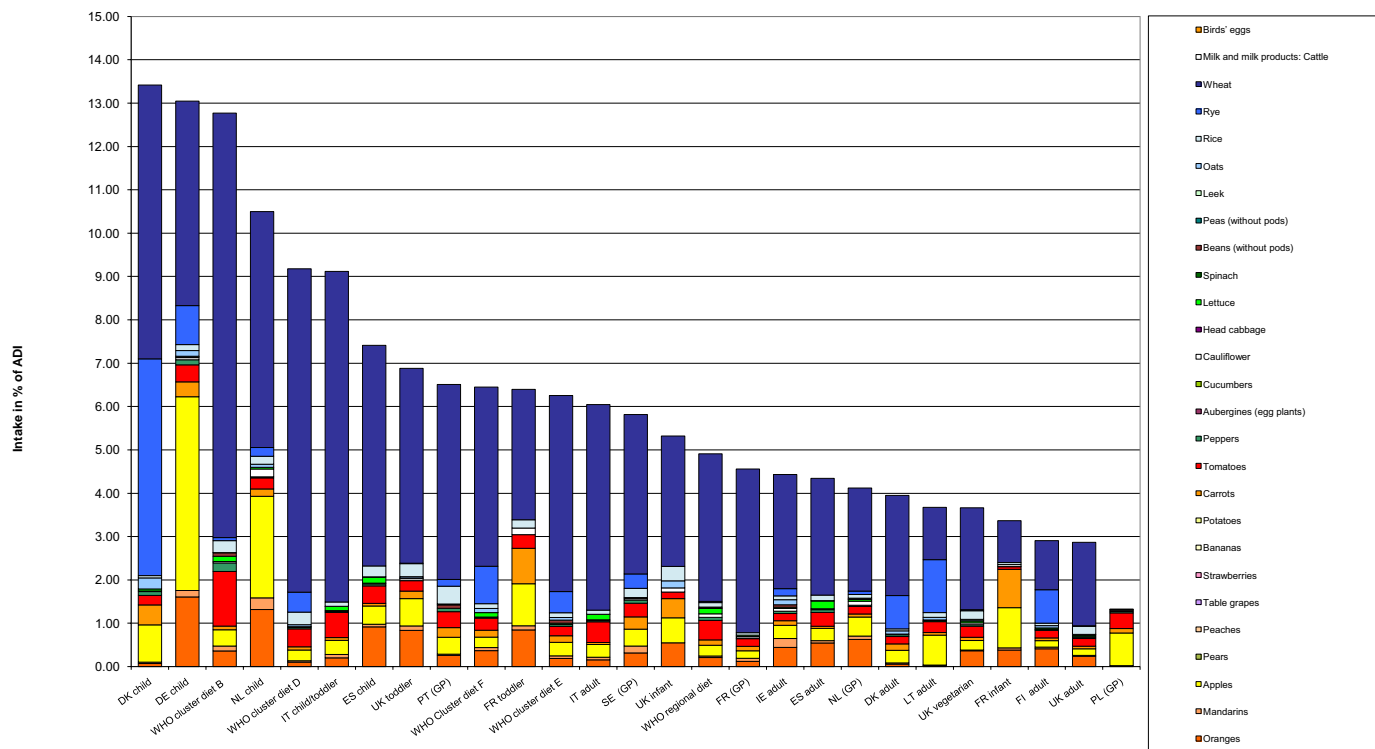
		Exposure (range) in % of ADI minimum - maximum					
		1	13				
No of diets exceeding ADI:							
		1	---				
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
13.4	DK child	6.3	Wheat	5.0	Rye	0.9	Apples
13.0	DE child	4.7	Wheat	4.5	Apples	1.6	Oranges
12.8	WHO cluster diet B	9.8	Wheat	1.3	Tomatoes	0.4	Apples
10.5	NL child	5.4	Wheat	2.3	Apples	1.3	Oranges
9.2	WHO cluster diet D	7.5	Wheat	0.5	Rye	0.4	Tomatoes
9.1	IT child/toddler	7.6	Wheat	0.6	Tomatoes	0.3	Apples
7.4	ES child	5.1	Wheat	0.9	Oranges	0.4	Apples
6.9	UK toddler	4.5	Wheat	0.8	Oranges	0.6	Apples
6.5	PT (GP)	4.5	Wheat	0.4	Rice	0.4	Apples
6.4	WHO Cluster diet F	4.1	Wheat	0.9	Rye	0.4	Oranges
6.4	FR toddler	3.0	Wheat	1.0	Apples	0.8	Oranges
6.3	WHO cluster diet E	4.5	Wheat	0.5	Rye	0.3	Apples
6.0	IT adult	4.7	Wheat	0.5	Tomatoes	0.3	Apples
5.8	SE (GP)	3.7	Wheat	0.4	Apples	0.3	Rye
5.3	UK infant	3.0	Wheat	0.6	Apples	0.5	Oranges
4.9	WHO regional diet	3.4	Wheat	0.4	Tomatoes	0.2	Apples
4.6	FR (GP)	3.8	Wheat	0.2	Tomatoes	0.2	Apples
4.4	IE adult	2.6	Wheat	0.4	Oranges	0.3	Apples
4.3	ES adult	2.7	Wheat	0.5	Oranges	0.3	Tomatoes
4.1	NL (GP)	2.4	Wheat	0.6	Oranges	0.4	Apples
4.0	DK adult	2.3	Wheat	0.8	Rye	0.3	Apples
3.7	LT adult	1.2	Rye	1.2	Wheat	0.7	Apples
3.7	UK vegetarian	2.4	Wheat	0.4	Oranges	0.3	Tomatoes
3.4	FR infant	1.0	Wheat	0.9	Apples	0.9	Carrots
2.9	FI adult	1.1	Wheat	0.8	Rye	0.4	Oranges
2.9	UK adult	1.9	Wheat	0.2	Oranges	0.2	Rice
1.3	PL (GP)	0.8	Apples	0.4	Tomatoes	0.1	Carrots

### Acute risk assessment

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	1555							
2009	Bananas	0.05	1261							
2009	Peppers	1	1543	0.13		0.17		7.18	DE child	
2009	Aubergines (egg plants)	0.05	996							
2009	Cauliflower	1	900	0.22		0.00		0.18	NL child	
2009	Peas (without pods)	0.05	783							
2009	Wheat	5	1248	12.02		2.30		22.15	UK 4-6 yr	
2009	Milk and milk products: Cattle	0.05	447							
2009	Birds' eggs	0.05	479							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

### Chronic risk assessment: Pirimiphos-methyl



Prochloraz			
Status of the active substance:	Excluded		
Code number:	109		
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARID (mg/kg bw):	0.1
Source of ADI:	DAR	Source of ARID:	JMPR
Year of evaluation:	2007	Year of evaluation:	2001

**Chronic risk assessment**

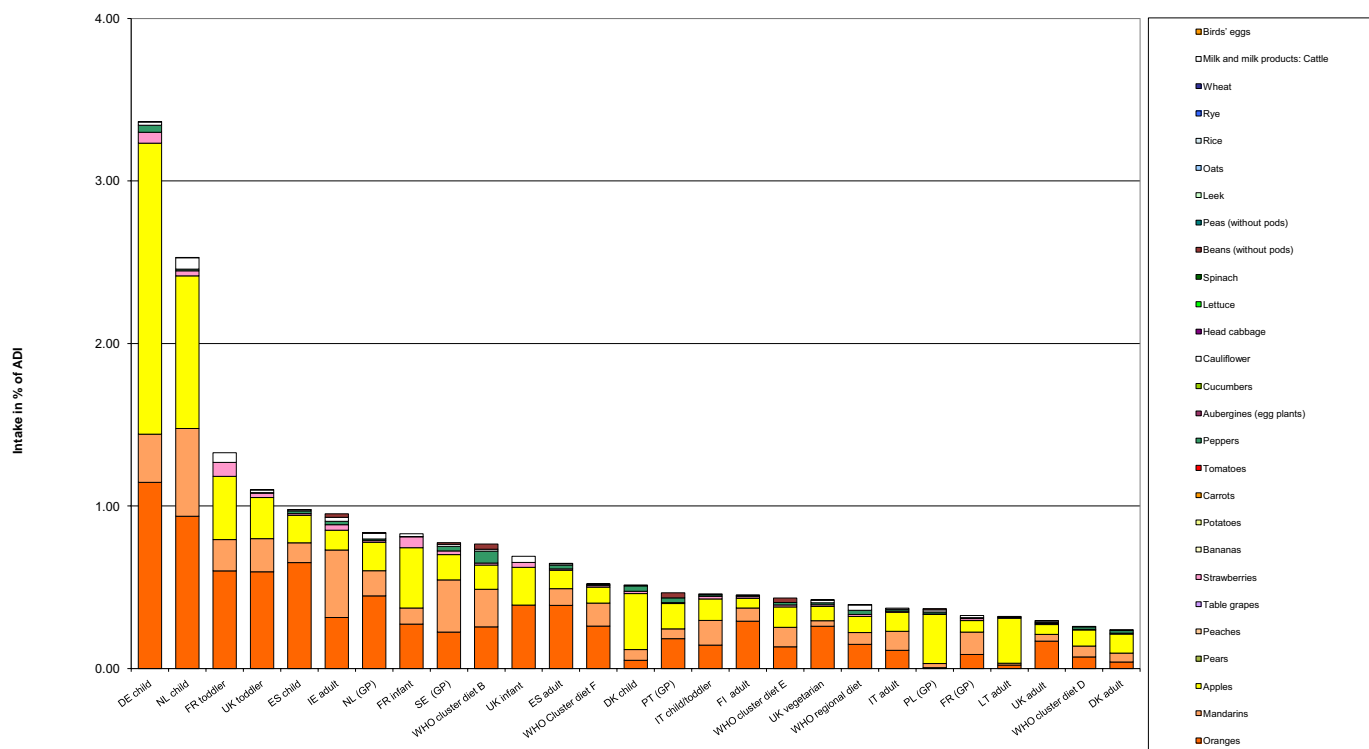
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities
3.4	DE child	1.8	Apples	1.1	Oranges	0.3	Mandarins
2.5	NL child	0.9	Apples	0.9	Oranges	0.5	Mandarins
1.3	FR toddler	0.6	Oranges	0.4	Apples	0.2	Mandarins
1.1	UK toddler	0.6	Oranges	0.3	Apples	0.2	Mandarins
1.0	ES child	0.7	Oranges	0.2	Apples	0.1	Mandarins
1.0	IE adult	0.4	Mandarins	0.3	Oranges	0.1	Apples
0.8	NL (GP)	0.4	Oranges	0.2	Apples	0.2	Mandarins
0.8	FR infant	0.4	Apples	0.3	Oranges	0.1	Mandarins
0.8	SE (GP)	0.3	Mandarins	0.2	Oranges	0.2	Apples
0.8	WHO cluster diet B	0.3	Oranges	0.2	Mandarins	0.1	Apples
0.7	UK infant	0.4	Oranges	0.2	Apples	0.0	Cauliflower
0.6	ES adult	0.4	Oranges	0.1	Apples	0.1	Mandarins
0.5	WHO Cluster diet F	0.3	Oranges	0.1	Mandarins	0.1	Apples
0.5	DK child	0.3	Apples	0.1	Mandarins	0.1	Oranges
0.5	PT (GP)	0.2	Oranges	0.2	Apples	0.1	Mandarins
0.5	IT child/toddler	0.2	Mandarins	0.1	Oranges	0.1	Apples
0.5	FI adult	0.3	Oranges	0.1	Mandarins	0.1	Apples
0.4	WHO cluster diet E	0.1	Oranges	0.1	Apples	0.1	Mandarins
0.4	UK vegetarian	0.3	Oranges	0.1	Apples	0.0	Mandarins
0.4	WHO regional diet	0.1	Oranges	0.1	Apples	0.1	Mandarins
0.4	IT adult	0.1	Apples	0.1	Mandarins	0.1	Oranges
0.4	PL (GP)	0.3	Apples	0.0	Mandarins	0.0	Cauliflower
0.3	FR (GP)	0.1	Mandarins	0.1	Oranges	0.1	Apples
0.3	LT adult	0.3	Apples	0.0	Oranges	0.0	Mandarins
0.3	UK adult	0.2	Oranges	0.1	Apples	0.0	Mandarins
0.3	WHO cluster diet D	0.1	Apples	0.1	Oranges	0.1	Mandarins
0.2	DK adult	0.1	Apples	0.1	Mandarins	0.0	Oranges

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	857							
2009	Bananas	0.05	614							
2009	Peppers	0.05	839		0.12	0.47		29.60	DE child	
2009	Aubergines (egg plants)	0.05	489							
2009	Cauliflower	0.05	405	0.25		0.01		0.35	NL child	
2009	Peas (without pods)	0.05	306							
2009	Wheat	0.5	684							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Prochloraz**



Procymidone			
Status of the active substance:	Included		
Code number:	110		
Toxicological end points			
ADI (mg/kg bw/day):	0.0028	ARID (mg/kg bw):	0.012
Source of ADI:	DAR	Source of ARID:	DAR
Year of evaluation:	2007	Year of evaluation:	2007

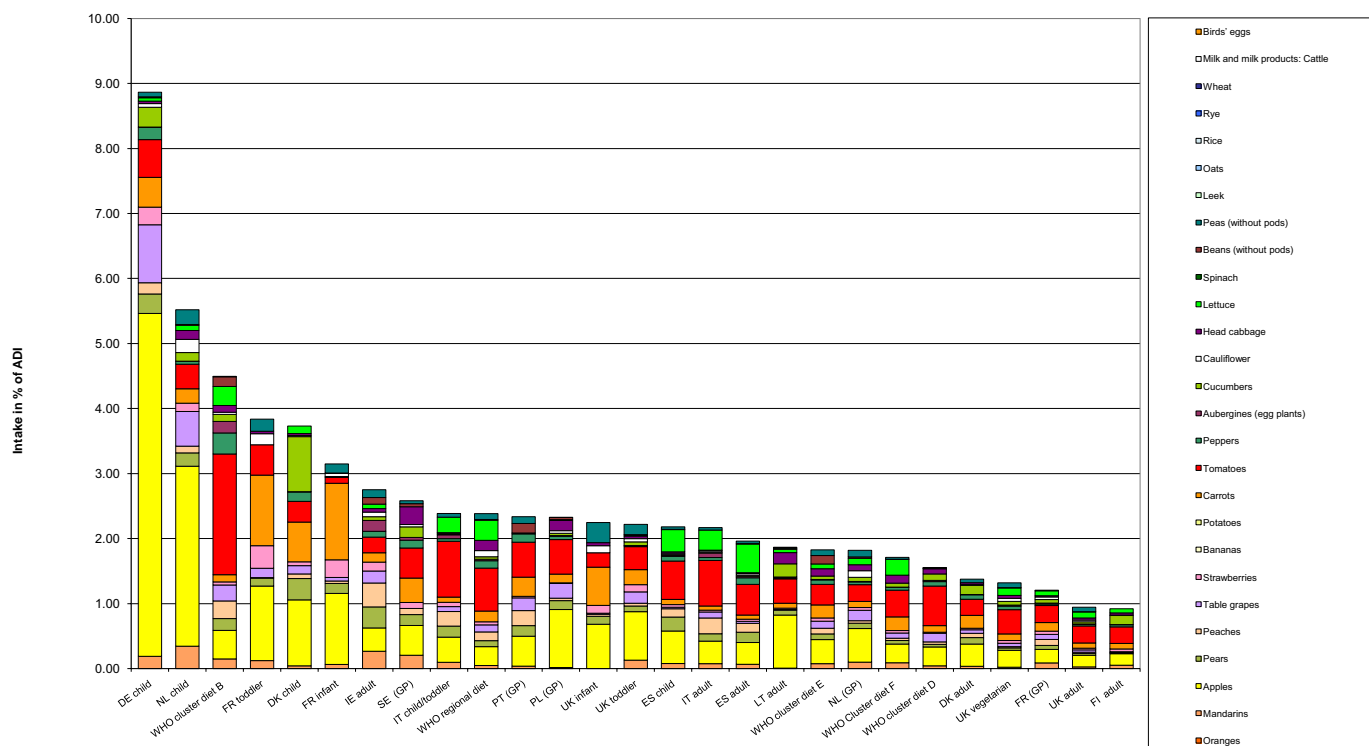
**Chronic risk assessment**

Highest calculated exposure in % of ADI		MS Diet		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	
8.9	DE child	5.3	Apples	0.9	Table grapes	0.6	Tomatoes								
5.5	NL child	2.8	Apples	0.5	Table grapes	0.4	Tomatoes								
4.5	WHO cluster diet B	1.9	Tomatoes	0.4	Apples	0.3	Peppers								
3.8	FR toddler	1.1	Apples	1.1	Carrots	0.5	Tomatoes								
3.7	DK child	1.0	Apples	0.8	Cucumbers	0.6	Carrots								
3.1	FR infant	1.2	Carrots	1.1	Apples	0.3	Strawberries								
2.8	IE adult	0.4	Peaches	0.4	Apples	0.3	Pears								
2.6	SE (GP)	0.5	Tomatoes	0.5	Apples	0.4	Carrots								
2.4	IT child/toddler	0.9	Tomatoes	0.4	Apples	0.2	Lettuce								
2.4	WHO regional diet	0.7	Tomatoes	0.3	Lettuce	0.3	Apples								
2.3	PT (GP)	0.5	Tomatoes	0.5	Apples	0.3	Carrots								
2.3	PL (GP)	0.9	Apples	0.5	Tomatoes	0.2	Table grapes								
2.2	UK infant	0.7	Apples	0.6	Carrots	0.3	Peas (without pods)								
2.2	UK toddler	0.7	Apples	0.4	Tomatoes	0.2	Carrots								
2.2	ES child	0.6	Tomatoes	0.5	Apples	0.3	Lettuce								
2.2	IT adult	0.7	Tomatoes	0.3	Apples	0.3	Lettuce								
2.0	ES adult	0.5	Tomatoes	0.4	Lettuce	0.3	Apples								
1.9	LT adult	0.8	Apples	0.4	Tomatoes	0.2	Cucumbers								
1.8	WHO cluster diet E	0.4	Apples	0.3	Tomatoes	0.2	Carrots								
1.8	NL (GP)	0.5	Apples	0.3	Tomatoes	0.2	Table grapes								
1.7	WHO Cluster diet F	0.4	Tomatoes	0.3	Apples	0.2	Lettuce								
1.6	WHO cluster diet D	0.6	Tomatoes	0.3	Apples	0.1	Table grapes								
1.4	DK adult	0.3	Apples	0.2	Tomatoes	0.2	Carrots								
1.3	UK vegetarian	0.4	Tomatoes	0.3	Apples	0.1	Lettuce								
1.2	FR (GP)	0.3	Tomatoes	0.2	Apples	0.1	Carrots								
0.9	UK adult	0.3	Tomatoes	0.2	Apples	0.1	Lettuce								
0.9	FI adult	0.3	Tomatoes	0.2	Apples	0.1	Cucumbers								

Acute risk assessment										
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	5	1568	1.47		1.2	12	654.80	DE child	
2009	Bananas	0.02	1230							
2009	Peppers	2	1575	1.59		0.82	6	430.35	DE child	
2009	Aubergines (egg plants)	2	1022	0.68		0.28		58.33	UK 4-6 yr	
2009	Cauliflower	0.02	887	0.23		0.01		7.16	NL child	
2009	Peas (without pods)	0.3	764	0.92		0.28		19.12	UK infant	
2009	Wheat	0.02	1228							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Procymidone**



Profenofos			
Status of the active substance:	Excluded		
Code number:	111		
Toxicological end points			
ADI (mg/kg bw/day):	0.03	ARID (mg/kg bw):	1
Source of ADI:	JMPR 2007	Source of ARID:	JMPR 2007
Year of evaluation:		Year of evaluation:	

**Chronic risk assessment**

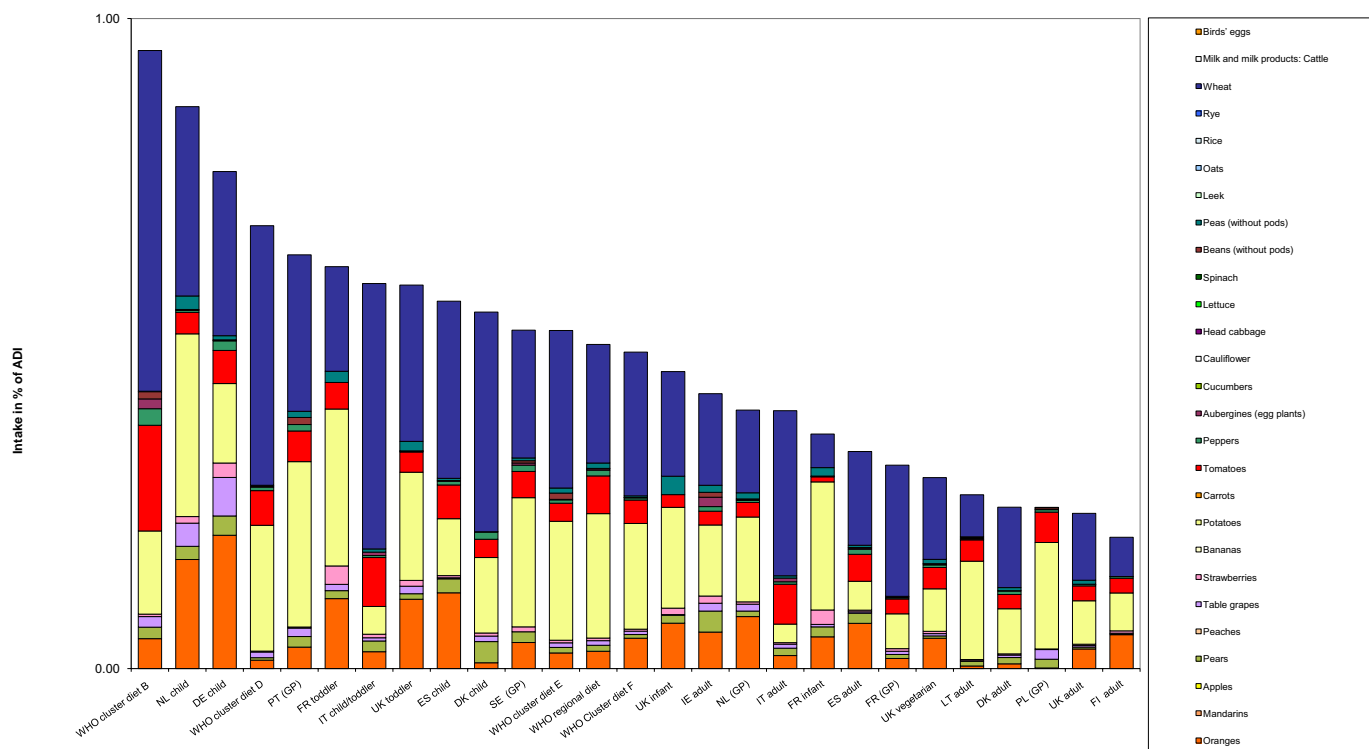
		Exposure (range) in % of ADI minimum - maximum		1			
		No of diets exceeding ADI:		---			
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.0	WHO cluster diet B	0.5	Wheat	0.2	Tomatoes	0.1	Potatoes
0.9	NL child	0.3	Wheat	0.3	Potatoes	0.2	Oranges
0.8	DE child	0.3	Wheat	0.2	Oranges	0.1	Potatoes
0.7	WHO cluster diet D	0.4	Wheat	0.2	Potatoes	0.1	Tomatoes
0.6	PT (GP)	0.3	Potatoes	0.2	Wheat	0.0	Tomatoes
0.6	FR toddler	0.2	Potatoes	0.2	Wheat	0.1	Oranges
0.6	IT child/toddler	0.4	Wheat	0.1	Tomatoes	0.0	Potatoes
0.6	UK toddler	0.2	Wheat	0.2	Potatoes	0.1	Oranges
0.6	ES child	0.3	Wheat	0.1	Oranges	0.1	Potatoes
0.5	DK child	0.3	Wheat	0.1	Potatoes	0.0	Pears
0.5	SE (GP)	0.2	Potatoes	0.2	Wheat	0.0	Tomatoes
0.5	WHO cluster diet E	0.2	Wheat	0.2	Potatoes	0.0	Tomatoes
0.5	WHO regional diet	0.2	Potatoes	0.2	Wheat	0.1	Tomatoes
0.5	WHO Cluster diet F	0.2	Wheat	0.2	Potatoes	0.0	Oranges
0.5	UK infant	0.2	Wheat	0.2	Potatoes	0.1	Oranges
0.4	IE adult	0.1	Wheat	0.1	Potatoes	0.1	Oranges
0.4	NL (GP)	0.1	Potatoes	0.1	Wheat	0.1	Oranges
0.4	IT adult	0.3	Wheat	0.1	Tomatoes	0.0	Potatoes
0.4	FR infant	0.2	Potatoes	0.1	Wheat	0.0	Oranges
0.3	ES adult	0.1	Wheat	0.1	Oranges	0.0	Potatoes
0.3	FR (GP)	0.2	Wheat	0.1	Potatoes	0.0	Tomatoes
0.3	UK vegetarian	0.1	Wheat	0.1	Potatoes	0.0	Oranges
0.3	LT adult	0.2	Potatoes	0.1	Wheat	0.0	Tomatoes
0.2	DK adult	0.1	Wheat	0.1	Potatoes	0.0	Tomatoes
0.2	PL (GP)	0.2	Potatoes	0.0	Tomatoes	0.0	Table grapes
0.2	UK adult	0.1	Wheat	0.1	Potatoes	0.0	Oranges
0.2	FI adult	0.1	Wheat	0.1	Potatoes	0.1	Oranges

