The Expert Committee on Pesticide Residues in Food

Report on the

Pesticide Residues Monitoring Programme for Quarter 1 2016

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Summary Findings

PRiF is an expert committee of Defra. This is our first quarterly report for 2016. During this year's surveillance programme we are looking for a range of up to 388 pesticides in our fruit and vegetable surveys.

This quarter's programme surveyed 476 samples of 17 different foods: apples, beans with pods, cabbage, cheese (processed), fish (sea), grapes, leeks, lettuce, milk, okra, peaches & nectarines, pears, peppers, potatoes, prepared fresh fruit, strawberries and tomatoes. The results show 27 samples contained residues above the maximum permitted levels. However we do not think that 18 findings of chlorate in cheese (processed) and 2 findings in prepared fresh fruit should be treated as breaches of the legislation,

A screening risk assessment is done for each residue in each commodity to identify residue levels that could lead to intakes above the relevant reference doses. Detailed risk assessments are then produced for every case where the actual residue level found could lead to an intake above the acute reference dose. We have looked carefully at all these findings including the risk assessments provided by the Health and Safety Executive's Chemicals Regulation Directorate (CRD).

In most cases the presence of the residues found would be unlikely to have had any effect on the health of the people who ate the food. In the case of lettuce and peaches we found residues a sample of each where short-lived effects were possible.

We have published full details of suppliers and retailers of the food sampled in an annex to this report. We have asked suppliers and the authorities of the exporting countries for an explanation of our findings – any responses we received are at Appendix D.

Thanks go to all of those individuals and organisations responsible for helping us put this report together. These include our Secretariat and scientists (both based at the Chemicals Regulation Directorate), the samplers from the market research organisation and Defra officials who have collected the samples and laboratory staff across the UK who undertook the analysis.

Dr Paul Brantom
Chairman of the Expert Committee on Pesticide Residues in Food

Section I - Introduction

Background

Food safety is important. Modern food production processes have given us plentiful supplies of a wide range of good quality affordable produce.

In the food industry of today the production environment can be managed from the preparation of seeds used for crops, through to growth, harvesting and storage of the produce.

One of the ways the food industry controls the environment in which foodstuffs are produced is by applying pesticides. They help farmers and growers maximise the production of food stuffs by, for example, preventing weeds inhibiting the growth of the crop, or insects destroying or infesting them. Pesticides can also be used to help protect seeds, or prolong the life of crops after they have been harvested. Biological and physical (cultural) controls are also used to protect crops or as part of an integrated system.

As pesticides are used to control unwanted pests, weeds and diseases, they can potentially also harm people, wildlife and the environment. This is why the UK, in common with most other countries, imposes legally enforceable conditions as to how and when pesticides can be used. No pesticide can be supplied or used on a food or ornamental crops in the UK without Government authorisation. To obtain this authorisation the manufacturer of the pesticide must show that it does not present a concern for people's health or the environment. Naturally derived and synthetic pesticides are subject to the same regulation.

Once the authorisation has been granted Government authorities carry out follow up checks to ensure that the authorisation is providing the necessary degree of protection to users, consumers and the environment and that those who use pesticides are complying with conditions specified within it.

The Government authority responsible for checking pesticide residues in foodstuffs is the Chemicals Regulation Directorate. Defra's Expert Committee on Pesticide Residues in Food (PRiF) oversees and provides an independent check on this work. We know that the use of pesticides on crops may lead to traces (residues) of these chemicals in food and we expect to find these in our monitoring programme.

Defra's Expert Committee on Pesticide Residues in Food (PRiF)
The Expert Committee on Pesticide Residues in Food was established in 2011. Our members have a broad range of expertise relating to the food supply industry. The main function of the Committee is to oversee Government's £2 million pesticide residues surveillance programme. Previously this work was carried out by the Pesticide Residues Committee.

Our Chairman, Dr Paul Brantom is an independent consultant in toxicological risk assessment. The Committee also includes members with expertise in toxicology, food production and supply as well as two public interest experts.

Information on the membership of the PRiF is also available on the PRiF's website: www.pesticides.gov.uk/guidance/industries/pesticides/advisory-groups/PRiF/about-PRiF/members.

Our role is to advise Ministers, the Director of the Chemicals Regulation Directorate (HSE) and the Chief Executive of the Food Standards Agency (FSA) on:

- the planning of surveillance programmes for pesticide residues in the UK food supply and the evaluation of the results;
- Procedures for sampling, sample processing, new methods of analysis, the assessment of variability of pesticide residues in food and related issues.

Surveillance programme

The pesticide residues surveillance programme is designed to enable us to check that:

- maximum residue levels of pesticides are being respected;
- users of pesticides are complying with conditions of use specified in the authorisation; and
- People's intakes of residues are within acceptable limits.

We do this by collecting samples of foodstuffs from a range of points in the supply chain (including supermarkets, corner shops, markets, distribution and supply depots). Each sample is then analysed in carefully selected certified laboratories for residues of up to 393 pesticides. This list is updated each calendar year which means that direct comparison with previous surveys is not always possible for new pesticides added to the list.

All EU countries are required to monitor food for pesticide residues and to carry out a number of specific surveys each year. In 2016 EU surveys are of: apples, cabbage, leeks, lettuce, milk, peaches & nectarines, rye, strawberries, tomatoes and wine. The number of samples to be analysed is greater for the countries with larger populations (such as the UK). Results from the EU surveys are published as a single report. The reports from 1996-2006 are on the Commission's website at http://ec.europa.eu/food/fvo/specialreports/pesticides_index_en.htm. The survey results for 2012 can be found on EFSA's website at http://www.efsa.europa.eu/en/efsajournal/doc/3942.pdf and those for 2013 at http://www.efsa.europa.eu/en/efsajournal/pub/4038.htm

All EU countries also have a national monitoring programme. The UK programme ensures all the major components of our national diet are sampled (milk, bread, potatoes, fruit and vegetables, cereals and related products, and animal products). The programme is not designed to provide a representation of residues in our diet – it is risk based and looks more at those commodities likely to contain residues. Some commodities are surveyed every year, whilst others are surveyed less frequently, for example once every three years; this is what we call the rolling programme.

The sampling and analysis is carried out in accordance with stringent international standards.

Reporting the results

Results by food commodity

- We include information about the survey (for instance where samples came from) for each commodity
- Detailed tabulated results are at the back of this report - these tables are also available for download from our website
- We summarise our findings and any follow-up action taken.

Risk assessments – single residues

- All results are screened by HSE to check for intakes above the Acute Reference Dose (ARfD). HSE assumes a relatively high level of intake and also assumes that most produce is eaten whole including peel/skin even when these are rarely consumed
- Where intakes above the ARfD are identified, we consider a detailed risk assessment prepared by HSE (at Section II of this report).
- Our observations and the follow-up action taken are summarised in the section for that food.

Risk assessments – multiple combined residues

- Residues of more than one pesticide from the same category/class of particular categories of pesticides, which have a similar toxicological mode of action, are screened by HSE to check for intakes above the combined Acute Reference Dose (ARfD).
- Where combined intakes above the combined ARfD are identified, we consider a detailed combined risk assessment prepared by HSE (at Section II of this report).

- Our observations and any follow-up action taken are summarised in the section for that food commodity.

Risk assessment - conclusions

- Where, in the light of current knowledge and considering the usual level of scientific uncertainty (or precaution) the intake will not cause ill health the conclusion will say no effect on health is expected.
- Where, in the light of current knowledge and considering a slightly higher level of scientific uncertainty (or less precaution) the intake is not likely to cause ill health, the conclusion will be less definite and state that an effect on health is unlikely.
- Where scientific uncertainty is greater more information is provided.

Residues in UK produce of pesticides which are not approved for use on that crop in the UK.

- All residues found in UK-produced foods are checked by HSE to make sure the pesticide is approved for use.
- Where no UK approval is identified, details of the sample are referred to HSE's Enforcement Section for follow up.
- Our observations and any follow-up action taken to date are summarised in the section for that food commodity. We may have to withhold details of samples while investigations are underway, in which case the details will be published in a later report.

Residues above the MRL, after taking into account measurement uncertainty

- Samples containing residues above the MRL are listed at Appendix B, and those which are clearly above the MRL after taking into account measurement uncertainty of plus or minus 50% are highlighted.
- Our observations and any follow-up action taken are summarised in the section for that food commodity.

The results in our reports are rounded for publication but not adjusted for measurement uncertainty.

We apply measurement uncertainty only to decide whether to highlight a result as over the MRL in the brand name annex. To do this we use the actual value reported by the laboratory before rounding. If after taking measurement uncertainty into account that value is found to be over the MRL the result will be highlighted in the brand name annex.

For example:

- The lab reports the results of duplicate analysis of a residue above an MRL at 0.023 mg/kg and 0.025 mg/kg giving an average value of 0.024mg/kg. For reporting purpose this value would be 0.02 mg/kg.

- If measurement uncertainty is then applied to the reported value of 0.02 mg/kg it could take the value to between 0.01 - 0.03 mg/kg. If the MRL is 0.01 mg/kg the lower value would be at the MRL and there is no exceedance.

- However if measurement uncertainty is applied to the measured result, eg 0.024 mg/kg the value could then be in the range of 0.012 – 0.036 mg/kg. In this case the lower value is above the MRL and so will be treated as an exceedance.

Residues in organic food

- We monitor pesticide residues in all the UK food supply, including organic food.
- We are not responsible for checking compliance with the rules associated with organic production. However, when we do detect residues in an organic food we explain whether or not those residues indicate a breach of the rules and inform Defra's Organic Farming Branch.

Brand Name Annex

- Full brand name details for samples included in this report are published in a brand name annex. Within this annex, samples with results of interest are highlighted.

- Brand name details are only published when enough follow-up work is completed for us to be reasonably sure whether a breach of the law or good practice has occurred. Therefore sometimes brand name details are withheld pending completion of this work but are published in a later report.

Current Issues

Chlorate

We are testing a limited number of foods for chlorate for the first time in 2016, to provide evidence that it is necessary to review the existing default MRL in order to take account of non-pesticide sources. The pesticide sodium chlorate is a residual broad action weed killer, which is not authorised for use in the EU. Far more likely sources in food are from chlorine-based treatments of drinking and irrigation water as well as chlorine-based surface disinfectants, which are widely used to ensure microbiological safety. We agree with HSE and the FSA that the current MRL needs to take account of these often essential and unavoidable sources.

Our results will add to a growing body of evidence, from both official monitoring across the EU and from the food and farming industries

Meanwhile we are advised by HSE that the statutory default level of 0.01 mg/kg applies to chlorate in all foods under Regulation 396/2005, although Member State authorities can exercise judgement on whether goods they find in exceedance of the MRL can be marketed in their territories. Those judgements are based on specific assessments of risk for the consumer, as allowed for in Article 14 of EC Regulation 178/2002 (laying down the general principles of EU food law and food safety). In particular, consideration of the safety of any residues detected will take into account the 2015 opinion of the EFSA Panel on Contaminants in the Food Chain Risks for public health related to the presence of chlorate in food[1]

In the meantime, Member States and trade bodies have submitted sets of monitoring data to support the future setting of substantive MRLs. These data are being considered by the Commission and EFSA. They were due to be discussed at the June meeting of the Standing Committee on Plants Animals Feed and Food (Pesticide Residues section)[2]; but this was not possible due to other pressing issues. The continuing suspension of the enforcement of chlorate MRLs means that more time is available to generate additional data and to refine national positions. The next Standing Committee meeting is scheduled for September, although the Commission has not said whether they expect to begin a consultation before then.

HSE and FSA continue to encourage those UK trading bodies and individual companies interested in the outcome of the MRL setting process to generate data in support of appropriate MRLs. If additional data are generated they should ideally cover residues arising across the EU rather than limited to the UK and, where possible, data should identify the treatment histories (timing and nature of sanitation practices etc.) that have contributed to the residues arising.

The Commission has indicated that trade bodies will be formally consulted on any substantive levels that are proposed, which may give further opportunities to submit data and/or reasoned arguments. The Commission has not stated when the consultation is likely to take place. HSE and the Food Standards Agency are providing updates on this process.[3]

Both the PRiF and Advisory Committee on Microbiological Safety of Food (ACMSF) are taking an active interest in these on-going developments, as well as the separate discussions on the setting of MRLs for biocides.

Residues below the MRL that exceed the ARfD

When MRLs are agreed at the EU level they are set at levels that are compatible with consumer safety. Occasionally, assessment of PRiF monitoring samples containing residues below or at the MRL will show consumer intakes could potentially be above the ARfD. This situation typically arises because of one of three reasons:

- the ARfD may have been lowered because of new information but there is a delay before MRLs have been reassessed or new MRLs are put in place;

[11] EFSA Journal 2015;13(6):4135 [103 pp.]
http://ec.europa.eu/food/plant/standing_committees/sc_phytopharmaceuticals/index_en.htm
[2] (Agendas and summaries are published by eth European Commision at
http://ec.europa.eu/food/plant/standing_committees/sc_phytopharmaceuticals/index_en.htm

- during the MRLs process the risk assessments are currently based on the highest residue level observed in residues trials used to support the MRL which will often be less than the actual MRL (it is expected that most residues found will be below the MRL, and if for this reason there are later samples which give intakes above the ARfD the numbers are expected to be low);
- the agreed EU approach might assume the commodity is peeled and data are used to reduce the intake in the risk assessment at the time of setting MRLs, whereas in the PRiF work risk assessments for the whole commodity are presented as routine and, if information showing the effects of processing on residues level is available to PRiF, a refined assessment is presented.

The first two of these reasons are common to EU assessments and the third represents a difference between the approach used by HSE for the risk assessment and that used at the time the MRL is set. We will highlight how our assessments differ from that done at the EU level so that readers are aware of the basis of the evaluation.

Historical issues

DDT

The use of DDT is banned or heavily restricted in many countries. It isn't allowed for use on food crops any more but it is still used in some countries outside the EU as a public health insecticide. Residues of DDT take a long time to break down in the environment and can accumulate in fatty tissue which is a major reason that it has been banned in the EU and many other countries.

Due to the bans and restrictions on use, the levels in food have decreased substantially since the 1960s and 1970s. Even so, because it takes a long time to breakdown we do expect, and do see, occasional DDT residues in our monitoring results. Overall, the incidence and the size of residues have fallen steadily over time, which is what we would expect. In recent years none of our findings were unusual, unexpected or of concern. We can tell from the chemical form that we detect whether the residues we have found are from historic use (which is what we usually find). We explain this every time we publish DDT results to try to make it as clear as we can that the results show food producers are not using DDT today. However, there are occasional media stories about DDT and various links and associations, which do not make this distinction.

The residues we find nowadays are at levels that would not be expected to have any effect on health, either in the short term or in the long term, when checked against today's understanding of the effect of DDT on health. As a committee, we take care to ensure we look thoroughly at this, and the Food Standards Agency is also actively involved in our considerations.

The Results

Apples

Introduction

We have surveyed apples every year since 1995 due to their importance in our diet. The survey includes both eating (dessert) and cooking apples. This year apples are being monitored across the EU as part of the EU co-ordinated multi-annual control programme.

Survey design

We are sampling and reporting apples in every quarter of 2016. This is the first part of the survey and covers samples collected between January and March.

A market research company bought the apple samples from retail outlets across the UK.

Further details

Full details of pesticides we looked for and the residues we found are in Table 5 at page 54
Suppliers details are in the Brand Name Annex

Conclusions

Summary statement

None of the residues detected by the laboratory would be expected to have an effect on health.

Results

When samples were taken

Between January and February 2016

Number of samples

24 samples were tested for up to 347 pesticide residues

Origin of samples

Eating

- 6 samples came from the UK
- 18 samples came from the EU

Residues found

1 sample contained no residues from those sought
23 samples contained residues above the reporting level
None of the samples contained residues above the MRL
None of the samples were labelled as organic.

Multiple residues

19 samples contained residues of more than one pesticide

- 6 samples contained 2 residues
- 3 samples contained 3 residues
- 4 samples contained 4 residues
- 2 samples contained 5 residues
- 3 samples contained 6 residues
- 1 sample contained 7 residues

Risk assessments

Number of risk assessments

The laboratory detected 20 different pesticide residues. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health.

Combined risk assessments (see page 40 for more information on the methodology used)

Some samples contained residues of more than one pesticide. The pesticide residues found are not chemically related to each other and do not have the same toxicological effects. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health, either separately or in combination.

Beans with Pods

Introduction

We have surveyed beans with pods every year since 2008 as we continue to find a high incidence of issues with this commodity.

The survey covers both green beans (runner, French, dwarf and string) and speciality beans (yard long, lima, guar and valore). The speciality beans are varieties that are not commonly grown in Europe.

Due to the high incidents of non-compliance in beans with pods additional import controls have been placed on beans from certain countries before entry in to the EU. When the samples in this report were collected, there were import controls in place for yard long beans from Dominican Republic and Thailand which are currently subject to 20% import control checks for pesticide residues and 50% of yard long beans from Cambodia are subject to import control checks.

Survey design

We are sampling and reporting beans with pods in every quarter of 2016. This is the first part of the survey and covers samples collected between January and March.

The bean samples were either collected by the Rural Payment Agency's Horticultural Marketing Inspectors from a range of points in the supply chain (wholesale markets, retail depots, ports and import points) or they were bought by a market research company from retail outlets across the UK.

We are publishing results for this survey on our website as part of the rolling reporting programme. The results in this report may have already been published.

Further details

Full details of pesticides we looked for and the residues we found are in Table 6 at page 61
Risk assessments carried out by HSE are at page 41
Suppliers details are in the Brand Name Annex

Conclusions

Summary statement

Based on the Chemicals Regulation Directorate's risk assessment of the residues detected we consider an effect on health to be unlikely (see risk assessments in section II)

Results

When samples were taken

Between January and February 2016

Number of samples

30 samples were tested for up to 361 pesticide residues

Origin of samples

Green Beans

- 17 samples were imported from outside the EU

Speciality Beans

- 13 samples were imported from outside the EU

Residues found

14 samples contained no residues from those sought
16 samples contained residues above the reporting level
5 samples contained residues above the MRL
3 samples were labelled as organic.1 contained residues from those sought

Multiple residues

9 samples contained residues of more than one pesticide

- 3 samples contained 2 residues
- 3 samples contained 3 residues
- 1 sample contained 4 residues

- 1 sample contained 6 residues
- 1 sample contained 7 residues

Residues measured above the MRL (see Appendix B)

The laboratory detected 6 residues above the MRL in 5 samples of beans with pods

- 1 sample from Egypt contained a residue of methomyl at 0.08 mg/kg. The MRL is 0.02* mg/kg.
- 1 sample from Bangladesh contained residues of
  - Carbendazim at 0.6 mg/kg, the MRL is 0.2
  - Chlorpyrifos at 4.3 mg/kg, the MRL is 0.05*
- 1 sample from India contained a residue of triazophos at 0.4 mg/kg. The MRL is 0.01*.
- 1 sample from India contained a residue of dimethoate at 0.2 mg/kg. The MRL is 0.02*.
- 1 sample from Pakistan contained a residue of lufenuron at 0.04 mg/kg. The MRL is 0.02*.

Risk assessments
(see Section II on page 41 for full risk assessments)

Number of risk assessments

The laboratory detected 25 different pesticide residues. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health.

Chlorpyrifos

1 sample contained chlorpyrifos at a level where we need to consider the effect on health in more detail. The highest level detected was 4.3 mg/kg

The risk assessments detailed below refer to the new EU acute Reference Dose 2015 value but also consider the risks based on the existing JMPR value which was based on data which examined impacts upon humans. HSE accept that relevant human toxicology data can be used to calculate the possible impacts of residues in food on humans and based on this assessment do not expect an effect on health.

Assessment A using the ARfD set in the EU

The intakes for infants, toddlers, 4-6 year old children, vegetarians, 15-18 year old children, adults, elderly in their own home, 7-10 year old children and 11-14 year old children exceeded the ARfD. The highest intake was for infants.

If infants ate large portions of beans with pods containing chlorpyrifos at 4.3 mg/kg, their intake of chlorpyrifos could be 431% of the Acute Reference Dose. This intake is 22 times lower than a dose which caused no observed adverse effects in a single dose rat study. The European Food Safety Authority used this study as the basis of the ARfD.

Toxicologists usually apply a factor of 100 to this dose to take into account uncertainties caused by using animal data and possible differences in susceptibility between people. We consider the likelihood of an effect on health to be low, given the remaining factor of 22. This is because an adverse effect on health would rely on

1) a susceptible individual eating a large quantity (97.5th percentile consumption) of the product which had the highest levels of residue ; and
2) the actual difference in susceptibility between that individual and rats being higher than the factor we are left with in this situation; and
3) the critical NOAEL being close to the actual doses needed to produce an adverse effect in the animals studied.

Furthermore, the ARfD derived is considered to have been set using a precautionary approach since red blood cell cholinesterase inhibition was used as the end-point. This is a sensitive way to assess adverse effects.

* **Maximum Residue Levels set at the LOD (LOD MRL):** These MRLs are set at a default level, i.e. at the limit of determination (LOD) as specified in EC Regulation 396/2005.

In conclusion, we consider that some people might experience salivation, intestinal disturbances or sweating after eating large portions (97.5th percentile consumption) of beans with pods containing the highest levels found in this report, but we consider the likelihood of an effect on health to be low. Such effects would be expected to be minor, short-lived, and reversible.

Assessment B with reference to the ARfD set by the JMPR

The intakes for infants, toddlers, 4-6 year old children, vegetarians, 15-18 year old children, adults, elderly in their own home, 7-10 year old children and 11-14 year old children exceeded the EU ARfD. The highest intake was for infants.

If infants ate large portions of beans with pods, containing chlorpyrifos at 4.3 mg/kg, their intake of chlorpyrifos could be 431% of the Acute Reference Dose. However, the EU ARfD was set without taking into account scientifically valid human data. The JMPR (Joint FAO/WHO meetings on pesticides) has recommended a higher Acute Reference Dose (ARfD) of 0.1 mg/kg bw/d using that human data. It allows an appropriate factor (10) to account for possible differences in susceptibility between people. Intakes in all groups are within the JMPR ARfD. Based on this assessment we do not expect an effect on health.

Conclusion

HSE accept that relevant human toxicology data can be used to calculate the possible impacts of residues in food on humans and based on this assessment do not expect an effect on health.

Triazophos

1 sample contained triazophos at a level where we need to consider the effect on health in more detail. The highest level detected was 0.4 mg/kg

The intakes for infants, toddlers, 4-6 year old children, vegetarians and 15-18 year old children exceeded the ARfD. The highest intake was for infants.

If infants ate large portions of beans with pods containing triazophos at 0.4 mg/kg, their intake of triazophos could be 201% of the Acute Reference Dose. An EU ARfD has not been set as triazophos has not been assessed at an EU level. However the JMPR (Joint FAO/WHO meetings on pesticides) has recommended an Acute Reference Dose (ARfD) of 0.001 mg/kg bw/d using human data. It allows an appropriate factor to account for possible differences in susceptibility between people. In such cases a factor of 10 is usually used but in this case the factor was larger (12.5) as there was additional rounding. The intake for toddlers is 6 times lower than a dose of 0.0125 mg/kg bw/d, which caused no observed adverse effect in a three week human volunteer study. This study was used to set the ARfD. As this was a repeated dose study rather than a single dose, the ARfD on balance is likely to be more conservative. Taking all the above into account, we consider the reduced factor of 6 (from 12.5) still sufficient to make any effect on health unlikely.

Combined risk assessments (see page 40 for more information on the methodology used)

Some samples contained residues of more than one pesticide. Some of these residues are from pesticides which belong to similar chemical groups, and may have similar toxicological effects. So the risk assessors needed to consider their possible impacts on human health, both on their own and in combination.

HSE carried out a combined risk assessment of the relevant samples. We would not expect any of these combinations to have an effect on health.

Follow up action

Letters sent

The Secretariat has written to the suppliers of the samples with residues above the MRL.

Any comments received are at Appendix D.

Organic sample with residues of carbendazim and

The Secretariat has written to the supplier of the sample of organic green beans from Egypt with residues of carbendazim and thiophanate-methyl which are not permitted in organic food production. Defra's Organic Farming branch and the

thiophanate-methyl	organic certification organisation were also informed.
RASFFs issued	The EU issued a notification for the following samples through the EC's Rapid Alert System for Food and Feed (RASFF) (see glossary for more details) • 1 sample from Bangladesh containing chlorpyrifos at 4.3 mg/kg. • 1 sample from India containing triazophos at 0.4 mg/kg.

Cabbage

Introduction

We last surveyed cabbage in 2013. This year cabbage is being surveyed across the EU as part of the EU co-ordinated multi-annual control programme.

The survey is of head cabbage only, that is types in which the central leaves form a head, such as white, red, savoy, green and pointed cabbages. It does not include similar vegetables that form no head or only a very loose head, such as kale, borekale, spring greens or collard greens.

Survey design

We are sampling and reporting on cabbages in every quarter of 2016. This is the first part of the survey and covers samples collected between January and March.

A market research company bought all the cabbage samples from retail outlets across the UK.

Further details

Full details of pesticides we looked for and the residues we found are in Table 7 at page 68
Suppliers details are in the Brand Name Annex

Conclusions

Summary statement

None of the residues detected by the laboratory would be expected to have an effect on health.

Results

When samples were taken

Between January and February 2016

Number of samples

24 samples were tested for up to 360 pesticide residues

Origin of samples

18 samples came from the UK
6 samples came from the EU

Residues found

19 samples contained no residues from those sought
5 samples contained residues above the reporting level
None of the samples contained residues above the MRL
3 samples were labelled as organic. None contained residues from those sought

Multiple residues

1 samples contained residues of more than one pesticide

- 1 sample contained 3 residues

Risk assessments

Number of risk assessments

The laboratory detected 6 different pesticide residues. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health.

Combined risk assessments (see page 40 for more information on the methodology used)

One sample contained residues of more than one pesticide. The pesticide residues found are not chemically related to each other and do not have the same toxicological effects. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health, either separately or in combination.

Cheese (processed)

Introduction

We survey a different type of cheese each year. This year we are surveying processed cheese, which we last surveyed in 2013. The survey includes spreadable cheese and cream cheese. It does not include cottage cheese, light or fat free cheese, or any spreadable cheeses with added flavours such as chive or chilli.

Survey design

We are sampling and reporting cheese in quarter one of 2016. This survey covers samples collected between January and March.

A market research company bought the cheese samples from retail outlets across the UK.

Further details

Full details of pesticides we looked for and the residues we found are in Table 8 at page 72
Suppliers details are in the Brand Name Annex

Conclusions

Summary statement

None of the residues detected by the laboratory would be expected to have an effect on health.

Chlorate

We found chlorate over the default MRL in 18 samples, from both the UK and France. However we do not think that these findings should be treated as breaches of the legislation, and we have not highlighted them as such in the brand name annex.

We are testing a limited number of foods for chlorate for the first time in 2016, to provide evidence that it is necessary to review the existing default MRL in order to take account of non-pesticide sources. In particular chlorine-based treatments of drinking and irrigation water as well as chlorine-based surface disinfectants widely used to ensure microbiological safety. We agree with HSE and the FSA that the current MRL does not take account of these often unavoidable sources.

This adds to a growing body of evidence, from both official monitoring across the EU and from the food and farming industries.

Following the HSE's risk assessment, we do not expect any of the residues we found to have an effect on health. Further they are more likely to come from key microbiological safety practices than pesticide use, so we do not think any change in production practice by the brand-owners or manufacturers is needed in response to these findings. More information on chlorate is available on page 6.

Results

When samples were taken

Between January and March 2016

Number of samples

36 samples were tested for up to 90 pesticide residues

Origin of samples

Soft Cheese

- 5 samples came from the UK
- 13 samples came from the EU

Spreadable cheese

- 13 samples came from the UK
- 5 samples came from the EU

The country of origin on the packaging does not necessarily indicate where the milk was from. It may be where the cheese was processed or where it was packed.