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	1287		0.08	0.11		0.72	DE child	
2009	Bananas	0.05	981							
2009	Peppers	0.05	1329	0.23	0.08	0.06		0.38	DE child	
2009	Aubergines (egg plants)	0.05	836	0.24		0.04		0.10	UK 4-6 yr	
2009	Cauliflower	0.05	760							
2009	Peas (without pods)	0.05	654	0.15		0.05		0.04	UK infant	
2009	Wheat	0.05	915	0.44		0.03		0.04	UK 4-6 yr	
2009	Milk and milk products: Cattle	0.05	375							
2009	Birds' eggs	0.05	417							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Profenofos**



Propamocarb			
Status of the active substance:	Included		
Code number:	112		
Toxicological end points			
ADI (mg/kg bw/day):	0.29	ARID (mg/kg bw):	1
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

**Chronic risk assessment**

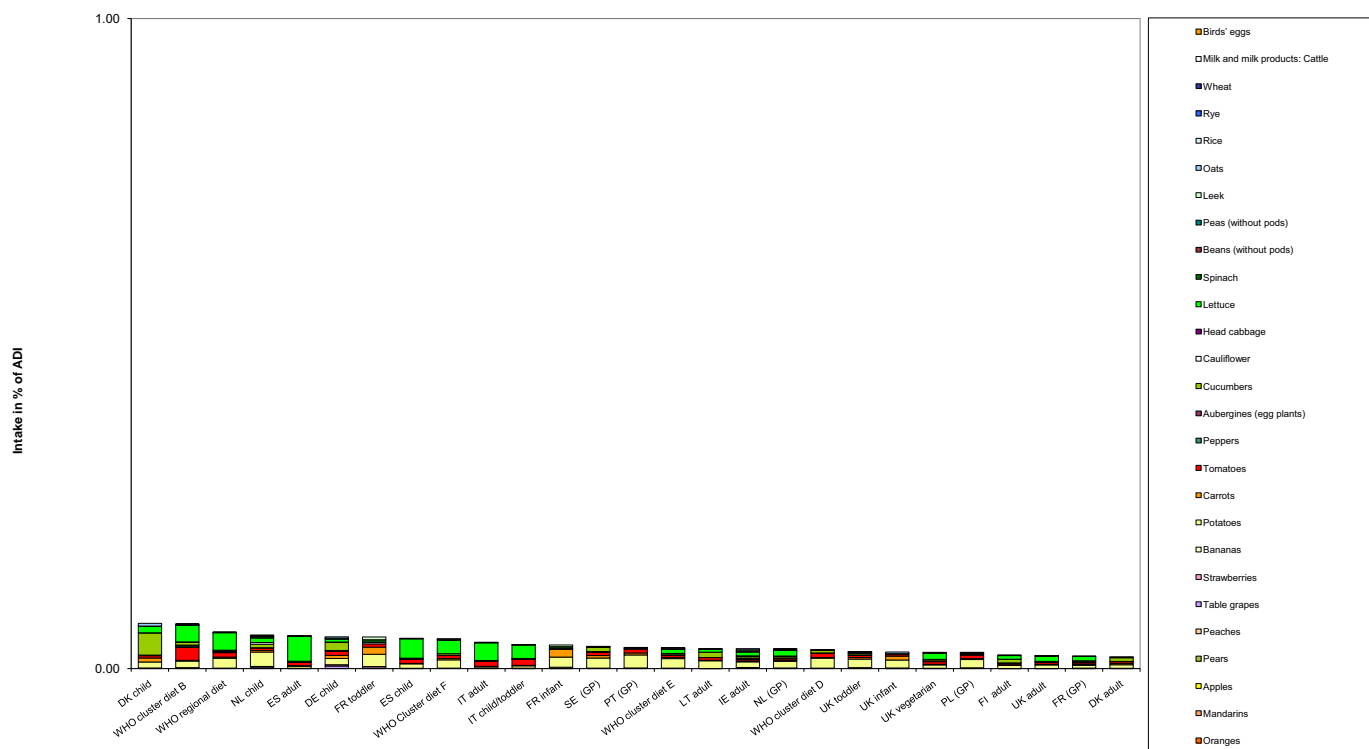
		Exposure (range) in % of ADI minimum - maximum					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.1	DK child	0.0	Cucumbers	0.0	Lettuce	0.0	Potatoes
0.1	WHO cluster diet B	0.0	Lettuce	0.0	Tomatoes	0.0	Potatoes
0.1	WHO regional diet	0.0	Lettuce	0.0	Potatoes	0.0	Tomatoes
0.1	NL child	0.0	Potatoes	0.0	Lettuce	0.0	Cucumbers
0.1	ES adult	0.0	Lettuce	0.0	Tomatoes	0.0	Potatoes
0.0	DE child	0.0	Cucumbers	0.0	Potatoes	0.0	Tomatoes
0.0	FR toddler	0.0	Potatoes	0.0	Carrots	0.0	Tomatoes
0.0	ES child	0.0	Lettuce	0.0	Potatoes	0.0	Tomatoes
0.0	WHO Cluster diet F	0.0	Lettuce	0.0	Potatoes	0.0	Tomatoes
0.0	IT adult	0.0	Lettuce	0.0	Tomatoes	0.0	Potatoes
0.0	IT child/toddler	0.0	Lettuce	0.0	Tomatoes	0.0	Potatoes
0.0	FR infant	0.0	Potatoes	0.0	Carrots	0.0	Leek
0.0	SE (GP)	0.0	Potatoes	0.0	Cucumbers	0.0	Tomatoes
0.0	PT (GP)	0.0	Potatoes	0.0	Tomatoes	0.0	Carrots
0.0	WHO cluster diet E	0.0	Potatoes	0.0	Lettuce	0.0	Tomatoes
0.0	LT adult	0.0	Potatoes	0.0	Cucumbers	0.0	Lettuce
0.0	IE adult	0.0	Potatoes	0.0	Lettuce	0.0	Tomatoes
0.0	NL (GP)	0.0	Potatoes	0.0	Lettuce	0.0	Tomatoes
0.0	WHO cluster diet D	0.0	Potatoes	0.0	Tomatoes	0.0	Cucumbers
0.0	UK toddler	0.0	Potatoes	0.0	Tomatoes	0.0	Carrots
0.0	UK infant	0.0	Potatoes	0.0	Carrots	0.0	Oats
0.0	UK vegetarian	0.0	Lettuce	0.0	Potatoes	0.0	Tomatoes
0.0	PL (GP)	0.0	Potatoes	0.0	Tomatoes	0.0	Cucumbers
0.0	FI adult	0.0	Cucumbers	0.0	Lettuce	0.0	Potatoes
0.0	UK adult	0.0	Lettuce	0.0	Potatoes	0.0	Tomatoes
0.0	FR (GP)	0.0	Lettuce	0.0	Potatoes	0.0	Tomatoes
0.0	DK adult	0.0	Cucumbers	0.0	Potatoes	0.0	Tomatoes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.1	728	0.14		0.02		0.13	DE child	
2009	Bananas	0.1	553							
2009	Peppers	10	751	4.53		0.16		1.02	DE child	
2009	Aubergines (egg plants)	10	508	6.10		0.16		0.40	UK 4-6 yr	
2009	Cauliflower	10	489	0.20		0.03		0.18	NL child	
2009	Peas (without pods)	0.1	437							
2009	Wheat	0.1	304							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Propamocarb**



Propargite	
Status of the active substance:	Excluded
Code number:	113
Toxicological end points	
ADI (mg/kg bw/day):	ARID (mg/kg bw):
Source of ADI:	Source of ARID:
Year of evaluation:	Year of evaluation:

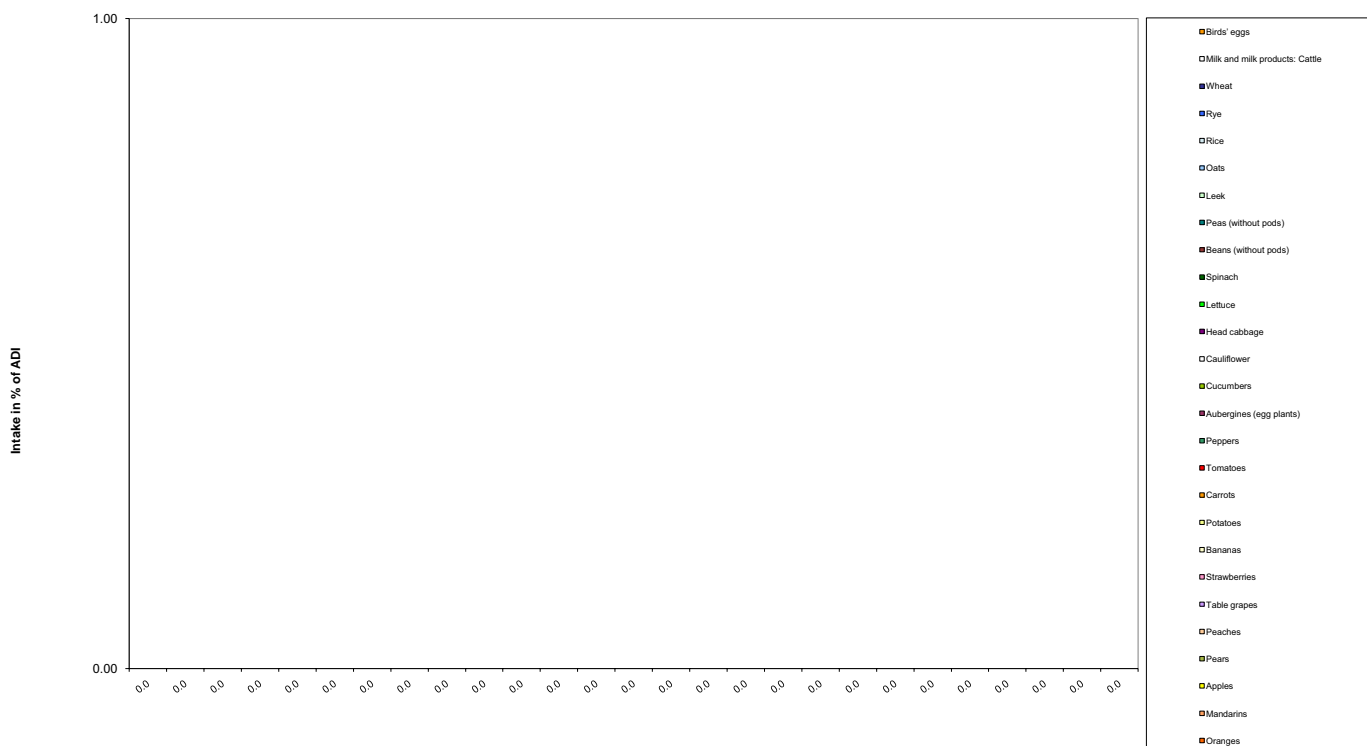
In 2011, EFSA could not conclude on the setting of the ADI and ARID due to data gap. The chronic and acute risk assessment could not be performed.

Chronic risk assessment							
		Exposure (range) in % of ADI minimum - maximum #DIV/0!		No of diets exceeding ADI:			
Highest calculated exposure in % of ADI	MS Diet	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)</sup>	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	7	1232	3.00		1.3	10			
2009	Bananas	0.01	1040							
2009	Peppers	2	1291	0.23		0.11				
2009	Aubergines (egg plants)	2	797	0.38		0.12				
2009	Cauliflower	0.01	697							
2009	Peas (without pods)	0.01	629							
2009	Wheat	0.01	745							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

<sup>a)</sup> The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Propargite





Prothioconazole			
Status of the active substance:	Included		
Code number:	114		
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARID (mg/kg bw):	0.01
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2007	Year of evaluation:	2007

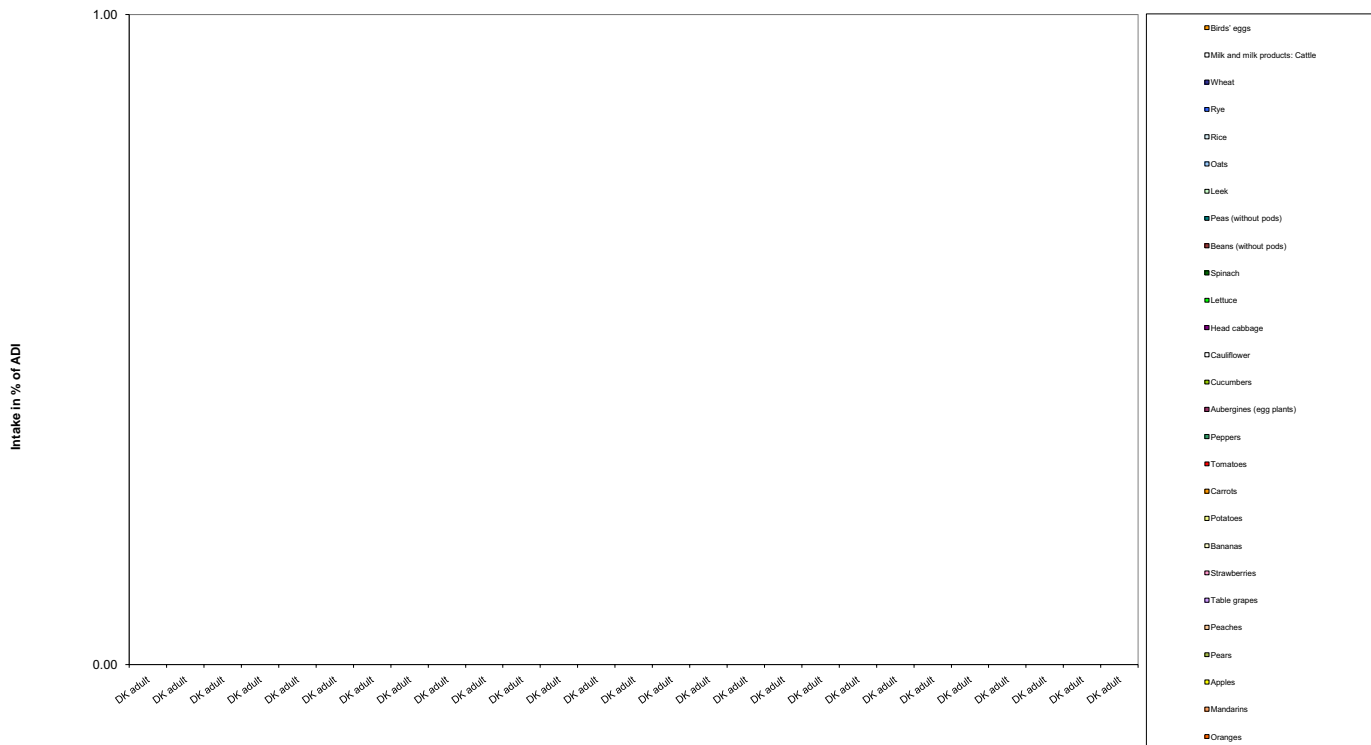
The ADI/ARID set for desethio-prothioconazole were selected.

Chronic risk assessment							
Highest calculated exposure in % of ADI		MS Diet		Exposure (range) in % of ADI minimum - maximum		No of diets exceeding ADI:	
Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
DK adult	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	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)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)

Acute risk assessment										
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	0.02	502							
2009	Bananas	0.02	333							
2009	Peppers	0.02	472							
2009	Aubergines (egg plants)	0.02	278							
2009	Cauliflower	0.02	270							
2009	Peas (without pods)	0.02	221							
2009	Wheat	0.1	291							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Prothioconazole



Pyrazophos			
Status of the active substance:	Excluded		
Code number:	115		
Toxicological end points			
ADI (mg/kg bw/day):	0.001	ARID (mg/kg bw):	0.001
Source of ADI:	ECCO 73	Source of ARID:	DE
Year of evaluation:	1999	Year of evaluation:	1998

**Chronic risk assessment**

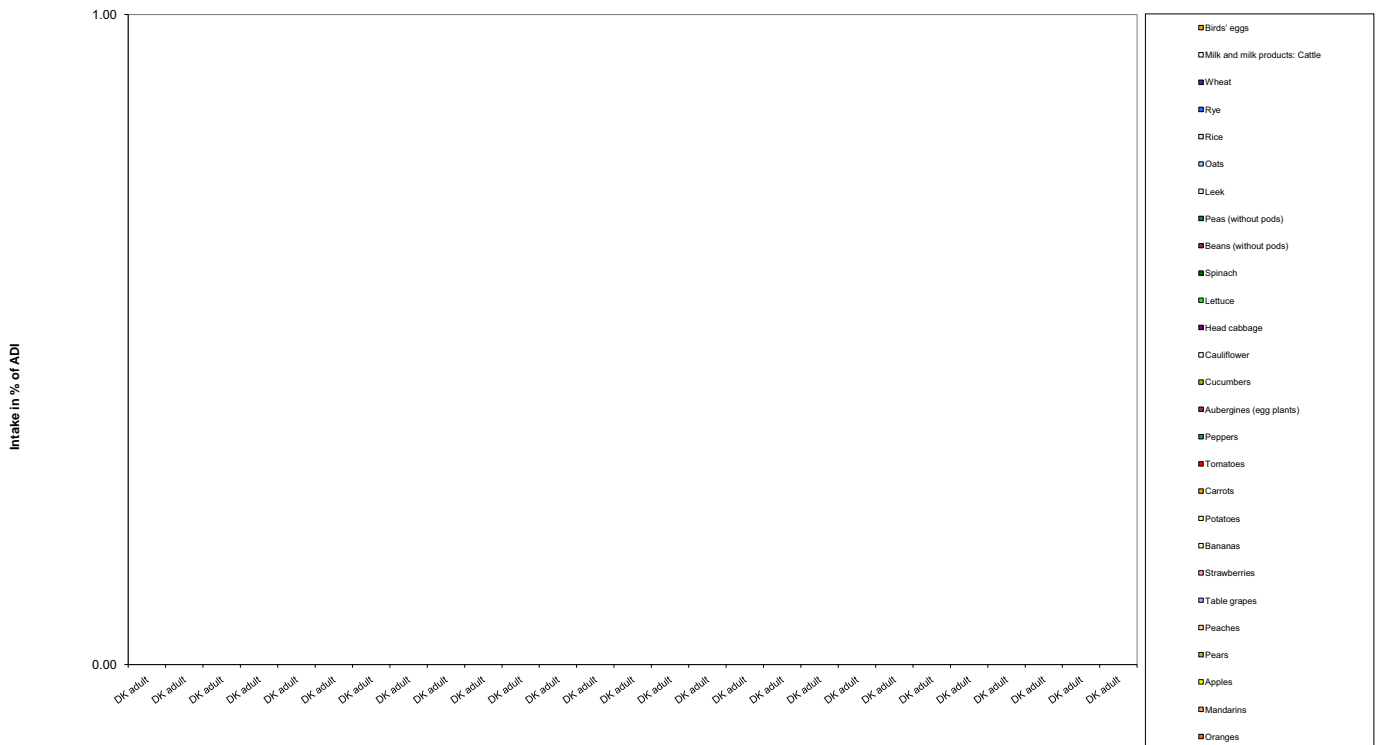
Exposure (range) in % of ADI minimum - maximum	
No of diets exceeding ADI: ---	
Highest calculated exposure in % of ADI	MS Diet
DK adult	FRUIT (FRESH OR FROZEN)
DK adult	FRUIT (FRESH OR FROZEN)
DK adult	FRUIT (FRESH OR FROZEN)
DK adult	FRUIT (FRESH OR FROZEN)
DK adult	FRUIT (FRESH OR FROZEN)
DK adult	FRUIT (FRESH OR FROZEN)
DK adult	FRUIT (FRESH OR FROZEN)
DK adult	FRUIT (FRESH OR FROZEN)
DK adult	FRUIT (FRESH OR FROZEN)
DK adult	FRUIT (FRESH OR FROZEN)
DK adult	FRUIT (FRESH OR FROZEN)
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DK adult	FRUIT (FRESH OR FROZEN)
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DK adult	FRUIT (FRESH OR FROZEN)
DK adult	FRUIT (FRESH OR FROZEN)
DK adult	FRUIT (FRESH OR FROZEN)
DK adult	FRUIT (FRESH OR FROZEN)
DK adult	FRUIT (FRESH OR FROZEN)
DK adult	FRUIT (FRESH OR FROZEN)
DK adult	FRUIT (FRESH OR FROZEN)

**Acute risk assessment**

								Acute exposure expressed in % of the ARfD		
Year	Commodity <sup>a)</sup>	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
	Milk and milk products:	0.02								
2009	Cattle		309							
2009	Birds' eggs	0.1	356							

<sup>a)</sup> The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Pyrazophos**



Pyridaben			
Status of the active substance:	Excluded		
Code number:	116		
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARID (mg/kg bw):	0.05
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2010	Year of evaluation:	2010