Residues found	9 samples contained no residues from those sought 27 samples contained residues above the reporting level 18 samples contained residues above the MRL None of the samples were labelled as organic.
Multiple residues	3 samples contained residues of more than one pesticide • 3 samples contained 2 residues
Residues measured above the MRL (see Appendix B)	The laboratory detected 18 residues above the MRL 18 samples of processed cheese • 13 samples from UK contained a residue of chlorate between 0.06 mg/kg and 0.2 mg/kg. The MRL is 0.01* mg/kg. • 5 samples from France contained a residue of chlorate between 0.03 mg/kg and 0.04 mg/kg. The MRL is 0.01* mg/kg. However, we do not think that these findings should be treated as breaches of the legislation – see our conclusions box above.

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Risk assessments

Number of risk assessments	The laboratory detected 2 different pesticide residues. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health.
Combined risk assessments (see page 40 for more information on the methodology used)	Some samples contained residues of more than one pesticide. The pesticide residues found are not chemically related to each other and do not have the same toxicological effects. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health, either separately or in combination.

Follow up action

Letters sent	The Secretariat has written to the suppliers of the samples with residues above the MRL. Any comments received are at Appendix D.

* **Maximum Residue Levels set at the LOD (LOD MRL):** These MRLs are set at a default level, i.e. at the limit of determination (LOD) as specified in EC Regulation 396/2005.

Fish (sea)

Introduction

This is the first time we have done a sea fish survey; however the types of fish included in the survey have been sampled in other surveys such as the white fish in 2014. This survey can include any wild or farmed varieties such as bass, cod, coley, haddock, hake, halibut, monkfish, plaice, seabream and whiting.

Survey design

We are sampling and reporting sea fish in every quarter of 2016. This is the first part of the survey and covers samples collected between January and March.

A market research company bought the sea fish samples from retail outlets across the UK.

Further details

Full details of pesticides we looked for and the residues we found are in Table 9 at page 75
Suppliers details are in the Brand Name Annex

Conclusions

Summary statement

None of the residues detected by the laboratory would be expected to have an effect on health.

DDT
1 sample contained a residue of DDT. The use of DDT is banned or heavily restricted in many countries because the residues take a long time to breakdown in the environment and can accumulate in fatty tissue.

An interpretation of the analytical results shows that the only DDT residue found was in the form of DDE which indicates historical use. More information about DDT residues is in the historical issues section on page 7 of this report.

The residue would not be expected to have any effect on health, either in the short term of the long term.

Results

When samples were taken

Between January and March 2016

Number of samples

23 samples were tested for up to 35 pesticide residues

Origin of samples

Cod
- 1 sample came from the UK
- 9 samples were imported from outside the EU

Haddock
- 1 sample was imported from outside the EU

Hake
- 4 samples were imported from outside the EU

Monk fish
- 1 sample was imported from outside the EU

Plaice
- 2 samples were imported from outside the EU

Pollock
- 2 samples were imported from outside the EU

Sea bass
- 1 sample came from the UK
- 1 sample was imported from outside the EU

	Sea bream • 1 sample was imported from outside the EU The country of origin on the packaging does not necessarily indicate where the fish was caught. It may be where it was packed for consumer purchase.
Residues found	22 samples contained no residues from those sought 1 sample contained a residue above the reporting level None of the samples were labelled as organic.
Multiple residues	None of the samples contained residues of more than one pesticide

Risk assessments

Number of risk assessments	The laboratory detected 1 pesticide residue. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health.

Grapes

Introduction

We have been surveying grapes every year since 2001. We continue to monitor grapes as a large number of pesticides are used on the crop.

In 2015, 58 samples contained a residue of ethephon, 3 of those samples were above the MRL. Ethephon is used to ripen red grapes on the vine.

Survey design

We are sampling and reporting grapes in every quarter of 2016. This is the first part of the survey and covers samples collected between January and March.

The grape samples were either collected by the Rural Payment Agency's Horticultural Marketing Inspectors from a range of points in the supply chain (wholesale markets, retail depots, ports and import points) or they were bought by a market research company from retail outlets across the UK.

We are publishing results for this survey on our website as part of the rolling reporting programme. The results in this report may have already been published.

Further details

Full details of pesticides we looked for and the residues we found are in Table 10 at page 78
Risk assessments carried out by HSE are at page 43
Suppliers details are in the Brand Name Annex

Conclusions

Summary statement

Based on the Chemicals Regulation Directorate's risk assessment of the residues detected we consider an effect on health to be unlikely (see risk assessments in Section II).

Results

When samples were taken

Between January and March 2016

Number of samples

36 samples were tested for up to 348 pesticide residues

Origin of samples

36 samples were imported from outside the EU

Residues found

2 samples contained no residues from those sought
34 samples contained residues above the reporting level
1 sample contained a residue above the MRL
None of the samples were labelled as organic.

Multiple residues

27 samples contained residues of more than one pesticide

- 16 samples contained 2 residues
- 4 samples contained 3 residues
- 2 samples contained 4 residues
- 2 samples contained 6 residues
- 1 sample contained 7 residues
- 1 sample contained 10 residues
- 1 sample contained 11 residues

Residues measured above the MRL (see Appendix B)

The laboratory detected 1 residue above the MRL in grapes

- 1 samples from Brazil contained a residue of ethephon at 1.2 mg/kg. The MRL is 1 mg/kg.

Risk assessments
(see Section II on page 43 for full risk assessments)

Number of risk assessments

The laboratory detected 30 residues. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we expect an effect on health to be unlikely.

Ethephon

1 sample contained ethephon at a level where we need to consider the effect on health in more detail. The highest level detected was 1.2 mg/kg

The intakes for toddlers, 4-6 year old children and 7-10 year old children exceeded the ARfD. The highest intake was for toddlers.

If toddlers ate large portions of grapes containing ethephon at 1.2 mg/kg, their intake of ethephon could be 146% of the Acute Reference Dose. This intake is 82 times lower than a dose which caused no observed adverse effect in a 28 day oral dog study. The European Food Safety Authority used this study as the basis of the ARfD.

Toxicologists usually apply a factor of 100 to this dose to take into account uncertainties caused by using animal data and possible differences in susceptibility between people. However, in this case the factor was larger (120) to ensure consistency with the findings of human volunteer studies. We consider the reduced factor of 82 (from 120) still enough to make an effect on health unlikely. More detail on the factors applied is on page 38 of this report.

Combined risk assessments (see page 40 for more information on the methodology used)

Some samples contained residues of more than one pesticide. The pesticide residues found are not chemically related to each other and do not have the same toxicological effects. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health, either separately or in combination.

Follow up action

Letters sent

The Secretariat has written to the suppliers of the samples with residues above the MRL.

Any comments received are at Appendix D.

RASFFs issued

HSE sent a RASFF notification to FSA, however the EU did not issue a notification for the following samples through the EC's Rapid Alert System for Food and Feed (RASFF) (see glossary for more details)

- 1 sample from Brazil containing ethephon at 1.2 mg/kg.

Leeks

Introduction

Leeks were last surveyed in 2013. This year they are being surveyed across the EU as part of the EU co-ordinated monitoring programme. The survey covers both leeks and mini or baby leeks.

Survey design

We are sampling and reporting leeks in every quarter of 2016. This is the first part of the survey and covers samples collected between January and March.

A market research company bought all the leek samples from retail outlets across the UK.

Further details

Full details of pesticides we looked for and the residues we found are in Table 11 at page 87
Suppliers details are in the Brand Name Annex

Conclusions

Summary statement

None of the residues detected by the laboratory would be expected to have an effect on health.

Results

When samples were taken

Between January and March 2016

Number of samples

24 samples were tested for up to 360 pesticide residues

Origin of samples

23 samples came from the UK
1 sample came from the EU

Residues found

23 samples contained no residues from those sought
1 sample contained a residue above the reporting level
None of the samples contained residues above the MRL
4 samples were labelled as organic. None contained residues from those sought

Multiple residues

None of the samples contained residues of more than one pesticide

Risk assessments

Number of risk assessments

The laboratory detected 1 residues. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health.

Lettuce

Introduction

We have surveyed lettuce every year since 1990s when residues of unapproved pesticides were detected in the UK grown lettuces. This issue was subsequently resolved; we continue to monitor lettuces as a large number of pesticides are used on the crop. The survey covers both UK grown and imported lettuces.

This year lettuce is being surveyed across the EU as part of the EU co-ordinated multi-annual control programme.

Survey design

We are sampling and reporting lettuce in every quarter of 2016. This is the first part of the survey and covers samples collected between January and March.

A market research company bought the lettuce samples from retail outlets across the UK.

Further details

Full details of pesticides we looked for and the residues we found are in Table 12 at page 91
Risk assessments carried out by HSE are at page 44
Suppliers details are in the Brand Name Annex

Conclusions

Summary statement

Dithiocarbamates

One sample of lettuce contained a residue of dithiocarbamates at 6.8 mg/kg, which is above the MRL of 5 mg/kg. HSE undertook a risk assessment which assumed that ziram had been used as this is most toxic dithiocarbamate,they concluded that any effect on health would be minor, short-lived and reversible.

Results

When samples were taken

Between January and February 2016

Number of samples

18 samples were tested for up to 346 pesticide residues

Origin of samples

Gem Hearts
- 2 samples came from the EU

Iceberg
- 9 samples came from the EU

Little Gem
- 3 samples came from the EU

Romaine
- 2 samples came from the EU

Round
- 2 samples came from the UK

Residues found

All samples contained residues
1 sample contained residues above the MRL
None of the samples were labelled as organic.

Multiple residues

16 samples contained residues of more than one pesticide
- 6 samples contained 2 residues
- 3 samples contained 3 residues
- 3 samples contained 4 residues
- 3 samples contained 5 residues
- 1 sample contained 12 residues

Residues measured above the MRL (see Appendix B)	The laboratory detected 1 residue above the MRL in a sample of lettuce • 1 sample from UK contained a residue of dithiocarbamates at 6.8 mg/kg. The MRL is 5 mg/kg.

Risk assessments
(see Section II on page 44 for full risk assessments)

Number of risk assessments	The laboratory detected 22 different pesticide residues. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, in the case of one sample of lettuce with a residue of dithiocarbamates we consider the likelihood of an effect on health to be low.
Dithiocarbamates	1 sample contained dithiocarbamates at levels where we need to consider the effect on health in more detail. The highest level detected was 6.8 mg/kg The usual non-specific approach for dithiocarbamates indicated a potential intake above the ARfD for ziram. The intakes for 4-6 year old children, 7-10 year old children, infants, toddlers, vegetarians, adults, 11-14 year old children, 15-18 year old children and elderly in their own home exceeded the ARfD. The highest intake was for 4-6 year old children. If 4-6 year old children ate large portions of lettuce containing ziram at 13.65 mg/kg their intake would be 304% of the Acute Reference Dose. This intake is 33 times lower than a dose which caused no observed adverse effects in a ten dose rat developmental study. The European Food Safety Authority used this study as the basis of the ARfD. Toxicologists usually apply a factor of 100 to this dose to take into account uncertainties caused by using animal data and possible differences in susceptibility between people. We consider the likelihood of an effect on health to be low, given the remaining factor of 33. This is because an adverse effect on health would rely on 1) a susceptible individual eating a large quantity of the product which in turn had the highest levels of residue (i.e. 5 times the maximum value found in monitoring) ; and 2) the actual difference in susceptibility between that individual and rats, being higher than the factor we are left with in this situation; and 3) the critical NOAEL being close to the actual doses needed to produce an adverse effect in the animals studied. In conclusion we consider that some people might experience slight loss of appetite after eating large portions (97.5th percentile consumption) of lettuce containing the highest levels found in this report, but we consider the likelihood of an effect on health to be low. Such effects would be expected to be minor and reversible.
Combined risk assessments (see page 40 for more information on the methodology used)	Some samples contained residues of more than one pesticide. The pesticide residues found are not chemically related to each other and do not have the same toxicological effects. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health, either separately or in combination.

Follow up action

Further investigation: suspected illegal use	We have passed details of 1 sample from the UK that contained a residue of cypermethrin which is not approved for use on lettuce in the UK to HSE. HSE is investigating; brand name details will not be published until the investigations are complete.

Milk

Introduction

We have surveyed milk every year since 2000. The survey includes cow's milk, goat's milk and ewe's milk. This year milk is being surveyed across the EU as part of the EU co-ordinated multi-annual control programme.

The survey covers full fat and semi skimmed milk only. Skimmed milk is not included due to its low fat content (around 0.1%). Some pesticides are fat soluble and therefore not likely to be found in milk with such a low fat content, these are also the pesticides most commonly detected in animal products.

Survey design

We are sampling and reporting milk in every quarter of 2016. This is the first part of the survey and covers samples collected between January and March.

A market research company bought the milk samples from retail outlets across the UK.

We are publishing results for this survey on our website as part of the rolling reporting programme. The results in this report may have already been published.

Further details

Full details of pesticides we looked for and the residues we found are in Table 13 at page 97
Suppliers details are in the Brand Name Annex

Conclusions

Summary statement

No residues were detected at or above the reporting limit.

Results

When samples were taken

Between January and March 2016

Number of samples

78 samples were tested for up to 35 pesticide residues

Origin of samples

Cows milk
- 68 samples came from the UK

Goats milk
- 10 samples came from the UK

Residues found

78 samples contained no residues from those sought
None of the samples contained residues above the reporting level
None of the samples contained residues above the MRL
22 samples were labelled as organic. None contained residues from those sought

Multiple residues

None of the samples contained residues of more than one pesticide

Risk assessments

Number of risk assessments

The laboratory did not detect any residues, so we did not do a risk assessment

Okra

Introduction

We have surveyed okra every year since 2012 due to a high rate of non-compliance incidents.

Due to a high incidence of non-compliance, from February 2013, under EU regulation 91/2013 every shipment of fresh okra from India in to the EU is required to be pre-notified to port authorities and be accompanied by results of sampling and analysis done by the Indian authorities, or from any other country the okra had been shipped through. While the samples in this report were collected there were also increased import controls from okra from Vietnam which was subject to 50% import controls.

Survey design

We are sampling and reporting okra in every quarter of 2016. This is the first part of the survey and covers samples collected between January and March.

The okra samples were either collected by the Rural Payment Agency's Horticultural Marketing Inspectors from a range of points in the supply chain (wholesale markets, retail depots, ports and import points) or they were bought by a market research company from retail outlets across the UK.

We are publishing results for this survey on our website as part of the rolling reporting programme. The results in this report may have already been published.

Further details

Full details of pesticides we looked for and the residues we found are in Table 14 at page 98
Suppliers details are in the Brand Name Annex

Conclusions

Summary statement

None of the residues detected by the laboratory would be expected to have an effect on health.

Results

When samples were taken

Between February and March 2016

Number of samples

12 samples were tested for up to 237 pesticide residues

Origin of samples

Fresh

- 12 samples were imported from outside the EU

Residues found

5 samples contained no residues from those sought
7 samples contained residues above the reporting level
None of the samples contained residues above the MRL
None of the samples were labelled as organic.

Multiple residues

2 samples contained residues of more than one pesticide

- 1 sample contained 2 residues
- 1 sample contained 3 residues

Risk assessments

Number of risk assessments

The laboratory detected 6 different pesticide residues. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health.

Combined risk assessments (see page 40 for more information on the methodology used)	Some samples contained residues of more than one pesticide. The pesticide residues found are not chemically related to each other and do not have the same toxicological effects. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health, either separately or in combination.

Peaches and Nectarines

Introduction

We last surveyed peaches and nectarines in 2013. This year they are being surveyed across the EU as part of the EU co-ordinated multi-annual control programme.

Survey design

We are sampling and reporting peaches and nectarines in quarters one, three and four of 2016. This is the first part of the survey and covers samples collected between January and March.

The peaches and nectarine samples were either collected by the Rural Payments Agency's Horticultural Marketing Inspectors from a range of points in the supply chain (wholesale markets, retail depots, ports and import points) or purchased from retail outlets across the UK by a market research company.

Further details

Full details of pesticides we looked for and the residues we found are in Table 15 at page 102
Risk assessments carried out by HSE are at page 44
Suppliers details are in the Brand Name Annex

Conclusions

Summary statement

Dithiocarbamates

One sample of peaches contained a residue of dithiocarbamates at 1.5 mg/kg, which is below the MRL of 2 mg/kg. HSE undertook a risk assessment which assumed that ziram had been used as this is most toxic dithiocarbamate, they concluded that any effect on health would be minor and reversible.

Results

When samples were taken

Between January and March 2016

Number of samples

20 samples were tested for up to 277 pesticide residues

Origin of samples

Nectarines
- 11 samples were imported from outside the EU

Peaches
- 9 samples were imported from outside the EU

Residues found

1 sample contained no residues from those sought
19 samples contained residues above the reporting level
None of the samples contained residues above the MRL
None of the samples were labelled as organic.

Multiple residues

19 samples contained residues of more than one pesticide
- 1 sample contained 2 residues
- 7 samples contained 3 residues
- 7 samples contained 4 residues
- 4 samples contained 6 residues

Risk assessments
(see Section II on page 44 for full risk assessments)

Number of risk assessments

The laboratory detected 16 different pesticide residues. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, in the case of one sample of lettuce with a residue of dithiocarbamates we consider the likelihood of an effect on health to be low.

Dithiocarbamates

1 sample contained dithiocarbamates at levels where we need to consider the effect on health in more detail. The highest level detected was 1.5 mg/kg

The usual non-specific approach for dithiocarbamates indicated a potential intake above the ARfD for ziram. The intakes for toddler, 4-6 year old children, and infants exceeded the ARfD. The highest intake was for toddlers.

If toddlers ate large portions of peach containing ziram at 3.01 mg/kg their intake would be 207% of the Acute Reference Dose. This intake is 47 times lower than a dose which caused no observed adverse effects in a ten dose rat developmental study. The European Food Safety Authority used this study as the basis of the ARfD.

Toxicologists usually apply a factor of 100 to this dose to take into account uncertainties caused by using animal data and possible differences in susceptibility between people. We consider the likelihood of an effect on health to be low, given the remaining factor of 47. This is because an adverse effect on health would rely on

1) a susceptible individual eating a large quantity of the product which in turn had the highest levels of residue (i.e. 7 times the maximum value found in monitoring) ; and

2) the actual difference in susceptibility between that individual and rats, being higher than the factor we are left with in this situation; and

3) the critical NOAEL being close to the actual doses needed to produce an adverse effect in the animals studied.

In conclusion we consider that some people might experience slight loss of appetite after eating large portions (97.5th percentile consumption) of peach containing the highest levels found in this report, but we consider the likelihood of an effect on health to be low. Such effects would be expected to be minor and reversible.

Combined risk assessments (see page 40 for more information on the methodology used)

Some sample contained residues of more than one pesticide. The pesticide residues found are not chemically related to each other and do not have the same toxicological effects. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health, either separately or in combination.

Pears

Introduction	We have surveyed Pears every year since 2002 as they are widely consumed.
Survey design	We are sampling and reporting pears in every quarter of 2016. This is the first part of the survey and covers samples collected between January and March. The pear samples were either collected by the Rural Payments Agency's Horticultural Marketing Inspectors from a range of points in the supply chain (wholesale markets, retail depots, ports and import points) or purchased from retail outlets across the UK by a market research company.
Further details	Full details of pesticides we looked for and the residues we found are in Table 16 at page 108 Suppliers details are in the Brand Name Annex

Conclusions

Summary statement	None of the residues detected by the laboratory would be expected to have an effect on health.

Results

When samples were taken	Between January and March 2016
Number of samples	24 samples were tested for up to 347 pesticide residues
Origin of samples	4 samples came from the UK 20 samples came from the EU
Residues found	4 samples contained no residues from those sought 20 samples contained residues above the reporting level None of the samples contained residues above the MRL 4 samples were labelled as organic. None contained residues from those sought
Multiple residues	19 samples contained residues of more than one pesticide • 4 samples contained 3 residues • 3 samples contained 4 residues • 2 samples contained 5 residues • 6 samples contained 6 residues • 4 samples contained 7 residues

Risk assessments

Number of risk assessments	The laboratory detected 22 different pesticide residues. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health.
Combined risk assessments (see page 40 for more information on the methodology used)	Some samples contained residues of more than one pesticide. The pesticide residues found are not chemically related to each other and do not have the same toxicological effects. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health, either separately or in combination.

Peppers

Introduction

We have surveyed peppers every year since 2006 due to a high non-compliance rate.

The survey can include sweet peppers, bell peppers and capsicum. It doesn't include chilli peppers.

Survey design

We are sampling and reporting peppers in quarters one, three and four of 2016. This is the first part of the survey and covers samples collected between January and March.

A market research company bought the pepper samples from retail outlets across the UK.

Further details

Full details of pesticides we looked for and the residues we found are in Table 17 at page 114
Suppliers details are in the Brand Name Annex

Conclusions

Summary statement

None of the residues detected by the laboratory would be expected to have an effect on health.

Results

When samples were taken

Between January and March 2016

Number of samples

18 samples were tested for up to 388 pesticide residues

Origin of samples

Fresh

- 4 samples were imported from outside the EU
- 14 samples came from the EU

Residues found

5 samples contained no residues from those sought
13 samples contained residues above the reporting level
None of the samples contained residues above the MRL
None of the samples were labelled as organic.

Multiple residues

8 samples contained residues of more than one pesticide

- 4 samples contained 2 residues
- 2 samples contained 4 residues
- 1 sample contained 5 residues
- 1 sample contained 6 residues

Risk assessments

Number of risk assessments

The laboratory detected 15 different pesticide residues. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health.

Combined risk assessments (see page 40 for more information on the methodology used)

Some samples contained residues of more than one pesticide. The pesticide residues found are not chemically related to each other and do not have the same toxicological effects. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health, either separately or in combination.

Potatoes

Introduction

We monitor potatoes annually due to their importance as a staple part of the diet. The survey covers both maincrop (or ware) and new potatoes.

Survey design

We are sampling and reporting potatoes in every quarter of 2016. This is the first part of the survey and covers samples collected between January and March.

The Animal and Plant Health Agency's Plant Health and Seed Inspectors collected the potato samples from a range of points in the supply chain (wholesalers, potato processors, ports and import points).

We are publishing results for this survey in our website as part of the rolling reporting programme. The results in this report may have already been published.

Further details

Full details of pesticides we looked for and the residues we found are in Table 18 at page 120
Risk assessments carried out by HSE are at page 45
Suppliers details are in the Brand Name Annex

Conclusions

Summary statement

Based on the Chemicals Regulation Directorate's risk assessment of the residues detected we consider an effect on health to be unlikely (see risk assessments in Section II).

Results

When samples were taken

Between January and March 2016

Number of samples

40 samples were tested for up to 346 pesticide residues

Origin of samples

Maincrop
- 28 samples came from the UK
- 4 samples were imported from outside the EU
- 2 samples came from the EU

New
- 1 sample came from the UK
- 5 samples were imported from outside the EU

Residues found

16 samples contained no residues from those sought
24 samples contained residues above the reporting level
None of the samples contained residues above the MRL
1 sample was labelled as organic. It didn't contain any residues from those sought

Multiple residues

15 samples contained residues of more than one pesticide
- 6 samples contained 2 residues
- 7 samples contained 3 residues
- 2 samples contained 4 residues

Risk assessments
(see Section II on page 45 for full risk assessments)

Number of risk

The laboratory detected 10 different pesticide residues. Following the Chemicals

assessments	Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health.
Chlorpropham	1 sample contained chlorpropham at levels where we need to consider the effect on health in more detail. The highest level detected was 8.6 mg/kg Data are available to support a specific variability factor of 3.0 to replace the default value of 7 and this lower value was used in the intake estimates (EFSA, 2012). If infants ate large portions of raw potato containing chlorpropham at 8.6 mg/kg, their intake of chlorpropham could be 113% of the Acute Reference Dose. These intake estimates are based on raw uncooked potatoes. However the cooking process for potatoes leads to about 40% loss of residues. Taking this loss into account (a processing factor of 0.57 is applied, EFSA (2012)) the estimated residue after cooking is 4.9 mg/kg. The highest intake is below the ARfD (65%) and based on this assessment we do not expect an effect on health. This assessment assumes the peel of the potato is eaten.
Combined risk assessments (see page 40 for more information on the methodology used)	Some samples contained residues of more than one pesticide. The pesticide residues found are not chemically related to each other and do not have the same toxicological effects. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health, either separately or in combination.

Follow up action

Further investigation: suspected illegal use	We have passed details of 1 sample from the UK that contained a residue of MCPA which is not approved for use on potatoes in the UK to HSE. HSE is investigating; brand name details will not be published until the investigations are complete.

Prepared Fresh Fruit

Introduction

We started surveying prepared fresh fruit in 2015. The survey can include any single fruit or mixed fruit that has been pre-prepared, for example fruit salad, sliced melon, pineapple cubes. The samples must all be fresh fruit and cannot included any tinned or jarred products.

This survey is being carried out as a follow-up from previous results from 2015 which found a high number of sample contained BAC & DDAC residues from their use as disinfectants, therefore we are on testing the sample in this survey from BAC, DDAC and Chlorate.

Survey design

We are sampling and reporting prepared fresh fruit in every quarter of 2016. This is the first part of the survey and covers samples collected between January and March.

A market research company bought the prepared fresh fruit samples from retail outlets across the UK.

We are publishing results for this survey in our website as part of the rolling reporting programme. The results in this report may have already been published.

Further details

Full details of pesticides we looked for and the residues we found are in Table 19 at page 126
Suppliers details are in the Brand Name Annex

Conclusions

Summary statement

None of the residues detected by the laboratory would be expected to have an effect on health.

Chlorate
We found chlorate over the default MRL in 2 UK samples. Hovever we do not think that these fndings should be treated as breaches of the legislation, and we have not highlighted them as such in the brand name annex.

We are testing a limited number of foods for chlorate for the first time in 2016, to provide evidence that it is necessary to review the existing default MRL in order to take account of non-pesticide sources. In particular chlorine-based treatments of drinking and irrigation water as well as chlorine-based surface disinfectants widely used to ensure microbiological safety. We agree with HSE and the FSA that the current MRL does not take account of these often unavoidable sources.

This adds to a growing body of evidence, from both official monitoring across the EU and from the food and farming industries.

Following the HSE's risk assessment, we do not expect any of the residues we found to have an effect on health. The residues are more likely to come from key microbiological safety practices rather than pesticide use, so we do not think any change in production practice by the brand-owners or manufacturers is needed in response to these findings. More information on chlorate is available on page 6.

Results

When samples were taken

Between January and March 2016

Number of samples	24 samples were tested for up to 3 pesticide residues
Origin of samples	Mango • 1 sample came from the EU Melon • 3 samples came from the UK Mixed • 8 samples came from the UK Pineapple • 11 samples came from the UK Watermelon • 1 sample came from the UK The country of origin on the packaging does not necessarily indicate where the fruit was grown. It may be where it was prepared or where it was packed for consumer purchase.
Residues found	21 samples contained no residues from those sought 3 samples contained residues above the reporting level 2 samples contained residues above the MRL None of the samples were labelled as organic.
Multiple residues	1 samples contained residues of more than one pesticide • 1 samples contained 2 residues
Residues measured above the MRL (see Appendix B)	The laboratory detected 2 residues in 2 samples on prepared fresh fruit above the MRL • 2 samples from UK contained a residue of chlorate at 0.03 mg/kg. The MRL is 0.01* mg/kg. However, we do not think that these findings should be treated as breaches of the legislation – see our conclusions box above.

Risk assessments

Number of risk assessments	The laboratory detected 2 different pesticide residues. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health.
Combined risk assessments (see page 40 for more information on the methodology used)	One sample contained residues of more than one pesticide. The pesticide residues found are not chemically related to each other and do not have the same toxicological effects. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health, either separately or in combination.

Follow up action

Letters sent	The Secretariat has written to the suppliers of the samples with residues above the MRL. Any comments received are at Appendix D.

* **Maximum Residue Levels set at the LOD (LOD MRL):** These MRLs are set at a default level, i.e. at the limit of determination (LOD) as specified in EC Regulation 396/2005.

Strawberries

Introduction

We last surveyed strawberries in 2013. This year, strawberries are being surveyed across the EU as part of the EU co-ordinated multi-annual control programme.

Survey design

We are sampling and reporting strawberries in every quarter of 2016. This is the first part of the survey and covers samples collected between January and March.

A market research company bought all the strawberry samples from retail outlets across the UK.

Further details

Full details of pesticides we looked for and the residues we found are in Table 20 at page 129
Suppliers details are in the Brand Name Annex

Conclusions

Summary statement

None of the residues detected by the laboratory would be expected to have an effect on health.

Results

When samples were taken

Between January and February 2016

Number of samples

24 samples were tested for up to 361 pesticide residues

Origin of samples

5 samples were imported from outside the EU
19 samples came from the EU

Residues found

8 samples contained no residues from those sought
16 samples contained residues above the reporting level
None of the samples contained residues above the MRL
6 samples were labelled as organic. None contained residues from those sought

Multiple residues

12 samples contained residues of more than one pesticide

- 5 samples contained 2 residues
- 2 samples contained 3 residues
- 1 sample contained 4 residues
- 2 samples contained 5 residues
- 1 sample contained 6 residues
- 1 sample contained 8 residues

Risk assessments

Number of risk assessments

The laboratory detected 20 different pesticide residues. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health.

Combined risk assessments (see page 40 for more information on the methodology used)

Some samples contained residues of more than one pesticide. The pesticide residues found are not chemically related to each other and do not have the same toxicological effects. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health, either separately or in combination.

Tomatoes

Introduction

We last surveyed tomatoes in 2013. This year they are being surveyed across the EU as part of the EU co-ordinated multi-annual control programme.

The survey covers beefsteak, plum, round, salad and tomatoes sold on the vine.

Survey design

We are sampling and reporting tomatoes in every quarter of 2016. This is the first part of the survey and covers samples collected between January and March.

A market research company bought all the tomato samples from retail outlets across the UK.

Further details

Full details of pesticides we looked for and the residues we found are in Table 21 at page 134
Suppliers details are in the Brand Name Annex

Conclusions

Summary statement

None of the residues detected by the laboratory would be expected to have an effect on health.

Results

When samples were taken

Between January and February 2016

Number of samples

18 samples were tested for up to 349 pesticide residues

Origin of samples

Cherry
- 1 sample was imported from outside the EU
- 1 sample came from the EU

Plum
- 2 samples came from the EU

Round
- 1 sample was imported from outside the EU
- 3 samples came from the EU

Salad
- 2 samples were imported from outside the EU
- 2 samples came from the EU

Vine
- 6 samples came from the EU

Residues found

5 samples contained no residues from those sought
13 samples contained residues above the reporting level
None of the samples contained residues above the MRL
5 samples were labelled as organic.1 contained a residue from those sought

Multiple residues

8 samples contained residues of more than one pesticide
- 2 samples contained 2 residues
- 3 samples contained 3 residues
- 1 samples contained 5 residues
- 1 sample contained 6 residues
- 1 sample contained 7 residues

Risk assessments

Number of risk assessments

The laboratory detected 23 different pesticide residues. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues

	to have an effect on health.
Combined risk assessments (see page 40 for more information on the methodology used)	Some samples contained residues of more than one pesticide. The pesticide residues found are not chemically related to each other and do not have the same toxicological effects. Following the Chemicals Regulation Directorate (HSE)'s risk assessment, we do not expect these residues to have an effect on health, either separately or in combination.

Follow up action

Organic sample with residue of spinosad	The Secretariat has written to the supplier of the sample of organic tomato from Spain with a residue of spinosad which is permitted in organic food production. Defra's Organic Farming branch and the organic certification organisation were also informed.

Supplier Details

Introduction
The following information is available on each sample collected this quarter:

- Date and place of collection
- Description (e.g. 'runner bean', organic milk);
- Country of origin or manufacture;
- Brand name and packer/manufacturer; and
- Residues detected (results shown in green indicate residues above the MRL).

The Government's 'brand naming' policy
The Government has decided that brand name information should be published as part of the Government food chemical surveillance programme. Brand names have been published for most pesticide residue surveys since 1998. Certain samples are excluded from the release of brand name information. These include samples taken as part of any pesticide residues enforcement programme and those taken as part of surveys to study individual people/farms. This policy was reviewed in 2000/1, when Ministers agreed to its continuation.

Where we find residues above an MRL or the presence of non-approved pesticides brand owners/retailers/ growers are notified of the result in advance of publication of reports and given four weeks to comment. Any responses we receive are included in Appendix D.

Interpreting brand name information
There is no ready definition of what constitutes a brand in all cases. For clearly branded produce like breakfast cereals or biscuits the "brand owner" is shown. In the case of "own brand" goods this may be one of the multiple retailers. For fruit and vegetables the retailer is generally shown. For meat, milk and most other animal products the retailer is also generally shown. Finally, for all commodities the country of origin is shown where this was displayed either on the produce or in the store.

Our programme takes samples of produce in approximate proportion to the market share of the main retailers. This has been done to ensure we obtain an accurate representation of a sector (e.g. fruit and vegetables).

Individual programmes are not capable of generating statistically valid information on residues in particular crops from particular retailers. This would require the collection of a much larger number of samples: either substantially increasing costs or greatly reducing the range of different foods sampled in any one year. Therefore, results from an individual survey cannot be taken as a fair representation of the residues status of any particular brand.

However, we do collect samples from a variety of outlets in a range of locations, over a period of years. Successive programmes should therefore help generate information on the typical residues profile of particular types of produce and on major trends in the incidence and levels of pesticides. It should be noted that this quarterly report is not intended to give a comprehensive comparison with previous surveys of the same commodities.

A particular issue arises in relation to the country of origin of fruit and vegetables. The origins included in the reports are those recorded either on the produce or in the store. However, it is not uncommon for mixing to occur on shop shelves. We have responded by increasing the proportion of pre-packed goods sampled. However, pre-packed samples are not available for some produce in some stores and it could also introduce bias to surveys if loose produce were not sampled. Loose produce is therefore sampled but the origin of the sample should be interpreted with a degree of caution.

Section II
HSE assessment of risk

The surveillance programme is designed to enable the regulatory authorities to check that:

- specified pesticide MRLs are being respected;
- users of pesticides are complying with conditions of use specified in the authorisation;
- Dietary intakes of residues are within acceptable limits.

This section details how risks from dietary intakes are assessed.

When assessments are carried out
A screening assessment is done for each residue and commodity combination to identify residue levels that would lead to intakes above the relevant reference doses. Further information on this screening approach is available on request from HSE. Detailed assessments are then produced for every case where the actual residue level found could lead to an intake by any group above the reference dose.

Assessing Dietary intakes
Assessing the acceptability of dietary intakes is complicated. Consumer risk assessments are carried out for both short-term (peak) and long-term intakes. These assessments use information on food consumption collected in UK dietary surveys in conjunction with the residue levels we find. Occasionally, additional pesticide specific information on the losses of residues that occur during preparation and/or cooking of food is also used.

How the assessment is carried out
Short-term intakes (also called NESTIs) are calculated using consumption data for high-level consumers, based on single-day consumption values and the highest residue found in a food commodity. The residue found is multiplied by a variability factor to take account of the fact that residues may vary between individual items that make up the sample analysed. The estimated intake is compared to the Acute Reference Dose (ARfD). This is done for ten consumer groups; adults, infants, toddlers, 4-6 year olds, 7-10 year olds, 11-14 year olds, 15-18 year olds, vegetarians, elderly living in residential homes and elderly living in their own homes.

Long-term intakes (NEDI) are also calculated for high-level consumers, but in this case the consumption data are high-level long-term values rather than peak single-day events, and similarly the residue values used reflect long-term average levels rather than occasional high values. Again these estimates are made for the ten consumer groups. In this case the estimated intake is compared to the Acceptable Daily Intake (ADI). More information on intake assessments is available on HSE's website: www.pesticides.gov.uk/guidance/industries/pesticides/topics/pesticide-approvals/pesticides-registration/data-requirements-handbook/consumer-intake-assessments-new-intake-calculation-models.

The reference doses (ADI, ARfD) are set by the Advisory Committee on Pesticides (ACP), or agreed within the EC (an increasing proportion of UK pesticide authorisations are now carried out in accordance with harmonised EU processes). However, where neither the UK nor the EC has set a reference dose, levels set by regulatory authorities in other countries may be used. For a small number of pesticides the reference doses used have been determined by HSE. These have not been independently peer-reviewed and should therefore be regarded as provisional. Reference dose values are available on the EU website: http://ec.europa.eu/sanco_pesticides/public/index.cfm?event=activesubstance.selection.

Although MRLs are not safety levels, an MRL would not be established if the residue concentrations measured in the supervised trials used to support the MRL would give rise to health concerns. In most cases residues present at the MRL result in intakes below the ARfD and the ADI. So even if the MRL is exceeded this does not always lead to an intake above the ARfD or ADI.

In addition, an estimated intake that exceeds the ADI or ARfD does not automatically result in concerns for consumer health, because a protective approach is used in setting the ADI and ARfD. In the unusual circumstance of an intake exceeding the ADI or ARfD, an evaluation of the toxicological data is made, and details of this assessment would be presented.

Most consumer intake assessments are for short-term exposure rather than chronic exposure. This is because in most cases the monitoring data show the majority of samples to contain residues below the reporting limit and so chronic exposure would not present a concern. Long-term risk assessments have been

carried out on a case-by-case basis, but are not routinely reported. Long-term exposure assessments are done using median residue levels, rather than using the highest residues found. Therefore, long-term risk assessments would only need to be carried out where data indicated a high proportion of samples contained residues above the MRL (this would result in a higher median residue level than that previously assessed when setting the MRL), or where there is no MRL and acute toxicology is not considered relevant for the particular pesticide concerned.

Where intakes exceed a reference dose, it is necessary for the underlying toxicological studies (animal studies) to be considered to enable the significance of such an exceedance to be understood. Toxicological studies are conducted using different doses to determine the nature of any ill health effects as well as the levels at which such effects can be expected to occur.

Toxicological studies are conducted using test animals to identify the highest experimental dose that causes no detectable adverse effects (the NOAEL). Where there is more than one relevant toxicological study, the lowest appropriate NOAEL for the most sensitive adverse effect is typically used. There is some uncertainty in extrapolating between animals and people and it is therefore important to use a 'safety factor' to account for sources of variation. This safety factor is incorporated (by dividing the NOAEL by the safety factor) in deriving a reference dose, either an ADI or an ARfD, to which consumer intakes are compared. A safety factor therefore extrapolates from the animal testing to the general population. Factors in the order of x100 are commonly used, x 10 for animal to man, and x10 for within human population differences in sensitivity. However, toxicologists may propose different values (e.g. from 5 to 1000) based on scientific reasoning in accordance with study designs and the quality of the data that has been generated from the studies.

In order to ensure exposures to pesticides do not pose unacceptable risk to humans a wide range of investigations are performed. Most of these are performed on experimental animals because the only end-points that can be examined in human volunteers are those involving observation or blood and urine sampling. Human volunteer studies involving pesticides are not generated in current regulatory work. There is debate at the international level as to whether human studies that have been generated should be used for risk assessment purposes. In the EU, the policy is not to use these data in assessments; the JMPR chose to apply judgement in the appropriate use of these data if available. The HSE risk assessments will usually refer to test animal species, such as dog, rat, and rabbit. All toxicological work is undertaken based on principles of minimising animal distress. Where scientifically valid human data are available the risk assessments will refer to these as they reduce the uncertainty in the assessment. Therefore, human data is only referred to in more limited circumstances.

Acute (short term) toxicology is not a concern for all pesticides, as some are not acutely toxic. In terms of the pesticides that have been found in fruit and vegetables through the surveillance programme an acute risk assessment would not be necessary on the following: tecnazene, maleic hydrazide, diphenylamine, furalaxyl, iprodione, kresoxim-methyl, pendimethalin, propargite, propyzamide, quintozene and tolclofos-methyl.

As the surveillance programme monitors residues in all types of food, from raw commodities (e.g. potatoes) to processed (e.g. wine), dried (e.g. dried fruit) and composite foods (e.g. fruit bread), consumer risk assessments are specifically tailored to address processed and mixed food products. MRLs are generally set for raw commodities, although when MRLs are established the assessment of dietary intakes takes into account the potential for residues to remain in processed foods produced from the raw agricultural commodities. MRLs have been set for processed infant foods, and in future may be extended to other processed food products.

Residues are usually reduced during food processing and occasionally may concentrate. The alteration of residues can be considered in consumer risk assessments, for example, in oil seed rape a fat-soluble pesticide may result in higher residues in the oil compared to residues in the raw seed. Consumption data are available for many major processed food items such as boiled potatoes, crisps, fruit juice, sugar, bread, and wine. Where such consumption data are not available, the intake estimates are based on the total consumption of the raw commodity, which would represent the worst-case (for example, breakfast cereals consumption would be based on total cereal products consumption). In the case of composite products a suitable worst-case alternative would be used, for example total bread consumption for fruit bread consumption.

Probabilistic Modelling

The standard calculations of consumer exposure use realistic consumption data and residue levels. However, they tend to overestimate intakes in most circumstances. This is due to the assumptions used; fruit and vegetables would contain high levels of residue in an individual unit and that these would be consumed by high-level consumers. They do not take into account the possible range of residue levels and consumption

distributions that may occur in reality. These possible combinations of residues and consumption levels can be taken into account using modelling/simulation techniques to produce probability distributions of residue intake levels to indicate the range of consumer intakes, presented as a probabilistic assessment of consumer exposure. These techniques are not yet routinely used to estimate dietary intakes of pesticide residues in the EC.

Multiple residues

The risk assessment process is not standing still. We are aware that some consumers are concerned by the 'cocktail effect'- the possible implications of residues of more than one chemical occurring in, say, a single portion of fruit or vegetables or the interaction between mixtures of pesticides and veterinary medicines at residue levels.

Where more than one pesticide residue is found in a sample, we produce a separate table which identifies each sample and what was found (see Appendix D). If more than one organophosphate/carbamate is found we will undertake an additional risk assessment. If the combination of pesticides found is either unusual or gives cause for concern then this will be detailed in the report.

The Food Standards Agency (FSA) asked the Committee on Toxicity of Chemicals in Food, Consumer Products and the Environment to assess these concerns. Their report 2Risk Assessment of Mixtures of Pesticides and Veterinary Medicines" was published in 2002. The Committee concluded that the probability of any health hazard from exposures to mixtures is likely to be small. Nonetheless, it identified areas of uncertainty in the risk assessment process and made recommendations for further work. These fell under the broad headings of regulatory, surveillance, research and public information issues. An action plan to take forward the recommendations has been published on the FSA website at: http://www.food.gov.uk/safereating/chemsafe/pesticides/pestmixbranch/. A number of research projects have been commissioned by the FSA to help progress the action plan; details can be found at http://www.food.gov.uk/multimedia/pdfs/ressurprjlistsep07 and http://www.food.gov.uk/science/research/researchinfo/researchportfolio/

Scientific methodologies have yet to be developed to deal with mixtures from groups of pesticides identified by the Committee. However, the Advisory Committee on Pesticides (ACP) has developed an approach for the anticholinesterase compounds. They have also recommended an approach for assessing compounds that might have combined toxicity. This includes a consideration of the proportion of the respective reference doses taken up by the predicted exposures to each active substance. If this is only a small proportion (e.g. <50% if there are two components; <33% for 3 etc) then assuming simple additivity the risks would still be acceptable. However if exposures to each active substance represent a high proportion of the respective reference doses and the total exceeds 100% a more detailed consideration is needed (www.pesticides.gov.uk/guidance/industries/pesticides/topics/pesticide-approvals/pesticides-registration/data-requirements-handbook/toxicity-assessment-of-combinations-of-2-or-more-compounds-in-a-formulation).

We are keen to ensure our reports reflect consumer concerns. We therefore now regularly assess findings showing multiple residues of organophosphate and carbamate pesticides. Combined assessment is a new development in risk assessment, which is being taken forward at the international level, e.g. the European Food Safety Authority (EFSA) held a colloquium in 2006 and has set-up two working groups to help develop the methodology (http://www.efsa.europa.eu/en/events/event/colloque061128.htm; http://www.efsa.europa.eu/en/supporting/pub/117e.htm; http://www.efsa.europa.eu/en/efsajournal/pub/705.htm; http://www.efsa.europa.eu/en/efsajournal/pub/1167.htm). Further advances in risk assessment methodology will be taken into account in developing the approach to multiple risk assessments in the future.

Table 1: Short-term intake estimates

Screening assessments have been done for all acutely toxic and potentially acutely toxic pesticides to check that predicted intakes are within the ARfD (or ADI, as appropriate, where an ARfD is not available). An acute exposure assessment is not done for pesticides which are not acutely toxic where it has been established that an ARfD is not required. Toxicological endpoints can be found in the DG SANCO EU Pesticides database which is available at http://ec.europa.eu/food/plant/protection/evaluation/database_act_subs_en.htm

The screening assessment uses the internationally agreed approach to short-term (acute) consumer exposure assessment with UK food consumption data as detailed within the UK NESTI model which is available on the HSE website at http://www.pesticides.gov.uk/approvals.asp?id=1687.

A paper to explain the assessment of acute intakes can be found on our website:
http://www.pesticides.gov.uk/Resources/HSE/PRiF/Documents/Other/2013/PRiF%20Intake%20Assessments%20290113.pdf

For the Q1 (2016) assessments, the following approaches have been taken to refine the NESTI according to case-by-case issues and to ensure that appropriate consumption values are used for less frequently consumed commodities where available food consumption data may be limited:

- Data on beans with pods were used for okra
- Data on cheese were used for all forms of cheese.
- Data on peaches were used for peaches and nectarines
- For all forms of pre-prepared fruits, data on apples without the use of a variability factor were used for screening purposes. As fruit pieces are small, a whole fruit consideration which takes account of unit to unit variability does not seem so relevant; the consumption values for a range of different fruits were considered and consumption values for apple are likely to be reasonably protective to cover the range of fruits consumed in this way. Further to the initial screen, the risk assessment was further refined using more specific consumption data, without the use of a variability factor, where suitable data were available.
- For potato/chlorpropham a variability factor of 3 was used, based on specific residues variability data for individual potato tubers.

Crop	Pesticide	Highest residue (mg/kg)	Intake (mg/kg bw/day)		ARfD (mg/kg bw/day)	Source
			Adult	Critical group†		
Beans with pods						
Beans with pods	Chlorpyrifos	4.3	0.0099	0.022 (infant) 0.022 (toddler) 0.016 (4-6 year old child) 0.012 (vegetarian) 0.012 (15-18 year old child)	0.005	EFSA, 2015

				0.0099 (adult) 0.0093 (Elderly- own home) 0.0087 (7-10 year old child) 0.0084 (11-14 year old child)		

Comment on risk assessment

The risk assessments detailed below refer to the new EU acute Reference Dose 2015 value but also consider the risks based on the existing JMPR value which was based on data which examined impacts upon humans. HSE accept that relevant human toxicology data can be used to calculate the possible impacts of residues in food on humans and based on this assessment do not expect an effect on health.

Assessment A using the ARfD set in the EU

The intakes for infants, toddlers, 4-6 year old children, vegetarians, 15-18 year old children, adults, elderly in their own home, 7-10 year old children and 11-14 year old children exceeded the ARfD. The highest intake was for infants.

If infants ate large portions of beans with pods containing chlorpyrifos at 4.3 mg/kg, their intake of chlorpyrifos could be 431% of the Acute Reference Dose. This intake is 22 times lower than a dose which caused no observed adverse effects in a single dose rat study. The European Food Safety Authority used this study as the basis of the ARfD.

Toxicologists usually apply a factor of 100 to this dose to take into account uncertainties caused by using animal data and possible differences in susceptibility between people. We consider the likelihood of an effect on health to be low, given the remaining factor of 22. This is because an adverse effect on health would rely on

1) a susceptible individual eating a large quantity (97.5^{th} percentile consumption) of the product which had the highest levels of residue ; and
2) the actual difference in susceptibility between that individual and rats being higher than the factor we are left with in this situation; and
3) the critical NOAEL being close to the actual doses needed to produce an adverse effect in the animals studied.

Furthermore, the ARfD derived is considered to have been set using a precautionary approach since red blood cell cholinesterase inhibition was used as the end-point. This is a sensitive way to assess adverse effects.

In conclusion, we consider that some people might experience salivation, intestinal disturbances or sweating after eating large portions (97.5^{th} percentile consumption) of beans with pods containing the highest levels found in this report, but we consider the likelihood of an effect on health to be low. Such effects would be expected to be minor, short-lived, and reversible.

Assessment B with reference to the ARfD set by the JMPR

The intakes for infants, toddlers, 4-6 year old children, vegetarians, 15-18 year old children, adults, elderly in their own home, 7-10 year old children and 11-14 year old children exceeded the EU ARfD. The highest intake was for infants.

If infants ate large portions of beans with pods, containing chlorpyrifos at 4.3 mg/kg, their intake of chlorpyrifos could be 431% of the Acute Reference

Dose. However, the EU ARfD was set without taking into account scientifically valid human data. The JMPR (Joint FAO/WHO meetings on pesticides) has recommended a higher Acute Reference Dose (ARfD) of 0.1 mg/kg bw/d using that human data. It allows an appropriate factor (10) to account for possible differences in susceptibility between people. Intakes in all groups are within the JMPR ARfD. Based on this assessment we do not expect an effect on health.

Conclusion

HSE accept that relevant human toxicology data can be used to calculate the possible impacts of residues in food on humans and based on this assessment do not expect an effect on health.

Beans with pods	Triazophos	0.4	0.00092	0.0020 (infant) 0.0020 (toddlers) 0.0015 (4-6 year old child) 0.0011 (vegetarian) 0.0011 (15-18 year old child)	0.001	JMPR, 2002

Comment on risk assessment

The intakes for infants, toddlers, 4-6 year old children, vegetarians and 15-18 year old children exceeded the ARfD. The highest intake was for infants.

If infants ate large portions of beans with pods containing triazophos at 0.4 mg/kg, their intake of triazophos could be 201% of the Acute Reference Dose. An EU ARfD has not been set as triazophos has not been assessed at an EU level. However the JMPR (Joint FAO/WHO meetings on pesticides) has recommended an Acute Reference Dose (ARfD) of 0.001 mg/kg bw/d using human data. It allows an appropriate factor to account for possible differences in susceptibility between people. In such cases a factor of 10 might be used but in this case the factor was larger (12.5) as there was additional rounding. The intake for toddlers is 6 times lower than a dose of 0.0125 mg/kg bw/d, which caused no observed adverse effect in a three week human volunteer study. The ARfD was also based on a repeated dose study rather than a single dose, which on balance is likely to be more conservative. Taking all the above into account we consider the reduced factor of 6 (from 12.5) still sufficient to make any effect on health unlikely.

Grapes						
Grapes	ethephon	1.2	0.024	0.073 (toddlers) 0.061 (4-6 year old children) 0.056 (7-10 year old children)	0.05	EU, 2008

Comment on risk assessment

The intakes for toddlers, 4-6 year old children and 7-10 year old children exceeded the ARfD. The highest intake was for toddlers.

If toddlers ate large portions of grapes containing ethephon at 1.2 mg/kg, their intake of ethephon could be 146% of the Acute Reference Dose. This intake is 82 times lower than a dose which caused no observed adverse effect in a 28 day oral dog study. The European Food Safety Authority used this study as the basis of the ARfD.

Toxicologists usually apply a factor of 100 to this dose to take into account uncertainties caused by using animal data and possible differences in susceptibility between people. However, in this case the factor was larger (120) to ensure consistency with the findings of human volunteer studies. We consider the reduced factor of 82 (from 120) still enough to make an effect on health unlikely. More detail on the factors applied is on page 38 of this report.

Lettuce						
Lettuce	Dithiocarbamate (ziram)	13.65[£]	0.13	0.24 (4-6 year olds) 0.18 (7-10 year olds) 0.17 (infants) 0.16 (toddlers) 0.15 (vegetarians) 0.13 (adults) 0.11 (11-14 year olds) 0.11 (15-18 year olds) 0.096 (elderly own home)	0.08	EU, 2004

Comment on risk assessment

The usual non-specific approach for dithiocarbamates indicated a potential intake above the ARfD for ziram. The intakes for 4-6 year old children, 7-10 year old children, infants, toddlers, vegetarians, adults, 11-14 year old children, 15-18 year old children and elderly in their own home exceeded the ARfD. The highest intake was for 4-6 year old children.

If 4-6 year old children ate large portions of lettuce containing ziram at 13.65 mg/kg their intake would be 304% of the Acute Reference Dose. This intake is 33 times lower than a dose which caused no observed adverse effects in a ten dose rat developmental study. The European Food Safety Authority used this study as the basis of the ARfD.

Toxicologists usually apply a factor of 100 to this dose to take into account uncertainties caused by using animal data and possible differences in susceptibility between people. We consider the likelihood of an effect on health to be low, given the remaining factor of 33. This is because an adverse effect on health would rely on

1) a susceptible individual eating a large quantity of the product which in turn had the highest levels of residue (i.e. 5 times the maximum value found in monitoring) ; and
2) the actual difference in susceptibility between that individual and rats, being higher than the factor we are left with in this situation; and
3) the critical NOAEL being close to the actual doses needed to produce an adverse effect in the animals studied.

In conclusion we consider that some people might experience slight loss of appetite after eating large portions (97.5th percentile consumption) of lettuce containing the highest levels found in this report, but we consider the likelihood of an effect on health to be low. Such effects would be expected to be minor and reversible.

Peaches & nectarines						
Peaches	Dithiocarbamate (ziram)	3.01*	0.037	0.17 (toddler) 0.12 (4-6 year olds) 0.10 (infants)	0.08	EU, 2004

The usual non-specific approach for dithiocarbamates indicated a potential intake above the ARfD for ziram. The intakes for toddler, 4-6 year old children, and infants exceeded the ARfD. The highest intake was for toddlers.

If toddlers ate large portions of peach containing ziram at 3.01 mg/kg their intake would be 207% of the Acute Reference Dose. This intake is 47 times lower than a dose which caused no observed adverse effects in a ten dose rat developmental study. The European Food Safety Authority used this study as the basis of the ARfD.

Toxicologists usually apply a factor of 100 to this dose to take into account uncertainties caused by using animal data and possible differences in susceptibility between people. We consider the likelihood of an effect on health to be low, given the remaining factor of 47. This is because an adverse effect on health would rely on

1) a susceptible individual eating a large quantity of the product which in turn had the highest levels of residue (i.e. 7 times the maximum value found in monitoring) ; and

2) the actual difference in susceptibility between that individual and rats, being higher than the factor we are left with in this situation; and

3) the critical NOAEL being close to the actual doses needed to produce an adverse effect in the animals studied.

In conclusion we consider that some people might experience slight loss of appetite after eating large portions (97.5th percentile consumption) of peach containing the highest levels found in this report, but we consider the likelihood of an effect on health to be low. Such effects would be expected to be minor and reversible.

Potatoes						
Potato	Chlorpropham	8.6	0.11	0.57 (infants)	0.5	EU, 2003

Comment on risk assessment

Data are available to support a specific variability factor of 3.0 to replace the default value of 7 and this lower value was used in the intake estimates (EFSA, 2012).

If infants ate large portions of raw potato containing chlorpropham at at 8.6 mg/kg, their intake of chlorpropham could be 113% of the Acute Reference Dose. These intake estimates are based on raw uncooked potatoes. However cooking potatoes leads to about 40% loss of residues. Taking this loss into

account (a processing factor of 0.57 is applied, EFSA (2012)) the estimated residue after cooking is 4.9 mg/kg. The highest intake is below the ARfD (65%) and based on this assessment we do not expect an effect on health.

†Highest intake of all ten consumer groups, or intakes for all consumer groups that exceed the ARfD

Dithiocarbamate residues are determined as carbon disulphide which is a common product from different dithiocarbamate pesticides; for the risk assessment a precautionary approach is taken: the worse case dithiocarbamate residue is calculated by assuming the residue is derived from ziram and this is compared to the ARfD for ziram. Where it can be confirmed that a specific dithiocarbamate was applied the equivalent residue of the specific active substance is estimated and the intake compared to the appropriate reference dose.

* Dithiocarbamate residue calculated as 3.01 mg/kg (using a molecular weight conversion of 2.007 for ziram) based on a carbon disulphide residue of 1.5 mg/kg.

£Dithiocarbamate residue calculated as 13.65 mg/kg (using a molecular weight conversion of 2.007 for ziram) based on a carbon disulphide residue of 6.8 mg/kg.

Acute risk assessments for samples containing more than one organophosphorus/carbamate or captan/folpet or triazoles or carbendazim/thiophanate methyl following screening assessment.