**Chronic risk assessment**

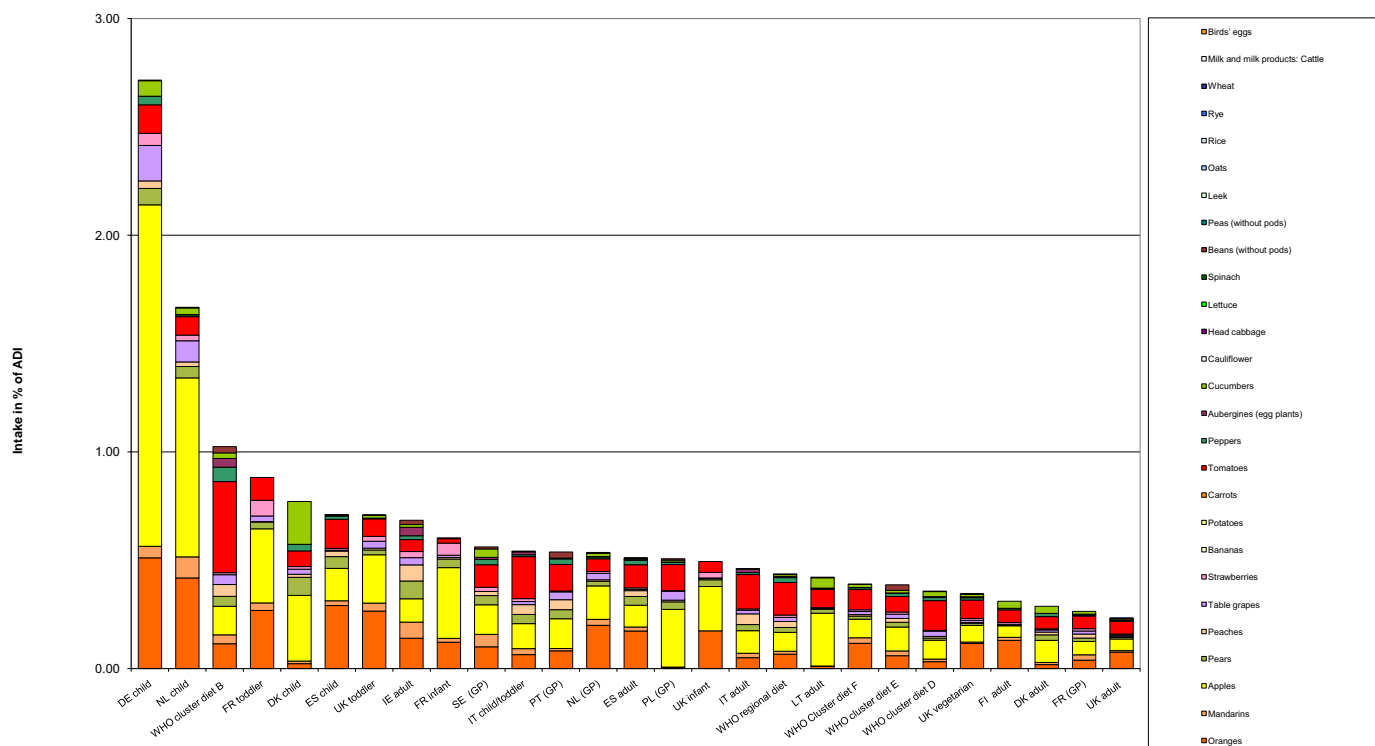
		Exposure (range) in % of ADI minimum - maximum					
		3					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
2.7	DE child	1.6	Apples	0.5	Oranges	0.2	Table grapes
1.7	NL child	0.8	Apples	0.4	Oranges	0.1	Table grapes
1.0	WHO cluster diet B	0.4	Tomatoes	0.1	Apples	0.1	Oranges
0.9	FR toddler	0.3	Apples	0.3	Oranges	0.1	Tomatoes
0.8	DK child	0.3	Apples	0.2	Cucumbers	0.1	Pears
0.7	ES child	0.3	Oranges	0.1	Apples	0.1	Tomatoes
0.7	UK toddler	0.3	Oranges	0.2	Apples	0.1	Tomatoes
0.7	IE adult	0.1	Oranges	0.1	Apples	0.1	Pears
0.6	FR infant	0.3	Apples	0.1	Oranges	0.1	Strawberries
0.6	SE (GP)	0.1	Apples	0.1	Tomatoes	0.1	Oranges
0.5	IT child/toddler	0.2	Tomatoes	0.1	Apples	0.1	Oranges
0.5	PT (GP)	0.1	Apples	0.1	Tomatoes	0.1	Oranges
0.5	NL (GP)	0.2	Oranges	0.2	Apples	0.1	Tomatoes
0.5	ES adult	0.2	Oranges	0.1	Tomatoes	0.1	Apples
0.5	PL (GP)	0.3	Apples	0.1	Tomatoes	0.0	Table grapes
0.5	UK infant	0.2	Apples	0.2	Oranges	0.1	Tomatoes
0.5	IT adult	0.2	Tomatoes	0.1	Apples	0.1	Oranges
0.4	WHO regional diet	0.1	Tomatoes	0.1	Apples	0.1	Oranges
0.4	LT adult	0.2	Apples	0.1	Tomatoes	0.0	Cucumbers
0.4	WHO Cluster diet F	0.1	Oranges	0.1	Tomatoes	0.1	Apples
0.4	WHO cluster diet E	0.1	Apples	0.1	Tomatoes	0.1	Oranges
0.4	WHO cluster diet D	0.1	Tomatoes	0.1	Apples	0.0	Oranges
0.3	UK vegetarian	0.1	Oranges	0.1	Tomatoes	0.1	Apples
0.3	FI adult	0.1	Oranges	0.1	Tomatoes	0.1	Apples
0.3	DK adult	0.1	Apples	0.1	Tomatoes	0.0	Cucumbers
0.3	FR (GP)	0.1	Apples	0.1	Tomatoes	0.0	Oranges
0.2	UK adult	0.1	Oranges	0.1	Tomatoes	0.1	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.5	1063	0.09		0.016		2.10	DE child	
2009	Bananas	0.5	963							
2009	Peppers	0.5	1055	0.66	0.14	0.07		8.82	DE child	
2009	Aubergines (egg plants)	0.2	699	1.43		0.28		14.00	UK 4-6 yr	
2009	Cauliflower	0.05	660							
2009	Peas (without pods)	0.05	593							
2009	Wheat	0.05	699							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Pyridaben**



Pyrimethanil			
Status of the active substance:	Included		
Code number:	117		
Toxicological end points			
ADI (mg/kg bw/day):	0.17	ARID (mg/kg bw):	n.n.
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2006	Year of evaluation:	2006

**Chronic risk assessment**

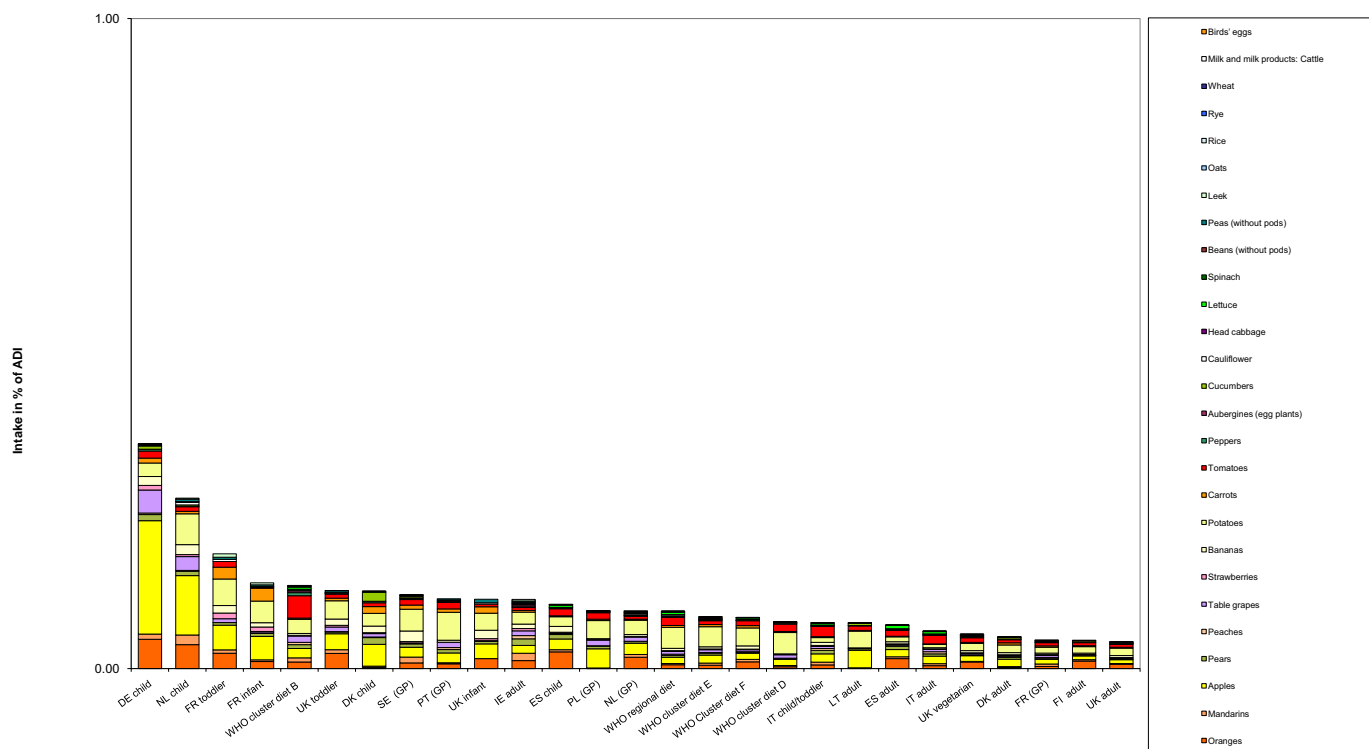
Highest calculated exposure in % of ADI		MS Diet		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
0.3	DE child	0.2	Apples	0.0	Oranges	0.0	Table grapes	0.0	Oranges	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.3	NL child	0.0	Apples	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes
0.2	FR toddler	0.0	Potatoes	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Apples
0.1	FR infant	0.0	Apples	0.0	Potatoes	0.0	Carrots	0.0	Potatoes	0.0	Carrots	0.0	Potatoes	0.0	Apples
0.1	WHO cluster diet B	0.0	Tomatoes	0.0	Potatoes	0.0	Apples	0.0	Potatoes	0.0	Apples	0.0	Potatoes	0.0	Oranges
0.1	UK toddler	0.0	Potatoes	0.0	Potatoes	0.0	Oranges	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Cucumbers
0.1	DK child	0.0	Apples	0.0	Potatoes	0.0	Tomatoes	0.0	Potatoes	0.0	Tomatoes	0.0	Potatoes	0.0	Apples
0.1	SE (GP)	0.0	Potatoes	0.0	Bananas	0.0	Apples	0.0	Bananas	0.0	Apples	0.0	Bananas	0.0	Apples
0.1	PT (GP)	0.0	Potatoes	0.0	Apples	0.0	Tomatoes	0.0	Apples	0.0	Tomatoes	0.0	Apples	0.0	Tomatoes
0.1	UK infant	0.0	Potatoes	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges
0.1	IE adult	0.0	Potatoes	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Apples
0.1	ES child	0.0	Oranges	0.0	Apples	0.0	Potatoes	0.0	Apples	0.0	Potatoes	0.0	Apples	0.0	Potatoes
0.1	PL (GP)	0.0	Apples	0.0	Potatoes	0.0	Tomatoes	0.0	Potatoes	0.0	Tomatoes	0.0	Potatoes	0.0	Tomatoes
0.1	NL (GP)	0.0	Potatoes	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Apples
0.1	WHO regional diet	0.0	Potatoes	0.0	Tomatoes	0.0	Apples	0.0	Tomatoes	0.0	Apples	0.0	Tomatoes	0.0	Apples
0.1	WHO cluster diet E	0.0	Potatoes	0.0	Apples	0.0	Tomatoes	0.0	Apples	0.0	Tomatoes	0.0	Apples	0.0	Tomatoes
0.1	WHO Cluster diet F	0.0	Potatoes	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Apples
0.1	WHO cluster diet D	0.0	Potatoes	0.0	Tomatoes	0.0	Apples	0.0	Tomatoes	0.0	Apples	0.0	Tomatoes	0.0	Apples
0.1	IT child/toddler	0.0	Tomatoes	0.0	Apples	0.0	Potatoes	0.0	Apples	0.0	Potatoes	0.0	Apples	0.0	Potatoes
0.1	LT adult	0.0	Apples	0.0	Potatoes	0.0	Tomatoes	0.0	Potatoes	0.0	Tomatoes	0.0	Potatoes	0.0	Tomatoes
0.1	ES adult	0.0	Oranges	0.0	Apples	0.0	Tomatoes	0.0	Apples	0.0	Tomatoes	0.0	Apples	0.0	Tomatoes
0.1	IT adult	0.0	Tomatoes	0.0	Apples	0.0	Potatoes	0.0	Apples	0.0	Potatoes	0.0	Apples	0.0	Potatoes
0.1	UK vegetarian	0.0	Potatoes	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Apples
0.0	DK adult	0.0	Potatoes	0.0	Apples	0.0	Tomatoes	0.0	Apples	0.0	Tomatoes	0.0	Apples	0.0	Tomatoes
0.0	FR (GP)	0.0	Potatoes	0.0	Apples	0.0	Tomatoes	0.0	Apples	0.0	Tomatoes	0.0	Apples	0.0	Tomatoes
0.0	FI adult	0.0	Oranges	0.0	Potatoes	0.0	Apples	0.0	Potatoes	0.0	Apples	0.0	Potatoes	0.0	Apples
0.0	UK adult	0.0	Potatoes	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Apples	0.0	Oranges	0.0	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	5	1438	10.85		3.1				
2009	Bananas	0.1	1160	0.3		0.01				
2009	Peppers	2	1462	1.64		0.91				
2009	Aubergines (egg plants)	1	921	2.50		0.11				
2009	Cauliflower	0.05	801	0.12		0.01				
2009	Peas (without pods)	0.05	708	8.62		0.19				
2009	Wheat		908							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Pyrimethanil**



Pyriproxyfen			
Status of the active substance:	Included		
Code number:	118		
Toxicological end points			
ADI (mg/kg bw/day):	0.1	ARID (mg/kg bw):	n.n.
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2009	Year of evaluation:	2009

**Chronic risk assessment**

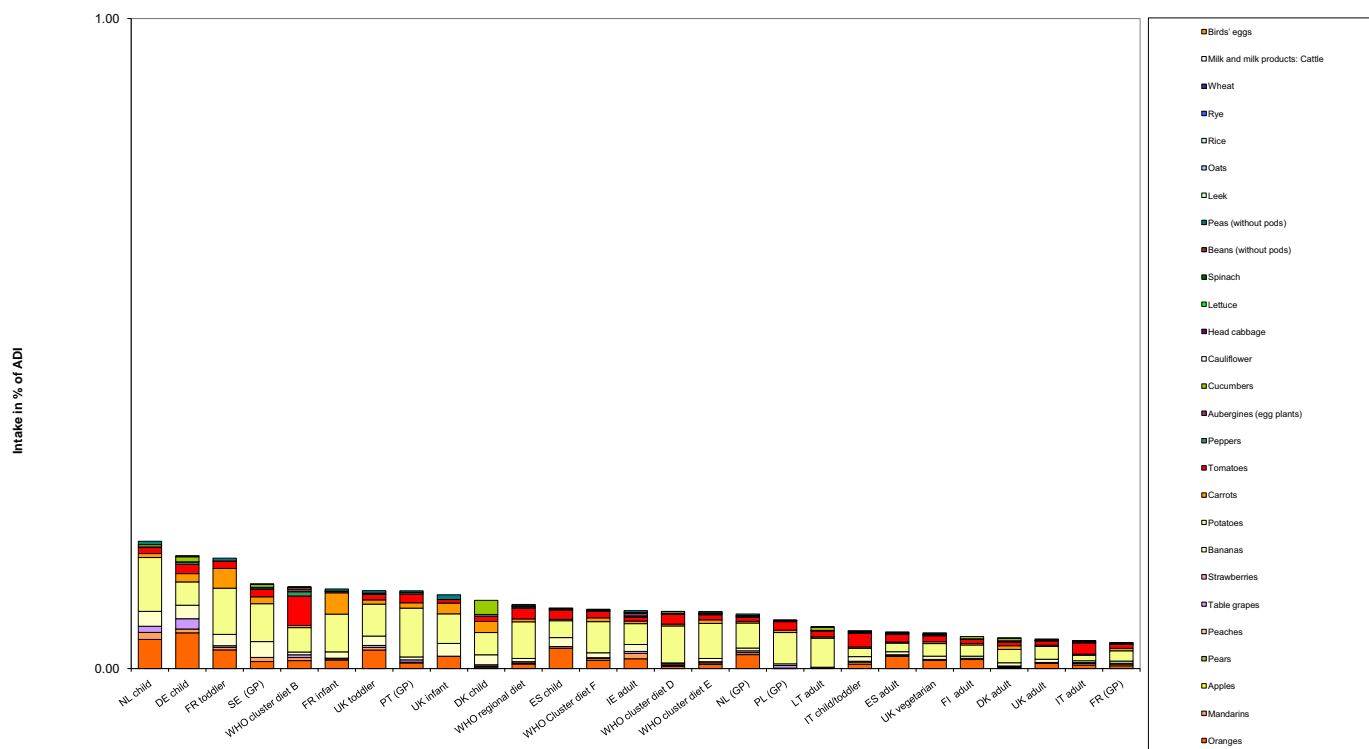
		Exposure (range) in % of ADI minimum - maximum					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.2	NL child	0.1	Potatoes	0.0	Oranges	0.0	Bananas
0.2	DE child	0.1	Oranges	0.0	Potatoes	0.0	Bananas
0.2	FR toddler	0.1	Potatoes	0.0	Carrots	0.0	Oranges
0.1	SE (GP)	0.1	Potatoes	0.0	Bananas	0.0	Tomatoes
0.1	WHO cluster diet B	0.0	Tomatoes	0.0	Potatoes	0.0	Oranges
0.1	FR infant	0.1	Potatoes	0.0	Carrots	0.0	Oranges
0.1	UK toddler	0.0	Potatoes	0.0	Oranges	0.0	Bananas
0.1	PT (GP)	0.1	Potatoes	0.0	Tomatoes	0.0	Oranges
0.1	UK infant	0.0	Potatoes	0.0	Bananas	0.0	Oranges
0.1	DK child	0.0	Potatoes	0.0	Cucumbers	0.0	Carrots
0.1	WHO regional diet	0.1	Potatoes	0.0	Tomatoes	0.0	Oranges
0.1	ES child	0.0	Oranges	0.0	Potatoes	0.0	Tomatoes
0.1	WHO Cluster diet F	0.0	Potatoes	0.0	Oranges	0.0	Tomatoes
0.1	IE adult	0.0	Potatoes	0.0	Oranges	0.0	Bananas
0.1	WHO cluster diet D	0.1	Potatoes	0.0	Tomatoes	0.0	Oranges
0.1	WHO cluster diet E	0.1	Potatoes	0.0	Tomatoes	0.0	Oranges
0.1	NL (GP)	0.0	Potatoes	0.0	Oranges	0.0	Tomatoes
0.1	PL (GP)	0.0	Potatoes	0.0	Tomatoes	0.0	Table grapes
0.1	LT adult	0.0	Potatoes	0.0	Tomatoes	0.0	Cucumbers
0.1	IT child/toddler	0.0	Tomatoes	0.0	Potatoes	0.0	Bananas
0.1	ES adult	0.0	Oranges	0.0	Potatoes	0.0	Tomatoes
0.1	UK vegetarian	0.0	Potatoes	0.0	Oranges	0.0	Tomatoes
0.0	FI adult	0.0	Potatoes	0.0	Oranges	0.0	Tomatoes
0.0	DK adult	0.0	Potatoes	0.0	Tomatoes	0.0	Carrots
0.0	UK adult	0.0	Potatoes	0.0	Oranges	0.0	Tomatoes
0.0	IT adult	0.0	Tomatoes	0.0	Potatoes	0.0	Oranges
0.0	FR (GP)	0.0	Potatoes	0.0	Tomatoes	0.0	Oranges

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	1094	0.09		0.02				
2009	Bananas	0.05	1000	0.1		0.03				
2009	Peppers	1	1151	1.30		0.04				
2009	Aubergines (egg plants)	1	765	3.40		0.15				
2009	Cauliflower	0.05	699							
2009	Peas (without pods)	0.05	612	0.16		0.02				
2009	Wheat	0.05	754							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Pyriproxyfen**



Quinoxifen			
Status of the active substance:	Included		
Code number:	119		
Toxicological end points			
ADI (mg/kg bw/day):	0.2	ARID (mg/kg bw):	n.n.
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2003	Year of evaluation:	2003

**Chronic risk assessment**

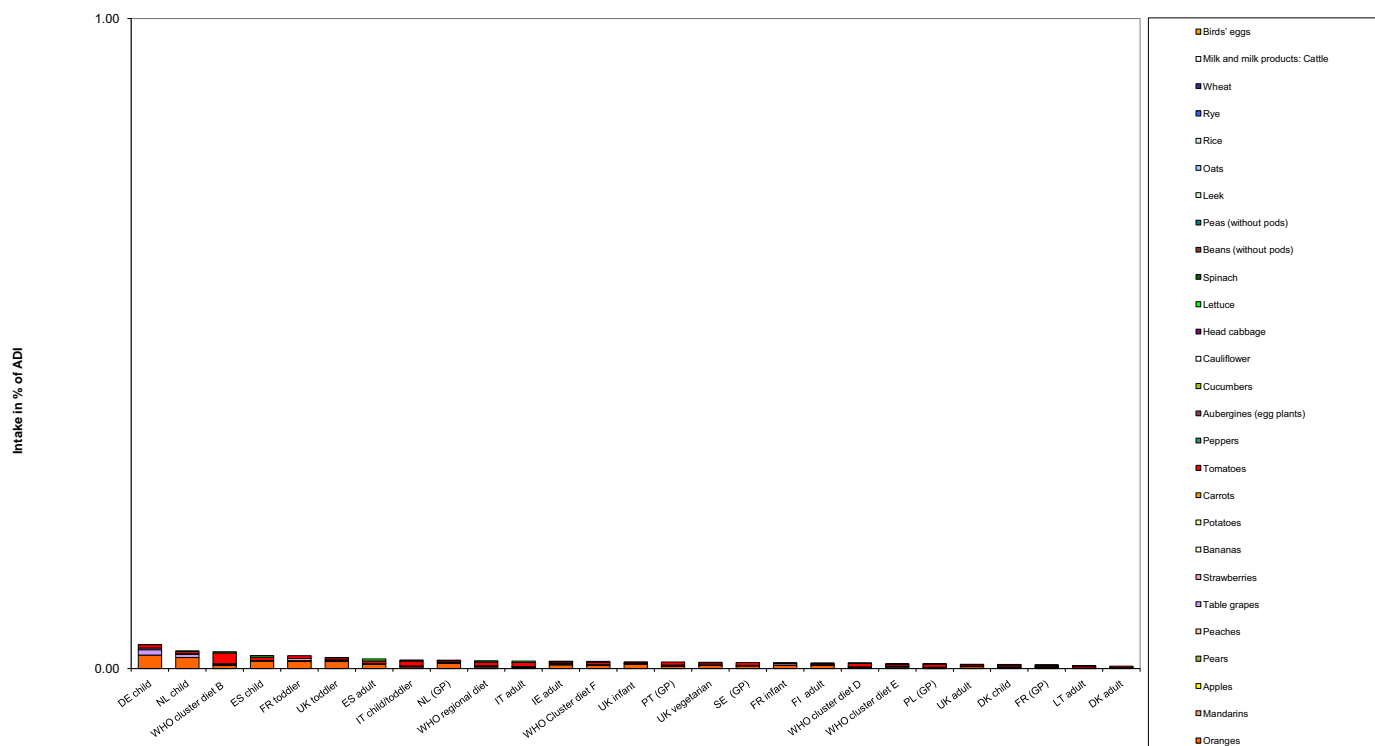
Highest calculated exposure in % of ADI		Exposure (range) in % of ADI minimum - maximum					
MS Diet		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.0	DE child	0.0	Oranges	0.0	Table grapes	0.0	Tomatoes
0.0	NL child	0.0	Oranges	0.0	Table grapes	0.0	Tomatoes
0.0	WHO cluster diet B	0.0	Tomatoes	0.0	Oranges	0.0	Table grapes
0.0	ES child	0.0	Oranges	0.0	Tomatoes	0.0	Lettuce
0.0	FR toddler	0.0	Oranges	0.0	Tomatoes	0.0	Strawberries
0.0	UK toddler	0.0	Oranges	0.0	Tomatoes	0.0	Table grapes
0.0	ES adult	0.0	Oranges	0.0	Tomatoes	0.0	Lettuce
0.0	IT child/toddler	0.0	Tomatoes	0.0	Oranges	0.0	Lettuce
0.0	NL (GP)	0.0	Oranges	0.0	Tomatoes	0.0	Table grapes
0.0	WHO regional diet	0.0	Tomatoes	0.0	Oranges	0.0	Lettuce
0.0	IT adult	0.0	Tomatoes	0.0	Oranges	0.0	Lettuce
0.0	IE adult	0.0	Oranges	0.0	Tomatoes	0.0	Table grapes
0.0	WHO Cluster diet F	0.0	Oranges	0.0	Tomatoes	0.0	Lettuce
0.0	UK infant	0.0	Oranges	0.0	Tomatoes	0.0	Strawberries
0.0	PT (GP)	0.0	Tomatoes	0.0	Oranges	0.0	Table grapes
0.0	UK vegetarian	0.0	Oranges	0.0	Tomatoes	0.0	Lettuce
0.0	SE (GP)	0.0	Tomatoes	0.0	Oranges	0.0	Strawberries
0.0	FR infant	0.0	Oranges	0.0	Strawberries	0.0	Tomatoes
0.0	FI adult	0.0	Oranges	0.0	Tomatoes	0.0	Lettuce
0.0	WHO cluster diet D	0.0	Tomatoes	0.0	Oranges	0.0	Table grapes
0.0	WHO cluster diet E	0.0	Tomatoes	0.0	Oranges	0.0	Table grapes
0.0	PL (GP)	0.0	Tomatoes	0.0	Table grapes	0.0	Strawberries
0.0	UK adult	0.0	Oranges	0.0	Tomatoes	0.0	Lettuce
0.0	DK child	0.0	Tomatoes	0.0	Table grapes	0.0	Oranges
0.0	FR (GP)	0.0	Tomatoes	0.0	Oranges	0.0	Table grapes
0.0	LT adult	0.0	Tomatoes	0.0	Oranges	0.0	Lettuce
0.0	DK adult	0.0	Tomatoes	0.0	Oranges	0.0	Table grapes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	1	1095	8.13		0.22				
2009	Bananas	0.02	929							
2009	Peppers	0.02	1080							
2009	Aubergines (egg plants)	0.02	741							
2009	Cauliflower	0.02	681							
2009	Peas (without pods)	0.02	594							
2009	Wheat	0.02	749							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Quinoxifen**