Some samples contained residues of more than one pesticide. Whenever toxicologists expect these to add to each other's effect, (have the same toxicological mode of action), HSE carries out a risk assessment of the combined results. Where the sum of the individual intakes, expressed as a percentage of the respective ARfDs, is above 100% then the risk assessment is published in full.

The screening assessment of samples, which contained more than one pesticide from the above groups, did not indicate any exceedances of the ARfD.

INDEX OF APPENDICES

Appendix A
Summary of Results

Table 1:Group Name

Food	Analysed	With residues at or below the MRL	With residues above the MRL	With residues of non-approved pesticides (UK only)	With multiple residues	Organic samples tested	Organic samples with residues
Apples	24	23	0	0	19	0	0
Beans with pods	30	11	5	0	9	3	1
Cabbage	24	5	0	0	1	3	0
Cheese (processed)	36	9	18	0	3	0	0
Fish (sea)	23	1	0	0	0	0	0
Grapes	36	33	1	0	27	0	0
Leeks	24	1	0	0	0	4	0
Lettuce	18	17	1	1	16	0	0
Milk	78	0	0	0	0	22	0
Okra	12	7	0	0	2	0	0
Peaches & nectarines	20	19	0	0	19	0	0
Pears	24	20	0	0	19	4	0
Peppers	18	13	0	0	8	0	0
Potatoes	43	26	0	1	16	2	0
Prepared fresh fruit	24	1	2	0	1	0	0
Strawberries	24	16	0	0	12	6	0
Tomatoes	18	13	0	0	8	5	1

Maximum Residue Levels (MRLs) reflect levels of pesticides that could occur in produce, which has been treated in accordance with good agricultural practice. Where pesticides do not give rise to readily detectable residues, or are not approved for use on particular commodities, MRLs are set at the lowest level which can be identified in routine laboratory analysis. Thus, they provide a mechanism for statutory controls on pesticides in produce which is put into circulation and for monitoring correct use of these chemicals.

If no use of a pesticide on a crop is identified when MRLs are set the tolerance for that pesticide/crop combination is set at the limit of determination (effectively zero). Limit of determination MRL are marked by a '*' in Part 2.

MRLs are established under the Pesticides (Maximum Residue Levels in Crops, Food and Feeding Stuffs) (England and Wales) Regulations 1999 (as amended), the Pesticides (Maximum Residue Levels in Crops, Food and Feeding Stuffs) (Scotland) Regulations 2000 and the Pesticides (Maximum Residue Levels in Crops, Food and Feeding Stuffs) Regulations (Northern Ireland) 2002. These Regulations list all statutory MRLs established under UK national or EC procedures. Today, virtually all these MRLs are set under an ongoing EC programme and the Regulations are amended periodically as levels are set for increasing numbers of pesticides.

There are a number of pesticides which do not yet have statutory MRLs. In the absence of such MRLs we advise suppliers to adhere to any appropriate levels established by the Codex Alimentarius Commission (CAC) a United Nations body established to promote global trading standards. Codex MRLs are not statutory but have been risk-assessed when set and provide a suitable standard in the absence of a statutory MRL.

MRLs may be extended to composite and processed products but levels are not specifically laid down in legislation. They are derived by calculation on an individual basis.

Appendix B
Summary of Rapid Alerts Issued and samples with residues above the MRL

Sample ID	Date of Sampling	Description	Country of Origin	Retail Outlet	Address	Brand Name	Packer / Manufacturer	Pesticide residues found in mg/kg (MRL)	RASFF reference
3606/2016	**02/02/2016**	**Valour Beans**	**Bangladesh**	**Fruit International**	**Stand 44, New Spitalfields Market, 1 Sherrin Road, Leyton, London E10 5SJ**			acetamiprid 0.04 (MRL = 0.15)	**2016.0513**
								carbendazim 0.6 (MRL = 0.2)	
								chlorpyrifos 4.3 (MRL = 0.05*)	
								chlorantraniliprole 0.02 (MRL = 0.8)	
								fenvalerate & esfenvalerate (all isomers) 0.02 (MRL = 0.1)	
								imidacloprid 0.07 (MRL = 2)	
								thiamethoxam (sum) 0.02 (MRL = 0.5)	
4063/2016	**02/02/2016**	**Valor Beans**	**India**	**Quality Veg Suppliers**	**Units 14/16, St James's Market, Bradford BD4 7PN**		**M/S MK Exports Mumbai, India**	BAC (sum) 0.04 (MRL = 0.1)	**2016.0506**
								bifenthrin 0.03 (MRL = 0.5)	
								carbendazim 0.2 (MRL = 0.2)	
								deltamethrin 0.02 (MRL = 0.2)	
								dithiocarbamates 0.2 (MRL = 1)	
								triazophos 0.4 (MRL = 0.01*)	

*** Maximum Residue Levels set at the LOD (LOD MRL):** These MRLs are set at a default level, i.e. at the limit of determination (LOD) where analytical methods can reasonably detect the presence of the pesticide. Either insufficient trials data are available on which to set a maximum residue level or there may be no use of the pesticide on that crop in the EU. However they may be permitted elsewhere.

APPENDIX B
SUMMARY OF MRL EXCEEDANCES

Table 3: MRL Exceedances

Sample ID	Food	Country of Origin	Pesticide Detected	Residue Detected (mg/kg)	MRL (mg/kg)	MRL exceedance after allowing for measurement uncertainty
Beans with pods						
0036/2016	**Green Beans**	**Egypt**	**methomyl (sum)**	**0.08**	**0.02***	**Yes**
3606/2016	**Speciality Beans**	**Bangladesh**	**carbendazim**	**0.6**	**0.2**	**Yes**
			chlorpyrifos	**4.3**	**0.05***	**Yes**
4061/2016	Speciality Beans	Pakistan	lufenuron	0.04	0.02*	No
4063/2016	**Speciality Beans**	**India**	**triazophos**	**0.4**	**0.01***	**Yes**
4064/2016	**Speciality Beans**	**India**	**dimethoate (sum)**	**0.2**	**0.02***	**Yes**
Cheese (processed) We do not think these findings of chlorate in processed cheese should be treated as breaches of the legislation – see our summary conclusions on page 14						
0091/2016	Spreadable cheese	UK	Chlorate	0.08	0.01*	No – see page 14
0092/2016	Spreadable cheese	France	Chlorate	0.03	0.01*	
0208/2016	Spreadable cheese	UK	Chlorate	0.1	0.01*	
0209/2016	Spreadable cheese	France	Chlorate	0.04	0.01*	
0210/2016	Spreadable cheese	UK	Chlorate	0.1	0.01*	
0214/2016	Spreadable cheese	UK	Chlorate	0.2	0.01*	
0215/2016	Spreadable cheese	UK	Chlorate	0.1	0.01*	
1208/2016	Spreadable cheese	France	Chlorate	0.04	0.01*	
1209/2016	Spreadable cheese	UK	Chlorate	0.06	0.01*	
1210/2016	Spreadable cheese	UK	Chlorate	0.06	0.01*	
1269/2016	Spreadable cheese	UK	Chlorate	0.1	0.01*	
1299/2016	Spreadable cheese	UK	Chlorate	0.07	0.01*	

Sample ID	Food	Country of Origin	Pesticide Detected	Residue Detected (mg/kg)	MRL (mg/kg)	MRL exceedance after allowing for measurement uncertainty
1301/2016	Spreadable cheese	France	Chlorate	0.03	0.01*	
1331/2016	Spreadable cheese	UK	Chlorate	0.1	0.01*	
1429/2016	Spreadable cheese	UK	Chlorate	0.1	0.01*	
1435/2016	Spreadable cheese	France	Chlorate	0.03	0.01*	
4486/2016	Spreadable cheese	UK	Chlorate	0.1	0.01*	
4488/2016	Spreadable cheese	UK	Chlorate	0.1	0.01*	
Grapes						
1243/2016	Crimson Grapes	Brazil	ethephon	1.2	1	No
Lettuce						
0150/2016	Round	UK	dithiocarbamates	6.8	5	No
Prepared fresh fruit We do not think these findings of chlorate in prepared fresh fruit should be treated as breaches of the legislation – see our summary conclusions on page 32						
1071/2016	Mixed	UK	Chlorate	0.03	0.01*	No – see page 32
1100/2016	Mixed	UK	Chlorate	0.03	0.01*	

*** Maximum Residue Levels set at the LOD (LOD MRL):** These MRLs are set at a default level, i.e. at the limit of determination (LOD) where analytical methods can reasonably detect the presence of the pesticide. Either insufficient trials data are available on which to set a maximum residue level or there may be no use of the pesticide on that crop in the EU. However they may be permitted elsewhere.

Appendix C
Pesticides Sought and Found in Individual Foodstuffs

Table 5a. Residues detected in retail samples of APPLES purchased between January and February 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
APPLES, EATING UK: 6 samples analysed		
boscalid	<0.01 (i.e. not found)	3
(MRL = 2)	0.04 - 0.1	3
bupirimate	<0.01 (i.e. not found)	5
(MRL = 0.2)	0.01	1
captan and folpet	<0.02 (i.e. not found)	5
(MRL = 3)	0.04	1
chlorantraniliprole	<0.01 (i.e. not found)	4
(MRL = 0.5)	0.02	2
cyprodinil	<0.05 (i.e. not found)	5
(MRL = 1.5)	0.1	1
difenoconazole	<0.01 (i.e. not found)	5
(MRL = 0.8)	0.01	1
diflubenzuron	<0.01 (i.e. not found)	5
(MRL = 5)	0.1	1
dithiocarbamates	<0.05 (i.e. not found)	5
(MRL = 5)	0.05	1
flonicamid (sum)	<0.01 (i.e. not found)	3
(MRL = 0.2)	0.01	3
fludioxonil	<0.01 (i.e. not found)	5
(MRL = 5)	0.07	1
indoxacarb	<0.01 (i.e. not found)	2
(MRL = 0.5)	0.01 - 0.04	4
myclobutanil	<0.01 (i.e. not found)	3
(MRL = 0.5)	0.01 - 0.02	3
pirimicarb (sum)	<0.01 (i.e. not found)	5
(MRL = 2)	0.02	1
pyraclostrobin	<0.01 (i.e. not found)	3
(MRL = 0.5)	0.01 - 0.06	3
APPLES, EATING Imported (EC): 18 samples analysed		
acetamiprid	<0.01 (i.e. not found)	17
(MRL = 0.8)	0.04	1
boscalid	<0.01 (i.e. not found)	13
(MRL = 2)	0.07 - 0.2	5

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
captan and folpet	<0.02 (i.e. not found)	14
(MRL = 3)	0.03 - 0.09	4
carbendazim	<0.01 (i.e. not found)	17
(MRL = 0.2)	0.03	1
chlorantraniliprole	<0.01 (i.e. not found)	17
(MRL = 0.5)	0.02	1
difenoconazole	<0.01 (i.e. not found)	17
(MRL = 0.8)	0.01	1
diflubenzuron	<0.01 (i.e. not found)	17
(MRL = 5)	0.09	1
dithianon	<0.02 (i.e. not found)	10
(MRL = 3)	0.03 - 0.1	8
dithiocarbamates	<0.05 (i.e. not found)	16
(MRL = 5)	0.07, 0.08	2
etofenprox	<0.01 (i.e. not found)	17
(MRL = 1)	0.02	1
flonicamid (sum)	<0.01 (i.e. not found)	10
(MRL = 0.2)	0.01 - 0.02	8
fludioxonil	<0.01 (i.e. not found)	10
(MRL = 5)	0.01 - 0.1	8
indoxacarb	<0.01 (i.e. not found)	17
(MRL = 0.5)	0.04	1
myclobutanil	<0.01 (i.e. not found)	17
(MRL = 0.5)	0.01	1
pyraclostrobin	<0.01 (i.e. not found)	13
(MRL = 0.5)	0.02 - 0.09	5
spirodiclofen	<0.01 (i.e. not found)	17
(MRL = 0.8)	0.01	1
trifloxystrobin	<0.01 (i.e. not found)	17
(MRL = 0.7)	0.01	1

Imported (EC) samples of apples were from Austria (1), France (13), Germany (1), Ireland (1), Italy (1), Poland (1). UK samples of apples (6).

Residues were distributed by country of origin, as follows:

acetamiprid	Poland (1)
boscalid	France (3), Italy (1), Poland (1), UK (3)
bupirimate	UK (1)
carbendazim	Poland (1)
captan and folpet	Austria (1), France (1), Germany (1), Poland (1), UK (1)
chlorantraniliprole	Germany (1), UK (2)
cyprodinil	UK (1)
diflubenzuron	Ireland (1), UK (1)
difenoconazole	Ireland (1), UK (1)

dithiocarbamates	Ireland (1), Poland (1), UK (1)
dithianon	France (6), Germany (1), Italy (1)
etofenprox	Italy (1)
flonicamid (sum)	Austria (1), France (6), Germany (1), UK (3)
fludioxonil	France (8), UK (1)
indoxacarb	Ireland (1), UK (4)
myclobutanil	Ireland (1), UK (3)
pirimicarb (sum)	UK (1)
pyraclostrobin	France (3), Italy (1), Poland (1), UK (3)
spirodiclofen	Poland (1)
trifloxystrobin	Germany (1)

Residues were found in all of the 6 UK eating samples
No residues were found in 1 of the 18 Imported (EC) eating samples

Table 5b. Residues detected in retail samples of APPLES purchased between January and February 2016 *continued*

Residues (1-7 compounds) were found in 23 of the 24 samples as follows:

Number of residues	Sample ID	Type of APPLES	Residues found (mg/kg)																				Country of origin
			ACET	BOS	BUP	CBZ	CPFOL	CTP	CYD	DIF	DIFC	DTC	DTN	EFX	FLC	FLUD	IDX	MYC	PIR	PYC	SPD	TRFL	
(1)	0199/2016	EATING	-	-	-	-	-	-	-	-	-	-	-	-	0.01	-	-	-	-	-	-	-	France
	1067/2016	EATING	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	-	-	-	-	-	-	France
	1199/2016	EATING	-	-	-	-	-	-	-	-	-	-	0.05	-	-	-	-	-	-	-	-	-	France
	1239/2016	EATING	-	-	-	-	-	-	-	-	-	-	0.06	-	-	-	-	-	-	-	-	-	France
(2)	1196/2016	EATING	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	-	-	UK
	1420/2016	EATING	-	-	-	-	0.03	-	-	-	-	-	-	-	0.02	-	-	-	-	-	-	-	Austria
	0019/2016	EATING	-	-	-	-	-	-	-	-	-	-	0.1	-	-	0.01	-	-	-	-	-	-	France
	1032/2016	EATING	-	-	-	-	-	-	-	-	-	-	-	-	0.01	0.03	-	-	-	-	-	-	France
	1261/2016	EATING	-	-	-	-	-	-	-	-	-	-	0.03	-	-	0.06	-	-	-	-	-	-	France
	1441/2016	EATING	-	-	-	-	-	-	-	-	-	-	-	-	0.02	0.06	-	-	-	-	-	-	France
(3)	0041/2016	EATING	-	0.09	-	-	-	-	-	-	-	-	-	-	0.01	-	-	-	-	0.04	-	-	UK
	1292/2016	EATING	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	0.02	0.02	-	-	-	-	UK
	0223/2016	EATING	-	-	-	-	-	-	-	-	-	-	0.04	-	0.02	0.02	-	-	-	-	-	-	France
(4)	1101/2016	EATING	-	0.1	-	-	0.09	-	-	-	-	-	-	-	-	0.1	-	-	-	0.04	-	-	France
	1326/2016	EATING	-	0.1	-	-	-	-	-	-	-	-	-	-	0.01	0.01	-	-	-	0.03	-	-	France
	1357/2016	EATING	-	0.07	-	-	-	-	-	-	-	-	0.03	-	0.01	-	-	-	-	0.02	-	-	France
	1044/2016	EATING	-	0.1	-	-	-	-	-	-	-	-	0.04	0.02	-	-	-	-	-	0.03	-	-	Italy
(5)	1307/2016	EATING	-	-	-	-	0.05	0.02	-	-	-	-	0.03	-	0.02	-	-	-	-	-	-	0.01	Germany
	1001/2016	EATING	-	-	-	-	-	-	-	0.09	0.01	0.08	-	-	-	-	0.04	0.01	-	-	-	-	Ireland
(6)	1130/2016	EATING	-	-	-	-	0.04	0.02	-	-	-	-	-	-	0.01	-	0.04	0.02	0.02	-	-	-	UK
	1385/2016	EATING	-	0.04	-	-	-	-	0.1	-	-	-	-	-	0.01	0.07	0.01	-	-	0.01	-	-	UK
	1472/2016	EATING	-	-	-	-	-	0.02	-	0.1	0.01	0.05	-	-	-	-	0.03	0.01	-	-	-	-	UK
(7)	0099/2016	EATING	0.04	0.2	-	0.03	0.07	-	-	-	-	0.07	-	-	-	-	-	-	-	0.09	0.01	-	Poland

The abbreviations used for the pesticide names are as follows:

ACET	acetamiprid	BOS	boscalid	BUP	bupirimate
CBZ	carbendazim	CPFOL	captan and folpet	CTP	chlorantraniliprole
CYD	cyprodinil	DIF	diflubenzuron	DIFC	difenoconazole
DTC	dithiocarbamates	DTN	dithianon	EFX	etofenprox
FLC	flonicamid (sum)	FLUD	fludioxonil	IDX	indoxacarb
MYC	myclobutanil	PIR	pirimicarb (sum)	PYC	pyraclostrobin
SPD	spirodiclofen	TRFL	trifloxystrobin		

Table 5c. Residues sought but not found in retail samples of APPLES purchased between January and February 2016

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

1,4-dimethylnaphthalene (0.01)
2,4-D (sum) (0.01)
2,4-DB (0.01)
2-phenylphenol (0.05)
6-benzyladenine (0.01)
abamectin (sum) (0.01)
acephate (0.01)
acetochlor (0.01)
acibenzolar-s-methyl (0.02)
aclonifen (0.05)
acrinathrin (0.05)
alachlor (0.01)
aldicarb (sum) (0.01)
aldrin and dieldrin (0.01)
alpha-HCH (0.01)
ametoctradin (0.01)
amidosulfuron (0.01)
amitraz (0.01)
anthraquinone (0.01)
asulam (0.05)
atrazine (0.01)
azinphos-methyl (0.02)
azoxystrobin (0.01)
BAC (sum) (0.05)
benalaxyl (0.01)
bendiocarb (0.01)
benfuracarb (0.01)
benthiavalicarb (sum) (0.01)
beta-HCH (0.01)
bifenthrin (0.01)
biphenyl (0.01)
bispyribac-sodium (0.01)
bitertanol (0.01)
bromophos-ethyl (0.01)
bromopropylate (0.01)
bromoxynil (0.01)
bromuconazole (0.01)
buprofezin (0.01)
butachlor (0.01)
butocarboxim (parent) (0.01)
butoxycarboxim (0.01)
cadusafos (0.01)
carbaryl (0.01)
carbofuran (sum) (0.01)
carbosulfan (0.01)
carboxin (0.05)
chlorbufam (0.05)
chlordane (sum) (0.01)
chlorfenapyr (0.02)
chlorfenvinphos (0.01)
chloridazon (0.01)
chlorothalonil (0.01)
chlorpropham (sum) (0.05)
chlorpyrifos (0.01)
chlorpyrifos-methyl (0.01)
ethion (0.01)
ethirimol (0.01)
ethofumesate (0.01)
ethoprophos (0.01)
etoxazole (0.02)
etridiazole (0.05)
etrimfos (0.01)
famoxadone (0.01)
fenamidone (0.01)
fenamiphos (sum) (0.01)
fenarimol (0.01)
fenazaquin (0.01)
fenbuconazole (0.01)
fenbutatin oxide (0.05)
fenhexamid (0.05)
fenitrothion (0.01)
fenoxycarb (0.01)
fenpropathrin (0.01)
fenpropidin (0.05)
fenpropimorph (0.01)
fenpyroximate (0.01)
fensulfothion (sum) (0.01)
fenthion (partial sum) (0.01)
fenvalerate & esfenvalerate (all isomers (0.01)
fipronil (sum) (0.01)
fluazifop-p-butyl (sum) (0.01)
fluazinam (0.01)
flubendiamide (0.01)
flucythrinate (0.05)
flufenacet (0.01)
flufenoxuron (0.02)
fluometuron (0.01)
fluopicolide (0.01)
fluopyram (0.01)
fluoxastrobin (0.01)
fluquinconazole (0.01)
flurochloridone (0.05)
fluroxypyr (sum) (0.05)
flusilazole (0.01)
flutolanil (0.01)
flutriafol (0.01)
fluxapyroxad (0.01)
fonofos (0.01)
formetanate (0.05)
formothion (0.01)
fosthiazate (0.01)
furalaxyl (0.01)
furathiocarb (0.01)
furmecyclox (0.01)
halofenozide (0.01)
halosulfuron-methyl (0.01)
haloxyfop (sum) (0.01)
Heptachlor (sum) (0.01)
heptenophos (0.01)
hexachlorobenzene (0.01)
monocrotophos (0.01)
monolinuron (0.01)
Monuron (0.01)
napropamide (0.05)
nitenpyram (0.01)
nitrothal-isopropyl (0.01)
nuarimol (0.01)
ofurace (0.01)
Oxadiargyl (0.01)
oxadixyl (0.01)
oxamyl (0.01)
oxasulfuron (0.01)
oxydemeton-methyl (sum) (0.01)
oxyfluorfen (0.05)
paclobutrazol (0.01)
parathion (0.01)
parathion-methyl (sum) (0.01)
penconazole (0.01)
pencycuron (0.01)
pendimethalin (0.01)
pentanochlor (0.01)
permethrin (0.01)
phenmedipham (0.05)
phenthoate (0.01)
phorate (partial sum) (0.02)
phosalone (0.01)
phosmet (sum) (0.01)
phosphamidon (0.01)
phoxim (0.01)
picolinafen (0.01)
picoxystrobin (0.01)
piperonyl butoxide (0.01)
pirimiphos-ethyl (0.01)
pirimiphos-methyl (0.01)
prochloraz (parent only) (0.01)
procymidone (0.01)
profenofos (0.01)
promecarb (0.01)
prometryn (0.01)
propachlor (0.01)
propamocarb (0.01)
propaquizafop (0.05)
propargite (0.01)
propetamphos (0.01)
propiconazole (0.01)
propoxur (0.01)
propyzamide (0.01)
proquinazid (0.01)
prosulfocarb (0.05)
prosulfuron (0.02)
prothioconazole (0.01)
prothiofos (0.01)
pymetrozine (0.01)
pyrazophos (0.01)
pyrethrins (0.01)

chlorthal-dimethyl (0.01)
chlortoluron (0.01)
chlozolinate (0.01)
chromafenozide (0.01)
clethodim (0.05)
clofentezine (0.01)
clomazone (0.01)
clothianidin (0.01)
coumaphos (0.01)
cyazofamid (0.01)
cycloate (0.01)
cycloxydim (0.05)
cyflufenamid (0.01)
cyfluthrin (0.02)
Cyhalofop-butyl (sum) (0.01)
cymoxanil (0.01)
cypermethrin (0.05)
cyproconazole (0.01)
cyromazine (0.05)
DDAC (sum) (0.05)
DDT (sum) (0.01)
deltamethrin (0.05)
demeton-S-methyl (0.01)
desmedipham (0.05)
diafenthiuron (0.05)
diazinon (0.01)
dichlobenil (0.05)
dichlofluanid (0.01)
dichlofluanid and DMSA (0.01)
dichlorprop (0.01)
dichlorvos (0.01)
diclobutrazol (0.01)
dicloran (0.01)
dicofol (sum) (0.01)
dicrotophos (0.01)
diethofencarb (0.01)
diflufenican (0.01)
dimethenamid (0.01)
dimethoate (sum) (0.01)
dimethomorph (0.01)
dimoxystrobin (0.01)
diniconazole (0.01)
dinotefuran (0.01)
diphenylamine (0.05)
disulfoton (sum) (0.02)
diuron (0.01)
dodine (0.05)
emamectin benzoate (0.01)
endosulfan (sum) (0.01)
EPN (0.01)
epoxiconazole (0.01)
EPTC (0.05)
ethephon (0.05)
ethiofencarb (parent) (0.01)
hexachlorocyclohexane (sum) (0.01)
hexaconazole (0.01)
hexythiazox (0.01)
imazalil (0.02)
imidacloprid (0.01)
ioxynil (0.05)
iprodione (0.02)
iprovalicarb (0.01)
isazophos (0.01)
isocarbophos (0.01)
isofenphos (0.01)
isofenphos-methyl (0.01)
isoprocarb (0.01)
isoprothiolane (0.01)
isoproturon (0.01)
isopyrazam (0.01)
isoxaben (0.01)
isoxaflutole (0.01)
kresoxim-methyl (0.01)
lambda-cyhalothrin (0.02)
lenacil (0.01)
lindane (0.01)
linuron (0.01)
lufenuron (0.02)
malathion (0.01)
mandipropamid (0.01)
MCPA, MCPB and MCPA thioethyl expressed (0.01)
MCPB (0.01)
mecarbam (0.01)
mepanipyrim (sum) (0.01)
mepronil (0.01)
mesosulfuron-methyl (0.01)
metaflumizone (0.05)
metalaxyl (0.01)
metamitron (0.01)
metconazole (0.01)
methabenzthiazuron (0.01)
methacrifos (0.01)
methamidophos (0.01)
methidathion (0.01)
methiocarb (sum) (0.01)
methomyl (sum) (0.01)
methoxychlor (0.01)
methoxyfenozide (0.01)
metobromuron (0.01)
metolachlor (0.01)
metolcarb (0.01)
metosulam (0.01)
metoxuron (0.01)
metrafenone (0.01)
metribuzin (0.05)
metsulfuron-methyl (0.05)
mevinphos (0.01)
molinate (0.01)
pyridaben (0.01)
pyridaphenthion (0.01)
pyrimethanil (0.05)
pyriproxifen (0.01)
quassia (0.01)
quinalphos (0.01)
quinmerac (0.05)
Quinoclamine (0.01)
quinoxyfen (0.01)
quintozene (sum) (0.01)
rimsulfuron (0.01)
rotenone (0.01)
spinosad (0.01)
spiromesifen (0.01)
spirotetramat (sum) (0.01)
spiroxamine (0.01)
sulcotrione (0.05)
sum of butocarboxim and butocarboxim sul (0.01)
tau-fluvalinate (0.01)
tebuconazole (0.01)
tebufenozide (0.01)
tebufenpyrad (0.01)
tebuthiuron (0.01)
tecnazene (0.01)
teflubenzuron (0.01)
tefluthrin (0.01)
terbufos (0.01)
Terbufos (sum not defintion) (0.01)
terbuthylazine (0.05)
tetrachlorvinphos (0.01)
tetraconazole (0.01)
tetradifon (0.01)
tetramethrin (0.01)
thiabendazole (0.05)
thiacloprid (0.01)
thiamethoxam (sum) (0.01)
thiophanate-methyl (0.01)
tolclofos-methyl (0.01)
tolfenpyrad (0.01)
tolylfluanid (sum) (0.01)
triadimefon & triadimenol (0.01)
triallate (0.05)
triasulfuron (0.05)
triazamate (0.01)
triazophos (0.01)
triclopyr (0.05)
tricyclazole (0.01)
triflumizole (0.01)
triflumuron (0.01)
trifluralin (0.01)
triforine (0.05)
triticonazole (0.01)
vinclozolin (sum) (0.01)
zoxamide (0.01)

Table 6a. Residues detected in samples of BEANS WITH PODS collected between January and February 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
GREEN BEANS Imported (Non-EC): 17 samples analysed		
carbendazim	<0.01 (i.e. not found)	15
(MRL = 0.2)	0.03, 0.09	2
chlorothalonil	<0.01 (i.e. not found)	16
(MRL = 5)	0.05	1
cypermethrin	<0.01 (i.e. not found)	15
(MRL = 0.7)	0.01, 0.02	2
flubendiamide	<0.01 (i.e. not found)	16
(MRL = 0.5)	0.1	1
iprodione	<0.01 (i.e. not found)	16
(MRL = 2)	0.1	1
methomyl (sum)	<0.01 (i.e. not found)	16
(MRL = 0.02*)	0.08	1
spinosad	<0.01 (i.e. not found)	16
(MRL = 0.3)	0.02	1
tebuconazole	<0.01 (i.e. not found)	16
(MRL = 2)	0.01	1
thiophanate-methyl	<0.01 (i.e. not found)	16
(MRL = 0.1*)	0.01	1
SPECIALITY BEANS Imported (Non-EC): 13 samples analysed		
acetamiprid	<0.01 (i.e. not found)	12
(MRL = 0.15)	0.04	1
azoxystrobin	<0.01 (i.e. not found)	12
(MRL = 3)	0.02	1
BAC (sum)	<0.01 (i.e. not found)	12
(MRL = 0.1)	0.04	1
bifenthrin	<0.01 (i.e. not found)	12
(MRL = 0.5)	0.03	1
carbendazim	<0.01 (i.e. not found)	9
(MRL = 0.2)	0.02 - 0.2	3
	0.6	1
chlorantraniliprole	<0.01 (i.e. not found)	11
(MRL = 0.8)	0.02	2
chlorpyrifos	<0.01 (i.e. not found)	12
(MRL = 0.05*)	4.3	1
clothianidin	<0.01 (i.e. not found)	12
(MRL = 0.2)	0.01	1
cypermethrin	<0.01 (i.e. not found)	12

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
(MRL = 0.7)	0.01	1
deltamethrin	<0.01 (i.e. not found)	12
(MRL = 0.2)	0.02	1
diafenthiuron	<0.01 (i.e. not found)	12
(MRL = 0.01*)	0.01	1
dimethoate (sum)	<0.01 (i.e. not found)	10
(MRL = 0.02*)	0.02	2
	0.2	1
dithiocarbamates	<0.05 (i.e. not found)	11
(MRL = 1)	0.2, 0.3	2
fenvalerate & esfenvalerate (all isomers)	<0.01 (i.e. not found)	11
(MRL = 0.1)	0.02, 0.06	2
imidacloprid	<0.01 (i.e. not found)	11
(MRL = 2)	0.02, 0.07	2
lufenuron	<0.01 (i.e. not found)	12
(MRL = 0.02*)	0.04	1
thiamethoxam (sum)	<0.01 (i.e. not found)	11
(MRL = 0.5)	0.02, 0.04	2
triazophos	<0.01 (i.e. not found)	12
(MRL = 0.01*)	0.4	1

NOTE: * Indicates MRL is set to the Limit Of Detection.

Imported (Non-EC) samples of beans with pods were from Bangladesh (3), Dominican Republic (2), Egypt (4), Ghana (1), Guatemala (1), India (5), Kenya (9), Malaysia (1), Morocco (2), Pakistan (1), Senegal (1).

Residues were distributed by country of origin, as follows:

acetamiprid	Bangladesh (1)
azoxystrobin	Dominican Republic (1)
BAC (sum)	India (1)
bifenthrin	India (1)
carbendazim	Bangladesh (3), Egypt (1), India (1), Kenya (1)
chlorothalonil	Guatemala (1)
chlorpyrifos	Bangladesh (1)
clothianidin	India (1)
chlorantraniliprole	Bangladesh (1), Malaysia (1)
cypermethrin	Bangladesh (1), Egypt (1), Kenya (1)
deltamethrin	India (1)
diafenthiuron	Malaysia (1)
dimethoate (sum)	Bangladesh (1), India (2)
dithiocarbamates	India (1), Malaysia (1)
flubendiamide	Kenya (1)
fenvalerate & esfenvalerate (all isomers	Bangladesh (2)
imidacloprid	Bangladesh (1), India (1)
iprodione	Egypt (1)
lufenuron	Pakistan (1)
methomyl (sum)	Egypt (1)
spinosad	Senegal (1)

tebuconazole	Kenya (1)
thiamethoxam (sum)	Bangladesh (1), India (1)
thiophanate-methyl	Egypt (1)
triazophos	India (1)

No residues were found in 10 of the 17 Imported (Non-EC) green beans samples
No residues were found in 4 of the 13 Imported (Non-EC) speciality beans samples

Table 6b. Residues detected in samples of BEANS WITH PODS collected between January and February 2016 *continued*

Residues (1-7 compounds) were found in 16 of the 30 samples as follows:

Number of residues	Sample ID	Type Of BEANS WITH PODS	Residues found (mg/kg)																								Country of origin
			ACET	AZOX	BACSM	BIF	CBZ	CLN	CPF	CTH	CTP	CYP	DEL	DFT	DIMSM	DTC	FLB	FNV	IMI	IPR	LFN	METHS	SPN	TBC	THMSM	TME	TRI	
(1)	4023/2016	Speciality Beans	-	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Dominican Republic
	1473/2016	Green Beans	-	-	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Guatemala
	4064/2016	Speciality Beans	-	-	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	India
	0082/2016	Green Beans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	-	-	-	Kenya
	1386/2016	Green Beans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	Kenya
	4061/2016	Speciality Beans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04	-	-	-	-	-	-	Pakistan
	1145/2016	Green Beans	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	-	-	-	-	Senegal
(2)	3604/2016	Speciality Beans	-	-	-	-	0.02	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Bangladesh
	0122/2016	Green Beans	-	-	-	-	0.09	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	-	Egypt
	1002/2016	Green Beans	-	-	-	-	0.03	-	-	-	-	0.02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Kenya
(3)	3521/2016	Speciality Beans	-	-	-	-	0.2	-	-	-	-	-	-	-	0.02	-	-	0.06	-	-	-	-	-	-	-	-	-	Bangladesh
	0036/2016	Green Beans	-	-	-	-	-	-	-	-	-	0.01	-	-	-	-	-	-	-	0.1	-	0.08	-	-	-	-	-	Egypt
	3522/2016	Speciality Beans	-	-	-	-	-	-	-	-	0.02	-	-	0.01	-	0.3	-	-	-	-	-	-	-	-	-	-	-	Malaysia
(4)	3607/2016	Speciality Beans	-	-	-	-	-	-	-	0.01	-	-	-	-	0.02	-	-	-	0.02	-	-	-	-	-	0.04	-	-	India

Number of residues	Sample ID	Type Of BEANS WITH PODS	Residues found (mg/kg)																								Country of origin
			ACET	AZOX	BACSM	BIF	CBZ	CLN	CPF	CTH	CTP	CYP	DEL	DFT	DIMSM	DTC	FLB	FNV	IMI	IPR	LFN	METHS	SPN	TBC	THMSM	TME	TRI	
(6)	4063/2016	Speciality Beans	-	-	0.04	0.03	0.2	-	-	-	-	-	0.02	-	-	0.2	-	-	-	-	-	-	-	-	-	-	0.4	India
(7)	3606/2016	Speciality Beans	0.04	-	-	-	0.6	-	4.3	-	0.02	-	-	-	-	-	-	0.02	0.07	-	-	-	-	-	0.02	-	-	Bangladesh

The abbreviations used for the pesticide names are as follows:

ACET	acetamiprid	AZOX	azoxystrobin	BACSM	BAC (sum)
BIF	bifenthrin	CBZ	carbendazim	CLN	chlorothalonil
CPF	chlorpyrifos	CTH	clothianidin	CTP	chlorantraniliprole
CYP	cypermethrin	DEL	deltamethrin	DFT	diafenthiuron
DIMSM	dimethoate (sum)	DTC	dithiocarbamates	FLB	flubendiamide
FNV	fenvalerate & esfenvalerate (all isomers)	IMI	imidacloprid	IPR	iprodione
LFN	lufenuron	METHS	methomyl (sum)	SPN	spinosad
TBC	tebuconazole	THMSM	thiamethoxam (sum)	TME	thiophanate-methyl
TRI	triazophos				

Table 6c. Residues sought but not found in samples of BEANS WITH PODS collected between January and February 2016

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

2,4-D (sum) (0.02)
2,4-DB (0.01)
2-phenylphenol (0.01)
abamectin (sum) (0.01)
acephate (0.01)
acetochlor (0.01)
acibenzolar-s-methyl (0.01)
aclonifen (0.01)
acrinathrin (0.01)
alachlor (0.01)
aldicarb (sum) (0.01)
aldrin and dieldrin (0.01)
allethrin (0.01)
alpha-HCH (0.01)
ametoctradin (0.01)
aminocarb (0.01)
amitraz (0.01)
atrazine (0.01)
azinphos-ethyl (0.01)
azinphos-methyl (0.01)
benalaxyl (0.01)
bendiocarb (0.01)
benthiavalicarb (sum) (0.01)
beta-HCH (0.01)
biphenyl (0.01)
bispyribac-sodium (0.01)
bitertanol (0.05)
boscalid (0.01)
bromopropylate (0.01)
bromoxynil (0.01)
bromuconazole (0.01)
bupirimate (0.01)
buprofezin (0.01)
butocarboxim (parent) (0.01)
butoxycarboxim (0.01)
cadusafos (0.01)
captan and folpet (0.01)
carbaryl (0.01)
carbetamide (0.01)
carbofuran (sum) (0.001)
carboxin (0.01)
chlorbufam (0.01)
chlordane (sum) (0.01)
chlorfenapyr (0.01)
chlorfenvinphos (0.01)
chlorfluazuron (0.01)
chloridazon (0.01)
chlorobenzilate (0.01)
chlorotoluron (0.01)
chlorpropham (sum) (0.05)
chlorpyrifos-methyl (0.01)
chlorthal-dimethyl (0.01)
chlozolinate (0.01)
chromafenozide (0.01)
cinidon-ethyl (0.01)
fenamidone (0.01)
fenamiphos (sum) (0.01)
fenarimol (0.01)
fenazaquin (0.01)
fenbuconazole (0.01)
fenbutatin oxide (0.01)
fenhexamid (0.01)
fenitrothion (0.01)
fenoxycarb (0.01)
fenpropathrin (0.01)
fenpropidin (0.01)
fenpropimorph (0.01)
fenpyrazamine (0.01)
fenpyroximate (0.01)
fensulfothion (sum) (0.01)
fenthion (partial sum) (0.01)
fenthion (sum) (0.01)
fipronil (sum) (0.005)
flonicamid (sum) (0.01)
fluazifop-p-butyl (sum) (0.01)
fluazinam (0.01)
flucythrinate (0.01)
fludioxonil (0.01)
flufenacet (0.01)
flufenoxuron (0.01)
fluometuron (0.01)
fluopicolide (0.01)
fluopyram (0.01)
fluoxastrobin (0.01)
fluquinconazole (0.01)
flusilazole (0.01)
flutolanil (0.01)
flutriafol (0.01)
fluxapyroxad (0.01)
fonofos (0.01)
formetanate (0.01)
formothion (0.01)
fosthiazate (0.01)
fuberidazole (0.01)
furalaxyl (0.01)
furathiocarb (0.001)
halofenozide (0.01)
halosulfuron-methyl (0.01)
haloxyfop (sum) (0.01)
Haloxyfop-R methyl (0.01)
Heptachlor (sum) (0.01)
heptenophos (0.01)
hexachlorobenzene (0.01)
hexachlorocyclohexane (sum) (0.01)
hexaconazole (0.01)
hexaflumuron (0.01)
hexazinone (0.01)
hexythiazox (0.01)
imazalil (0.01)
indoxacarb (0.01)
Oxadiargyl (0.01)
oxadiazon (0.01)
oxadixyl (0.01)
oxamyl (0.01)
oxasulfuron (0.01)
oxydemeton-methyl (sum) (0.01)
oxyfluorfen (0.01)
paclobutrazol (0.01)
parathion (0.01)
parathion-methyl (sum) (0.01)
penconazole (0.01)
pencycuron (0.01)
pendimethalin (0.01)
penflufen (0.01)
penthiopyrad (0.01)
permethrin (0.01)
phenmedipham (0.01)
phenthoate (0.01)
phorate (sum) (0.02)
phosalone (0.01)
phosmet (sum) (0.01)
phosphamidon (0.01)
phoxim (0.01)
picolinafen (0.01)
picoxystrobin (0.01)
piperonyl butoxide (0.01)
pirimicarb (sum) (0.01)
pirimiphos-ethyl (0.01)
pirimiphos-methyl (0.01)
prochloraz (parent only) (0.01)
procymidone (0.01)
profenofos (0.01)
promecarb (0.01)
prometryn (0.01)
propamocarb (0.01)
propanil (0.01)
propaquizafop (0.01)
propargite (0.01)
propetamphos (0.01)
propham (0.01)
propiconazole (0.01)
propoxur (0.01)
propyzamide (0.01)
proquinazid (0.01)
prosulfocarb (0.01)
prosulfuron (0.01)
prothioconazole (0.01)
prothiofos (0.01)
pymetrozine (0.01)
pyraclostrobin (0.01)
pyrazophos (0.01)
pyrethrins (0.01)
pyridaben (0.01)
pyridaphenthion (0.01)
pyrifenox (0.01)

clethodim (0.01)
clofentezine (0.01)
clomazone (0.01)
coumaphos (0.01)
crufomate (0.01)
cyanazine (0.01)
cyazofamid (0.01)
cycloate (0.01)
cycloxydim (0.01)
cyflufenamid (0.01)
cyfluthrin (0.01)
Cyhalofop-butyl (sum) (0.01)
cymoxanil (0.01)
cyproconazole (0.01)
cyprodinil (0.01)
cyromazine (0.01)
DDAC (sum) (0.01)

DDT (sum) (0.01)
desmedipham (0.01)
desmetryn (0.01)
diazinon (0.01)
dichlofluanid (0.01)
dichlorprop (0.01)
dichlorvos (0.01)
diclobutrazol (0.01)
dicloran (0.01)
dicofol (sum) (0.02)
dicrotophos (0.01)
diethofencarb (0.01)
difenoconazole (0.01)
diflubenzuron (0.01)
diflufenican (0.01)
dimethomorph (0.01)
dimoxystrobin (0.01)
diniconazole (0.01)
dinocap (0.01)
dinotefuran (0.01)
dioxathion (0.01)
diphenylamine (0.05)
disulfoton (sum) (0.01)
diuron (0.01)
dodine (0.05)
emamectin benzoate (0.01)
endosulfan (sum) (0.01)
endrin (0.01)
EPN (0.01)
epoxiconazole (0.01)
EPTC (0.01)
ethiofencarb (parent) (0.01)
ethion (0.01)
ethirimol (0.01)
ethofumesate (0.01)
ethoprophos (0.01)
etofenprox (0.01)
etoxazole (0.01)
etrimfos (0.01)
famoxadone (0.01)
ioxynil (0.01)
iprovalicarb (0.01)
isazophos (0.01)
isocarbophos (0.01)
isofenphos (0.01)
isofenphos-methyl (0.01)
isoprocarb (0.01)
isoprothiolane (0.01)
isoproturon (0.01)
isopyrazam (0.01)
isoxaben (0.01)
isoxaflutole (0.01)
kresoxim-methyl (0.01)
lambda-cyhalothrin (0.01)
lenacil (0.01)
lindane (0.01)
linuron (0.01)

malathion (0.01)
mandipropamid (0.01)
MCPA (sum) (0.01)
MCPB (0.01)
mecarbam (0.01)
mepanipyrim (sum) (0.01)
mepronil (0.01)
mesosulfuron-methyl (0.01)
metaflumizone (0.01)
metalaxyl (0.01)
metamitron (0.01)
metazachlor (0.01)
metconazole (0.01)
methabenzthiazuron (0.01)
methacrifos (0.01)
methamidophos (0.01)
methidathion (0.01)
methiocarb (sum) (0.01)
methoxychlor (0.01)
methoxyfenozide (0.01)
metobromuron (0.01)
metolachlor (0.01)
metolcarb (0.01)
metosulam (0.01)
metoxuron (0.01)
metrafenone (0.01)
metribuzin (0.01)
metsulfuron-methyl (0.01)
mevinphos (0.01)
molinate (0.01)
monocrotophos (0.01)
monolinuron (0.01)
Monuron (0.01)
myclobutanil (0.01)
napropamide (0.01)
neburon (0.01)
nitenpyram (0.01)
nitrothal-isopropyl (0.01)
nuarimol (0.01)
ofurace (0.01)
pyrimethanil (0.01)
pyriproxifen (0.01)
pyroxsulam (0.01)
quassia (0.01)
quinalphos (0.01)
quinmerac (0.01)
Quinoclamine (0.01)
quinoxyfen (0.01)
quintozene (sum) (0.01)
Quizalofop, incl. quizalfop-P (0.01)
rotenone (0.01)
simazine (0.01)
spirodiclofen (0.01)
spiromesifen (0.01)
spirotetramat (sum) (0.01)
spiroxamine (0.01)
sum of butocarboxim and butocarboxim sul (0.01)
tau-fluvalinate (0.01)
tebufenozide (0.01)
tebufenpyrad (0.01)
tebuthiuron (0.01)
tecnazene (0.01)
teflubenzuron (0.01)
tefluthrin (0.01)
terbacil (0.01)
terbufos (0.01)
Terbufos (sum not defintion) (0.01)
terbumeton (0.01)
terbuthylazine (0.01)
terbutryn (0.01)
tetrachlorvinphos (0.01)
tetraconazole (0.01)
tetradifon (0.01)
tetramethrin (0.01)
thiabendazole (0.01)
thiacloprid (0.01)
tolclofos-methyl (0.01)
tolfenpyrad (0.01)
tolylfluanid (sum) (0.01)
triadimefon & triadimenol (0.01)
triallate (0.01)
triasulfuron (0.01)
triazamate (0.01)
triazamate (acid) (0.01)
triazamate (ester) (0.01)
trichlorfon (0.01)
triclopyr (0.05)
tricyclazole (0.01)
trifloxystrobin (0.01)
triflumuron (0.01)
trifluralin (0.01)
triforine (0.05)
triticonazole (0.01)
Tritosulfuron (0.01)
vamidothion (0.01)
vinclozolin (sum) (0.01)
zoxamide (0.01)

Table 7a. Residues detected in retail samples of CABBAGE purchased between January and February 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
CABBAGE, UK: 18 samples analysed		
boscalid	<0.01 (i.e. not found)	16
(MRL = 5)	0.02	2
difenoconazole	<0.01 (i.e. not found)	17
(MRL = 0.2)	0.02	1
fluazifop-p-butyl (sum)	<0.01 (i.e. not found)	17
(MRL = 0.3)	0.2	1
iprodione	<0.01 (i.e. not found)	17
(MRL = 15)	0.2	1
prothioconazole	<0.01 (i.e. not found)	17
(MRL = 0.1)	0.08	1
CABBAGE, Imported (EC): 6 samples analysed		
imidacloprid	<0.01 (i.e. not found)	5
(MRL = 0.5)	0.03	1

Imported (EC) samples of cabbage were from Spain (6).
UK samples of cabbage (18).

Residues were distributed by country of origin, as follows:

boscalid	UK (2)
difenoconazole	UK (1)
fluazifop-p-butyl (sum)	UK (1)
imidacloprid	Spain (1)
iprodione	UK (1)
prothioconazole	UK (1)

No residues were found in 14 of the 18 UK samples
No residues were found in 5 of the 6 Imported (EC) samples

Table 7b. Residues detected in retail samples of CABBAGE purchased between January and February 2016

Residues (1-3 compounds) were found in 5 of the 24 samples as follows:

Number of residues	Sample ID	Residues found (mg/kg)						Country of origin
		BOS	DIFC	FZPBS	IMI	IPR	PZL	
(1)	1035/2016	-	-	0.2	-	-	-	UK
	1046/2016	0.02	-	-	-	-	-	UK
	1198/2016	-	-	-	-	0.2	-	UK
	1034/2016	-	-	-	0.03	-	-	Spain
(3)	0083/2016	0.02	0.02	-	-	-	0.08	UK

The abbreviations used for the pesticide names are as follows:

BOS	boscalid	DIFC	difenoconazole	FZPBS	fluazifop-p-butyl (sum)
IMI	imidacloprid	IPR	iprodione	PZL	prothioconazole

Table 7c. Residues sought but not found in retail samples of CABBAGE purchased between January and February 2016

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

2,4-D (sum) (0.02)
2,4-DB (0.01)
2-phenylphenol (0.01)
abamectin (sum) (0.01)
acephate (0.01)
acetamiprid (0.01)
acetochlor (0.01)
acibenzolar-s-methyl (0.01)
aclonifen (0.01)
acrinathrin (0.01)
alachlor (0.01)
aldicarb (sum) (0.01)
aldrin and dieldrin (0.01)
allethrin (0.01)
alpha-HCH (0.01)
ametoctradin (0.01)
aminocarb (0.01)
amitraz (0.01)
atrazine (0.01)
azinphos-ethyl (0.01)
azinphos-methyl (0.01)
azoxystrobin (0.01)

BAC (sum) (0.01)
benalaxyl (0.01)
bendiocarb (0.01)
benthiavalicarb (sum) (0.01)
beta-HCH (0.01)
bifenthrin (0.01)
biphenyl (0.01)
bispyribac-sodium (0.01)
bitertanol (0.05)
bromopropylate (0.01)
bromoxynil (0.01)
bromuconazole (0.01)
bupirimate (0.01)
buprofezin (0.01)
butocarboxim (parent) (0.01)
butoxycarboxim (0.01)
cadusafos (0.01)
captan (0.01)
carbaryl (0.01)
carbendazim (0.01)
carbetamide (0.01)
carbofuran (sum) (0.01)
carboxin (0.01)
chlorantraniliprole (0.01)
chlorbufam (0.01)
chlordane (sum) (0.01)
chlorfenapyr (0.01)
chlorfenvinphos (0.01)
chlorfluazuron (0.01)
chloridazon (0.01)
chlorobenzilate (0.01)
chlorothalonil (0.01)
chlorotoluron (0.01)

chlorpropham (sum) (0.05)
etofenprox (0.01)
etoxazole (0.01)
etrimfos (0.01)
famoxadone (0.01)
fenamidone (0.01)
fenamiphos (sum) (0.01)
fenarimol (0.01)
fenazaquin (0.01)
fenbuconazole (0.01)
fenbutatin oxide (0.01)
fenhexamid (0.01)
fenitrothion (0.01)
fenoxycarb (0.01)
fenpropathrin (0.01)
fenpropidin (0.01)
fenpropimorph (0.01)
fenpyrazamine (0.01)
fenpyroximate (0.01)
fensulfothion (sum) (0.01)
fenthion (partial sum) (0.01)
fenthion (sum) (0.01)
fenvalerate & esfenvalerate (all isomers (0.01)
fipronil (sum) (0.01)
flonicamid (sum) (0.01)
fluazinam (0.01)
flubendiamide (0.01)
flucythrinate (0.01)
fludioxonil (0.01)
flufenacet (0.01)
flufenoxuron (0.01)
fluometuron (0.01)
fluopicolide (0.01)
fluopyram (0.01)
fluoxastrobin (0.01)
fluquinconazole (0.01)
flusilazole (0.01)
flutolanil (0.01)
flutriafol (0.01)
fluxapyroxad (0.01)
folpet (0.01)
fonofos (0.01)
formetanate (0.01)
formothion (0.01)
fosthiazate (0.01)
fuberidazole (0.01)
furalaxyl (0.01)
furathiocarb (0.001)
halofenozide (0.01)
halosulfuron-methyl (0.01)
haloxyfop (sum) (0.01)
Haloxyfop-R methyl (0.01)
Heptachlor (sum) (0.01)
heptenophos (0.01)
hexachlorobenzene (0.01)
hexachlorocyclohexane (sum) (0.01)
hexaconazole (0.01)

nuarimol (0.01)
ofurace (0.01)
Oxadiargyl (0.01)
oxadiazon (0.01)
oxadixyl (0.01)
oxamyl (0.01)
oxasulfuron (0.01)
oxydemeton-methyl (sum) (0.01)
oxyfluorfen (0.01)
paclobutrazol (0.01)
parathion (0.01)
parathion-methyl (sum) (0.01)
penconazole (0.01)
pencycuron (0.01)
pendimethalin (0.01)
penflufen (0.01)
penthiopyrad (0.01)
permethrin (0.01)
phenmedipham (0.01)
phenthoate (0.01)
phorate (sum) (0.02)
phosalone (0.01)

phosmet (sum) (0.01)
phosphamidon (0.01)
phoxim (0.01)
picolinafen (0.01)
picoxystrobin (0.01)
piperonyl butoxide (0.01)
pirimicarb (sum) (0.01)
pirimiphos-ethyl (0.01)
pirimiphos-methyl (0.01)
prochloraz (parent only) (0.01)
procymidone (0.01)
profenofos (0.01)
promecarb (0.01)
prometryn (0.01)
propamocarb (0.01)
propanil (0.01)
propaquizafop (0.01)
propargite (0.01)
propetamphos (0.01)
propham (0.01)
propiconazole (0.01)
propoxur (0.01)
propyzamide (0.01)
proquinazid (0.01)
prosulfocarb (0.01)
prosulfuron (0.01)
prothiofos (0.01)
pymetrozine (0.01)
pyraclostrobin (0.01)
pyrazophos (0.01)
pyrethrins (0.01)
pyridaben (0.01)
pyridaphenthion (0.01)

pyrifenox (0.01)

chlorpyrifos (0.01)
chlorpyrifos-methyl (0.01)
chlorthal-dimethyl (0.01)
chlozolinate (0.01)
chromafenozide (0.01)
cinidon-ethyl (0.01)
clethodim (0.01)
clofentezine (0.01)
clomazone (0.01)
clothianidin (0.01)
coumaphos (0.01)
crufomate (0.01)
cyanazine (0.01)
cyazofamid (0.01)
cycloate (0.01)
cycloxydim (0.01)
cyflufenamid (0.01)
cyfluthrin (0.01)

Cyhalofop-butyl (sum) (0.01)
cymoxanil (0.01)
cypermethrin (0.01)
cyproconazole (0.01)
cyprodinil (0.01)
cyromazine (0.01)
DDAC (sum) (0.01)
DDT (sum) (0.01)
deltamethrin (0.01)
desmedipham (0.01)
desmetryn (0.01)
diazinon (0.01)
dichlofluanid (0.01)
dichlorprop (0.01)
dichlorvos (0.01)
diclobutrazol (0.01)
dicloran (0.01)
dicofol (sum) (0.02)
dicrotophos (0.01)
diethofencarb (0.01)
diflubenzuron (0.01)
diflufenican (0.01)
dimethoate (sum) (0.01)
dimethomorph (0.01)
dimoxystrobin (0.01)
diniconazole (0.01)
dinocap (0.01)
dinotefuran (0.01)
dioxathion (0.01)
diphenylamine (0.05)
disulfoton (sum) (0.01)
diuron (0.01)
dodine (0.05)
emamectin benzoate (0.01)
endosulfan (sum) (0.01)
endrin (0.01)
EPN (0.01)
epoxiconazole (0.01)
EPTC (0.01)
ethiofencarb (parent) (0.01)
ethion (0.01)
ethirimol (0.01)
ethofumesate (0.01)
ethoprophos (0.01)

hexaflumuron (0.01)
hexazinone (0.01)
hexythiazox (0.01)
imazalil (0.01)
indoxacarb (0.01)
ioxynil (0.01)
iprovalicarb (0.01)
isazophos (0.01)
isocarbophos (0.01)
isofenphos (0.01)
isofenphos-methyl (0.01)
isoprocarb (0.01)
isoprothiolane (0.01)
isoproturon (0.01)
isopyrazam (0.01)
isoxaben (0.01)
isoxaflutole (0.01)
kresoxim-methyl (0.01)

lambda-cyhalothrin (0.01)
lenacil (0.01)
lindane (0.01)
linuron (0.01)
lufenuron (0.01)
malathion (0.01)
mandipropamid (0.01)
MCPA (sum) (0.01)
MCPB (0.01)
mecarbam (0.01)
mepanipyrim (sum) (0.01)
mepronil (0.01)
mesosulfuron-methyl (0.01)
metaflumizone (0.01)
metalaxyl (0.01)
metamitron (0.01)
metazachlor (0.01)
metconazole (0.02)
methabenzthiazuron (0.01)
methacrifos (0.01)
methamidophos (0.01)
methidathion (0.01)
methiocarb (sum) (0.01)
methomyl (sum) (0.01)
methoxychlor (0.01)
methoxyfenozide (0.01)
metobromuron (0.01)
metolachlor (0.01)
metolcarb (0.01)
metosulam (0.01)
metoxuron (0.01)
metrafenone (0.01)
metribuzin (0.01)
metsulfuron-methyl (0.01)
mevinphos (0.01)
molinate (0.01)
monocrotophos (0.01)
monolinuron (0.01)
Monuron (0.01)
myclobutanil (0.01)
napropamide (0.01)
neburon (0.01)
nitenpyram (0.01)
nitrothal-isopropyl (0.01)

pyrimethanil (0.01)
pyriproxifen (0.01)
pyroxsulam (0.01)
quassia (0.01)
quinalphos (0.01)
quinmerac (0.01)
Quinoclamine (0.01)
quinoxyfen (0.01)
quintozene (sum) (0.01)
Quizalofop, incl. quizalfop-P (0.01)
rotenone (0.01)
simazine (0.01)
spinosad (0.01)
spirodiclofen (0.01)
spiromesifen (0.01)
spirotetramat (sum) (0.01)
spiroxamine (0.01)
sum of butocarboxim and butocarboxim sul (0.01)
tau-fluvalinate (0.01)
tebuconazole (0.01)
tebufenozide (0.01)
tebufenpyrad (0.01)
tebuthiuron (0.01)
tecnazene (0.01)
teflubenzuron (0.01)
tefluthrin (0.01)
terbacil (0.01)
terbufos (0.01)
Terbufos (sum not defintion) (0.01)
terbumeton (0.01)
terbuthylazine (0.01)
terbutryn (0.01)
tetrachlorvinphos (0.01)
tetraconazole (0.01)
tetradifon (0.01)
tetramethrin (0.01)
thiabendazole (0.01)
thiacloprid (0.01)
thiamethoxam (sum) (0.01)
thiophanate-methyl (0.01)
tolclofos-methyl (0.01)
tolfenpyrad (0.01)
tolylfluanid (sum) (0.01)
triadimefon & triadimenol (0.01)
triallate (0.01)
triasulfuron (0.01)
triazamate (0.01)
triazamate (acid) (0.01)
triazamate (ester) (0.01)
triazophos (0.01)
trichlorfon (0.01)
triclopyr (0.05)
tricyclazole (0.01)
trifloxystrobin (0.01)
triflumuron (0.01)
trifluralin (0.01)
triforine (0.05)
triticonazole (0.01)
Tritosulfuron (0.01)
vamidothion (0.01)
vinclozolin (sum) (0.01)
zoxamide (0.01)

Table 8a. Residues detected in retail samples of CHEESE purchased between January and March 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
SOFT CHEESE UK: 5 samples analysed		
None found	-	5
SPREADABLE CHEESE UK: 13 samples analysed		
Chlorate	<0.01 (i.e. not found)	0
(MRL = 0.01*)	0.06 - 0.2	13
However we do not think that these chlorate findings should be treated as breaches of the legislation. – see our summary conclusions on 14		
SOFT CHEESE Imported (EC): 13 samples analysed		
BAC (sum)	<0.01 (i.e. not found)	4
(MRL = 0.1)	0.01 - 0.04	9
SPREADABLE CHEESE Imported (EC): 5 samples analysed		
BAC (sum)	<0.01 (i.e. not found)	2
(MRL = 0.1)	0.02 - 0.09	3
Chlorate	<0.01 (i.e. not found)	0
(MRL = 0.01*)	0.03 - 0.04	5
However we do not think that these chlorate findings should be treated as breaches of the legislation. – see our summary conclusions on 14.		