<b>Resmethrin</b>		
Status of the active substance:	<b>Excluded</b>	
Code number:	<b>120</b>	
<b>Toxicological end points</b>		
ADI (mg/kg bw/day):	<b>0.03</b>	ARID (mg/kg bw):
Source of ADI:	<b>JMPR</b>	Source of ARID:
Year of evaluation:	<b>1991</b>	Year of evaluation:

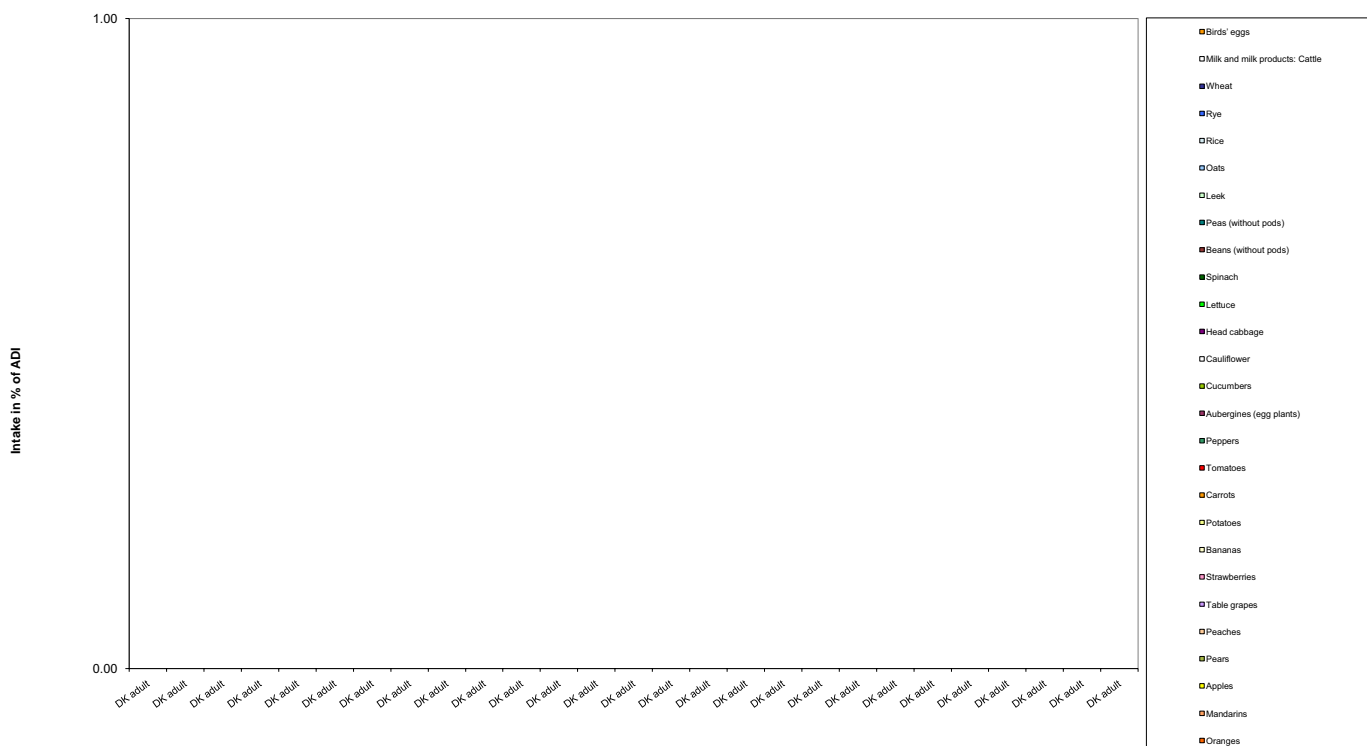
Active substance was not assessed regarding the setting of an ARID.

<b>Chronic risk assessment</b>							
Exposure (range) in % of ADI minimum - maximum							
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	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		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)
DK adult			FRUIT (FRESH		FRUIT (FRESH OR		FRUIT (FRESH OR FROZEN)

<b>Acute risk assessment</b>										
								Acute exposure expressed in % of the ARfD		
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes									
2009	Bananas									
2009	Peppers									
2009	Aubergines (egg plants)									
2009	Cauliflower									
2009	Peas (without pods)									
2009	Wheat									
2009	Milk and milk products: Cattle	0.1	335							
2009	Birds' eggs	0.1	437							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Resmethrin**



<b>Spiroxamine</b>			
Status of the active substance:	<b>Included</b>		
Code number:	<b>121</b>		
<b>Toxicological end points</b>			
ADI (mg/kg bw/day):	<b>0.025</b>	ARID (mg/kg bw):	<b>0.1</b>
Source of ADI:	<b>EFSA</b>	Source of ARID:	<b>EFSA</b>
Year of evaluation:	<b>2010</b>	Year of evaluation:	<b>2010</b>

**Chronic risk assessment**

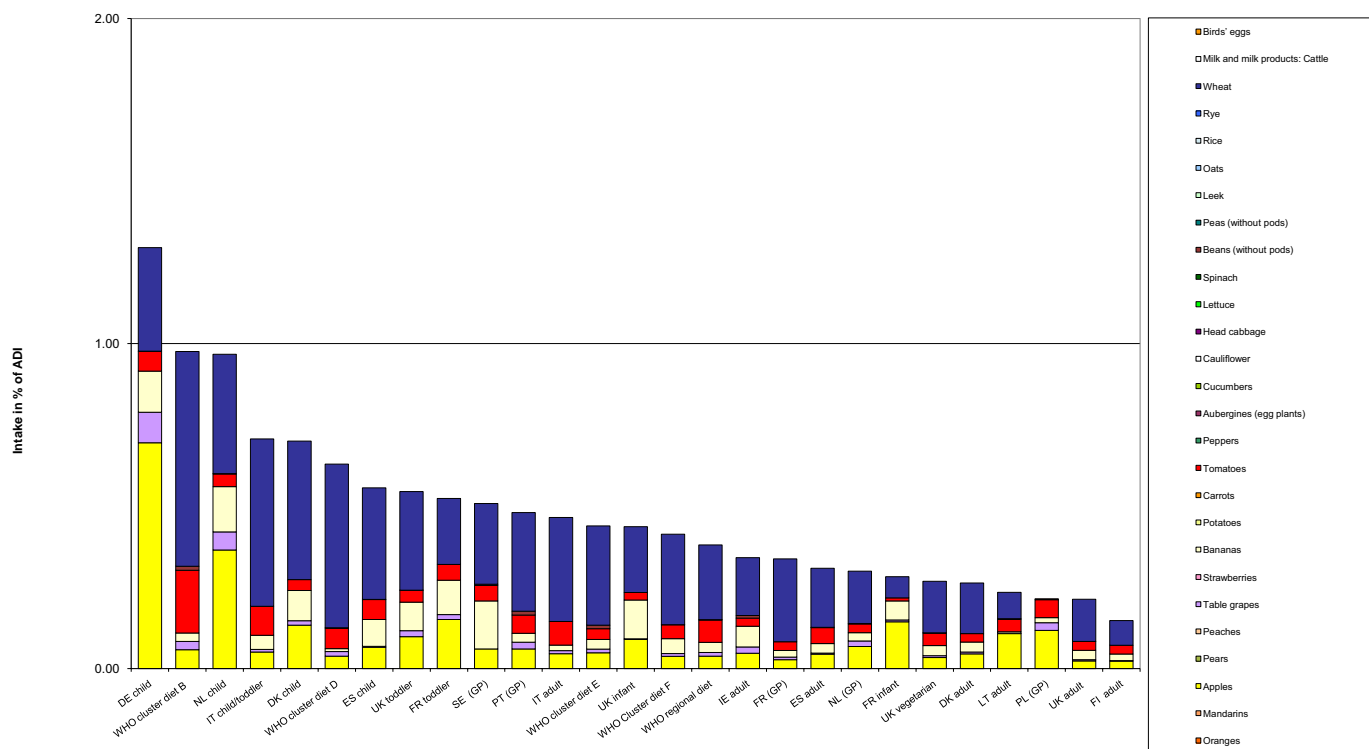
		Exposure (range) in % of ADI minimum - maximum					
		1					
		<b>No of diets exceeding ADI:</b>					
		---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.3	DE child	0.7	Apples	0.3	Wheat	0.1	Bananas
1.0	WHO cluster diet B	0.7	Wheat	0.2	Tomatoes	0.1	Apples
1.0	NL child	0.4	Wheat	0.4	Apples	0.1	Bananas
0.7	IT child/toddler	0.5	Wheat	0.1	Tomatoes	0.1	Apples
0.7	DK child	0.4	Wheat	0.1	Apples	0.1	Bananas
0.6	WHO cluster diet D	0.5	Wheat	0.1	Tomatoes	0.0	Apples
0.6	ES child	0.3	Wheat	0.1	Bananas	0.1	Apples
0.5	UK toddler	0.3	Wheat	0.1	Apples	0.1	Bananas
0.5	FR toddler	0.2	Wheat	0.2	Apples	0.1	Bananas
0.5	SE (GP)	0.2	Wheat	0.1	Bananas	0.1	Apples
0.5	PT (GP)	0.3	Wheat	0.1	Apples	0.1	Tomatoes
0.5	IT adult	0.3	Wheat	0.1	Tomatoes	0.0	Apples
0.4	WHO cluster diet E	0.3	Wheat	0.0	Apples	0.0	Tomatoes
0.4	UK infant	0.2	Wheat	0.1	Bananas	0.1	Apples
0.4	WHO Cluster diet F	0.3	Wheat	0.0	Bananas	0.0	Tomatoes
0.4	WHO regional diet	0.2	Wheat	0.1	Tomatoes	0.0	Apples
0.3	IE adult	0.2	Wheat	0.1	Bananas	0.0	Apples
0.3	FR (GP)	0.3	Wheat	0.0	Apples	0.0	Tomatoes
0.3	ES adult	0.2	Wheat	0.0	Tomatoes	0.0	Apples
0.3	NL (GP)	0.2	Wheat	0.1	Apples	0.0	Tomatoes
0.3	FR infant	0.1	Apples	0.1	Wheat	0.1	Bananas
0.3	UK vegetarian	0.2	Wheat	0.0	Tomatoes	0.0	Apples
0.3	DK adult	0.2	Wheat	0.0	Apples	0.0	Bananas
0.2	LT adult	0.1	Apples	0.1	Wheat	0.0	Tomatoes
0.2	PL (GP)	0.1	Apples	0.1	Tomatoes	0.0	Table grapes
0.2	UK adult	0.1	Wheat	0.0	Bananas	0.0	Tomatoes
0.1	FI adult	0.1	Wheat	0.0	Tomatoes	0.0	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	1	1185	7.26		0.22		14.41	DE child	
2009	Bananas	3	934	0.2		0.004		0.33	UK infant	
2009	Peppers	0.05	1231							
2009	Aubergines (egg plants)	0.05	760							
2009	Cauliflower	0.05	664							
2009	Peas (without pods)	0.05	623							
2009	Wheat	0.05	827	0.48		0.004		0.06	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Spiroxamine**





<b>Tebuconazole</b>			
Status of the active substance:	<b>Included</b>		
Code number:	<b>122</b>		
<b>Toxicological end points</b>			
ADI (mg/kg bw/day):	<b>0.03</b>	ARID (mg/kg bw):	<b>0.03</b>
Source of ADI:	<b>EFSA</b>	Source of ARID:	<b>EFSA</b>
Year of evaluation:	<b>2008</b>	Year of evaluation:	<b>2008</b>

**Chronic risk assessment**

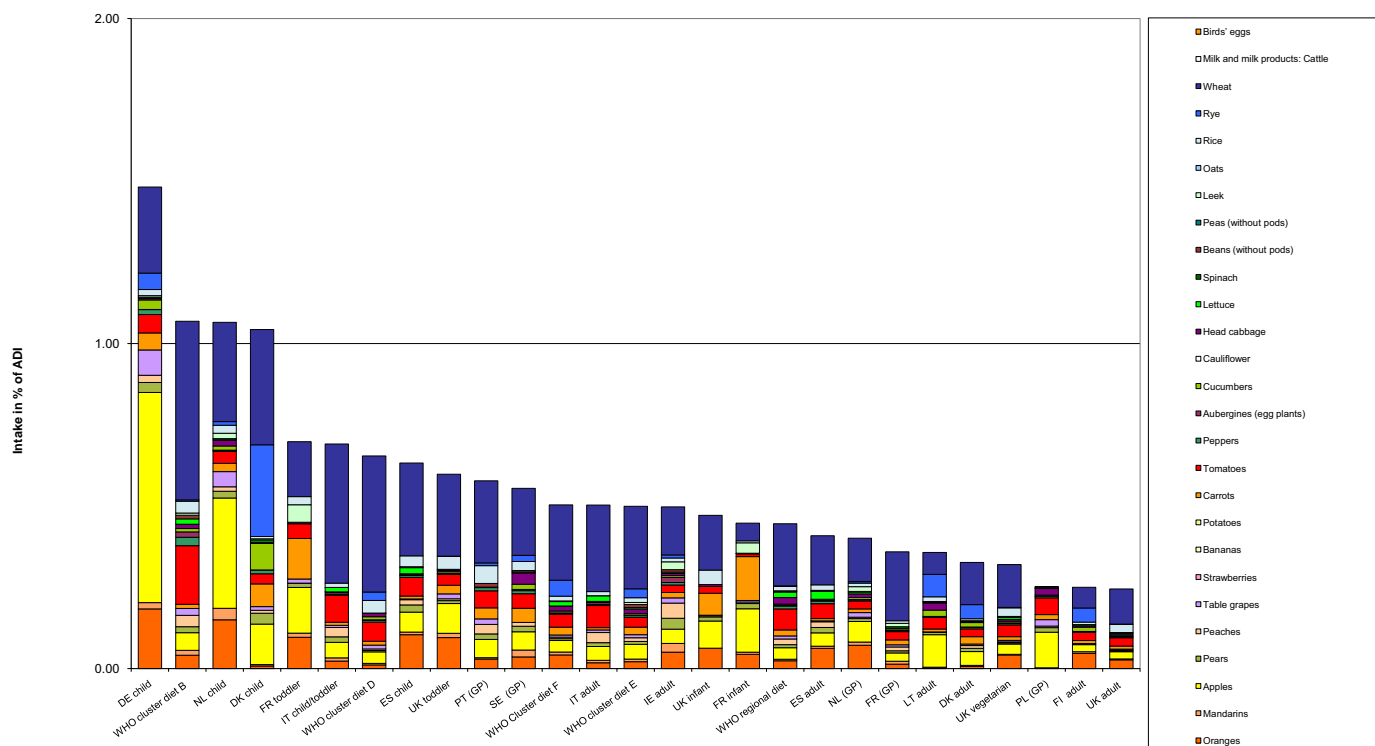
		Exposure (range) in % of ADI minimum - maximum 1					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.5	DE child	0.6	Apples	0.3	Wheat	0.2	Oranges
1.1	WHO cluster diet B	0.5	Wheat	0.2	Tomatoes	0.1	Apples
1.1	NL child	0.3	Apples	0.3	Wheat	0.2	Oranges
1.0	DK child	0.4	Wheat	0.3	Rye	0.1	Apples
0.7	FR toddler	0.2	Wheat	0.1	Apples	0.1	Carrots
0.7	IT child/toddler	0.4	Wheat	0.1	Tomatoes	0.0	Apples
0.7	WHO cluster diet D	0.4	Wheat	0.1	Tomatoes	0.0	Rice
0.6	ES child	0.3	Wheat	0.1	Oranges	0.1	Apples
0.6	UK toddler	0.3	Wheat	0.1	Oranges	0.1	Apples
0.6	PT (GP)	0.3	Wheat	0.1	Apples	0.1	Rice
0.6	SE (GP)	0.2	Wheat	0.1	Apples	0.0	Tomatoes
0.5	WHO Cluster diet F	0.2	Wheat	0.0	Rye	0.0	Oranges
0.5	IT adult	0.3	Wheat	0.1	Tomatoes	0.0	Apples
0.5	WHO cluster diet E	0.3	Wheat	0.0	Apples	0.0	Tomatoes
0.5	IE adult	0.1	Wheat	0.1	Oranges	0.0	Peaches
0.5	UK infant	0.2	Wheat	0.1	Apples	0.1	Carrots
0.4	FR infant	0.1	Carrots	0.1	Apples	0.1	Wheat
0.4	WHO regional diet	0.2	Wheat	0.1	Tomatoes	0.0	Apples
0.4	ES adult	0.2	Wheat	0.1	Oranges	0.0	Tomatoes
0.4	NL (GP)	0.1	Wheat	0.1	Oranges	0.1	Apples
0.4	FR (GP)	0.2	Wheat	0.0	Apples	0.0	Tomatoes
0.4	LT adult	0.1	Apples	0.1	Rye	0.1	Wheat
0.3	DK adult	0.1	Wheat	0.0	Rye	0.0	Apples
0.3	UK vegetarian	0.1	Wheat	0.0	Oranges	0.0	Tomatoes
0.3	PL (GP)	0.1	Apples	0.1	Tomatoes	0.0	Head cabbage
0.2	FI adult	0.1	Wheat	0.0	Oranges	0.0	Rye
0.2	UK adult	0.1	Wheat	0.0	Oranges	0.0	Rice

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	2	1398	5.87		0.59	2	128.78	DE child	
2009	Bananas	0.05	1166							
2009	Peppers	0.5	1397	0.79		0.04		7.77	DE child	
2009	Aubergines (egg plants)	0.5	888	0.79		0.08		6.58	UK 4-6 yr	
2009	Cauliflower	1	818							
2009	Peas (without pods)	0.05	701							
2009	Wheat	0.2	1168	1.54		0.030		1.44	UK 4-6 yr	
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Tebuconazole**



Tebufenozide			
Status of the active substance:	Excluded		
Code number:	123		
Toxicological end points			
ADI (mg/kg bw/day):	0.02	ARID (mg/kg bw):	n.n.
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2007	Year of evaluation:	2007

**Chronic risk assessment**

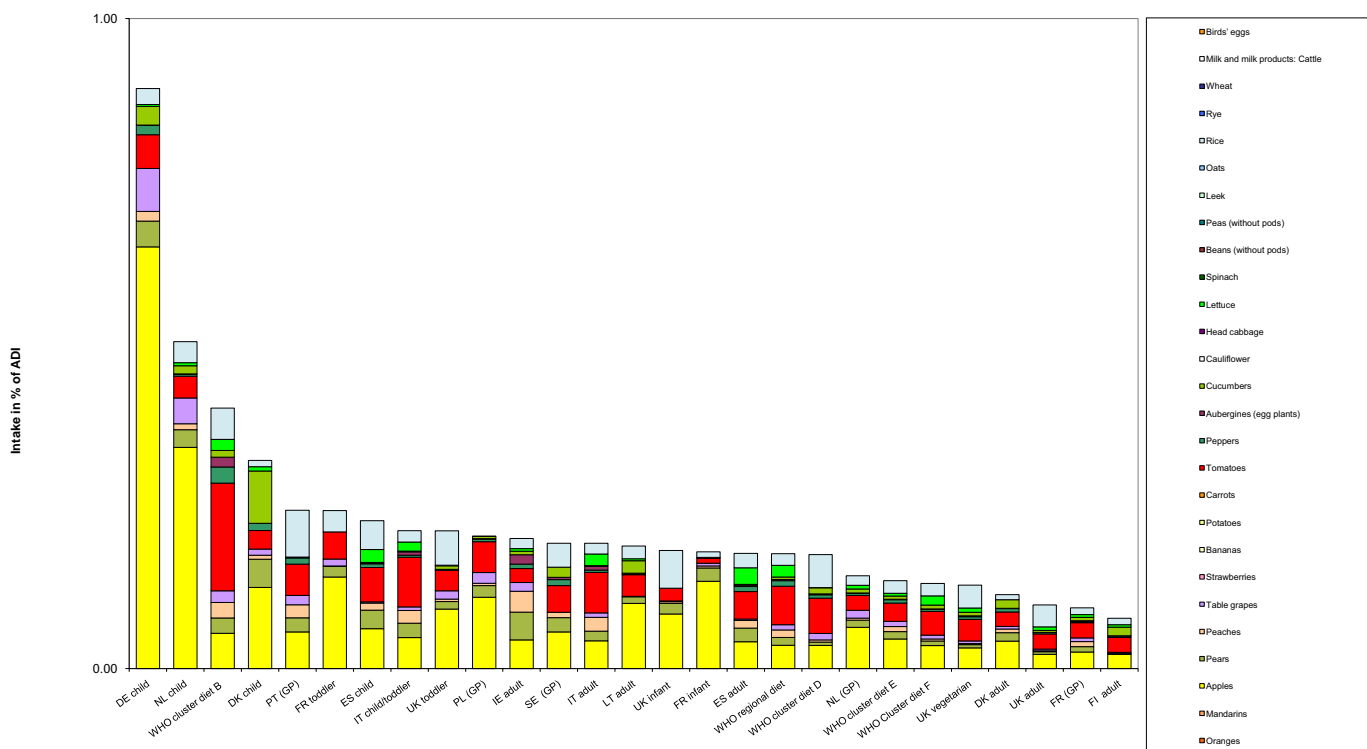
Exposure (range) in % of ADI minimum - maximum		1					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.9	DE child	0.6	Apples	0.1	Table grapes	0.1	Tomatoes
0.5	NL child	0.3	Apples	0.0	Table grapes	0.0	Tomatoes
0.4	WHO cluster diet B	0.2	Tomatoes	0.1	Apples	0.0	Rice
0.3	DK child	0.1	Apples	0.1	Cucumbers	0.0	Pears
0.2	PT (GP)	0.1	Rice	0.1	Apples	0.0	Tomatoes
0.2	FR toddler	0.1	Apples	0.0	Tomatoes	0.0	Rice
0.2	ES child	0.1	Apples	0.1	Tomatoes	0.0	Rice
0.2	IT child/toddler	0.1	Tomatoes	0.0	Apples	0.0	Pears
0.2	UK toddler	0.1	Apples	0.1	Rice	0.0	Tomatoes
0.2	PL (GP)	0.1	Apples	0.0	Tomatoes	0.0	Pears
0.2	IE adult	0.0	Apples	0.0	Pears	0.0	Peaches
0.2	SE (GP)	0.1	Apples	0.0	Tomatoes	0.0	Rice
0.2	IT adult	0.1	Tomatoes	0.0	Apples	0.0	Peaches
0.2	LT adult	0.1	Apples	0.0	Tomatoes	0.0	Rice
0.2	UK infant	0.1	Apples	0.1	Rice	0.0	Tomatoes
0.2	FR infant	0.1	Apples	0.0	Pears	0.0	Rice
0.2	ES adult	0.0	Tomatoes	0.0	Apples	0.0	Lettuce
0.2	WHO regional diet	0.1	Tomatoes	0.0	Apples	0.0	Rice
0.2	WHO cluster diet D	0.1	Tomatoes	0.1	Rice	0.0	Apples
0.1	NL (GP)	0.1	Apples	0.0	Tomatoes	0.0	Rice
0.1	WHO cluster diet E	0.0	Apples	0.0	Tomatoes	0.0	Rice
0.1	WHO Cluster diet F	0.0	Tomatoes	0.0	Apples	0.0	Rice
0.1	UK vegetarian	0.0	Rice	0.0	Tomatoes	0.0	Apples
0.1	DK adult	0.0	Apples	0.0	Tomatoes	0.0	Cucumbers
0.1	UK adult	0.0	Rice	0.0	Tomatoes	0.0	Apples
0.1	FR (GP)	0.0	Apples	0.0	Tomatoes	0.0	Rice
0.1	FI adult	0.0	Tomatoes	0.0	Apples	0.0	Cucumbers