NOTE: * Indicates MRL is set to the Limit Of Detection.

Imported (EC) samples of cheese were from Denmark (13), France (5).
UK samples of cheese (18).

Residues were distributed by country of origin, as follows:

BAC (sum)	Denmark (9), France (3)
Chlorate	France (5), UK (13)

No residues were found in any of the UK soft cheese samples
Residues were found in all of the 13 UK spreadable cheese samples
No residues were found in 4 of the 13 Imported (EC) soft cheese samples
Residues were found in all of the 5 Imported (EC) spreadable cheese samples

Table 8b. Residues detected in retail samples of CHEESE purchased between January and March 2016 *continued*

Residues (1-2 compounds) were found in 27 of the 36 samples as follows:

Number of residues	Sample ID	Type of CHEESE	Residues found (mg/kg) BACSM	CLOR	Country of origin
(1)	0091/2016	SPREADABLE CHEESE	-	0.08	UK
	0208/2016	SPREADABLE CHEESE	-	0.1	UK
	0210/2016	SPREADABLE CHEESE	-	0.1	UK
	0214/2016	SPREADABLE CHEESE	-	0.2	UK
	0215/2016	SPREADABLE CHEESE	-	0.1	UK
	1209/2016	SPREADABLE CHEESE	-	0.06	UK
	1210/2016	SPREADABLE CHEESE	-	0.06	UK
	1269/2016	SPREADABLE CHEESE	-	0.1	UK
	1299/2016	SPREADABLE CHEESE	-	0.07	UK
	1331/2016	SPREADABLE CHEESE	-	0.1	UK
	1429/2016	SPREADABLE CHEESE	-	0.1	UK
	4486/2016	SPREADABLE CHEESE	-	0.1	UK
	4488/2016	SPREADABLE CHEESE	-	0.1	UK
	0093/2016	SOFT CHEESE	0.03	-	Denmark
	1237/2016	SOFT CHEESE	0.04	-	Denmark
	1238/2016	SOFT CHEESE	0.03	-	Denmark
	1268/2016	SOFT CHEESE	0.02	-	Denmark
	1300/2016	SOFT CHEESE	0.04	-	Denmark
	1311/2016	SOFT CHEESE	0.01	-	Denmark
	1332/2016	SOFT CHEESE	0.03	-	Denmark
	1366/2016	SOFT CHEESE	0.03	-	Denmark
	1367/2016	SOFT CHEESE	0.03	-	Denmark
	1208/2016	SPREADABLE CHEESE	-	0.04	France
	1301/2016	SPREADABLE CHEESE	-	0.03	France
(2)	0092/2016	SPREADABLE CHEESE	0.02	0.03	France
	0209/2016	SPREADABLE CHEESE	0.09	0.04	France
	1435/2016	SPREADABLE CHEESE	0.07	0.03	France

The abbreviations used for the pesticide names are as follows:

BACSM BAC (sum) CLOR Chlorate

Table 8c. Residues sought but not found in retail samples of CHEESE purchased between January and March 2016

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

abamectin (sum) (0.01)
acephate (0.01)
aldrin and dieldrin (0.002)
alpha-HCH (0.002)
azamethiphos (0.01)
azinphos-ethyl (0.005)
benfuracarb (0.002)
beta-HCH (0.002)
bifenthrin (0.005)
boscalid (0.01)
bromophos-ethyl (0.002)
cadusafos (0.002)
carbaryl (0.002)
carbendazim (0.01)
carbofuran (sum) (0.002)
carbosulfan (0.002)
chlordane (sum) (0.002)
chlorfenvinphos (0.002)
chlorobenzilate (0.01)
chlorpropham (sum) (0.005)
chlorpyrifos (0.002)
chlorpyrifos-methyl (0.002)
coumaphos (0.002)
cyfluthrin (0.005)
cypermethrin (0.002)
cyproconazole (0.01)
DDAC (sum) (0.01)
DDT (sum) (0.002)
deltamethrin (0.005)
diazinon (0.002)
dichlorvos (0.01)
diflubenzuron (0.01)
dimethoate (sum) (0.01)
endosulfan (sum) (0.002)
endrin (0.002)
epoxiconazole (0.01)
ethoprophos (0.002)
etofenprox (0.01)
famoxadone (0.002)
fenitrothion (0.002)
fenpropimorph (0.01)
fenthion (partial sum) (0.01)
fenvalerate & esfenvalerate (all isomers (0.002)
fluazifop-p-butyl (sum) (0.01)
fluquinconazole (0.01)
flusilazole (0.01)
formothion (0.01)
haloxyfop (sum) (0.01)
Heptachlor (sum) (0.002)
hexachlorobenzene (0.002)
hexachlorocyclohexane (sum) (0.002)
indoxacarb (0.01)
lambda-cyhalothrin (0.005)
lindane (0.002)
malathion (0.005)
metaflumizone (0.01)
metazachlor (0.002)
methacrifos (0.002)
methamidophos (0.01)
methidathion (0.005)
methoxychlor (0.002)
nitrofen (0.002)
parathion (0.005)
parathion-methyl (sum) (0.005)
pendimethalin (0.005)
permethrin (0.002)
phosmet (sum) (0.002)
phoxim (0.01)
pirimicarb (sum) (0.002)
pirimiphos-methyl (0.002)
prochloraz (parent only) (0.01)
profenofos (0.01)
propetamphos (0.002)
propoxur (0.002)
prothioconazole (0.01)
pyrazophos (0.002)
quintozene (sum) (0.002)
resmethrin (0.01)
spinosad (0.01)
tau-fluvalinate (0.01)
tebuconazole (0.01)
tecnazene (0.002)
teflubenzuron (0.01)
tetrachlorvinphos (0.002)
tetraconazole (0.01)
thiacloprid (0.01)
triazophos (0.002)
vinclozolin (sum) (0.002)

Table 9a. Residues detected in retail samples of SEA FISH purchased between January and March 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
COD UK: 1 sample analysed		
None found	-	1
SEA BASS UK: 1 sample analysed		
None found	-	1
COD Imported (Non-EC): 9 samples analysed		
None found	-	9
HADDOCK Imported (Non-EC): 1 sample analysed		
None found	-	1
HAKE Imported (Non-EC): 4 samples analysed		
None found	-	4
MONK FISH Imported (Non-EC): 1 sample analysed		
None found	-	1
PLAICE Imported (Non-EC): 2 samples analysed		
None found	-	2
POLLOCK Imported (Non-EC): 2 samples analysed		
None found	-	2
SEA BASS Imported (Non-EC): 1 sample analysed		
None found	-	1
SEA BREAM Imported (Non-EC): 1 sample analysed		
DDT (sum)	<0.002 (i.e. not found)	0
(No MRL)	0.002	1

Imported (Non-EC) samples of sea fish were from Alaska (1), Atlantic Ocean (1), China (1), North Atlantic (1), North East Atlantic (8), North Pacific (1), Norway (1), Norwegian Sea (2), Pacific Ocean (2), South East Atlantic (1), Turkey (2).
UK samples of sea fish (2).

Residues were distributed by country of origin, as follows:
DDT (sum) Turkey (1)
No residues were found in any of the UK cod samples
No residues were found in any of the UK sea bass samples
No residues were found in any of the Imported (Non-EC) cod samples
No residues were found in any of the Imported (Non-EC) haddock samples
No residues were found in any of the Imported (Non-EC) hake samples
No residues were found in any of the Imported (Non-EC) monk fish samples
No residues were found in any of the Imported (Non-EC) plaice samples
No residues were found in any of the Imported (Non-EC) pollock samples
No residues were found in any of the Imported (Non-EC) sea bass samples
Residues were found in all of the 1 Imported (Non-EC) sea bream samples

Table 9b. Residues detected in retail samples of SEA FISH purchased between January and March 2016 *continued*

Residue (1 compound) was found in 1 of the 23 samples as follows:

Number of residues	Sample ID	Type of SEA FISH	Residues found (mg/kg) DDT	Country of origin
(1)	0035/2016	SEA BREAM	0.002	Turkey

The abbreviations used for the pesticide names are as follows:

DDT DDT (sum)

Table 9c. Residues sought but not found in retail samples of SEA FISH purchased between January and March 2016

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

aldrin and dieldrin (0.002)
alpha-HCH (0.002)
azinphos-ethyl (0.002)
beta-HCH (0.002)
bifenthrin (0.005)
chlordane (animal products) (0.002)
chlorfenvinphos (0.002)
chlorobenzilate (0.002)
chlorpyrifos (0.002)
chlorpyrifos-methyl (0.002)
cyfluthrin (0.005)
cypermethrin (0.005)
deltamethrin (0.005)
diazinon (0.002)
endosulfan (sum) (0.002)
endrin (0.002)
fenvalerate & esfenvalerate (all isomers (0.005)
Heptachlor (sum) (0.002)
hexachlorobenzene (0.002)
lindane (0.002)
methacrifos (0.002)
methidathion (0.002)
methoxychlor (0.002)
nitrofen (0.002)
parathion (0.002)
parathion-methyl (sum) (0.002)
permethrin (0.005)
pirimiphos-methyl (0.002)
profenofos (0.002)
pyrazophos (0.002)
quintozene (sum) (0.002)
resmethrin (0.005)
tecnazene (0.002)
triazophos (0.002)

Table 10a. Residues detected in samples of GRAPES collected between January and March 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
GRAPES, Imported (Non-EC): 36 samples analysed		
ametoctradin	<0.01 (i.e. not found)	35
(MRL = 6)	0.04	1
azoxystrobin	<0.01 (i.e. not found)	33
(MRL = 2)	0.04 - 0.2	3
boscalid	<0.01 (i.e. not found)	30
(MRL = 5)	0.02 - 0.1	6
chlorantraniliprole	<0.01 (i.e. not found)	35
(MRL = 1)	0.2	1
clothianidin	<0.01 (i.e. not found)	35
(MRL = 0.7)	0.01	1
cyflufenamid	<0.01 (i.e. not found)	35
(MRL = 0.15)	0.02	1
cyproconazole	<0.01 (i.e. not found)	35
(MRL = 0.2)	0.01	1
cyprodinil	<0.05 (i.e. not found)	35
(MRL = 3)	0.1	1
dimethomorph	<0.01 (i.e. not found)	32
(MRL = 3)	0.02 - 0.08	4
dithiocarbamates	<0.05 (i.e. not found)	29
(MRL = 5)	0.05 - 0.2	7
ethephon	<0.001 (i.e. not found)	22
(MRL = 1)	0.06 - 0.6	13
	1.2	1
famoxadone	<0.01 (i.e. not found)	35
(MRL = 2)	0.06	1
fenhexamid	<0.05 (i.e. not found)	28
(MRL = 5)	0.1 - 0.9	5
(MRL = 15)	0.1 - 0.8	3
fluopyram	<0.01 (i.e. not found)	20
(MRL = 1.5)	0.01 - 0.5	16
imidacloprid	<0.01 (i.e. not found)	35
(MRL = 1)	0.01	1
indoxacarb	<0.01 (i.e. not found)	35
(MRL = 2)	0.03	1
mandipropamid	<0.01 (i.e. not found)	33
(MRL = 2)	0.03 - 0.05	3
metrafenone	<0.01 (i.e. not found)	34
(MRL = 5)	0.01, 0.05	2

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
myclobutanil	<0.01 (i.e. not found)	32
(MRL = 1)	0.03 - 0.1	4
penconazole	<0.01 (i.e. not found)	32
(MRL = 0.2)	0.01 - 0.05	4
pyraclostrobin	<0.01 (i.e. not found)	35
(MRL = 1)	0.01	1
pyrimethanil	<0.05 (i.e. not found)	32
(MRL = 5)	0.06 - 0.9	4
quinoxyfen	<0.01 (i.e. not found)	32
(MRL = 1)	0.01 - 0.03	4
spinosad	<0.01 (i.e. not found)	34
(MRL = 0.5)	0.01, 0.08	2
spirotetramat (sum)	<0.01 (i.e. not found)	35
(MRL = 2)	0.01	1
tebuconazole	<0.01 (i.e. not found)	35
(MRL = 0.5)	0.1	1
tetraconazole	<0.01 (i.e. not found)	33
(MRL = 0.5)	0.02 - 0.03	3
thiamethoxam (sum)	<0.01 (i.e. not found)	35
(MRL = 0.9)	0.02	1
triadimefon & triadimenol	<0.01 (i.e. not found)	35
(MRL = 2)	0.02	1
zoxamide	<0.01 (i.e. not found)	35
(MRL = 5)	0.04	1

Imported (Non-EC) samples of grapes were from Brazil (1), India (4), Namibia (2), South Africa (28), USA (1).

Residues were distributed by country of origin, as follows:

ametoctradin	India (1)
azoxystrobin	Brazil (1), South Africa (2)
boscalid	Namibia (2), South Africa (3), USA (1)
cyflufenamid	USA (1)
cyproconazole	Brazil (1)
clothianidin	India (1)
chlorantraniliprole	USA (1)
cyprodinil	USA (1)
dimethomorph	India (3), South Africa (1)
dithiocarbamates	India (3), South Africa (4)
ethephon	Brazil (1), South Africa (12), USA (1)
famoxadone	South Africa (1)
fenhexamid	South Africa (8)
fluopyram	South Africa (16)
indoxacarb	South Africa (1)
imidacloprid	India (1)
mandipropamid	India (3)
metrafenone	South Africa (1), USA (1)
myclobutanil	India (3), USA (1)

penconazole	South Africa (4)
pyraclostrobin	USA (1)
pyrimethanil	Namibia (2), South Africa (1), USA (1)
quinoxyfen	South Africa (4)
spinosad	India (2)
spirotetramat (sum)	South Africa (1)
tebuconazole	USA (1)
thiamethoxam (sum)	India (1)
triadimefon & triadimenol	India (1)
tetraconazole	India (2), USA (1)
zoxamide	South Africa (1)

No residues were found in 2 of the 36 Imported (Non-EC) samples

Table 10b. Residues detected in samples of GRAPES collected between January and March 2016 *continued*

Residues (1-11 compounds) were found in 34 of the 36 samples as follows:

Number of residues	Sample ID	Residues found (mg/kg)															
		AMTD	AZOX	BOS	CFF	CPZ	CTH	CTP	CYD	DMR	DTC	ETH	FAX	FNHX	FPYM	IDX	IMI
(1)	3556/2016	-	-	-	-	-	-	-	-	-	0.08	-	-	-	-	-	-
	1215/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-
	1309/2016	-	-	-	-	-	-	-	-	-	-	0.6	-	-	-	-	-
	1388/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	0.4	-	-
	1421/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	-	-
	1466/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-
	4114/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-	-
(2)	0084/2016	-	-	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-
	3586/2016	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-
	0042/2016	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	0201/2016	-	-	-	-	-	-	-	-	-	-	-	-	0.1	0.04	-	-
	1045/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	0.06	0.03	-
	1262/2016	-	-	-	-	-	-	-	-	-	-	0.2	-	-	0.2	-	-
	1293/2016	-	-	-	-	-	-	-	-	-	-	0.2	-	-	0.2	-	-
	1324/2016	-	-	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-
	1358/2016	-	-	-	-	-	-	-	-	-	-	0.5	-	-	0.5	-	-
	1442/2016	-	-	-	-	-	-	-	-	-	-	-	-	0.8	0.05	-	-
	3534/2016	-	-	0.02	-	-	-	-	-	-	-	0.2	-	-	-	-	-
	3535/2016	-	-	-	-	-	-	-	-	-	-	0.3	-	-	-	-	-
	3570/2016	-	-	-	-	-	-	-	-	-	-	-	-	0.6	0.06	-	-
	3948/2016	-	-	-	-	-	-	-	-	-	-	-	-	0.9	0.1	-	-
	4134/2016	-	-	-	-	-	-	-	-	-	-	0.6	-	-	0.3	-	-
	4138/2016	-	-	-	-	-	-	-	-	-	-	0.2	-	-	-	-	-

Number of residues	Sample ID	Residues found (mg/kg)															
		AMTD	AZOX	BOS	CFF	CPZ	CTH	CTP	CYD	DMR	DTC	ETH	FAX	FNHX	FPYM	IDX	IMI
(3)	1243/2016	-	0.04	-	-	0.01	-	-	-	-	-	1.2	-	-	-	-	-
	0095/2016	-	-	0.02	-	-	-	-	-	-	-	0.1	-	-	-	-	-
	0221/2016	-	-	-	-	-	-	-	-	-	0.05	-	-	0.4	0.04	-	-
	3590/2016	-	-	-	-	-	-	-	-	-	-	0.06	0.06	-	0.01	-	-
(4)	3517/2016	-	-	-	-	-	-	-	-	0.02	0.05	-	-	-	-	-	-
	0021/2016	-	-	0.09	-	-	-	-	-	-	0.05	0.5	-	-	-	-	-
(6)	3973/2016	0.04	-	-	-	-	-	-	-	0.06	-	-	-	-	-	-	-
	3597/2016	-	-	-	-	-	-	-	-	-	0.2	0.4	-	0.8	-	-	-
(7)	3901/2016	-	0.05	-	-	-	-	-	-	0.02	0.08	-	-	0.1	-	-	-
(10)	3516/2016	-	-	-	-	-	0.01	-	-	0.08	0.05	-	-	-	-	-	0.01
(11)	3568/2016	-	-	0.06	0.02	-	-	0.2	0.1	-	-	0.4	-	-	-	-	-

Number of residues	Sample ID	Residues found (mg/kg)													Country of origin
		MDI	MTF	MYC	PNZ	PYC	PYM	QINO	SPN	STTPS	TBC	THMSM	TRSP	TTZ	ZOX	
(1)	3556/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	India
	1215/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
	1309/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
	1388/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
	1421/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
	1466/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa

Number of residues	Sample ID	Residues found (mg/kg)														Country of origin
		MDI	MTF	MYC	PNZ	PYC	PYM	QINO	SPN	STTPS	TBC	THMSM	TRSP	TTZ	ZOX	
	4114/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
(2)	0084/2016	-	-	-	-	-	0.06	-	-	-	-	-	-	-	-	Namibia
	3586/2016	-	-	-	-	-	0.9	-	-	-	-	-	-	-	-	Namibia
	0042/2016	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-	South Africa
	0201/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
	1045/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
	1262/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
	1293/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
	1324/2016	-	-	-	-	-	-	0.03	-	-	-	-	-	-	-	South Africa
	1358/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
	1442/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
	3534/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
	3535/2016	-	-	-	-	-	-	0.01	-	-	-	-	-	-	-	South Africa
	3570/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
	3948/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
	4134/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
	4138/2016	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	South Africa
(3)	1243/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Brazil
	0095/2016	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	South Africa
	0221/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
	3590/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
(4)	3517/2016	0.04	-	0.1	-	-	-	-	-	-	-	-	-	-	-	India
	0021/2016	-	0.05	-	-	-	-	-	-	-	-	-	-	-	-	South Africa
(6)	3973/2016	0.05	-	0.03	-	-	-	-	0.01	-	-	-	-	0.03	-	India
	3597/2016	-	-	-	-	-	0.06	0.01	-	0.01	-	-	-	-	-	South Africa

Number of residues	Sample ID	Residues found (mg/kg)														Country of origin
		MDI	MTF	MYC	PNZ	PYC	PYM	QINO	SPN	STTPS	TBC	THMSM	TRSP	TTZ	ZOX	
(7)	3901/2016	-	-	-	0.01	-	-	0.01	-	-	-	-	-	-	0.04	South Africa
(10)	3516/2016	0.03	-	0.03	-	-	-	-	0.08	-	-	0.02	0.02	0.02	-	India
(11)	3568/2016	-	0.01	0.06	-	0.01	0.3	-	-	-	0.1	-	-	0.02	-	USA

The abbreviations used for the pesticide names are as follows:

AMTD	ametoctradin	AZOX	azoxystrobin	BOS	boscalid
CFF	cyflufenamid	CPZ	cyproconazole	CTH	clothianidin
CTP	chlorantraniliprole	CYD	cyprodinil	DMR	dimethomorph
DTC	dithiocarbamates	ETH	ethephon	FAX	famoxadone
FNHX	fenhexamid	FPYM	fluopyram	IDX	indoxacarb
IMI	imidacloprid	MDI	mandipropamid	MTF	metrafenone
MYC	myclobutanil	PNZ	penconazole	PYC	pyraclostrobin
PYM	pyrimethanil	QINO	quinoxyfen	SPN	spinosad
STTPS	spirotetramat (sum)	TBC	tebuconazole	THMSM	thiamethoxam (sum)
TRSP	triadimefon & triadimenol	TTZ	tetraconazole	ZOX	zoxamide

Table 10c. Residues sought but not found in samples of GRAPES collected between January and March 2016

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

1,4-dimethylnaphthalene (0.01)
2,4-D (sum) (0.01)
2,4-DB (0.01)
2-phenylphenol (0.05)
6-benzyladenine (0.01)
abamectin (sum) (0.01)
acephate (0.01)
acetamiprid (0.01)
acetochlor (0.01)
acibenzolar-s-methyl (0.02)
aclonifen (0.05)
acrinathrin (0.05)
alachlor (0.01)
aldicarb (sum) (0.01)
aldrin and dieldrin (0.01)
alpha-HCH (0.01)
amidosulfuron (0.01)
amitraz (0.01)
anthraquinone (0.01)
asulam (0.05)
atrazine (0.01)
azinphos-methyl (0.02)
BAC (sum) (0.05)
benalaxyl (0.01)
bendiocarb (0.01)
benfuracarb (0.01)
benthiavalicarb (sum) (0.01)
beta-HCH (0.01)
bifenthrin (0.01)
biphenyl (0.01)
bispyribac-sodium (0.01)
bitertanol (0.01)
bromophos-ethyl (0.01)
bromopropylate (0.01)
bromoxynil (0.01)
bromuconazole (0.01)
bupirimate (0.01)
buprofezin (0.01)
butachlor (0.01)
butocarboxim (parent) (0.01)
butoxycarboxim (0.01)
cadusafos (0.01)
captan (0.02)
carbaryl (0.01)
carbendazim (0.01)
carbofuran (sum) (0.01)
carbosulfan (0.01)
carboxin (0.05)
chlorbufam (0.05)
chlordane (sum) (0.01)
chlorfenapyr (0.02)
chlorfenvinphos (0.01)
chloridazon (0.01)
chlormequat (0.02)
chlorothalonil (0.01)
epoxiconazole (0.01)
EPTC (0.05)
ethiofencarb (parent) (0.01)
ethion (0.01)
ethirimol (0.01)
ethofumesate (0.01)
ethoprophos (0.01)
etofenprox (0.01)
etoxazole (0.02)
etridiazole (0.05)
etrimfos (0.01)
fenamidone (0.01)
fenamiphos (sum) (0.01)
fenarimol (0.01)
fenazaquin (0.01)
fenbuconazole (0.01)
fenbutatin oxide (0.05)
fenitrothion (0.01)
fenoxycarb (0.01)
fenpropathrin (0.01)
fenpropidin (0.05)
fenpropimorph (0.01)
fenpyroximate (0.01)
fensulfothion (sum) (0.01)
fenthion (partial sum) (0.01)
fenvalerate & esfenvalerate (all isomers (0.01)
fipronil (sum) (0.01)
flonicamid (sum) (0.01)
fluazifop-p-butyl (sum) (0.01)
fluazinam (0.01)
flubendiamide (0.01)
flucythrinate (0.05)
fludioxonil (0.01)
flufenacet (0.01)
flufenoxuron (0.02)
fluometuron (0.01)
fluopicolide (0.01)
fluoxastrobin (0.01)
fluquinconazole (0.01)
flurochloridone (0.05)
fluroxypyr (sum) (0.05)
flusilazole (0.01)
flutolanil (0.01)
flutriafol (0.01)
fluxapyroxad (0.01)
folpet (0.01)
fonofos (0.01)
formetanate (0.05)
fosthiazate (0.01)
furalaxyl (0.01)
furathiocarb (0.01)
furmecyclox (0.01)
halofenozide (0.01)
halosulfuron-methyl (0.01)
haloxyfop (sum) (0.01)
metribuzin (0.05)
metsulfuron-methyl (0.05)
mevinphos (0.01)
molinate (0.01)
monocrotophos (0.01)
monolinuron (0.01)
Monuron (0.01)
napropamide (0.05)
nitenpyram (0.01)
nitrothal-isopropyl (0.01)
nuarimol (0.01)
ofurace (0.01)
Oxadiargyl (0.01)
oxadixyl (0.01)
oxamyl (0.01)
oxasulfuron (0.01)
oxydemeton-methyl (sum) (0.01)
oxyfluorfen (0.05)
paclobutrazol (0.01)
parathion (0.01)
parathion-methyl (sum) (0.01)
pencycuron (0.01)
pendimethalin (0.01)
pentanochlor (0.01)
permethrin (0.01)
phenmedipham (0.05)
phenthoate (0.01)
phorate (partial sum) (0.02)
phosalone (0.01)
phosmet (sum) (0.01)
phosphamidon (0.01)
phoxim (0.01)
picolinafen (0.01)
picoxystrobin (0.01)
piperonyl butoxide (0.01)
pirimicarb (sum) (0.01)
pirimiphos-ethyl (0.01)
pirimiphos-methyl (0.01)
prochloraz (parent only) (0.01)
procymidone (0.01)
profenofos (0.01)
promecarb (0.01)
prometryn (0.01)
propachlor (0.01)
propamocarb (0.01)
propaquizafop (0.05)
propargite (0.01)
propetamphos (0.01)
propiconazole (0.01)
propoxur (0.01)
propyzamide (0.01)
proquinazid (0.01)
prosulfocarb (0.05)
prosulfuron (0.02)
prothioconazole (0.01)

chlorpropham (sum) (0.05)
chlorpyrifos (0.01)
chlorpyrifos-methyl (0.01)
chlorthal-dimethyl (0.01)

chlortoluron (0.01)
chlozolinate (0.01)
chromafenozide (0.01)
clethodim (0.05)
clofentezine (0.01)
clomazone (0.01)
coumaphos (0.01)
cyazofamid (0.01)
cycloate (0.01)
cycloxydim (0.05)
cyfluthrin (0.02)
Cyhalofop-butyl (sum) (0.01)
cymoxanil (0.01)
cypermethrin (0.05)
cyromazine (0.05)