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	3	1010	0.69		0.59				
2009	Bananas	0.05	788							
2009	Peppers	1	1031	1.45		0.15				
2009	Aubergines (egg plants)	0.5	701	0.57		0.05				
2009	Cauliflower	0.5	635							
2009	Peas (without pods)	0.05	575							
2009	Wheat	0.05	490							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Tebufenozide**



Tebufenpyrad			
Status of the active substance:	Included		
Code number:	124		
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:	2008	Year of evaluation:	2008

**Chronic risk assessment**

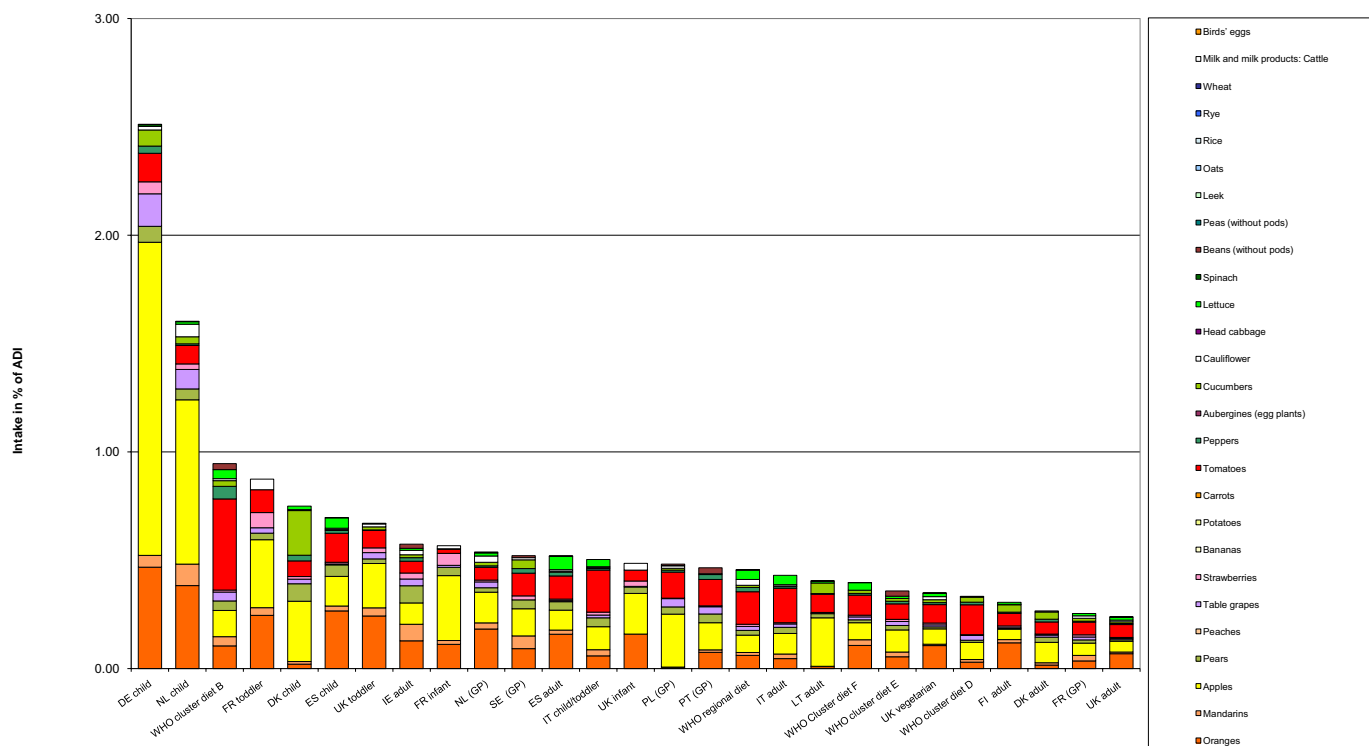
		Exposure (range) in % of ADI minimum - maximum					
		3					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
2.5	DE child	1.4	Apples	0.5	Oranges	0.2	Table grapes
1.6	NL child	0.8	Apples	0.4	Oranges	0.1	Mandarins
0.9	WHO cluster diet B	0.4	Tomatoes	0.1	Apples	0.1	Oranges
0.9	FR toddler	0.3	Apples	0.2	Oranges	0.1	Tomatoes
0.7	DK child	0.3	Apples	0.2	Cucumbers	0.1	Pears
0.7	ES child	0.3	Oranges	0.1	Apples	0.1	Tomatoes
0.7	UK toddler	0.2	Oranges	0.2	Apples	0.1	Tomatoes
0.6	IE adult	0.1	Oranges	0.1	Apples	0.1	Pears
0.6	FR infant	0.3	Apples	0.1	Oranges	0.1	Strawberries
0.5	NL (GP)	0.2	Oranges	0.1	Apples	0.1	Tomatoes
0.5	SE (GP)	0.1	Apples	0.1	Tomatoes	0.1	Oranges
0.5	ES adult	0.2	Oranges	0.1	Tomatoes	0.1	Apples
0.5	IT child/toddler	0.2	Tomatoes	0.1	Apples	0.1	Oranges
0.5	UK infant	0.2	Apples	0.2	Oranges	0.1	Tomatoes
0.5	PL (GP)	0.2	Apples	0.1	Tomatoes	0.0	Table grapes
0.5	PT (GP)	0.1	Apples	0.1	Tomatoes	0.1	Oranges
0.5	WHO regional diet	0.1	Tomatoes	0.1	Apples	0.1	Oranges
0.4	IT adult	0.2	Tomatoes	0.1	Apples	0.0	Oranges
0.4	LT adult	0.2	Apples	0.1	Tomatoes	0.0	Cucumbers
0.4	WHO Cluster diet F	0.1	Oranges	0.1	Tomatoes	0.1	Apples
0.4	WHO cluster diet E	0.1	Apples	0.1	Tomatoes	0.1	Oranges
0.3	UK vegetarian	0.1	Oranges	0.1	Tomatoes	0.1	Apples
0.3	WHO cluster diet D	0.1	Tomatoes	0.1	Apples	0.0	Oranges
0.3	FI adult	0.1	Oranges	0.1	Tomatoes	0.0	Apples
0.3	DK adult	0.1	Apples	0.1	Tomatoes	0.0	Cucumbers
0.3	FR (GP)	0.1	Tomatoes	0.1	Apples	0.0	Oranges
0.2	UK adult	0.1	Oranges	0.1	Tomatoes	0.0	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.5	1104	2.26		0.16		52.38	DE child	
2009	Bananas	0.05	979							
2009	Peppers	0.5	1130	0.09		0.00		0.63	DE child	
2009	Aubergines (egg plants)	0.5	730							
2009	Cauliflower	0.05	643	0.16		0.00		0.99	NL child	
2009	Peas (without pods)	0.05	601							
2009	Wheat	0.05	656							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Tebufenpyrad**



Teflubenzuron			
Status of the active substance:	Included		
Code number:	125		
Toxicological end points			
ADI (mg/kg bw/day):	0.01	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**

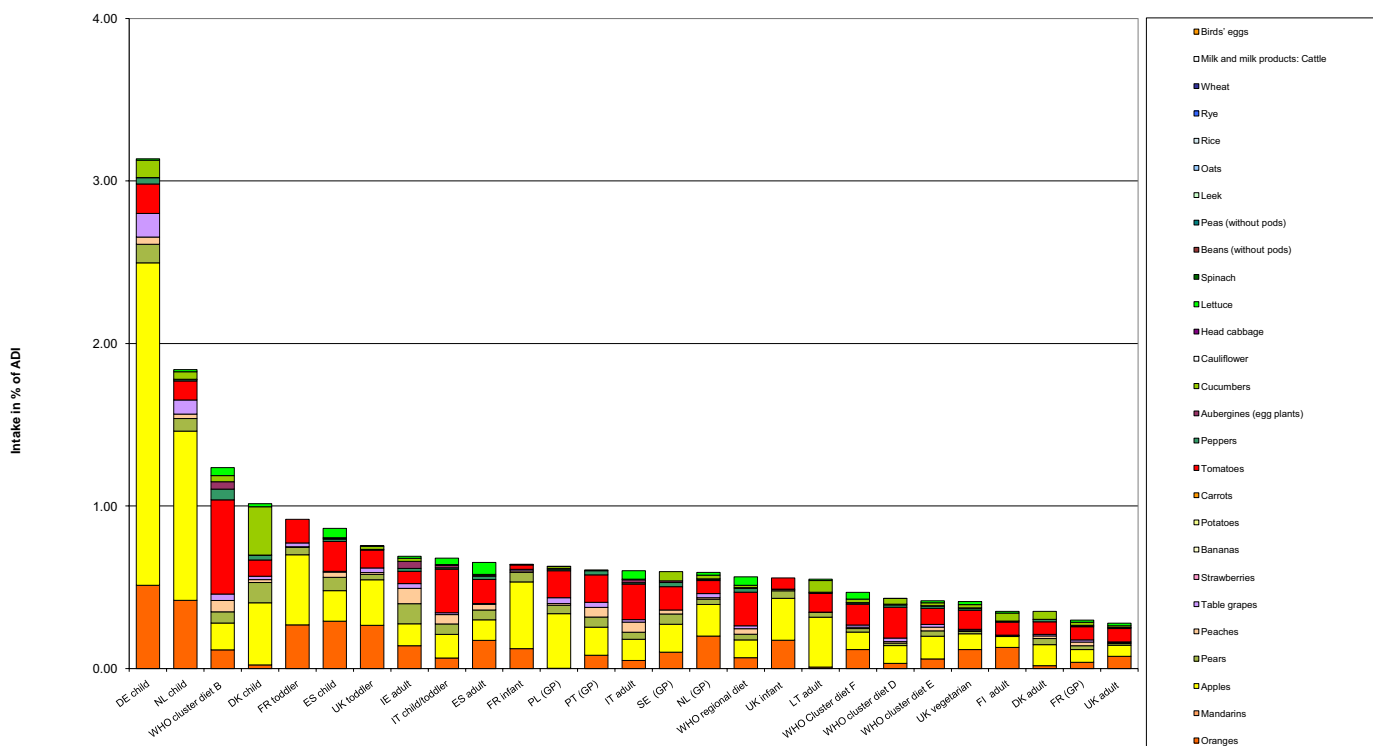
		Exposure (range) in % of ADI minimum - maximum					
		3					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
3.1	DE child	2.0	Apples	0.5	Oranges	0.2	Tomatoes
1.8	NL child	1.0	Apples	0.4	Oranges	0.1	Tomatoes
1.2	WHO cluster diet B	0.6	Tomatoes	0.2	Apples	0.1	Oranges
1.0	DK child	0.4	Apples	0.3	Cucumbers	0.1	Pears
0.9	FR toddler	0.4	Apples	0.3	Oranges	0.1	Tomatoes
0.9	ES child	0.3	Oranges	0.2	Apples	0.2	Tomatoes
0.8	UK toddler	0.3	Apples	0.3	Oranges	0.1	Tomatoes
0.7	IE adult	0.1	Oranges	0.1	Apples	0.1	Pears
0.7	IT child/toddler	0.3	Tomatoes	0.1	Apples	0.1	Oranges
0.7	ES adult	0.2	Oranges	0.1	Tomatoes	0.1	Apples
0.6	FR infant	0.4	Apples	0.1	Oranges	0.1	Pears
0.6	PL (GP)	0.3	Apples	0.2	Tomatoes	0.1	Pears
0.6	PT (GP)	0.2	Apples	0.2	Tomatoes	0.1	Oranges
0.6	IT adult	0.2	Tomatoes	0.1	Apples	0.1	Peaches
0.6	SE (GP)	0.2	Apples	0.1	Tomatoes	0.1	Oranges
0.6	NL (GP)	0.2	Oranges	0.2	Apples	0.1	Tomatoes
0.6	WHO regional diet	0.2	Tomatoes	0.1	Apples	0.1	Oranges
0.6	UK infant	0.3	Apples	0.2	Oranges	0.1	Tomatoes
0.6	LT adult	0.3	Apples	0.1	Tomatoes	0.1	Cucumbers
0.5	WHO Cluster diet F	0.1	Tomatoes	0.1	Oranges	0.1	Apples
0.4	WHO cluster diet D	0.2	Tomatoes	0.1	Apples	0.0	Cucumbers
0.4	WHO cluster diet E	0.1	Apples	0.1	Tomatoes	0.1	Oranges
0.4	UK vegetarian	0.1	Tomatoes	0.1	Oranges	0.1	Apples
0.4	FI adult	0.1	Oranges	0.1	Tomatoes	0.1	Apples
0.4	DK adult	0.1	Apples	0.1	Tomatoes	0.0	Cucumbers
0.3	FR (GP)	0.1	Tomatoes	0.1	Apples	0.0	Oranges
0.3	UK adult	0.1	Tomatoes	0.1	Oranges	0.1	Apples

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	1	768	0.26		0.017				
2009	Bananas	0.05	690							
2009	Peppers	0.5	808	0.99		0.14				
2009	Aubergines (egg plants)	0.5	592	0.34		0.02				
2009	Cauliflower	0.5	528							
2009	Peas (without pods)	0.05	549							
2009	Wheat	0.1	460							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Teflubenzuron**



Tefluthrin			
Status of the active substance:	Excluded		
Code number:	126		
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:	2010	Year of evaluation:	2010

**Chronic risk assessment**

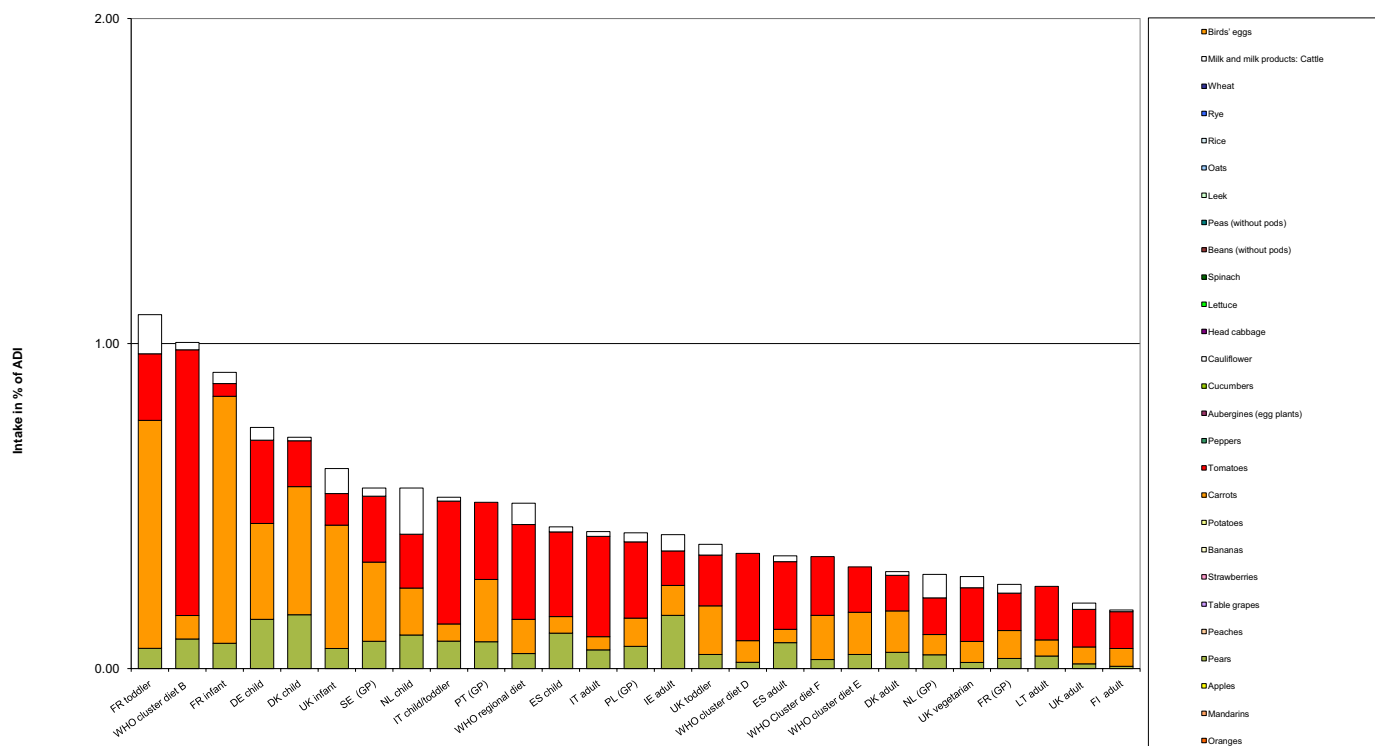
		Exposure (range) in % of ADI minimum - maximum 1					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
1.1	FR toddler	0.7	Carrots	0.2	Tomatoes	0.1	Cauliflower
1.0	WHO cluster diet B	0.8	Tomatoes	0.1	Pears	0.1	Carrots
0.9	FR infant	0.8	Carrots	0.1	Pears	0.0	Tomatoes
0.7	DE child	0.3	Carrots	0.3	Tomatoes	0.2	Pears
0.7	DK child	0.4	Carrots	0.2	Pears	0.1	Tomatoes
0.6	UK infant	0.4	Carrots	0.1	Tomatoes	0.1	Cauliflower
0.6	SE (GP)	0.2	Carrots	0.2	Tomatoes	0.1	Pears
0.6	NL child	0.2	Tomatoes	0.1	Carrots	0.1	Cauliflower
0.5	IT child/toddler	0.4	Tomatoes	0.1	Pears	0.1	Carrots
0.5	PT (GP)	0.2	Tomatoes	0.2	Carrots	0.1	Pears
0.5	WHO regional diet	0.3	Tomatoes	0.1	Carrots	0.1	Cauliflower
0.4	ES child	0.3	Tomatoes	0.1	Pears	0.1	Carrots
0.4	IT adult	0.3	Tomatoes	0.1	Pears	0.0	Carrots
0.4	PL (GP)	0.2	Tomatoes	0.1	Carrots	0.1	Pears
0.4	IE adult	0.2	Pears	0.1	Tomatoes	0.1	Carrots
0.4	UK toddler	0.2	Tomatoes	0.1	Carrots	0.0	Pears
0.4	WHO cluster diet D	0.3	Tomatoes	0.1	Carrots	0.0	Pears
0.3	ES adult	0.2	Tomatoes	0.1	Pears	0.0	Carrots
0.3	WHO Cluster diet F	0.2	Tomatoes	0.1	Carrots	0.0	Pears
0.3	WHO cluster diet E	0.1	Tomatoes	0.1	Carrots	0.0	Pears
0.3	DK adult	0.1	Carrots	0.1	Tomatoes	0.0	Pears
0.3	NL (GP)	0.1	Tomatoes	0.1	Tomatoes	0.1	Cauliflower
0.3	UK vegetarian	0.2	Tomatoes	0.1	Carrots	0.0	Cauliflower
0.3	FR (GP)	0.1	Tomatoes	0.1	Carrots	0.0	Pears
0.3	LT adult	0.2	Tomatoes	0.0	Carrots	0.0	Pears
0.2	UK adult	0.1	Tomatoes	0.1	Carrots	0.0	Cauliflower
0.2	FI adult	0.1	Tomatoes	0.1	Carrots	0.0	Pears

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	684							
2009	Bananas	0.05	535							
2009	Peppers	0.05	744							
2009	Aubergines (egg plants)	0.05	492	0.47		0.03		39.65	NL child	
2009	Cauliflower	0.05	424							
2009	Peas (without pods)	0.05	363							
2009	Wheat	0.05	430							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Tefluthrin**



Tetradifon			
Status of the active substance:	Excluded		
Code number:	127		
Toxicological end points			
ADI (mg/kg bw/day):	0.015	ARID (mg/kg bw):	n.n.
Source of ADI:	DE	Source of ARID:	DE
Year of evaluation:	2001	Year of evaluation:	2002

**Chronic risk assessment**

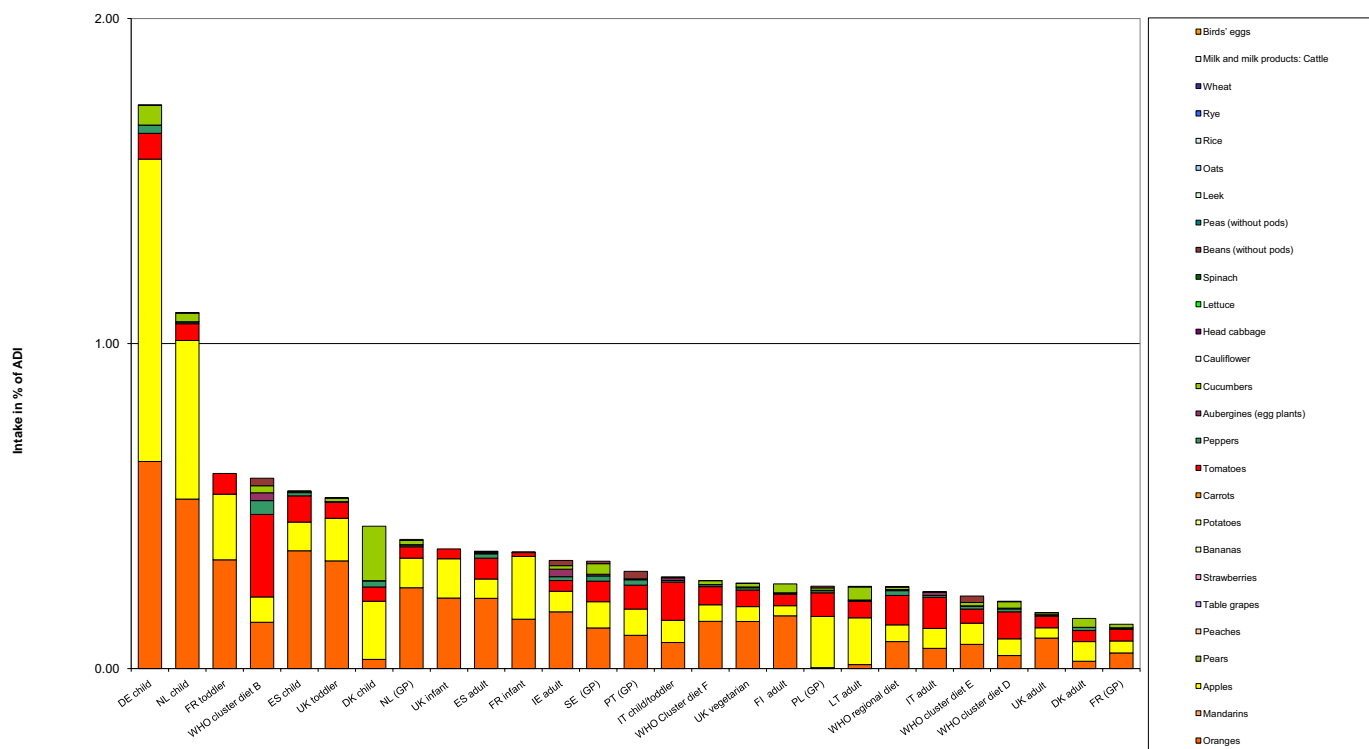
Highest calculated exposure in % of ADI		Highest contributor to MS diet (in % of ADI)		2nd contributor to MS diet (in % of ADI)		3rd contributor to MS diet (in % of ADI)	
MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities	MS Diet	Commodity / group of commodities
1.7	DE child	0.9	Apples	0.6	Oranges	0.1	Tomatoes
1.1	NL child	0.5	Oranges	0.5	Apples	0.1	Tomatoes
0.6	FR toddler	0.3	Oranges	0.2	Apples	0.1	Tomatoes
0.6	WHO cluster diet B	0.3	Tomatoes	0.1	Oranges	0.1	Apples
0.5	ES child	0.4	Oranges	0.1	Apples	0.1	Tomatoes
0.5	UK toddler	0.3	Oranges	0.1	Apples	0.0	Tomatoes
0.4	DK child	0.2	Apples	0.2	Cucumbers	0.0	Tomatoes
0.4	NL (GP)	0.2	Oranges	0.1	Apples	0.0	Tomatoes
0.4	UK infant	0.2	Oranges	0.1	Apples	0.0	Tomatoes
0.4	ES adult	0.2	Oranges	0.1	Tomatoes	0.1	Apples
0.4	FR infant	0.2	Apples	0.2	Oranges	0.0	Tomatoes
0.3	IE adult	0.2	Oranges	0.1	Apples	0.0	Tomatoes
0.3	SE (GP)	0.1	Oranges	0.1	Apples	0.1	Tomatoes
0.3	PT (GP)	0.1	Oranges	0.1	Apples	0.1	Tomatoes
0.3	IT child/toddler	0.1	Tomatoes	0.1	Oranges	0.1	Apples
0.3	WHO Cluster diet F	0.1	Oranges	0.1	Tomatoes	0.1	Apples
0.3	UK vegetarian	0.1	Oranges	0.1	Tomatoes	0.0	Apples
0.3	FI adult	0.2	Oranges	0.0	Tomatoes	0.0	Apples
0.3	PL (GP)	0.2	Apples	0.1	Tomatoes	0.0	Cucumbers
0.3	LT adult	0.1	Apples	0.1	Tomatoes	0.0	Cucumbers
0.3	WHO regional diet	0.1	Tomatoes	0.1	Oranges	0.1	Apples
0.2	IT adult	0.1	Tomatoes	0.1	Oranges	0.1	Apples
0.2	WHO cluster diet E	0.1	Oranges	0.1	Apples	0.0	Tomatoes
0.2	WHO cluster diet D	0.1	Tomatoes	0.1	Apples	0.0	Oranges
0.2	UK adult	0.1	Oranges	0.0	Tomatoes	0.0	Apples
0.2	DK adult	0.1	Apples	0.0	Tomatoes	0.0	Cucumbers
0.1	FR (GP)	0.0	Oranges	0.0	Apples	0.0	Tomatoes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	2	1340							
2009	Bananas	0.02	1119							
2009	Peppers	0.02	1380	0.14		0.01				
2009	Aubergines (egg plants)	0.02	913	0.22		0.02				
2009	Cauliflower	0.02	766							
2009	Peas (without pods)	0.02	680							
2009	Wheat	0.02	952							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Tetradifon**