DDAC (sum) (0.05)
DDT (sum) (0.01)
deltamethrin (0.05)
demeton-S-methyl (0.01)
desmedipham (0.05)
diafenthiuron (0.05)
diazinon (0.01)
dichlobenil (0.05)
dichlofluanid (0.01)

dichlofluanid and DMSA (0.01)
dichlorprop (0.01)
dichlorvos (0.01)
diclobutrazol (0.01)
dicloran (0.01)
dicofol (sum) (0.01)
dicrotophos (0.01)
diethofencarb (0.01)
difenoconazole (0.01)
diflubenzuron (0.01)
diflufenican (0.01)
dimethenamid (0.01)
dimethoate (sum) (0.01)
dimoxystrobin (0.01)
diniconazole (0.01)
dinotefuran (0.01)
diphenylamine (0.05)
disulfoton (sum) (0.02)
diuron (0.01)
dodine (0.05)
emamectin benzoate (0.01)
endosulfan (sum) (0.01)
EPN (0.01)

Heptachlor (sum) (0.01)
heptenophos (0.01)
hexachlorobenzene (0.01)
hexachlorocyclohexane (sum) (0.01)
hexaconazole (0.01)
hexythiazox (0.01)
imazalil (0.02)
ioxynil (0.05)
iprodione (0.02)
iprovalicarb (0.01)
isazophos (0.01)
isocarbophos (0.01)
isofenphos (0.01)
isofenphos-methyl (0.01)
isoprocarb (0.01)
isoprothiolane (0.01)
isoproturon (0.01)
isopyrazam (0.01)
isoxaben (0.01)

isoxaflutole (0.01)
kresoxim-methyl (0.01)
lambda-cyhalothrin (0.02)
lenacil (0.01)
lindane (0.01)
linuron (0.01)
lufenuron (0.02)
malathion (0.01)
MCPA, MCPB and MCPA thioethyl expressed (0.01)
MCPB (0.01)
mecarbam (0.01)
mepanipyrim (sum) (0.01)
mepiquat (0.02)
mepronil (0.01)
mesosulfuron-methyl (0.01)
metaflumizone (0.05)
metalaxyl (0.01)
metamitron (0.01)
metconazole (0.01)
methabenzthiazuron (0.01)
methacrifos (0.01)
methamidophos (0.01)
methidathion (0.01)
methiocarb (sum) (0.01)
methomyl (sum) (0.01)
methoxychlor (0.01)
methoxyfenozide (0.01)
metobromuron (0.01)
metolachlor (0.01)
metolcarb (0.01)
metosulam (0.01)
metoxuron (0.01)

prothiofos (0.01)
pymetrozine (0.01)
pyrazophos (0.01)
pyrethrins (0.01)

pyridaben (0.01)
pyridaphenthion (0.01)
pyriproxifen (0.01)
quassia (0.01)
quinalphos (0.01)
quinmerac (0.05)
Quinoclamine (0.01)
quintozene (sum) (0.01)
rimsulfuron (0.01)
rotenone (0.01)
spirodiclofen (0.01)
spiromesifen (0.01)
spiroxamine (0.01)
sulcotrione (0.05)
sum of butocarboxim and butocarboxim sul (0.01)
tau-fluvalinate (0.01)
tebufenozide (0.01)
tebufenpyrad (0.01)
tebuthiuron (0.01)
tecnazene (0.01)
teflubenzuron (0.01)
tefluthrin (0.01)
terbufos (0.01)
Terbufos (sum not defintion) (0.01)

terbuthylazine (0.05)
tetrachlorvinphos (0.01)
tetradifon (0.01)
tetramethrin (0.01)
thiabendazole (0.05)
thiacloprid (0.01)
thiophanate-methyl (0.01)
tolclofos-methyl (0.01)
tolfenpyrad (0.01)
tolylfluanid (sum) (0.01)
triallate (0.05)
triasulfuron (0.05)
triazamate (0.01)
triazophos (0.01)
triclopyr (0.05)
tricyclazole (0.01)
trifloxystrobin (0.01)
triflumizole (0.01)
triflumuron (0.01)
trifluralin (0.01)
triforine (0.05)
triticonazole (0.01)
vinclozolin (sum) (0.01)

Table 11a. Residues detected in retail samples of LEEKS purchased between January and March 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
LEEKS, UK: 23 samples analysed		
boscalid	<0.01 (i.e. not found)	22
(MRL = 5)	0.02	1
LEEKS, Imported (EC): 1 sample analysed		
None found	-	1

Imported (EC) samples of leeks were from Germany (1).
UK samples of leeks (23).

Residues were distributed by country of origin, as follows:
boscalid UK (1)

No residues were found in 22 of the 23 UK samples
No residues were found in any of the Imported (EC) samples

Table 11b. Residues detected in retail samples of LEEKS purchased between January and March 2016 *continued*

Residue (1 compound) was found in 1 of the 24 samples as follows:

Number of residues	Sample ID	Residues found (mg/kg) BOS	Country of origin
(1)	1096/2016	0.02	UK

The abbreviations used for the pesticide names are as follows:

BOS boscalid

Table 11c. Residues sought but not found in retail samples of LEEKS purchased between January and March 2016

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

2,4-D (sum) (0.02)
2,4-DB (0.01)
2-phenylphenol (0.01)
abamectin (sum) (0.01)
acephate (0.01)
acetamiprid (0.01)
acetochlor (0.01)
acibenzolar-s-methyl (0.01)
aclonifen (0.01)
acrinathrin (0.01)
alachlor (0.01)
aldicarb (sum) (0.01)
aldrin and dieldrin (0.01)
allethrin (0.01)
alpha-HCH (0.01)
ametoctradin (0.01)
aminocarb (0.01)
amitraz (0.01)
atrazine (0.01)
azinphos-ethyl (0.01)
azinphos-methyl (0.01)
azoxystrobin (0.01)
BAC (sum) (0.01)
benalaxyl (0.01)
bendiocarb (0.01)
benthiavalicarb (sum) (0.01)
beta-HCH (0.01)
bifenthrin (0.01)
biphenyl (0.01)
bispyribac-sodium (0.01)
bitertanol (0.05)
bromopropylate (0.01)
bromoxynil (0.01)
bromuconazole (0.01)
bupirimate (0.01)
buprofezin (0.01)
butocarboxim (parent) (0.01)
butoxycarboxim (0.01)
cadusafos (0.01)
captan (0.01)
carbaryl (0.01)
carbendazim (0.01)
carbetamide (0.01)
carbofuran (sum) (0.001)
carboxin (0.01)
chlorantraniliprole (0.01)
chlorbufam (0.01)
chlordane (sum) (0.01)
chlorfenapyr (0.01)
chlorfenvinphos (0.01)
chlorfluazuron (0.01)
chloridazon (0.01)
chlorobenzilate (0.01)
chlorothalonil (0.01)
chlorotoluron (0.01)
chlorpropham (sum) (0.05)
chlorpyrifos (0.01)
etoxazole (0.01)
etrimfos (0.01)
famoxadone (0.01)
fenamidone (0.01)
fenamiphos (sum) (0.01)
fenarimol (0.01)
fenazaquin (0.01)
fenbuconazole (0.01)
fenbutatin oxide (0.01)
fenhexamid (0.01)
fenitrothion (0.01)
fenoxycarb (0.01)
fenpropathrin (0.01)
fenpropidin (0.01)
fenpropimorph (0.01)
fenpyrazamine (0.01)
fenpyroximate (0.01)
fensulfothion (sum) (0.01)
fenthion (partial sum) (0.01)
fenthion (sum) (0.01)
fenvalerate & esfenvalerate (all isomers (0.01)
fipronil (sum) (0.005)
flonicamid (sum) (0.01)
fluazifop-p-butyl (sum) (0.01)
fluazinam (0.01)
flubendiamide (0.01)
flucythrinate (0.01)
fludioxonil (0.01)
flufenacet (0.01)
flufenoxuron (0.01)
fluometuron (0.01)
fluopicolide (0.01)
fluopyram (0.01)
fluoxastrobin (0.01)
fluquinconazole (0.01)
flusilazole (0.01)
flutolanil (0.01)
flutriafol (0.01)
fluxapyroxad (0.01)
folpet (0.01)
fonofos (0.01)
formetanate (0.01)
formothion (0.01)
fosthiazate (0.01)
fuberidazole (0.01)
furalaxyl (0.01)
furathiocarb (0.001)
halofenozide (0.01)
halosulfuron-methyl (0.01)
haloxyfop (sum) (0.01)
Haloxyfop-R methyl (0.01)
Heptachlor (sum) (0.01)
heptenophos (0.01)
hexachlorobenzene (0.01)
hexachlorocyclohexane (sum) (0.01)
hexaconazole (0.01)
hexaflumuron (0.01)
nuarimol (0.01)
ofurace (0.01)
Oxadiargyl (0.01)
oxadiazon (0.01)
oxadixyl (0.01)
oxamyl (0.01)
oxasulfuron (0.01)
oxydemeton-methyl (sum) (0.01)
oxyfluorfen (0.01)
paclobutrazol (0.01)
parathion (0.01)
parathion-methyl (sum) (0.01)
penconazole (0.01)
pencycuron (0.01)
pendimethalin (0.01)
penflufen (0.01)
penthiopyrad (0.01)
permethrin (0.01)
phenmedipham (0.01)
phenthoate (0.01)
phorate (sum) (0.02)
phosalone (0.01)
phosmet (sum) (0.01)
phosphamidon (0.01)
phoxim (0.01)
picolinafen (0.01)
picoxystrobin (0.01)
piperonyl butoxide (0.01)
pirimicarb (sum) (0.01)
pirimiphos-ethyl (0.01)
pirimiphos-methyl (0.01)
prochloraz (parent only) (0.01)
procymidone (0.01)
profenofos (0.01)
promecarb (0.01)
prometryn (0.01)
propamocarb (0.01)
propanil (0.01)
propaquizafop (0.01)
propargite (0.01)
propetamphos (0.01)
propham (0.01)
propiconazole (0.01)
propoxur (0.01)
propyzamide (0.01)
proquinazid (0.01)
prosulfocarb (0.01)
prosulfuron (0.01)
prothioconazole (0.01)
prothiofos (0.01)
pymetrozine (0.01)
pyraclostrobin (0.01)
pyrazophos (0.01)
pyrethrins (0.01)
pyridaben (0.01)
pyridaphenthion (0.01)
pyrifenox (0.01)

chlorpyrifos-methyl (0.01)
chlorthal-dimethyl (0.01)
chlozolinate (0.01)
chromafenozide (0.01)
cinidon-ethyl (0.01)
clethodim (0.01)
clofentezine (0.01)
clomazone (0.01)
clothianidin (0.01)
coumaphos (0.01)
crufomate (0.01)
cyanazine (0.01)
cyazofamid (0.01)
cycloate (0.01)
cycloxydim (0.01)
cyflufenamid (0.01)
cyfluthrin (0.01)
Cyhalofop-butyl (sum) (0.01)

cymoxanil (0.01)
cypermethrin (0.01)
cyproconazole (0.01)
cyprodinil (0.01)
cyromazine (0.01)
DDAC (sum) (0.01)
DDT (sum) (0.01)
deltamethrin (0.01)
desmedipham (0.01)
desmetryn (0.01)
diazinon (0.01)
dichlofluanid (0.01)
dichlorprop (0.01)
dichlorvos (0.01)
diclobutrazol (0.01)
dicloran (0.01)
dicofol (sum) (0.02)
dicrotophos (0.01)
diethofencarb (0.01)
difenoconazole (0.01)
diflubenzuron (0.01)
diflufenican (0.01)
dimethoate (sum) (0.01)
dimethomorph (0.01)
dimoxystrobin (0.01)
diniconazole (0.01)
dinocap (0.01)
dinotefuran (0.01)
dioxathion (0.01)
diphenylamine (0.05)
disulfoton (sum) (0.01)
diuron (0.01)
dodine (0.05)
emamectin benzoate (0.01)
endosulfan (sum) (0.01)
endrin (0.01)
EPN (0.01)
epoxiconazole (0.01)
EPTC (0.01)
ethiofencarb (parent) (0.01)
ethion (0.01)
ethirimol (0.01)
ethofumesate (0.01)
ethoprophos (0.01)
etofenprox (0.01)
hexazinone (0.01)
hexythiazox (0.01)
imazalil (0.01)
imidacloprid (0.01)
indoxacarb (0.01)
ioxynil (0.01)
iprodione (0.01)
iprovalicarb (0.01)
isazophos (0.01)
isocarbophos (0.01)
isofenphos (0.01)
isofenphos-methyl (0.01)
isoprocarb (0.01)
isoprothiolane (0.01)
isoproturon (0.01)
isopyrazam (0.01)
isoxaben (0.01)
isoxaflutole (0.01)

kresoxim-methyl (0.01)
lambda-cyhalothrin (0.01)
lenacil (0.01)
lindane (0.01)
linuron (0.01)
lufenuron (0.01)
malathion (0.01)
mandipropamid (0.01)
MCPA (sum) (0.01)
MCPB (0.01)
mecarbam (0.01)
mepanipyrim (sum) (0.01)
mepronil (0.01)
mesosulfuron-methyl (0.01)
metaflumizone (0.01)
metalaxyl (0.01)
metamitron (0.01)
metazachlor (0.01)
metconazole (0.02)
methabenzthiazuron (0.01)
methacrifos (0.01)
methamidophos (0.01)
methidathion (0.01)
methiocarb (sum) (0.01)
methomyl (sum) (0.01)
methoxychlor (0.01)
methoxyfenozide (0.01)
metobromuron (0.01)
metolachlor (0.01)
metolcarb (0.01)
metosulam (0.01)
metoxuron (0.01)
metrafenone (0.01)
metribuzin (0.01)
metsulfuron-methyl (0.01)
mevinphos (0.01)
molinate (0.01)
monocrotophos (0.01)
monolinuron (0.01)
Monuron (0.01)
myclobutanil (0.01)
napropamide (0.01)
neburon (0.01)
nitenpyram (0.01)
nitrothal-isopropyl (0.01)
pyrimethanil (0.01)
pyriproxifen (0.01)
pyroxsulam (0.01)
quassia (0.01)
quinalphos (0.01)
quinmerac (0.01)
Quinoclamine (0.01)
quinoxyfen (0.01)
quintozene (sum) (0.01)
Quizalofop, incl. quizalfop-P (0.01)
rotenone (0.01)
simazine (0.01)
spinosad (0.01)
spirodiclofen (0.01)
spiromesifen (0.01)
spirotetramat (sum) (0.01)
spiroxamine (0.01)
sum of butocarboxim and butocarboxim sul (0.01)
tau-fluvalinate (0.01)
tebuconazole (0.01)
tebufenozide (0.01)
tebufenpyrad (0.01)
tebuthiuron (0.01)
tecnazene (0.01)
teflubenzuron (0.01)
tefluthrin (0.01)
terbacil (0.01)
terbufos (0.01)
Terbufos (sum not defintion) (0.01)
terbumeton (0.01)
terbuthylazine (0.01)
terbutryn (0.01)
tetrachlorvinphos (0.01)
tetraconazole (0.01)
tetradifon (0.01)
tetramethrin (0.01)
thiabendazole (0.01)
thiacloprid (0.01)
thiamethoxam (sum) (0.01)
thiophanate-methyl (0.01)
tolclofos-methyl (0.01)
tolfenpyrad (0.01)
tolylfluanid (sum) (0.01)
triadimefon & triadimenol (0.01)
triallate (0.01)
triasulfuron (0.01)
triazamate (0.01)
triazamate (acid) (0.01)
triazamate (ester) (0.01)
triazophos (0.01)
trichlorfon (0.01)
triclopyr (0.05)
tricyclazole (0.01)
trifloxystrobin (0.01)
triflumuron (0.01)
trifluralin (0.01)
triforine (0.05)
triticonazole (0.01)
Tritosulfuron (0.01)
vamidothion (0.01)
vinclozolin (sum) (0.01)
zoxamide (0.01)

Table 12a. Residues detected in retail samples of LETTUCE purchased between January and February 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
ROUND UK: 2 samples analysed		
acetamiprid	<0.01 (i.e. not found)	1
(MRL = 3)	0.07	1
azoxystrobin	<0.01 (i.e. not found)	1
(MRL = 15)	7.1	1
cypermethrin	<0.01 (i.e. not found)	1
(MRL = 2)	0.4	1
cyprodinil	<0.05 (i.e. not found)	1
(MRL = 15)	1.8	1
deltamethrin	<0.05 (i.e. not found)	1
(MRL = 0.5)	0.1	1
dimethomorph	<0.01 (i.e. not found)	1
(MRL = 15)	0.7	1
dithiocarbamates	<0.05 (i.e. not found)	1
(MRL = 5)	6.8	1
fludioxonil	<0.01 (i.e. not found)	1
(MRL = 40)	1.1	1
metalaxyl	<0.01 (i.e. not found)	1
(MRL = 3)	0.1	1
pirimicarb (sum)	<0.01 (i.e. not found)	1
(MRL = 5)	0.4	1
propamocarb	<0.01 (i.e. not found)	0
(MRL = 40)	4.6, 4.9	2
propyzamide	<0.01 (i.e. not found)	1
(MRL = 0.6)	0.01	1
thiacloprid	<0.01 (i.e. not found)	1
(MRL = 1)	0.3	1
GEM HEARTS Imported (EC): 2 samples analysed		
chlorantraniliprole	<0.01 (i.e. not found)	1
(MRL = 20)	0.05	1
fluopicolide	<0.01 (i.e. not found)	1
(MRL = 9)	0.01	1
imidacloprid	<0.01 (i.e. not found)	0
(MRL = 2)	0.03, 0.07	2
mandipropamid	<0.01 (i.e. not found)	1
(MRL = 25)	0.01	1
metalaxyl	<0.01 (i.e. not found)	1
(MRL = 3)	0.01	1

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
propamocarb	<0.01 (i.e. not found)	1
(MRL = 40)	0.04	1
ICEBERG Imported (EC): 9 samples analysed		
acetamiprid	<0.01 (i.e. not found)	8
(MRL = 3)	0.02	1
boscalid	<0.01 (i.e. not found)	7
(MRL = 30)	0.01, 0.04	2
dimethomorph	<0.01 (i.e. not found)	6
(MRL = 15)	0.03 - 0.04	3
fludioxonil	<0.01 (i.e. not found)	8
(MRL = 40)	0.02	1
folpet	<0.01 (i.e. not found)	8
(MRL = 2)	0.01	1
imidacloprid	<0.01 (i.e. not found)	0
(MRL = 2)	0.02 - 0.2	9
metalaxyl	<0.01 (i.e. not found)	4
(MRL = 3)	0.01 - 0.06	5
propamocarb	<0.01 (i.e. not found)	7
(MRL = 40)	0.02, 0.07	2
pyraclostrobin	<0.01 (i.e. not found)	8
(MRL = 2)	0.04	1
LITTLE GEM Imported (EC): 3 samples analysed		
azoxystrobin	<0.01 (i.e. not found)	2
(MRL = 15)	0.04	1
boscalid	<0.01 (i.e. not found)	2
(MRL = 30)	0.03	1
difenoconazole	<0.01 (i.e. not found)	2
(MRL = 3)	0.03	1
dithiocarbamates	<0.05 (i.e. not found)	1
(MRL = 5)	0.06, 0.07	2
folpet	<0.01 (i.e. not found)	0
(MRL = 2)	0.02	3
propamocarb	<0.01 (i.e. not found)	2
(MRL = 40)	0.04	1
ROMAINE Imported (EC): 2 samples analysed		
boscalid	<0.01 (i.e. not found)	1
(MRL = 30)	0.06	1
dimethomorph	<0.01 (i.e. not found)	1
(MRL = 15)	0.03	1

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
fenhexamid	<0.05 (i.e. not found)	1
(MRL = 40)	0.08	1
imidacloprid	<0.01 (i.e. not found)	0
(MRL = 2)	0.06, 0.1	2
propamocarb	<0.01 (i.e. not found)	1
(MRL = 40)	0.2	1
pyraclostrobin	<0.01 (i.e. not found)	1
(MRL = 2)	0.02	1

Imported (EC) samples of lettuce were from Spain (16).
UK samples of lettuce (2).

Residues were distributed by country of origin, as follows:

acetamiprid	Spain (1), UK (1)
azoxystrobin	Spain (1), UK (1)
boscalid	Spain (4)
chlorantraniliprole	Spain (1)
cyprodinil	UK (1)
cypermethrin	UK (1)
deltamethrin	UK (1)
difenoconazole	Spain (1)
dimethomorph	Spain (4), UK (1)
dithiocarbamates	Spain (2), UK (1)
fludioxonil	Spain (1), UK (1)
fenhexamid	Spain (1)
fluopicolide	Spain (1)
folpet	Spain (4)
imidacloprid	Spain (13)
mandipropamid	Spain (1)
metalaxyl	Spain (6), UK (1)
propamocarb	Spain (5), UK (2)
pirimicarb (sum)	UK (1)
propyzamide	UK (1)
pyraclostrobin	Spain (2)
thiacloprid	UK (1)

Residues were found in all of the 2 UK round samples
Residues were found in all of the 2 Imported (EC) gem hearts samples
Residues were found in all of the 9 Imported (EC) iceberg samples
Residues were found in all of the 3 Imported (EC) little gem samples
Residues were found in all of the 2 Imported (EC) romaine samples

Table 12b. Residues detected in retail samples of LETTUCE purchased between January and February 2016 *continued*

Residues (1-12 compounds) were found in 18 of the 18 samples as follows:

Number of residues	Sample ID	Type of LETTUCE	Residues found (mg/kg)																						Country of origin
			ACET	AZOX	BOS	CTP	CYD	CYP	DEL	DIFC	DMR	DTC	FLUD	FNHX	FPC	FPET	IMI	MDI	MTX	PCB	PIR	PPZ	PYC	THC	
(1)	0097/2016	ICEBERG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	-	-	-	-	-	-	-	Spain
	1099/2016	ICEBERG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	-	-	-	-	-	-	-	Spain
(2)	1244/2016	ROUND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4.6	-	0.01	-	-	UK
	0203/2016	ICEBERG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	-	-	0.02	-	-	-	-	Spain
	1006/2016	LITTLE GEM	-	-	0.03	-	-	-	-	-	-	-	-	-	-	0.02	-	-	-	-	-	-	-	-	Spain
	1069/2016	ICEBERG	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.04	-	0.04	-	-	-	-	-	Spain
	1202/2016	LITTLE GEM	-	-	-	-	-	-	-	-	-	0.07	-	-	-	0.02	-	-	-	-	-	-	-	-	Spain
	1362/2016	GEM HEARTS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	-	0.01	-	-	-	-	-	Spain
(3)	0220/2016	ICEBERG	-	-	-	-	-	-	-	-	0.03	-	-	-	-	-	0.2	-	0.03	-	-	-	-	-	Spain
	1192/2016	ROMAINE	-	-	-	-	-	-	-	-	-	-	-	0.08	-	-	0.06	-	-	0.2	-	-	-	-	Spain
	1443/2016	ICEBERG	-	-	-	-	-	-	-	-	0.04	-	-	-	-	-	0.2	-	0.02	-	-	-	-	-	Spain
(4)	1036/2016	ROMAINE	-	-	0.06	-	-	-	-	-	0.03	-	-	-	-	-	0.1	-	-	-	-	-	0.02	-	Spain
	1263/2016	ICEBERG	-	-	0.04	-	-	-	-	-	-	-	-	-	-	0.01	0.2	-	0.06	-	-	-	-	-	Spain
	1422/2016	ICEBERG	0.02	-	-	-	-	-	-	-	-	-	0.02	-	-	-	0.02	-	0.01	-	-	-	-	-	Spain
(5)	1132/2016	GEM HEARTS	-	-	-	0.05	-	-	-	-	-	-	-	-	0.01	-	0.07	0.01	-	0.04	-	-	-	-	Spain
	1294/2016	LITTLE GEM	-	0.04	-	-	-	-	-	0.03	-	0.06	-	-	-	0.02	-	-	-	0.04	-	-	-	-	Spain
	1328/2016	ICEBERG	-	-	0.01	-	-	-	-	-	0.03	-	-	-	-	-	0.07	-	-	0.07	-	-	0.04	-	Spain
(12)	0150/2016	ROUND	0.07	7.1	-	-	1.8	0.4	0.1	-	0.7	6.8	1.1	-	-	-	-	-	0.1	4.9	0.4	-	-	0.3	UK

The abbreviations used for the pesticide names are as follows:

ACET	acetamiprid	AZOX	azoxystrobin	BOS	boscalid
CTP	chlorantraniliprole	CYD	cyprodinil	CYP	cypermethrin
DEL	deltamethrin	DIFC	difenoconazole	DMR	dimethomorph
DTC	dithiocarbamates	FLUD	fludioxonil	FNHX	fenhexamid
FPC	fluopicolide	FPET	folpet	IMI	imidacloprid
MDI	mandipropamid	MTX	metalaxyl	PCB	propamocarb
PIR	pirimicarb (sum)	PPZ	propyzamide	PYC	pyraclostrobin
THC	thiacloprid				

Table 12c. Residues sought but not found in retail samples of LETTUCE purchased between January and February 2016