Thiabendazole			
Status of the active substance:	Included		
Code number:	128		
Toxicological end points			
ADI (mg/kg bw/day):	0.1	ARID (mg/kg bw):	n.n.
Source of ADI:	COM	Source of ARID:	JMPR
Year of evaluation:	2001	Year of evaluation:	2006

**Chronic risk assessment**

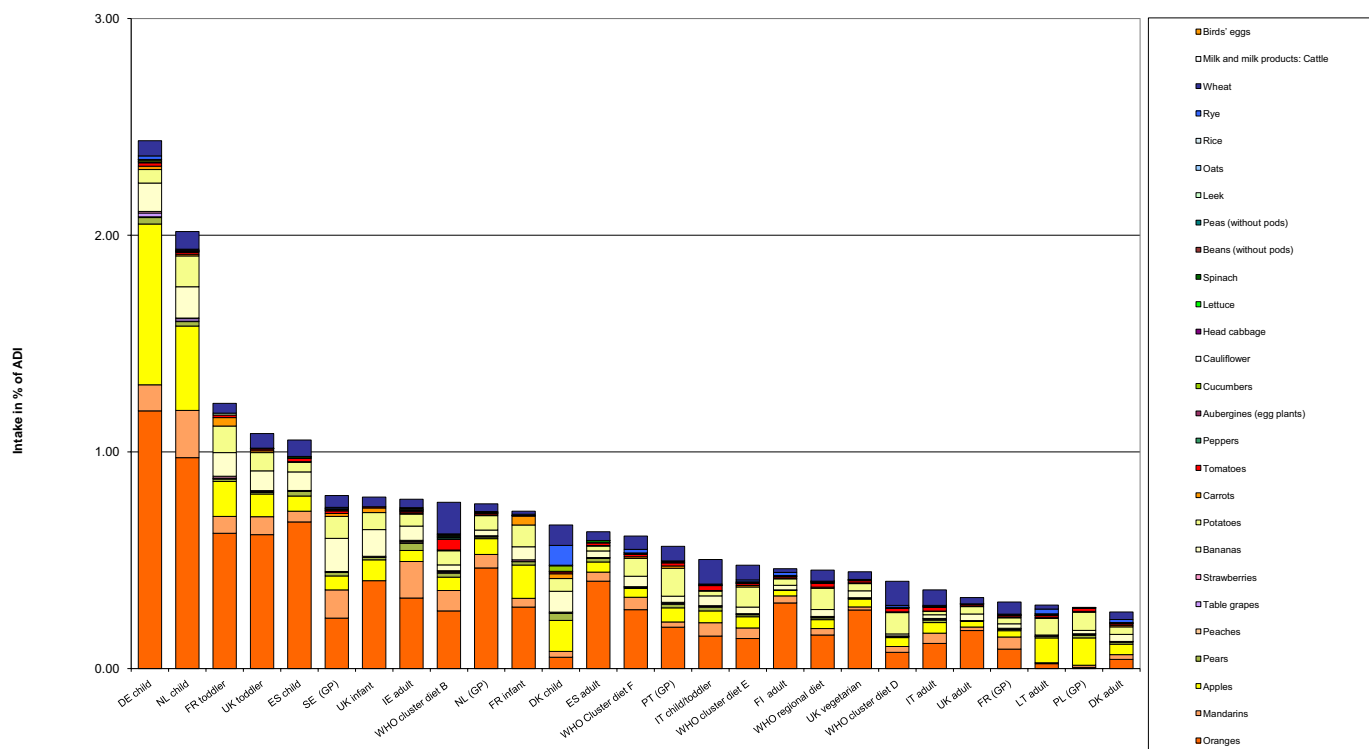
Highest calculated exposure in % of ADI		MS Diet		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
2.4	DE child	1.2	Oranges	0.7	Apples	0.1	Bananas	0.4	Apples	0.2	Mandarins	0.2	Bananas	0.1	Potatoes
2.0	NL child	1.0	Oranges	0.4	Apples	0.1	Bananas	0.2	Bananas	0.1	Mandarins	0.1	Apples	0.1	Apples
1.2	FR toddler	0.6	Oranges	0.1	Bananas	0.1	Wheat	0.2	Apples	0.1	Potatoes	0.1	Bananas	0.1	Mandarins
1.1	UK toddler	0.6	Oranges	0.1	Bananas	0.1	Apples	0.2	Bananas	0.1	Mandarins	0.1	Apples	0.1	Apples
1.1	ES child	0.7	Oranges	0.1	Bananas	0.1	Wheat	0.2	Bananas	0.1	Mandarins	0.1	Apples	0.1	Apples
0.8	SE (GP)	0.2	Oranges	0.2	Bananas	0.1	Mandarins	0.2	Apples	0.1	Potatoes	0.1	Bananas	0.1	Mandarins
0.8	UK infant	0.4	Oranges	0.1	Bananas	0.1	Apples	0.1	Bananas	0.1	Mandarins	0.1	Apples	0.1	Apples
0.8	IE adult	0.3	Oranges	0.1	Bananas	0.1	Wheat	0.2	Apples	0.1	Potatoes	0.1	Bananas	0.1	Mandarins
0.8	WHO cluster diet B	0.3	Oranges	0.1	Bananas	0.1	Wheat	0.1	Apples	0.1	Potatoes	0.1	Bananas	0.1	Mandarins
0.8	NL (GP)	0.5	Oranges	0.1	Apples	0.1	Apples	0.1	Apples	0.1	Potatoes	0.1	Potatoes	0.1	Potatoes
0.7	FR infant	0.3	Oranges	0.2	Apples	0.1	Apples	0.1	Apples	0.1	Potatoes	0.1	Wheat	0.1	Wheat
0.7	DK child	0.1	Apples	0.1	Bananas	0.1	Wheat	0.1	Bananas	0.1	Mandarins	0.1	Wheat	0.1	Wheat
0.6	ES adult	0.4	Oranges	0.0	Apples	0.0	Mandarins	0.1	Apples	0.0	Potatoes	0.1	Wheat	0.1	Wheat
0.6	WHO Cluster diet F	0.3	Oranges	0.1	Potatoes	0.1	Wheat	0.1	Potatoes	0.1	Mandarins	0.1	Wheat	0.1	Wheat
0.6	PT (GP)	0.2	Oranges	0.1	Potatoes	0.1	Wheat	0.1	Potatoes	0.1	Mandarins	0.1	Wheat	0.1	Wheat
0.5	IT child/toddler	0.2	Oranges	0.1	Potatoes	0.1	Mandarins	0.0	Potatoes	0.0	Potatoes	0.1	Wheat	0.1	Wheat
0.5	WHO cluster diet E	0.1	Oranges	0.1	Potatoes	0.1	Wheat	0.1	Potatoes	0.1	Mandarins	0.1	Wheat	0.1	Wheat
0.5	FI adult	0.3	Oranges	0.0	Mandarins	0.0	Potatoes	0.1	Potatoes	0.1	Mandarins	0.0	Potatoes	0.0	Potatoes
0.5	WHO regional diet	0.2	Oranges	0.1	Potatoes	0.1	Wheat	0.1	Potatoes	0.1	Mandarins	0.1	Wheat	0.1	Wheat
0.4	UK vegetarian	0.3	Oranges	0.0	Apples	0.0	Wheat	0.1	Apples	0.0	Potatoes	0.0	Wheat	0.0	Wheat
0.4	WHO cluster diet D	0.1	Wheat	0.1	Potatoes	0.1	Apples	0.1	Potatoes	0.1	Mandarins	0.1	Wheat	0.1	Wheat
0.4	IT adult	0.1	Oranges	0.1	Wheat	0.1	Apples	0.1	Wheat	0.0	Potatoes	0.0	Apples	0.0	Apples
0.3	UK adult	0.2	Oranges	0.0	Potatoes	0.0	Bananas	0.1	Potatoes	0.0	Potatoes	0.0	Bananas	0.0	Bananas
0.3	FR (GP)	0.1	Oranges	0.1	Wheat	0.1	Mandarins	0.1	Wheat	0.1	Mandarins	0.1	Wheat	0.1	Mandarins
0.3	LT adult	0.1	Apples	0.1	Potatoes	0.0	Oranges	0.1	Potatoes	0.0	Oranges	0.0	Oranges	0.0	Oranges
0.3	PL (GP)	0.1	Apples	0.1	Potatoes	0.0	Bananas	0.1	Potatoes	0.0	Bananas	0.0	Bananas	0.0	Bananas
0.3	DK adult	0.0	Apples	0.0	Oranges	0.0	Potatoes	0.0	Oranges	0.0	Potatoes	0.0	Potatoes	0.0	Potatoes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	1296	0.08		0.02				
2009	Bananas	5	1059	38.9		1,820				
2009	Peppers	0.05	1359	0.07		0.00				
2009	Aubergines (egg plants)	0.05	834	0.12		0.01				
2009	Cauliflower	0.05	754							
2009	Peas (without pods)	0.05	666							
2009	Wheat	0.05	859	0.12		0,044				
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Thiabendazole**



Thiacloprid			
Status of the active substance:	Included		
Code number:	129		
Toxicological end points			
ADI (mg/kg bw/day):	0.01	ARID (mg/kg bw):	0.03
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2004	Year of evaluation:	2003

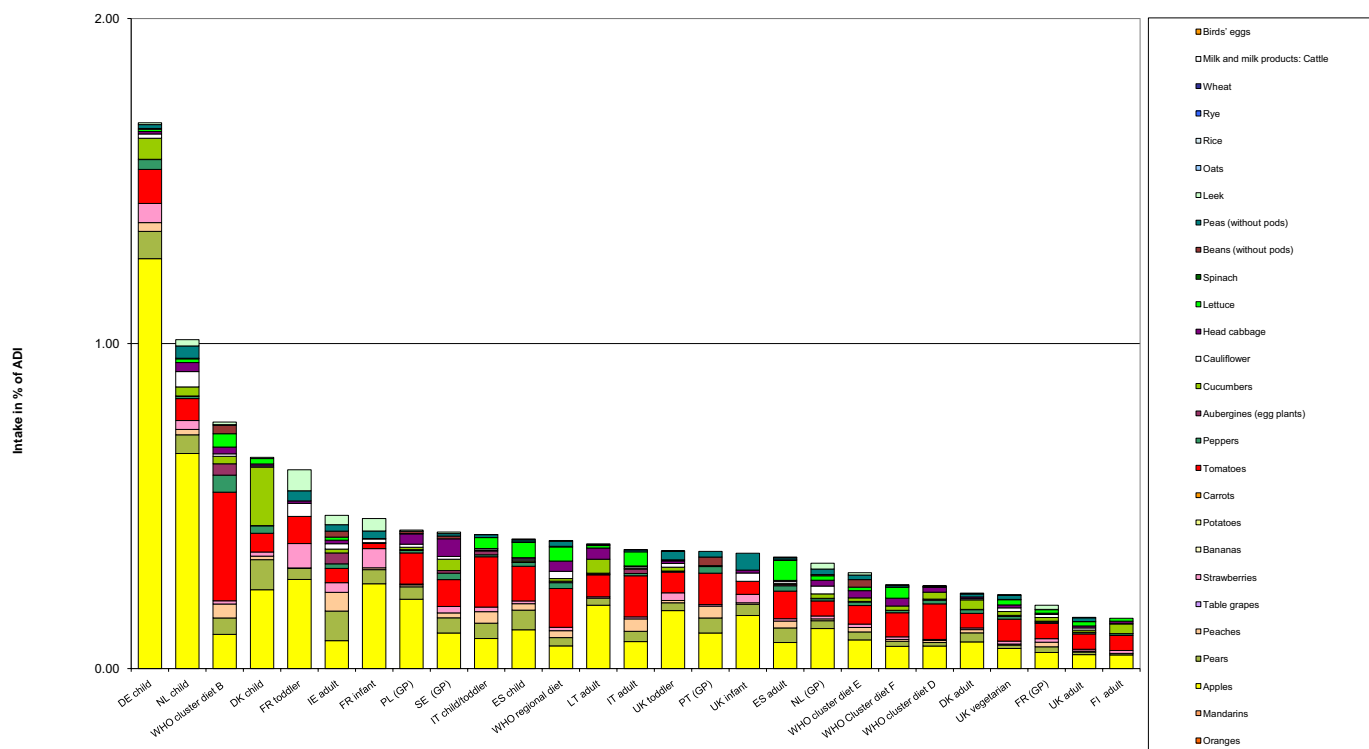
**Chronic risk assessment**

Highest calculated exposure in % of ADI		MS Diet		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	
1.7	DE child	1.3	Apples	0.1	Tomatoes	0.1	Pears								
1.0	NL child	0.7	Apples	0.1	Tomatoes	0.1	Pears								
0.8	WHO cluster diet B	0.3	Tomatoes	0.1	Apples	0.1	Peppers								
0.7	DK child	0.2	Apples	0.2	Cucumbers	0.1	Pears								
0.6	FR toddler	0.3	Apples	0.1	Tomatoes	0.1	Strawberries								
0.5	IE adult	0.1	Pears	0.1	Apples	0.1	Peaches								
0.5	FR infant	0.3	Apples	0.1	Strawberries	0.0	Pears								
0.4	PL (GP)	0.2	Apples	0.1	Tomatoes	0.0	Pears								
0.4	SE (GP)	0.1	Apples	0.1	Tomatoes	0.1	Head cabbage								
0.4	IT child/toddler	0.2	Tomatoes	0.1	Apples	0.0	Pears								
0.4	ES child	0.1	Apples	0.1	Tomatoes	0.1	Pears								
0.4	WHO regional diet	0.1	Tomatoes	0.1	Apples	0.0	Lettuce								
0.4	LT adult	0.2	Apples	0.1	Tomatoes	0.0	Cucumbers								
0.4	IT adult	0.1	Tomatoes	0.1	Apples	0.0	Lettuce								
0.4	UK toddler	0.2	Apples	0.1	Tomatoes	0.0	Peas (without pods)								
0.4	PT (GP)	0.1	Apples	0.1	Tomatoes	0.0	Pears								
0.4	UK infant	0.2	Apples	0.1	Peas (without pods)	0.0	Tomatoes								
0.3	ES adult	0.1	Tomatoes	0.1	Apples	0.1	Lettuce								
0.3	NL (GP)	0.1	Apples	0.0	Tomatoes	0.0	Cauliflower								
0.3	WHO cluster diet E	0.1	Apples	0.1	Tomatoes	0.0	Pears								
0.3	WHO Cluster diet F	0.1	Tomatoes	0.1	Apples	0.0	Lettuce								
0.3	WHO cluster diet D	0.1	Tomatoes	0.1	Apples	0.0	Cucumbers								
0.2	DK adult	0.1	Apples	0.0	Tomatoes	0.0	Cucumbers								
0.2	UK vegetarian	0.1	Tomatoes	0.1	Apples	0.0	Lettuce								
0.2	FR (GP)	0.0	Apples	0.0	Tomatoes	0.0	Pears								
0.2	UK adult	0.0	Tomatoes	0.0	Apples	0.0	Lettuce								
0.2	FI adult	0.0	Tomatoes	0.0	Apples	0.0	Cucumbers								

Acute risk assessment										
Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.02	940							
2009	Bananas	0.02	782							
2009	Peppers	1	993	1.01		0.72	1	151.15	DE child	
2009	Aubergines (egg plants)	0.5	660	2.58		0.24		19.58	UK 4-6 yr	
2009	Cauliflower	0.1	611	0.65		0.02		3.30	NL child	
2009	Peas (without pods)	0.2	558	0.36		0.03		0.76	UK infant	
2009	Wheat	0.1	493							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Thiacloprid**





Thiophanate-methyl			
Status of the active substance:	Included		
Code number:	130		
Toxicological end points			
ADI (mg/kg bw/day):	0.08	ARID (mg/kg bw):	0.2
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2005	Year of evaluation:	2005

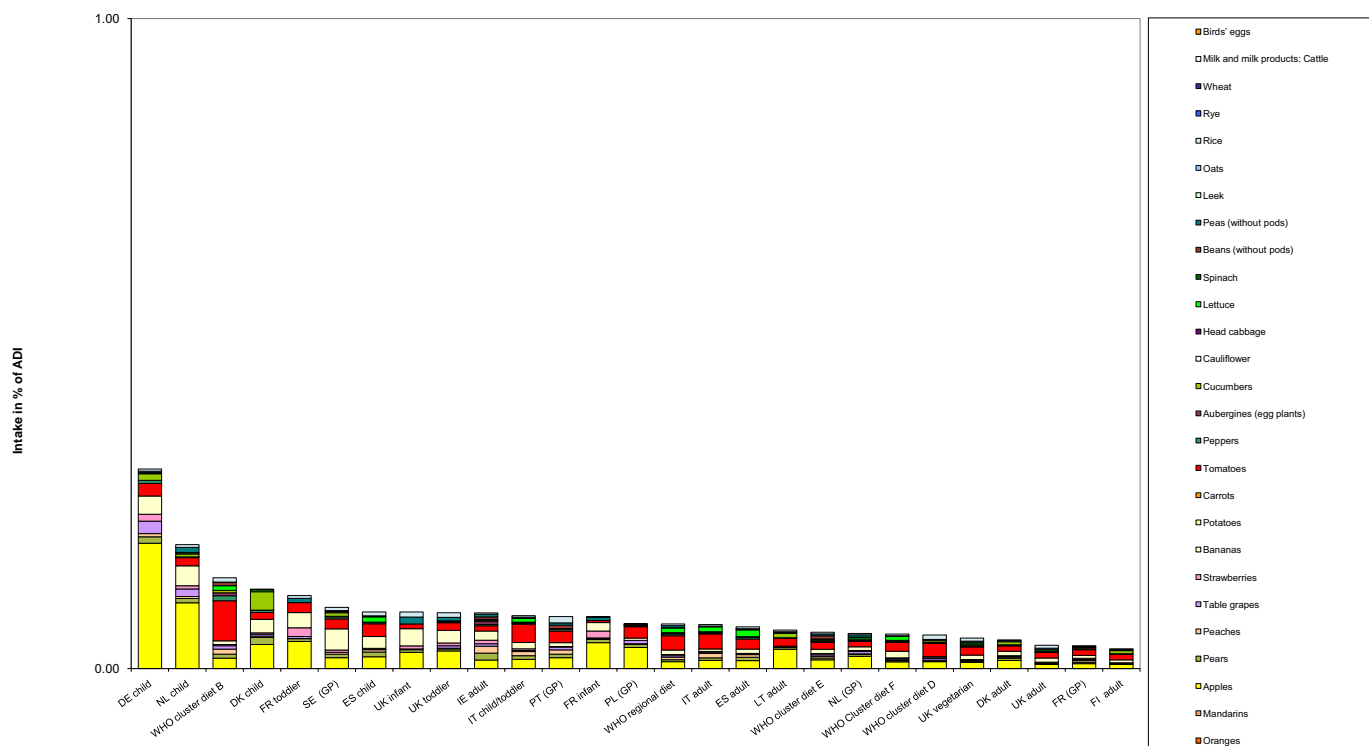
**Chronic risk assessment**

Highest calculated exposure in % of ADI		MS Diet		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	
0.3	DE child	0.2	NL child	0.2	Apples	0.0	Bananas	0.0	Bananas	0.0	Tomatoes				
0.2	NL child	0.1	WHO cluster diet B	0.1	Apples	0.0	Bananas	0.0	Bananas	0.0	Tomatoes				
0.1	WHO cluster diet B	0.1	DK child	0.1	Tomatoes	0.0	Apples	0.0	Apples	0.0	Peppers				
0.1	DK child	0.0	FR toddler	0.0	Apples	0.0	Cucumbers	0.0	Cucumbers	0.0	Bananas				
0.1	FR toddler	0.0	SE (GP)	0.0	Apples	0.0	Bananas	0.0	Bananas	0.0	Tomatoes				
0.1	SE (GP)	0.0	ES child	0.0	Bananas	0.0	Apples	0.0	Apples	0.0	Tomatoes				
0.1	ES child	0.0	UK infant	0.0	Tomatoes	0.0	Bananas	0.0	Bananas	0.0	Apples				
0.1	UK infant	0.0	UK toddler	0.0	Bananas	0.0	Apples	0.0	Apples	0.0	Peas (without pods)				
0.1	UK toddler	0.0	IE adult	0.0	Apples	0.0	Bananas	0.0	Bananas	0.0	Tomatoes				
0.1	IE adult	0.0	IT child/toddler	0.0	Bananas	0.0	Apples	0.0	Apples	0.0	Pears				
0.1	IT child/toddler	0.0	PT (GP)	0.0	Tomatoes	0.0	Apples	0.0	Apples	0.0	Bananas				
0.1	PT (GP)	0.0	FR infant	0.0	Tomatoes	0.0	Bananas	0.0	Bananas	0.0	Rice				
0.1	FR infant	0.0	PL (GP)	0.0	Apples	0.0	Tomatoes	0.0	Tomatoes	0.0	Strawberries				
0.1	PL (GP)	0.0	WHO regional diet	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Table grapes				
0.1	WHO regional diet	0.0	IT adult	0.0	Apples	0.0	Tomatoes	0.0	Tomatoes	0.0	Lettuce				
0.1	IT adult	0.0	ES adult	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Lettuce				
0.1	ES adult	0.0	LT adult	0.0	Apples	0.0	Tomatoes	0.0	Tomatoes	0.0	Cucumbers				
0.1	LT adult	0.0	WHO cluster diet E	0.0	Apples	0.0	Tomatoes	0.0	Tomatoes	0.0	Bananas				
0.1	WHO cluster diet E	0.0	NL (GP)	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Bananas				
0.1	NL (GP)	0.0	WHO Cluster diet F	0.0	Apples	0.0	Tomatoes	0.0	Tomatoes	0.0	Bananas				
0.1	WHO Cluster diet F	0.0	WHO cluster diet D	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Rice				
0.1	WHO cluster diet D	0.0	UK vegetarian	0.0	Tomatoes	0.0	Apples	0.0	Apples	0.0	Bananas				
0.0	UK vegetarian	0.0	DK adult	0.0	Tomatoes	0.0	Tomatoes	0.0	Tomatoes	0.0	Bananas				
0.0	DK adult	0.0	UK adult	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Bananas				
0.0	UK adult	0.0	FR (GP)	0.0	Apples	0.0	Apples	0.0	Apples	0.0	Bananas				
0.0	FR (GP)	0.0	FI adult	0.0	Tomatoes	0.0	Apples	0.0	Apples	0.0	Bananas				
0.0	FI adult	0.0		0.0	Tomatoes	0.0	Apples	0.0	Apples	0.0	Cucumbers				

Acute risk assessment										
Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.1	984	1.22	0.20	0.47		15.39	DE child	
2009	Bananas	0.1	823	0.6		0.010		0.42	UK infant	
2009	Peppers	0.1	999	0.10	0.10	0.13		4.09	DE child	
2009	Aubergines (egg plants)	2	654	0.46		0.03		0.38	UK 4-6 yr	
2009	Cauliflower	0.1	634							
2009	Peas (without pods)	0.1	592	6.93	0.17	0.12		0.49	UK infant	
2009	Wheat	0.05	638							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Thiophanate-methyl**



Tolclofos-methyl			
Status of the active substance:	Included		
Code number:	131		
Toxicological end points			
ADI (mg/kg bw/day):	0.064	ARID (mg/kg bw):	n.n.
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2005	Year of evaluation:	2005

**Chronic risk assessment**

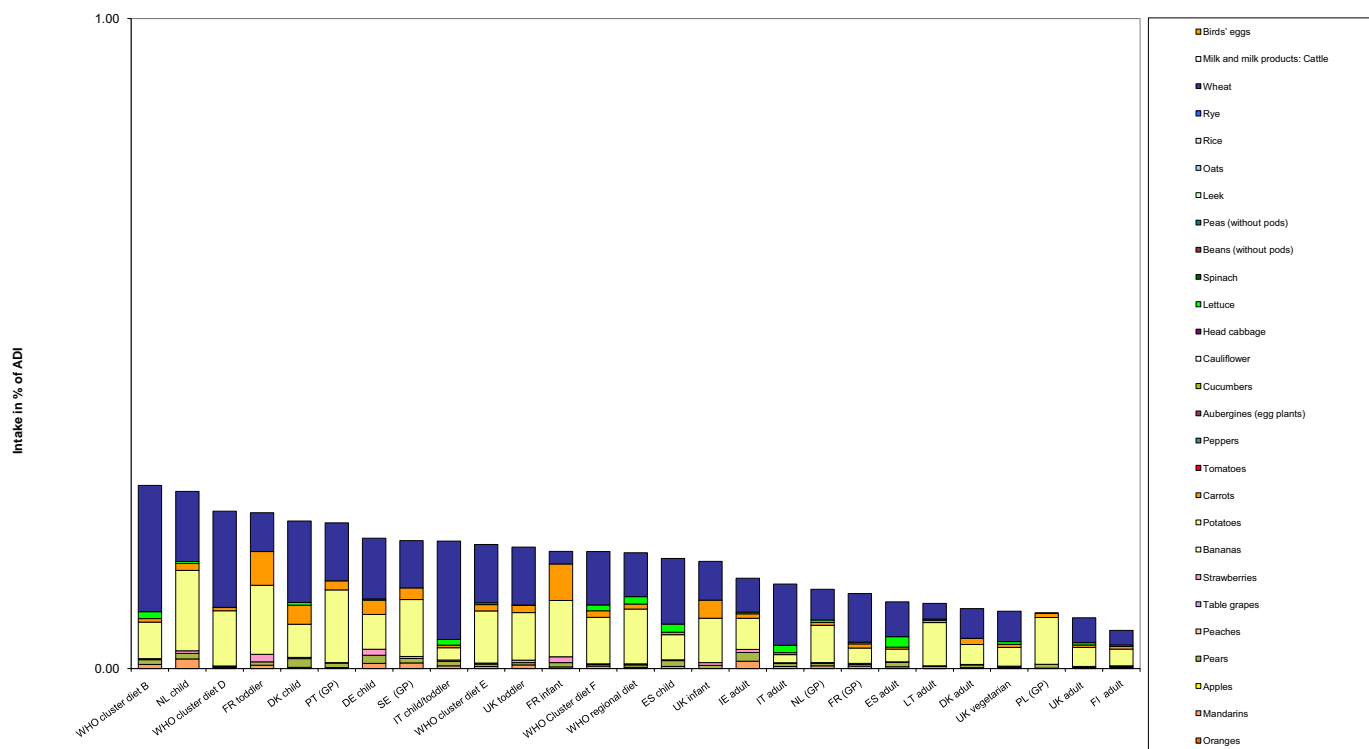
Highest calculated exposure in % of ADI		MS Diet		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
0.3	WHO cluster diet B	0.2	Wheat	0.1	Potatoes	0.0	Lettuce								
0.3	NL child	0.1	Potatoes	0.1	Wheat	0.0	Mandarins								
0.2	WHO cluster diet D	0.1	Wheat	0.1	Potatoes	0.0	Carrots								
0.2	FR toddler	0.1	Potatoes	0.1	Wheat	0.1	Carrots								
0.2	DK child	0.1	Wheat	0.1	Potatoes	0.0	Carrots								
0.2	PT (GP)	0.1	Potatoes	0.1	Wheat	0.0	Carrots								
0.2	DE child	0.1	Wheat	0.1	Potatoes	0.0	Carrots								
0.2	SE (GP)	0.1	Potatoes	0.1	Wheat	0.0	Carrots								
0.2	IT child/toddler	0.2	Wheat	0.0	Potatoes	0.0	Lettuce								
0.2	WHO cluster diet E	0.1	Wheat	0.1	Potatoes	0.0	Carrots								
0.2	UK toddler	0.1	Wheat	0.1	Potatoes	0.0	Carrots								
0.2	FR infant	0.1	Potatoes	0.1	Carrots	0.0	Wheat								
0.2	WHO Cluster diet F	0.1	Wheat	0.1	Potatoes	0.0	Carrots								
0.2	WHO regional diet	0.1	Potatoes	0.1	Wheat	0.0	Lettuce								
0.2	ES child	0.1	Wheat	0.0	Potatoes	0.0	Lettuce								
0.2	UK infant	0.1	Potatoes	0.1	Wheat	0.0	Carrots								
0.1	IE adult	0.1	Wheat	0.0	Potatoes	0.0	Pears								
0.1	IT adult	0.1	Wheat	0.0	Potatoes	0.0	Lettuce								
0.1	NL (GP)	0.1	Potatoes	0.0	Wheat	0.0	Carrots								
0.1	FR (GP)	0.1	Wheat	0.0	Potatoes	0.0	Carrots								
0.1	ES adult	0.1	Wheat	0.0	Potatoes	0.0	Lettuce								
0.1	LT adult	0.1	Potatoes	0.0	Wheat	0.0	Carrots								
0.1	DK adult	0.0	Wheat	0.0	Potatoes	0.0	Carrots								
0.1	UK vegetarian	0.0	Wheat	0.0	Potatoes	0.0	Carrots								
0.1	PL (GP)	0.1	Potatoes	0.0	Carrots	0.0	Pears								
0.1	UK adult	0.0	Wheat	0.0	Potatoes	0.0	Carrots								
0.1	FI adult	0.0	Potatoes	0.0	Wheat	0.0	Carrots								

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.05	1497							
2009	Bananas	0.05	1206							
2009	Peppers	1	1558							
2009	Aubergines (egg plants)	1	993							
2009	Cauliflower	0.5	864							
2009	Peas (without pods)	0.05	756							
2009	Wheat	0.05	1098	0.09		0.020				
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Tolclofos-methyl**



Tolyfluanid			
Status of the active substance:	Excluded		
Code number:	132		
Toxicological end points			
ADI (mg/kg bw/day):	0.1	ARID (mg/kg bw):	0.25
Source of ADI:	EFSA	Source of ARID:	EFSA
Year of evaluation:	2005	Year of evaluation:	2005

**Chronic risk assessment**

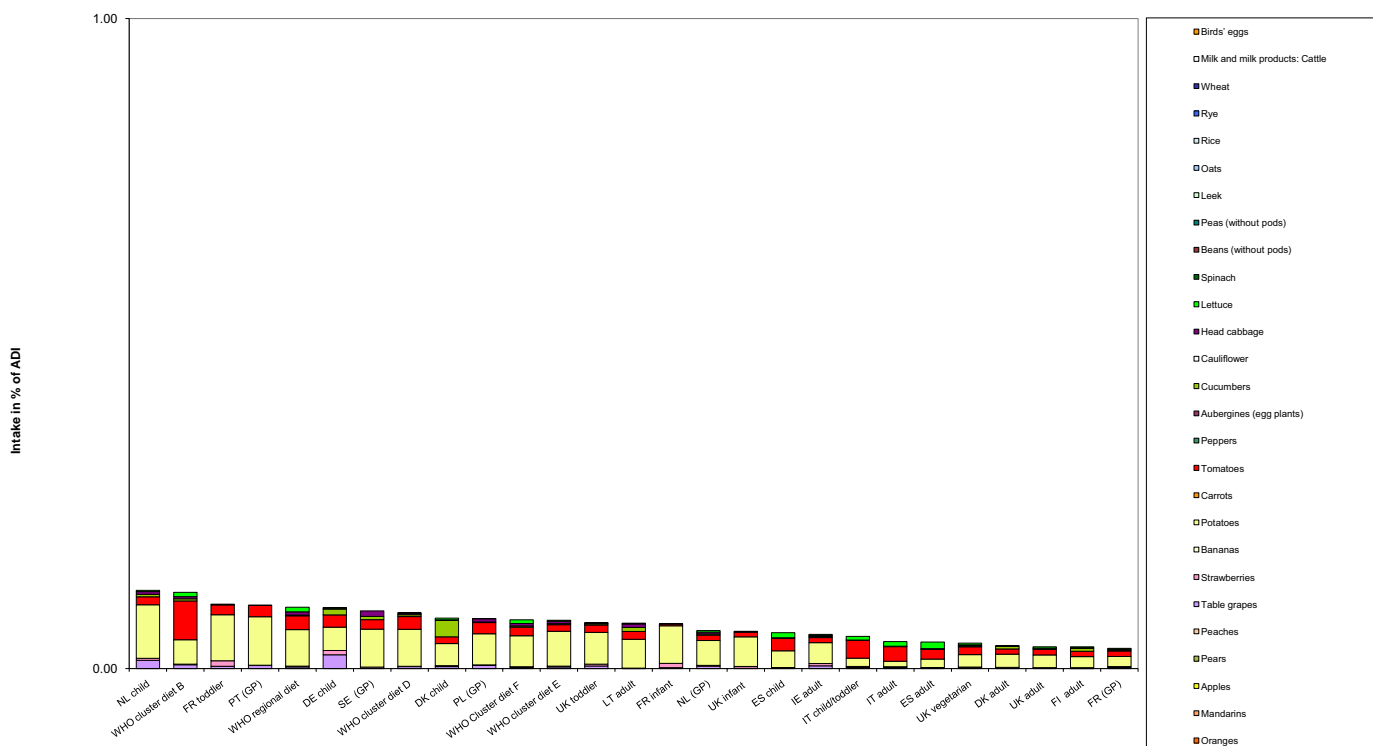
Highest calculated exposure in % of ADI		Exposure (range) in % of ADI minimum - maximum					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.1	NL child	0.1	Potatoes	0.0	Table grapes	0.0	Tomatoes
0.1	WHO cluster diet B	0.1	Tomatoes	0.0	Potatoes	0.0	Lettuce
0.1	FR toddler	0.1	Potatoes	0.0	Tomatoes	0.0	Strawberries
0.1	PT (GP)	0.1	Potatoes	0.0	Tomatoes	0.0	Table grapes
0.1	WHO regional diet	0.1	Potatoes	0.0	Tomatoes	0.0	Lettuce
0.1	DE child	0.0	Potatoes	0.0	Table grapes	0.0	Tomatoes
0.1	SE (GP)	0.1	Potatoes	0.0	Tomatoes	0.0	Head cabbage
0.1	WHO cluster diet D	0.1	Potatoes	0.0	Tomatoes	0.0	Table grapes
0.1	DK child	0.0	Potatoes	0.0	Cucumbers	0.0	Tomatoes
0.1	PL (GP)	0.0	Potatoes	0.0	Tomatoes	0.0	Table grapes
0.1	WHO Cluster diet F	0.0	Potatoes	0.0	Tomatoes	0.0	Lettuce
0.1	WHO cluster diet E	0.1	Potatoes	0.0	Tomatoes	0.0	Head cabbage
0.1	UK toddler	0.0	Potatoes	0.0	Tomatoes	0.0	Table grapes
0.1	LT adult	0.0	Potatoes	0.0	Tomatoes	0.0	Cucumbers
0.1	FR infant	0.1	Potatoes	0.0	Strawberries	0.0	Tomatoes
0.1	NL (GP)	0.0	Potatoes	0.0	Tomatoes	0.0	Table grapes
0.1	UK infant	0.0	Potatoes	0.0	Tomatoes	0.0	Strawberries
0.1	ES child	0.0	Potatoes	0.0	Tomatoes	0.0	Lettuce
0.1	IE adult	0.0	Potatoes	0.0	Tomatoes	0.0	Table grapes
0.0	IT child/toddler	0.0	Tomatoes	0.0	Potatoes	0.0	Lettuce
0.0	IT adult	0.0	Tomatoes	0.0	Potatoes	0.0	Lettuce
0.0	ES adult	0.0	Tomatoes	0.0	Potatoes	0.0	Lettuce
0.0	UK vegetarian	0.0	Potatoes	0.0	Tomatoes	0.0	Lettuce
0.0	DK adult	0.0	Potatoes	0.0	Tomatoes	0.0	Cucumbers
0.0	UK adult	0.0	Potatoes	0.0	Tomatoes	0.0	Lettuce
0.0	FI adult	0.0	Potatoes	0.0	Tomatoes	0.0	Cucumbers
0.0	FR (GP)	0.0	Potatoes	0.0	Tomatoes	0.0	Table grapes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	5	1124	0.09		0.07		1.83	DE child	
2009	Bananas	0.05	750							
2009	Peppers	2	1104							
2009	Aubergines (egg plants)	3	641							
2009	Cauliflower	0.05	560							
2009	Peas (without pods)	0.05	479							
2009	Wheat	0.05	665							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Tolyfluanid**



Triadimefon			
Status of the active substance:	Excluded		
Code number:	133		
Toxicological end points			
ADI (mg/kg bw/day):	0.03	ARID (mg/kg bw):	0.05
Source of ADI:	JMPR	Source of ARID:	EFSA
Year of evaluation:	2004	Year of evaluation:	2008

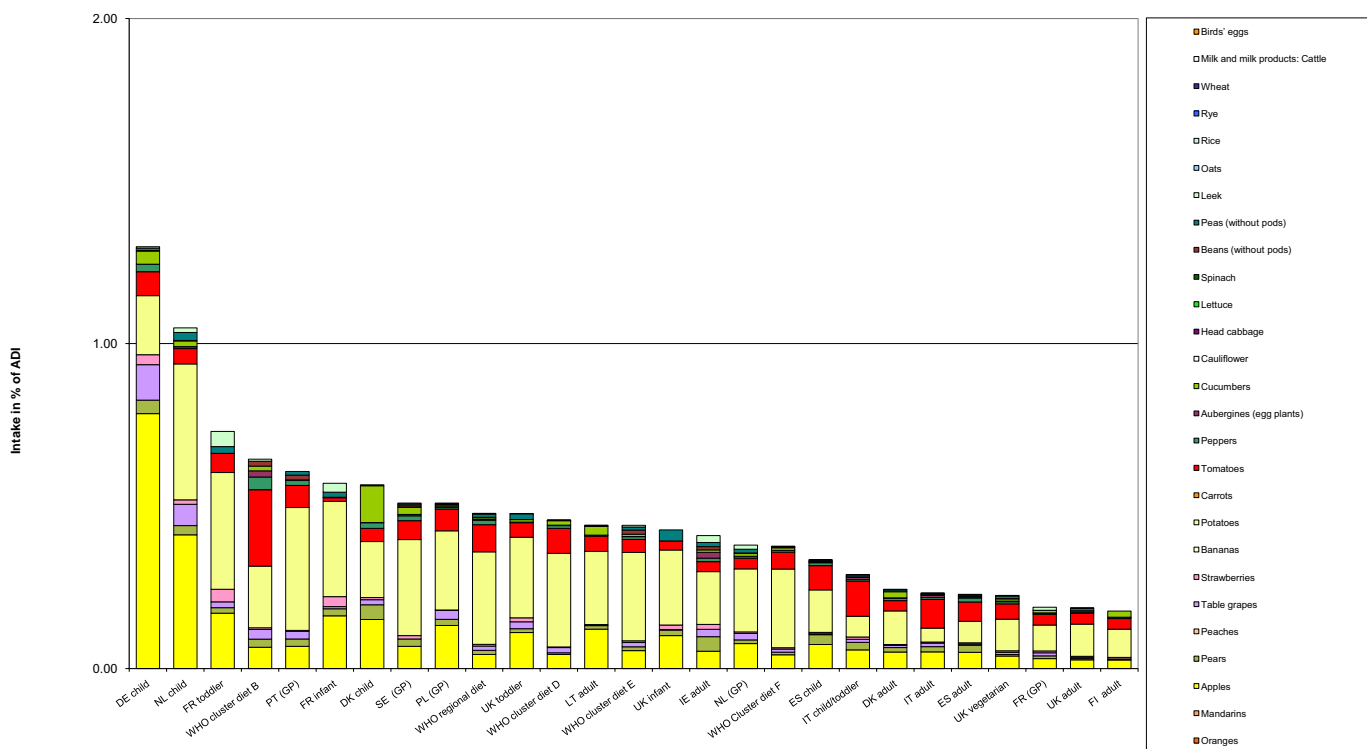
For the risk assessment the ADI of triadimefon and the ARID for triadimenol were selected.

Chronic risk assessment							
			Exposure (range) in % of ADI minimum - maximum 1				
			No of diets exceeding ADI: ---				
Highest calculated exposure in % of ADI	MS Diet	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
1.3	DE child	0.8	Apples	0.2	Potatoes	0.1	Table grapes
1.0	NL child	0.4	Potatoes	0.4	Apples	0.1	Table arapes
0.7	FR toddler	0.4	Potatoes	0.2	Apples	0.1	Apples
0.6	WHO cluster diet B	0.2	Tomatoes	0.2	Potatoes	0.1	Apples
0.6	PT (GP)	0.4	Potatoes	0.1	Apples	0.1	Tomatoes
0.6	FR infant	0.3	Potatoes	0.2	Apples	0.0	Strawberries
0.6	DK child	0.2	Potatoes	0.2	Apples	0.1	Cucumbers
0.5	SE (GP)	0.3	Potatoes	0.1	Apples	0.1	Tomatoes
0.5	PL (GP)	0.2	Potatoes	0.1	Apples	0.1	Tomatoes
0.5	WHO regional diet	0.3	Potatoes	0.1	Tomatoes	0.0	Apples
0.5	UK toddler	0.2	Potatoes	0.1	Apples	0.0	Tomatoes
0.5	WHO cluster diet D	0.3	Potatoes	0.1	Tomatoes	0.0	Apples
0.4	LT adult	0.2	Potatoes	0.1	Apples	0.0	Tomatoes
0.4	WHO cluster diet E	0.3	Potatoes	0.1	Apples	0.0	Tomatoes
0.4	UK infant	0.2	Potatoes	0.1	Apples	0.0	Peas (without pods)
0.4	IE adult	0.2	Potatoes	0.1	Apples	0.0	Pears
0.4	NL (GP)	0.2	Potatoes	0.1	Apples	0.0	Tomatoes
0.4	WHO Cluster diet F	0.2	Potatoes	0.1	Tomatoes	0.0	Apples
0.3	ES child	0.1	Potatoes	0.1	Tomatoes	0.1	Apples
0.3	IT child/toddler	0.1	Tomatoes	0.1	Potatoes	0.1	Apples
0.2	DK adult	0.1	Potatoes	0.1	Apples	0.0	Tomatoes
0.2	IT adult	0.1	Tomatoes	0.1	Apples	0.0	Potatoes
0.2	ES adult	0.1	Potatoes	0.1	Tomatoes	0.0	Apples
0.2	UK vegetarian	0.1	Potatoes	0.0	Tomatoes	0.0	Apples
0.2	FR (GP)	0.1	Potatoes	0.0	Tomatoes	0.0	Apples
0.2	UK adult	0.1	Potatoes	0.0	Tomatoes	0.0	Apples
0.2	FI adult	0.1	Potatoes	0.0	Tomatoes	0.0	Apples

Acute risk assessment										
Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Maximum exposure value	Most critical diet	Comment
2009	Table grapes	2	1035	7.15		0.397		51.99	DE child	
2009	Bananas	0.2	846							
2009	Peppers	0.5	1229	7.00		0.34		42.83	DE child	
2009	Aubergines (egg plants)	0.1	746	0.80		0.08		3.95	UK 4-6 yr	
2009	Cauliflower	0.1	639							
2009	Peas (without pods)	0.1	597	0.17		0.01		0.15	UK infant	
2009	Wheat	0.2	819							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Triadimefon



Triazophos			
Status of the active substance:	Excluded		
Code number:	134		
Toxicological end points			
ADI (mg/kg bw/day):	0.001	ARID (mg/kg bw):	0.001
Source of ADI:	JMPR	Source of ARID:	JMPR
Year of evaluation:	2002	Year of evaluation:	2002

**Chronic risk assessment**

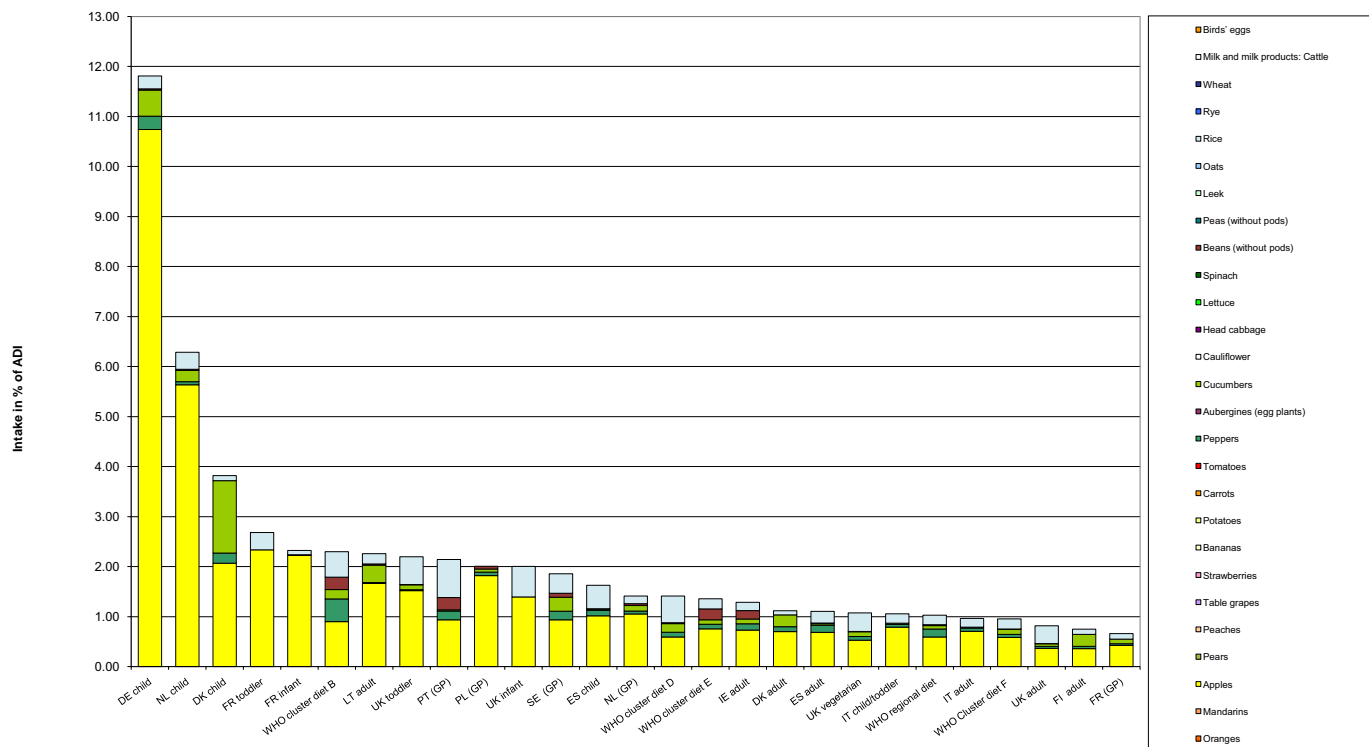
Exposure (range) in % of ADI minimum - maximum		No of diets exceeding ADI:					
1 - 12		1 ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
11.8	DE child	10.7	Apples	0.5	Cucumbers	0.3	Peppers
6.3	NL child	5.6	Apples	0.3	Rice	0.2	Cucumbers
3.8	DK child	2.1	Apples	1.4	Cucumbers	0.2	Peppers
2.7	FR toddler	2.3	Apples	0.3	Rice	0.2	FRUIT (FRESH OR FROZEN)
2.3	FR infant	2.2	Apples	0.1	Rice	0.0	Peppers
2.3	WHO cluster diet B	0.9	Apples	0.5	Rice	0.5	Peppers
2.3	LT adult	1.7	Apples	0.3	Cucumbers	0.2	Rice
2.2	UK toddler	1.5	Apples	0.6	Rice	0.1	Cucumbers
2.1	PT (GP)	0.9	Apples	0.8	Rice	0.2	Beans (without pods)
2.0	PL (GP)	1.8	Apples	0.1	Peppers	0.1	Cucumbers
2.0	UK infant	1.4	Apples	0.6	Rice	0.2	FRUIT (FRESH OR FROZEN)
1.9	SE (GP)	0.9	Apples	0.4	Rice	0.3	Cucumbers
1.6	ES child	1.0	Apples	0.5	Rice	0.1	Peppers
1.4	NL (GP)	1.1	Apples	0.2	Rice	0.1	Cucumbers
1.4	WHO cluster diet D	0.6	Apples	0.5	Rice	0.2	Cucumbers
1.4	WHO cluster diet E	0.8	Apples	0.2	Beans (without pods)	0.2	Rice
1.3	IE adult	0.7	Apples	0.2	Beans (without pods)	0.2	Rice
1.1	DK adult	0.7	Apples	0.2	Cucumbers	0.1	Peppers
1.1	ES adult	0.7	Apples	0.2	Rice	0.1	Peppers
1.1	UK vegetarian	0.5	Apples	0.4	Rice	0.1	Cucumbers
1.1	IT child/toddler	0.8	Apples	0.2	Rice	0.1	Peppers
1.0	WHO regional diet	0.6	Apples	0.2	Rice	0.2	Peppers
1.0	IT adult	0.7	Apples	0.2	Rice	0.1	Peppers
1.0	WHO Cluster diet F	0.6	Apples	0.2	Rice	0.1	Cucumbers
0.8	UK adult	0.4	Apples	0.4	Rice	0.1	Cucumbers
0.7	FI adult	0.4	Apples	0.2	Cucumbers	0.1	Rice
0.7	FR (GP)	0.4	Apples	0.1	Rice	0.1	Cucumbers

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.01	1504							
2009	Bananas	0.01	1173							
2009	Peppers	0.01	1470		0.14	0.06	2	396.76	DE child	
2009	Aubergines (egg plants)	0.01	958							
2009	Cauliflower	0.01	825							
2009	Peas (without pods)	0.01	741							
2009	Wheat	0.02	1181							
2009	Milk and milk products: Cattle	0.01	389							
2009	Birds' eggs	0.01	440							

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Triazophos**



Trichlorfon	
Status of the active substance:	Excluded
Code number:	135
Toxicological end points	
ADI (mg/kg bw/day):	ARfD (mg/kg bw):
Source of ADI:	Source of ARfD:
Year of evaluation:	Year of evaluation:

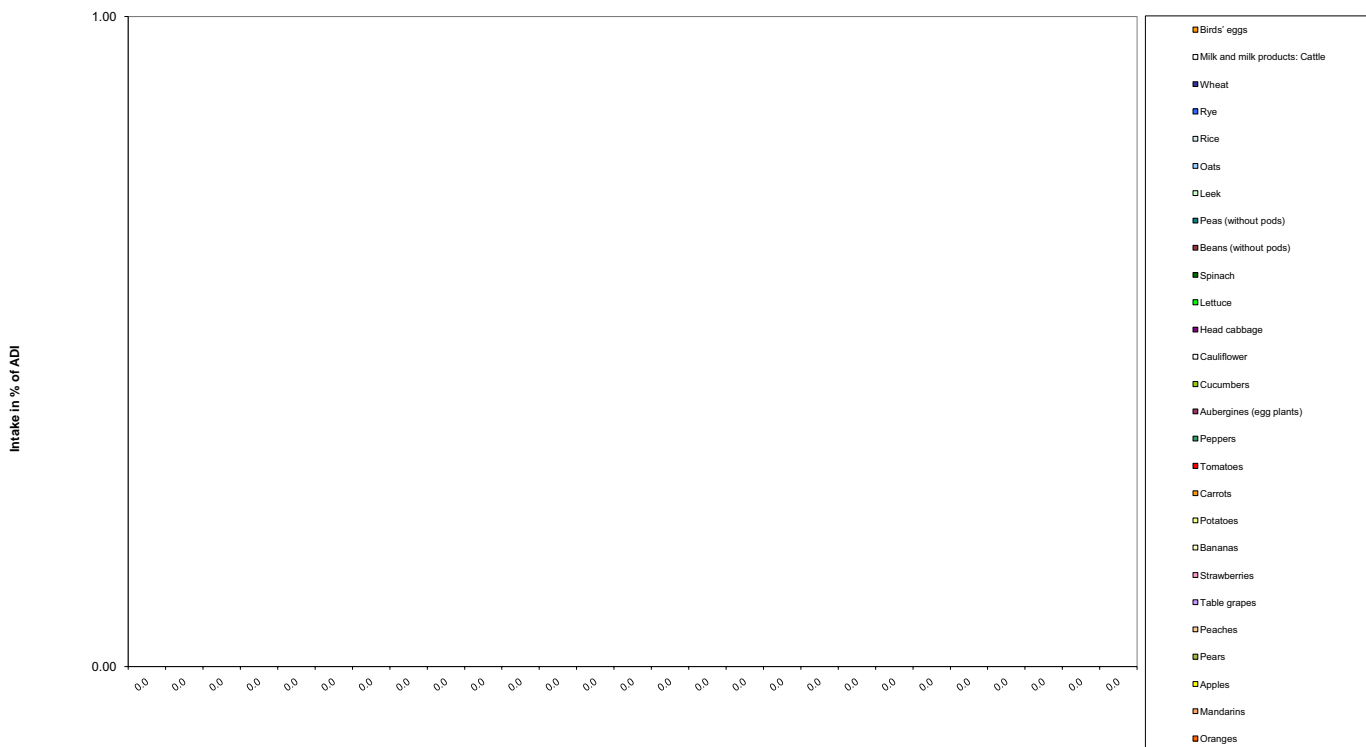
In the framework of the peer-review of this substance, EFSA could not conclude on the toxicological reference values because of data gap. No risk assessment could be performed.

Chronic risk assessment							
		Exposure (range) in % of ADI minimum - maximum #DIV/0!					
No of diets exceeding ADI: ---							
Highest calculated exposure in % of ADI	MS Diet	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)</sup>	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.5	703							
2009	Bananas	0.5	542							
2009	Peppers	1	817							
2009	Aubergines (egg plants)	0.5	492							
2009	Cauliflower	0.5	424							
2009	Peas (without pods)	0.5	357	0.28		0.003				
2009	Wheat	0.1	477							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

<sup>a)</sup> The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

Chronic risk assessment: Trichlorfon



Trifloxystrobin			
Status of the active substance:	Included		
Code number:	136		
Toxicological end points			
ADI (mg/kg bw/day):	0.1	ARID (mg/kg bw):	n.n.
Source of ADI:	COM	Source of ARID:	COM
Year of evaluation:	2003	Year of evaluation:	2003

**Chronic risk assessment**

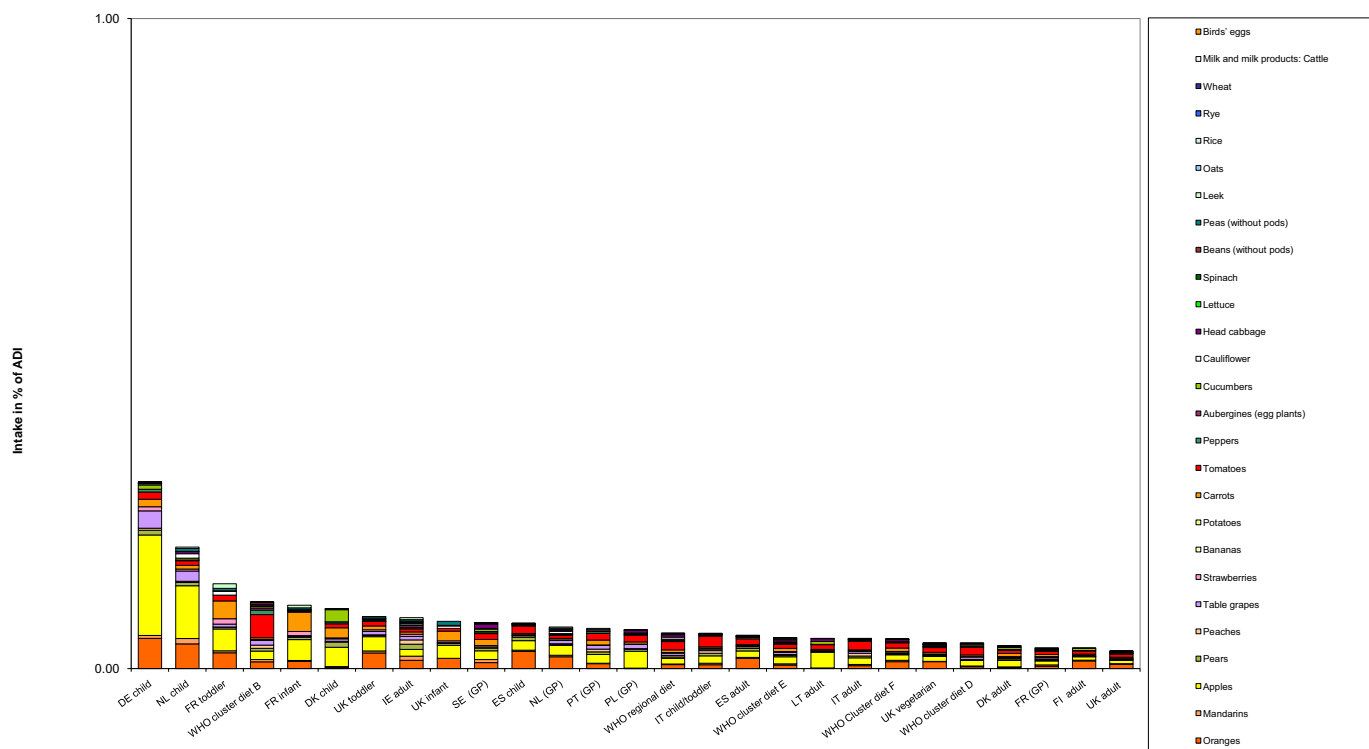
Exposure (range) in % of ADI minimum - maximum		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	Highest contributor to MS diet (in % of ADI)	Commodity / group of commodities	2nd contributor to MS diet (in % of ADI)	Commodity / group of commodities	3rd contributor to MS diet (in % of ADI)	Commodity / group of commodities
0.3	DE child	0.2	Apples	0.0	Oranges	0.0	Table grapes
0.2	NL child	0.1	Apples	0.0	Oranges	0.0	Table grapes
0.1	FR toddler	0.0	Apples	0.0	Carrots	0.0	Oranges
0.1	WHO cluster diet B	0.0	Tomatoes	0.0	Apples	0.0	Oranges
0.1	FR infant	0.0	Apples	0.0	Carrots	0.0	Oranges
0.1	DK child	0.0	Apples	0.0	Cucumbers	0.0	Carrots
0.1	UK toddler	0.0	Oranges	0.0	Apples	0.0	Tomatoes
0.1	IE adult	0.0	Oranges	0.0	Apples	0.0	Pears
0.1	UK infant	0.0	Apples	0.0	Oranges	0.0	Carrots
0.1	SE (GP)	0.0	Apples	0.0	Carrots	0.0	Oranges
0.1	ES child	0.0	Oranges	0.0	Apples	0.0	Tomatoes
0.1	NL (GP)	0.0	Oranges	0.0	Apples	0.0	Tomatoes
0.1	PT (GP)	0.0	Apples	0.0	Tomatoes	0.0	Carrots
0.1	PL (GP)	0.0	Apples	0.0	Tomatoes	0.0	Table grapes
0.1	WHO regional diet	0.0	Tomatoes	0.0	Apples	0.0	Oranges
0.1	IT child/toddler	0.0	Tomatoes	0.0	Apples	0.0	Oranges
0.1	ES adult	0.0	Oranges	0.0	Apples	0.0	Tomatoes
0.0	WHO cluster diet E	0.0	Apples	0.0	Tomatoes	0.0	Oranges
0.0	LT adult	0.0	Apples	0.0	Tomatoes	0.0	Cucumbers
0.0	IT adult	0.0	Tomatoes	0.0	Apples	0.0	Oranges
0.0	WHO Cluster diet F	0.0	Oranges	0.0	Apples	0.0	Tomatoes
0.0	UK vegetarian	0.0	Oranges	0.0	Apples	0.0	Tomatoes
0.0	WHO cluster diet D	0.0	Tomatoes	0.0	Apples	0.0	Table grapes
0.0	DK adult	0.0	Apples	0.0	Carrots	0.0	Tomatoes
0.0	FR (GP)	0.0	Apples	0.0	Tomatoes	0.0	Oranges
0.0	FI adult	0.0	Oranges	0.0	Apples	0.0	Tomatoes
0.0	UK adult	0.0	Oranges	0.0	Apples	0.0	Tomatoes

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	5	1389	12.46		1.4				
2009	Bananas	0.05	1074							
2009	Peppers	0.3	1356	1.25		0.17				
2009	Aubergines (egg plants)	0.02	890	0.23		0.01				
2009	Cauliflower	0.05	747	0.13		0.00				
2009	Peas (without pods)	0.02	674	0.15		0.008				
2009	Wheat	0.05	1025							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Trifloxystrobin**



<b>Triticonazole</b>			
Status of the active substance:	<b>Included</b>		
Code number:	<b>137</b>		
<b>Toxicological end points</b>			
ADI (mg/kg bw/day):	<b>0.025</b>	ARID (mg/kg bw):	<b>0.05</b>
Source of ADI:	<b>EFSA</b>	Source of ARID:	<b>EFSA</b>
Year of evaluation:	<b>2006</b>	Year of evaluation:	<b>2005</b>

**Chronic risk assessment**

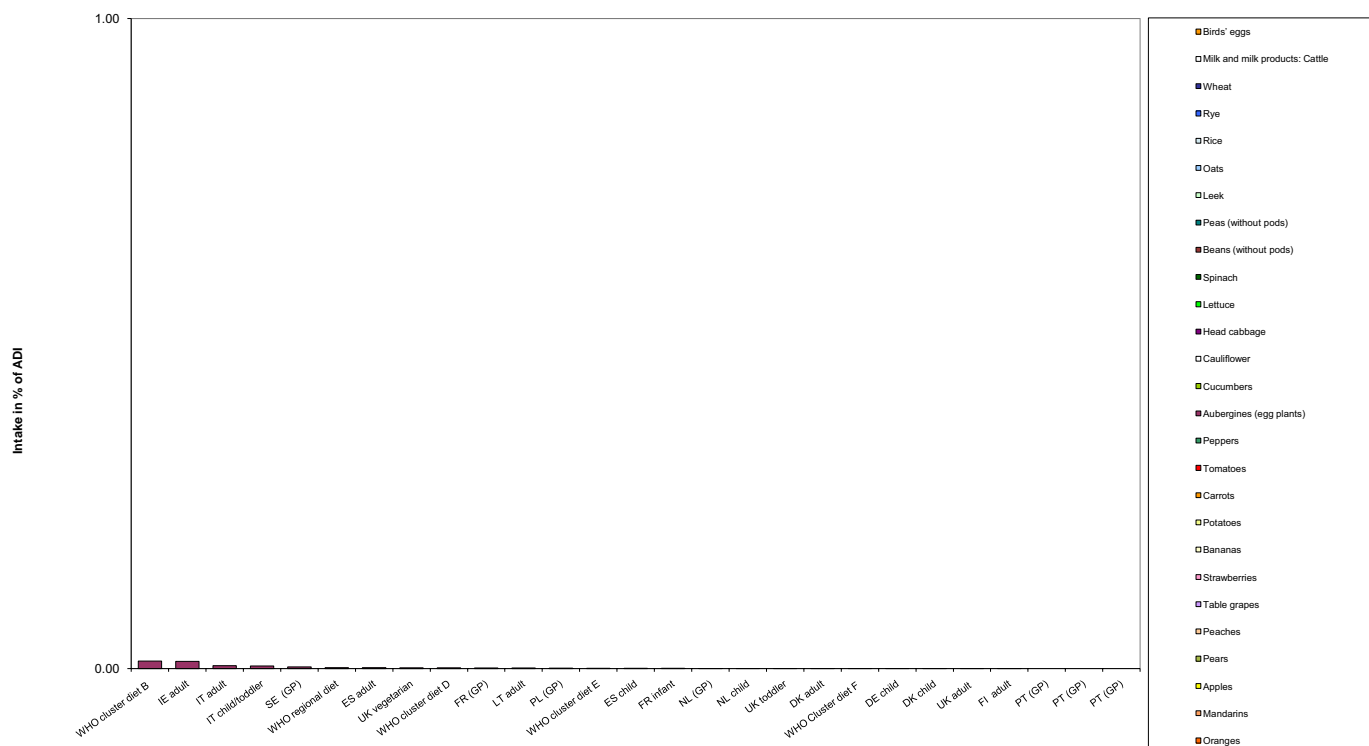
Highest calculated exposure in % of ADI		MS Diet		Highest contributor to MS diet (in % of ADI)		Commodity / group of commodities		2nd contributor to MS diet (in % of ADI)		Commodity / group of commodities		3rd contributor to MS diet (in % of ADI)		Commodity / group of commodities	
0.0	WHO cluster diet B	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	IE adult	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	IT adult	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	IT child/toddler	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	SE (GP)	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	WHO regional diet	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	ES adult	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	UK vegetarian	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	WHO cluster diet D	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	FR (GP)	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	LT adult	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	PL (GP)	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	WHO cluster diet E	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	ES child	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	FR infant	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	NL (GP)	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	NL child	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	UK toddler	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	DK adult	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	WHO Cluster diet F	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	DE child	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	DK child	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	UK adult	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	FI adult	0.0	Aubergines (egg)	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	PT (GP)	0.0	FRUIT (FRESH	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	PT (GP)	0.0	FRUIT (FRESH	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)
0.0	PT (GP)	0.0	FRUIT (FRESH	0.0	FRUIT (FRESH OR	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	FRUIT (FRESH OR FROZEN)	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 a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	0.01	753							
2009	Bananas	0.01	524							
2009	Peppers	0.01	772							
2009	Aubergines (egg plants)	0.01	480	0.21		0.01		0.45	UK 4-6 yr	
2009	Cauliflower	0.01	435							
2009	Peas (without pods)	0.01	436							
2009	Wheat	0.01	356							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Triticonazole**





Vinclozolin			
Status of the active substance:	Excluded		
Code number:	138		
Toxicological end points			
ADI (mg/kg bw/day):	0.005	ARID (mg/kg bw):	0.06
Source of ADI:	COM	Source of ARID:	COM - LOEP
Year of evaluation:	2006	Year of evaluation:	2006

**Chronic risk assessment**

		Exposure (range) in % of ADI minimum - maximum					
		7					
		No of diets exceeding ADI: ---					
Highest calculated exposure in % of ADI	MS Diet	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
7.0	DE child	5.2	Apples	0.8	Table grapes	0.5	Carrots
3.8	NL child	2.7	Apples	0.5	Table grapes	0.2	Carrots
2.7	FR toddler	1.1	Carrots	1.1	Apples	0.2	Strawberries
2.7	DK child	1.0	Apples	0.8	Cucumbers	0.6	Carrots
2.6	FR infant	1.2	Carrots	1.1	Apples	0.2	Strawberries
1.6	UK infant	0.7	Apples	0.6	Carrots	0.2	Peas (without pods)
1.4	UK toddler	0.7	Apples	0.2	Carrots	0.1	Table grapes
1.3	PL (GP)	0.9	Apples	0.2	Table grapes	0.1	Carrots
1.2	WHO cluster diet B	0.4	Apples	0.2	Table grapes	0.1	Peaches
1.1	PT (GP)	0.4	Apples	0.3	Carrots	0.2	Table grapes
1.1	SE (GP)	0.4	Apples	0.4	Carrots	0.2	Cucumbers
1.1	LT adult	0.8	Apples	0.2	Cucumbers	0.1	Carrots
1.1	IE adult	0.4	Apples	0.2	Peaches	0.2	Table grapes
1.0	NL (GP)	0.5	Apples	0.1	Table grapes	0.1	Carrots
0.9	WHO cluster diet E	0.4	Apples	0.2	Carrots	0.1	Table grapes
0.9	WHO regional diet	0.3	Apples	0.2	Carrots	0.1	Lettuce
0.9	ES child	0.5	Apples	0.1	Lettuce	0.1	Carrots
0.8	IT child/toddler	0.4	Apples	0.1	Peaches	0.1	Lettuce
0.8	DK adult	0.3	Apples	0.2	Carrots	0.1	Cucumbers
0.8	IT adult	0.3	Apples	0.1	Peaches	0.1	Lettuce
0.8	WHO Cluster diet F	0.3	Apples	0.2	Carrots	0.1	Lettuce
0.7	ES adult	0.3	Apples	0.2	Lettuce	0.1	Peaches
0.6	WHO cluster diet D	0.3	Apples	0.1	Table grapes	0.1	Carrots
0.6	UK vegetarian	0.3	Apples	0.1	Carrots	0.1	Cucumbers
0.6	FR (GP)	0.2	Apples	0.1	Carrots	0.1	Table grapes
0.5	FI adult	0.2	Apples	0.1	Cucumbers	0.1	Carrots
0.4	UK adult	0.2	Apples	0.1	Carrots	0.0	Peas (without pods)

**Acute risk assessment**

Year	Commodity a)	MRL	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 toxicological threshold MRL/residue the threshold	Acute exposure expressed in % of the ARfD		Comment
								Maximum exposure value	Most critical diet	
2009	Table grapes	5	616	0.32		0.069		7.53	DE child	
2009	Bananas	0.05	491							
2009	Peppers	3	618							
2009	Aubergines (egg plants)	3	368							
2009	Cauliflower	0.05	349							
2009	Peas (without pods)	0.3	323	1.86		0.177		2.41	UK infant	
2009	Wheat	0.05	436							
2009	Milk and milk products: Cattle									
2009	Birds' eggs									

a) The residues measured in butter were recalculated to milk, considering the fat solubility of the active substance.

**Chronic risk assessment: Vinclozolin**