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

1,4-dimethylnaphthalene (0.01)
2,4-D (sum) (0.01)
2,4-DB (0.01)
2-phenylphenol (0.05)
6-benzyladenine (0.01)
abamectin (sum) (0.01)
acephate (0.01)
acetochlor (0.01)
acibenzolar-s-methyl (0.02)
aclonifen (0.05)
acrinathrin (0.05)
alachlor (0.01)
aldicarb (sum) (0.01)
aldrin and dieldrin (0.01)
alpha-HCH (0.01)
ametoctradin (0.01)
amidosulfuron (0.01)
amitraz (0.01)
anthraquinone (0.01)
asulam (0.05)
atrazine (0.01)
azinphos-methyl (0.02)
BAC (sum) (0.05)
benalaxyl (0.01)
bendiocarb (0.01)
benfuracarb (0.01)
benthiavalicarb (sum) (0.01)
beta-HCH (0.01)
bifenthrin (0.01)
biphenyl (0.01)
bispyribac-sodium (0.01)
bitertanol (0.01)
bromophos-ethyl (0.01)
bromopropylate (0.01)
bromoxynil (0.01)
bromuconazole (0.01)
bupirimate (0.01)
buprofezin (0.01)
butachlor (0.01)
butocarboxim (parent) (0.01)
butoxycarboxim (0.01)
cadusafos (0.01)
captan (0.02)
carbaryl (0.01)
carbendazim (0.01)
carbofuran (sum) (0.01)
carbosulfan (0.01)
carboxin (0.05)
chlorbufam (0.05)
chlordane (sum) (0.01)
chlorfenapyr (0.02)
chlorfenvinphos (0.01)
chloridazon (0.01)
chlorothalonil (0.01)
chlorpropham (sum) (0.05)
ethion (0.01)
ethirimol (0.01)
ethofumesate (0.01)
ethoprophos (0.01)
etofenprox (0.01)
etoxazole (0.02)
etridiazole (0.05)
etrimfos (0.01)
famoxadone (0.01)
fenamidone (0.01)
fenamiphos (sum) (0.01)
fenarimol (0.01)
fenazaquin (0.01)
fenbuconazole (0.01)
fenbutatin oxide (0.05)
fenitrothion (0.01)
fenoxycarb (0.01)
fenpropathrin (0.01)
fenpropidin (0.05)
fenpropimorph (0.01)
fenpyroximate (0.01)
fensulfothion (sum) (0.01)
fenthion (partial sum) (0.01)
fenvalerate & esfenvalerate (all isomers (0.01)
fipronil (sum) (0.01)
flonicamid (sum) (0.01)
fluazifop-p-butyl (sum) (0.01)
fluazinam (0.01)
flubendiamide (0.01)
flucythrinate (0.05)
flufenacet (0.01)
flufenoxuron (0.02)
fluometuron (0.01)
fluopyram (0.01)
fluoxastrobin (0.01)
fluquinconazole (0.01)
flurochloridone (0.05)
fluroxypyr (sum) (0.05)
flusilazole (0.01)
flutolanil (0.01)
flutriafol (0.01)
fluxapyroxad (0.01)
fonofos (0.01)
formetanate (0.05)
formothion (0.01)
fosthiazate (0.01)
furalaxyl (0.01)
furathiocarb (0.01)
halofenozide (0.01)
halosulfuron-methyl (0.01)
haloxyfop (sum) (0.01)
Heptachlor (sum) (0.01)
heptenophos (0.01)
hexachlorobenzene (0.01)
hexachlorocyclohexane (sum)
monolinuron (0.01)
Monuron (0.01)
myclobutanil (0.01)
napropamide (0.05)
nitenpyram (0.01)
nitrothal-isopropyl (0.01)
nuarimol (0.01)
ofurace (0.01)
Oxadiargyl (0.01)
oxadixyl (0.01)
oxamyl (0.01)
oxasulfuron (0.01)
oxydemeton-methyl (sum) (0.01)
oxyfluorfen (0.05)
paclobutrazol (0.01)
parathion (0.01)
parathion-methyl (sum) (0.01)
penconazole (0.01)
pencycuron (0.01)
pendimethalin (0.01)
pentanochlor (0.01)
permethrin (0.01)
phenmedipham (0.05)
phenthoate (0.01)
phorate (partial sum) (0.02)
phosalone (0.01)
phosmet (sum) (0.01)
phosphamidon (0.01)
phoxim (0.01)
picolinafen (0.01)
picoxystrobin (0.01)
piperonyl butoxide (0.01)
pirimiphos-ethyl (0.01)
pirimiphos-methyl (0.01)
prochloraz (parent only) (0.01)
procymidone (0.01)
profenofos (0.01)
promecarb (0.01)
prometryn (0.01)
propachlor (0.01)
propaquizafop (0.05)
propargite (0.01)
propetamphos (0.01)
propiconazole (0.01)
propoxur (0.01)
proquinazid (0.01)
prosulfocarb (0.05)
prosulfuron (0.02)
prothioconazole (0.01)
prothiofos (0.01)
pymetrozine (0.01)
pyrazophos (0.01)
pyrethrins (0.01)
pyridaben (0.01)
pyridaphenthion (0.01)

chlorpyrifos (0.01)
chlorpyrifos-methyl (0.01)
chlorthal-dimethyl (0.01)
chlortoluron (0.01)
chlozolinate (0.01)
chromafenozide (0.01)
clethodim (0.05)
clofentezine (0.01)
clomazone (0.01)
clothianidin (0.01)
coumaphos (0.01)
cyazofamid (0.01)
cycloate (0.01)
cycloxydim (0.05)
cyflufenamid (0.01)
cyfluthrin (0.02)
Cyhalofop-butyl (sum) (0.01)

cymoxanil (0.01)
cyproconazole (0.01)
cyromazine (0.05)
DDAC (sum) (0.05)
DDT (sum) (0.01)
demeton-S-methyl (0.01)
desmedipham (0.05)
diafenthiuron (0.05)
diazinon (0.01)

dichlobenil (0.05)
dichlofluanid (0.01)
dichlofluanid and DMSA (0.01)
dichlorprop (0.01)
dichlorvos (0.01)
diclobutrazol (0.01)
dicloran (0.01)
dicofol (sum) (0.01)
dicrotophos (0.01)
diethofencarb (0.01)
diflubenzuron (0.01)
diflufenican (0.01)
dimethenamid (0.01)
dimethoate (sum) (0.01)
dimoxystrobin (0.01)
diniconazole (0.01)
dinotefuran (0.01)
diphenylamine (0.05)
disulfoton (sum) (0.02)
diuron (0.01)
dodine (0.05)
emamectin benzoate (0.01)
endosulfan (sum) (0.01)
EPN (0.01)
epoxiconazole (0.01)
EPTC (0.05)
ethiofencarb (parent) (0.01)
(0.01)
hexaconazole (0.01)
hexythiazox (0.01)
imazalil (0.02)
indoxacarb (0.01)
inorganic bromide (20)
ioxynil (0.05)
iprodione (0.02)
iprovalicarb (0.01)
isazophos (0.01)
isocarbophos (0.01)
isofenphos (0.01)
isofenphos-methyl (0.01)
isoprocarb (0.01)
isoprothiolane (0.01)
isoproturon (0.01)
isopyrazam (0.01)
isoxaben (0.01)

isoxaflutole (0.01)
kresoxim-methyl (0.01)
lambda-cyhalothrin (0.02)
lenacil (0.01)
lindane (0.01)
linuron (0.01)
lufenuron (0.02)
malathion (0.01)
MCPA, MCPB and MCPA thioethyl expressed (0.01)
MCPB (0.01)
mecarbam (0.01)
mepanipyrim (sum) (0.01)
mepronil (0.01)
mesosulfuron-methyl (0.01)
metaflumizone (0.05)
metamitron (0.01)
metconazole (0.01)
methabenzthiazuron (0.01)
methacrifos (0.01)
methamidophos (0.01)
methidathion (0.01)
methiocarb (sum) (0.01)
methomyl (sum) (0.01)
methoxychlor (0.01)
methoxyfenozide (0.01)
metobromuron (0.01)
metolachlor (0.01)
metolcarb (0.01)
metosulam (0.01)
metoxuron (0.01)
metrafenone (0.01)
metribuzin (0.05)
metsulfuron-methyl (0.05)
mevinphos (0.01)
molinate (0.01)
monocrotophos (0.01)
pyrimethanil (0.05)
pyriproxifen (0.01)
quassia (0.01)
quinalphos (0.01)
quinmerac (0.05)
Quinoclamine (0.01)
quinoxyfen (0.01)
quintozene (sum) (0.01)
rimsulfuron (0.01)
rotenone (0.01)
spinosad (0.01)
spirodiclofen (0.01)
spiromesifen (0.01)
spirotetramat (sum) (0.01)
spiroxamine (0.01)
sulcotrione (0.05)
sum of butocarboxim and butocarboxim sul (0.01)
tau-fluvalinate (0.01)
tebuconazole (0.01)
tebufenozide (0.01)
tebufenpyrad (0.01)
tebuthiuron (0.01)
tecnazene (0.01)
teflubenzuron (0.01)
tefluthrin (0.01)
terbufos (0.01)

Terbufos (sum not defintion) (0.01)
terbuthylazine (0.05)
tetrachlorvinphos (0.01)
tetraconazole (0.01)
tetradifon (0.01)
tetramethrin (0.01)
thiabendazole (0.05)
thiamethoxam (sum) (0.01)
thiophanate-methyl (0.01)
tolclofos-methyl (0.01)
tolfenpyrad (0.01)
tolylfluanid (sum) (0.01)
triadimefon & triadimenol (0.01)
triallate (0.05)
triasulfuron (0.05)
triazamate (0.01)
triazophos (0.01)
triclopyr (0.05)
tricyclazole (0.01)
trifloxystrobin (0.01)
triflumizole (0.01)
triflumuron (0.01)
trifluralin (0.01)
triforine (0.05)
triticonazole (0.01)
vinclozolin (sum) (0.01)
zoxamide (0.01)

Table 13a. Residues detected in retail samples of MILK purchased between January and March 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
COWS MILK UK: 68 samples analysed		
None found	-	68
GOATS MILK UK: 10 samples analysed		
None found	-	10

UK samples of milk (78).

No residues were found in any of the UK cows milk samples
No residues were found in any of the UK goats milk samples

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

aldrin and dieldrin (0.002)
alpha-HCH (0.002)
azinphos-ethyl (0.002)
beta-HCH (0.002)
bifenthrin (0.005)
chlordane (animal products) (0.001)
chlorfenvinphos (0.002)
chlorobenzilate (0.002)
chlorpyrifos (0.002)
chlorpyrifos-methyl (0.002)
cyfluthrin (0.002)
cypermethrin (0.002)
DDT (sum) (0.002)
deltamethrin (0.002)
diazinon (0.002)
endosulfan (sum) (0.002)
endrin (0.0008)
fenvalerate & esfenvalerate (all isomers (0.002)
hexachlorobenzene (0.002)
lindane (0.0004)
methacrifos (0.002)
methidathion (0.002)
methoxychlor (0.002)
nitrofen (0.002)
parathion (0.002)
parathion-methyl (sum) (0.002)
permethrin (0.002)
pirimiphos-methyl (0.002)
profenofos (0.002)
pyrazophos (0.002)
quintozene (sum) (0.002)
resmethrin (0.002)
tecnazene (0.002)
triazophos (0.002)
trifluralin (0.002)

Table 14a. Residues detected in samples of OKRA collected between February and March 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
OKRA, FRESH Imported (Non-EC): 12 samples analysed		
azoxystrobin	<0.01 (i.e. not found)	10
(MRL = 3)	0.01, 0.03	2
buprofezin	<0.01 (i.e. not found)	11
(MRL = 0.5)	0.04	1
chlorpyrifos	<0.01 (i.e. not found)	11
(MRL = 0.5)	0.02	1
cypermethrin	<0.01 (i.e. not found)	11
(MRL = 0.5)	0.01	1
deltamethrin	<0.01 (i.e. not found)	10
(MRL = 0.3)	0.01, 0.03	2
imidacloprid	<0.01 (i.e. not found)	9
(MRL = 0.5)	0.05 - 0.1	3

Imported (Non-EC) samples of okra were from Ethiopia (1), Honduras (2), India (9).

Residues were distributed by country of origin, as follows:

azoxystrobin	Ethiopia (1), Honduras (1)
buprofezin	Honduras (1)
chlorpyrifos	India (1)
cypermethrin	India (1)
deltamethrin	Honduras (2)
imidacloprid	India (3)

No residues were found in 5 of the 12 Imported (Non-EC) fresh samples

Table 14b. Residues detected in samples of OKRA collected between February and March 2016 *continued*

Residues (1-3 compounds) were found in 7 of the 12 samples as follows:

Number of residues	Sample ID	Type of OKRA	Residues found (mg/kg)						Country of origin
			AZOX	BUF	CPF	CYP	DEL	IMI	
(1)	4025/2016	FRESH	0.03	-	-	-	-	-	Ethiopia
	4024/2016	FRESH	-	-	-	-	0.01	-	Honduras
	3893/2016	FRESH	-	-	-	-	-	0.1	India
	4065/2016	FRESH	-	-	-	-	-	0.05	India
	4066/2016	FRESH	-	-	-	-	-	0.1	India
(2)	4128/2016	FRESH	-	-	0.02	0.01	-	-	India
(3)	4115/2016	FRESH	0.01	0.04	-	-	0.03	-	Honduras

The abbreviations used for the pesticide names are as follows:

AZOX	azoxystrobin	BUF	buprofezin	CPF	chlorpyrifos
CYP	cypermethrin	DEL	deltamethrin	IMI	imidacloprid

Table 14c. Residues sought but not found in samples of OKRA collected between February and March 2016

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

abamectin (sum) (0.01)
acephate (0.01)
acetamiprid (0.01)
acibenzolar-s-methyl (0.01)
acrinathrin (0.01)
aldicarb (sum) (0.01)
aldrin and dieldrin (0.01)
alpha-HCH (0.01)
atrazine (0.01)
azinphos-ethyl (0.01)
azinphos-methyl (0.01)
benalaxyl (0.01)
bendiocarb (0.01)
beta-HCH (0.01)
bifenox (0.01)
bifenthrin (0.01)
biphenyl (0.01)
bitertanol (0.01)
boscalid (0.01)
bromophos-ethyl (0.01)
bromophos-methyl (0.01)
bromopropylate (0.01)
bromuconazole (0.01)
bupirimate (0.01)
butralin (0.01)
cadusafos (0.01)
carbaryl (0.01)
carbendazim (0.01)
carbofuran (sum) (0.01)
carbophenothion (0.01)
chlordane (sum) (0.01)
chlorfenapyr (0.01)
chlorfenson (0.01)
chlorfenvinphos (0.01)
chlorobenzilate (0.01)
chlorotoluron (0.01)
chlorpyrifos-methyl (0.01)
chlorthal-dimethyl (0.01)
chlorthion (0.01)
chlorthiophos (0.01)
chlozolinate (0.01)
clofentezine (0.01)
clothianidin (0.01)
cyanophenphos (0.01)
cyflufenamid (0.01)
cyfluthrin (0.01)
cyproconazole (0.01)
cyprodinil (0.01)
DDT (sum) (0.01)
dialifos (0.01)
diazinon (0.01)
dichlobenil (0.01)
dichlofenthion (0.01)
dicloran (0.01)
etofenprox (0.01)
etrimfos (0.01)
famoxadone (0.01)
fenamidone (0.01)
fenamiphos (sum) (0.01)
fenazaquin (0.01)
fenbuconazole (0.01)
fenitrothion (0.01)
fenoxycarb (0.01)
fenpropathrin (0.01)
fenpropimorph (0.01)
fenpyroximate (0.01)
fenson (0.01)
fenvalerate & esfenvalerate (SS & RR Iso (0.01)
fluazinam (0.01)
fludioxonil (0.01)
flufenacet (0.01)
flufenoxuron (0.01)
fluopicolide (0.01)
fluoxastrobin (0.01)
fluquinconazole (0.01)
flusilazole (0.01)
flutolanil (0.01)
flutriafol (0.01)
fonofos (0.01)
formothion (0.01)
fosthiazate (0.01)
furalaxyl (0.01)
furathiocarb (0.01)
Heptachlor (sum) (0.01)
heptenophos (0.01)
hexachlorocyclohexane (sum) (0.01)
hexaconazole (0.01)
hexazinone (0.01)
hexythiazox (0.01)
imazalil (0.01)
indoxacarb (0.01)
iprodione (0.01)
iprovalicarb (0.01)
isazophos (0.01)
isobenzan (0.01)
isodrin (0.01)
isofenphos (0.01)
isofenphos-methyl (0.01)
isoprocarb (0.01)
isoprothiolane (0.01)
isoproturon (0.01)
jodfenphos (0.01)
kresoxim-methyl (0.01)
lambda-cyhalothrin (0.01)
lenacil (0.01)
leptophos (0.01)
lindane (0.01)
linuron (0.01)
ofurace (0.01)
oxadixyl (0.01)
oxamyl (0.01)
oxydemeton-methyl (sum) (0.01)
parathion (0.01)
penconazole (0.01)
pencycuron (0.01)
pendimethalin (0.01)
permethrin (0.01)
phenothrin (0.01)
phenthoate (0.01)
phosalone (0.01)
phosphamidon (0.01)
pirimicarb (sum) (0.01)
pirimiphos-ethyl (0.01)
pirimiphos-methyl (0.01)
prochloraz (parent only) (0.01)
procymidone (0.01)
profenofos (0.01)
prometryn (0.01)
propachlor (0.01)
propamocarb (0.01)
propanil (0.01)
propargite (0.01)
propazine (0.01)
propetamphos (0.01)
propiconazole (0.01)
propoxur (0.01)
propyzamide (0.01)
prosulfocarb (0.01)
prothioconazole (0.01)
prothiofos (0.01)
pyraclostrobin (0.01)
pyrazophos (0.01)
pyrethrins (0.01)
pyridaben (0.01)
pyridaphenthion (0.01)
pyrifenox (0.01)
pyrimethanil (0.01)
pyriproxifen (0.01)
quinalphos (0.01)
quinoxyfen (0.01)
rotenone (0.01)
simazine (0.01)
spinosad (0.01)
spirodiclofen (0.01)
spiromesifen (0.01)
sulfotep (0.01)
tau-fluvalinate (0.01)
tebuconazole (0.01)
tebufenoside (0.01)
tebufenpyrad (0.01)
tecnazene (0.01)
teflubenzuron (0.01)

dicofol (sum) (0.01)
dicrotophos (0.01)
diethofencarb (0.01)
difenoconazole (0.01)
diflubenzuron (0.01)
diflufenican (0.01)
dimethoate (sum) (0.01)
dimethomorph (0.01)
dimethylvinphos (0.01)
dimoxystrobin (0.01)
diniconazole (0.01)
dioxabenzophos (0.01)
ditalimfos (0.01)
dithiocarbamates (0.05)
diuron (0.01)
edifenphos (0.01)
endosulfan (sum) (0.01)
endrin (0.01)
EPN (0.01)
epoxiconazole (0.01)
ethion (0.01)
ethofumesate (0.01)
ethoprophos (0.01)
lufenuron (0.01)
mecarbam (0.01)
mepronil (0.01)
metaflumizone (0.01)
metalaxyl (0.01)
metamitron (0.01)
metazachlor (0.01)
methabenzthiazuron (0.01)
methamidophos (0.01)
methidathion (0.01)
methoxychlor (0.01)
metolachlor (0.01)
metolcarb (0.01)
metoxuron (0.01)
metrafenone (0.01)
metribuzin (0.01)
mevinphos (0.01)
monocrotophos (0.01)
Monuron (0.01)
myclobutanil (0.01)
napropamide (0.01)
nitrofen (0.01)
nitrothal-isopropyl (0.01)
tefluthrin (0.01)
terbacil (0.01)
terbufos (0.01)
Terbufos (sum not defintion) (0.01)
terbuthylazine (0.01)
tetrachlorvinphos (0.01)
tetraconazole (0.01)
tetradifon (0.01)
tetramethrin (0.01)
tetrasul (0.01)
thiabendazole (0.01)
thiacloprid (0.01)
thiamethoxam (sum) (0.01)
thiophanate-methyl (0.01)
tolclofos-methyl (0.01)
triadimefon & triadimenol (0.01)
triazophos (0.01)
trietazine (0.01)
trifloxystrobin (0.01)
triflumuron (0.01)
trifluralin (0.01)
triticonazole (0.01)
zoxamide (0.01)

All compounds marked in italic were only tested for in half of the okra samples. Therefore the number of pesticides sought in all of the samples is 225.

Table 15a. Residues detected in samples of PEACHES AND NECTARINES obtained between January and March 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
NECTARINES Imported (Non-EC): 11 samples analysed		
acetamiprid	<0.01 (i.e. not found)	6
(MRL = 0.8)	0.02 - 0.06	5
azoxystrobin	<0.01 (i.e. not found)	10
(MRL = 2)	0.08	1
chlorantraniliprole	<0.01 (i.e. not found)	8
(MRL = 1)	0.02 - 0.04	3
cypermethrin	<0.01 (i.e. not found)	10
(MRL = 2)	0.02	1
deltamethrin	<0.01 (i.e. not found)	9
(MRL = 0.1)	0.01	2
dithiocarbamates	<0.05 (i.e. not found)	6
(MRL = 2)	0.05 - 0.2	5
fludioxonil	<0.01 (i.e. not found)	4
(MRL = 10)	0.02 - 0.9	7
indoxacarb	<0.01 (i.e. not found)	10
(MRL = 1)	0.02	1
iprodione	<0.01 (i.e. not found)	7
(MRL = 10)	0.03 - 0.2	4
pyrimethanil	<0.01 (i.e. not found)	3
(MRL = 10)	0.02 - 0.7	8
spinosad	<0.01 (i.e. not found)	10
(MRL = 0.6)	0.01	1
spirodiclofen	<0.01 (i.e. not found)	8
(MRL = 2)	0.03 - 0.05	3
tebuconazole	<0.01 (i.e. not found)	7
(MRL = 0.6)	0.02 - 0.04	4
thiacloprid	<0.01 (i.e. not found)	10
(MRL = 0.5)	0.05	1
PEACHES Imported (Non-EC): 9 samples analysed		
acetamiprid	<0.01 (i.e. not found)	7
(MRL = 0.8)	0.01, 0.02	2
azoxystrobin	<0.01 (i.e. not found)	7
(MRL = 2)	0.02	2
dithiocarbamates	<0.05 (i.e. not found)	1
(MRL = 2)	0.06 - 1.5	8
fenbuconazole	<0.01 (i.e. not found)	8
(MRL = 0.5)	0.02	1
fludioxonil	<0.01 (i.e. not found)	4
(MRL = 10)	0.04 - 1	5

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
indoxacarb	<0.01 (i.e. not found)	8
(MRL = 1)	0.03	1
iprodione	<0.01 (i.e. not found)	6
(MRL = 10)	0.1 - 0.5	3
lambda-cyhalothrin	<0.01 (i.e. not found)	7
(MRL = 0.2)	0.02	2
pyrimethanil	<0.01 (i.e. not found)	6
(MRL = 10)	0.02 - 0.6	3
spirodiclofen	<0.01 (i.e. not found)	8
(MRL = 2)	0.02	1
tebuconazole	<0.01 (i.e. not found)	8
(MRL = 0.6)	0.04	1

Imported (Non-EC) samples of peaches and nectarines were from Chile (6), South Africa (14).

Residues were distributed by country of origin, as follows:

acetamiprid	Chile (6), South Africa (1)
azoxystrobin	South Africa (3)
chlorantraniliprole	Chile (3)
cypermethrin	South Africa (1)
deltamethrin	South Africa (2)
dithiocarbamates	Chile (1), South Africa (12)
fenbuconazole	South Africa (1)
fludioxonil	Chile (4), South Africa (8)
indoxacarb	South Africa (2)
iprodione	Chile (1), South Africa (6)
lambda-cyhalothrin	South Africa (2)
pyrimethanil	Chile (6), South Africa (5)
spirodiclofen	Chile (4)
spinosad	Chile (1)
tebuconazole	Chile (5)
thiacloprid	Chile (1)

Residues were found in all of the 11 Imported (Non-EC) nectarines samples
No residues were found in 1 of the 9 Imported (Non-EC) peaches samples

Table 15b. Residues detected in samples of PEACHES AND NECTARINES obtained between January and March 2016

Residues (2-6 compounds) were found in 19 of the 20 samples as follows:

Number of residues	Sample ID	Type of PEACHES AND NECTARINES	Residues found (mg/kg)																Country of origin
			ACET	AZOX	CTP	CYP	DEL	DTC	FENB	FLUD	IDX	IPR	LCY	PYM	SPD	SPN	TBC	THC	
(2)	3589/2016	Peaches	-	-	-	-	-	0.08	-	-	-	0.2	-	-	-	-	-	-	South Africa
(3)	3536/2016	Nectarines	-	-	-	0.02	-	-	-	0.08	-	0.2	-	-	-	-	-	-	South Africa
	3587/2016	Peaches	0.01	-	-	-	-	0.5	-	-	-	-	-	0.5	-	-	-	-	South Africa
	3588/2016	Nectarines	-	-	-	-	-	0.1	-	0.1	0.02	-	-	-	-	-	-	-	South Africa
	3902/2016	Nectarines	-	0.08	-	-	-	0.2	-	-	-	0.1	-	-	-	-	-	-	South Africa
	4002/2016	Nectarines	-	-	-	-	-	0.1	-	-	-	0.1	-	0.3	-	-	-	-	South Africa
	4004/2016	Peaches	-	-	-	-	-	0.1	0.02	-	-	0.5	-	-	-	-	-	-	South Africa
	4039/2016	Peaches	-	-	-	-	-	0.06	-	1	-	-	0.02	-	-	-	-	-	South Africa
(4)	3506/2016	Nectarines	0.05	-	-	-	-	-	-	-	-	-	-	0.04	0.04	-	0.04	-	Chile
	3550/2016	Nectarines	0.06	-	-	-	-	-	-	0.9	-	-	-	0.02	-	-	0.03	-	Chile
	2533/2016	Peaches	-	-	-	-	-	1.5	-	0.04	0.03	-	-	0.6	-	-	-	-	South Africa
	3949/2016	Nectarines	-	-	-	-	0.01	0.05	-	0.03	-	-	-	0.6	-	-	-	-	South Africa
	4041/2016	Peaches	-	0.02	-	-	-	0.2	-	0.5	-	-	0.02	-	-	-	-	-	South Africa
	4113/2016	Nectarines	-	-	-	-	0.01	0.07	-	0.02	-	-	-	0.6	-	-	-	-	South Africa
	4126/2016	Peaches	-	0.02	-	-	-	0.07	-	0.5	-	0.1	-	-	-	-	-	-	South Africa
(6)	3543/2016	Nectarines	0.02	-	0.04	-	-	-	-	-	-	0.03	-	0.7	0.05	-	0.04	-	Chile
	3575/2016	Nectarines	0.06	-	0.04	-	-	-	-	0.3	-	-	-	0.5	-	0.01	-	0.05	Chile
	3981/2016	Nectarines	0.02	-	0.02	-	-	-	-	0.4	-	-	-	0.6	0.03	-	0.02	-	Chile

Number of residues	Sample ID	Type of PEACHES AND NECTARINES	Residues found (mg/kg)															Country of origin
			ACET	AZOX	CTP	CYP	DEL	DTC	FENB	FLUD	IDX	IPR	LCY	PYM	SPD	SPN	TBC	THC	
	4043/2016	Peaches	0.02	-	-	-	-	0.08	-	0.7	-	-	-	0.02	0.02	-	0.04	-	Chile

The abbreviations used for the pesticide names are as follows:

ACET	acetamiprid	AZOX	azoxystrobin	CTP	chlorantraniliprole
CYP	cypermethrin	DEL	deltamethrin	DTC	dithiocarbamates
FENB	fenbuconazole	FLUD	fludioxonil	IDX	indoxacarb
IPR	iprodione	LCY	lambda-cyhalothrin	PYM	pyrimethanil
SPD	spirodiclofen	SPN	spinosad	TBC	tebuconazole
THC	thiacloprid				

Table 15c. Residues sought but not found in samples of PEACHES AND NECTARINES obtained between January and March 2016

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

2-phenylphenol (0.01)
acephate (0.01)
acetochlor (0.01)
acibenzolar-s-methyl (0.01)
acrinathrin (0.01)
alachlor (0.01)
aldrin and dieldrin (0.01)
alpha-HCH (0.01)
atrazine (0.01)
azinphos-ethyl (0.01)
azinphos-methyl (0.01)
benalaxyl (0.01)
bendiocarb (0.01)
beta-HCH (0.01)
bifenox (0.01)
bifenthrin (0.01)
biphenyl (0.01)
bitertanol (0.01)
boscalid (0.01)
bromophos-ethyl (0.01)
bromophos-methyl (0.01)
bromopropylate (0.01)
bromuconazole (0.01)
bupirimate (0.01)
buprofezin (0.01)
butachlor (0.01)
butocarboxim (parent) (0.01)
butralin (0.01)
cadusafos (0.01)
captan (0.01)
carbaryl (0.01)
carbendazim (0.01)
carbofuran (sum) (0.01)
carbophenothion (0.01)
carboxin (0.01)
chlorbufam (0.01)
chlordane (sum) (0.01)
chlorfenapyr (0.01)
chlorfenson (0.01)
chlorfenvinphos (0.01)
chloridazon (0.01)
chlorobenzilate (0.01)
chlorothalonil (0.01)
chlorpyrifos (0.01)
chlorpyrifos-methyl (0.01)
chlorthal-dimethyl (0.01)
chlorthion (0.01)
chlorthiophos (0.01)
chlozolinate (0.01)
clofentezine (0.01)
clomazone (0.01)
coumaphos (0.01)
crufomate (0.01)
cyanophenphos (0.01)
cyazofamid (0.01)
cycloate (0.01)
EPN (0.01)
ethion (0.01)
ethirimol (0.01)
ethofumesate (0.01)
ethoprophos (0.01)
etofenprox (0.01)
etridiazole (0.01)
etrimfos (0.01)
famoxadone (0.01)
fenamidone (0.01)
fenamiphos (sum) (0.01)
fenarimol (0.01)
fenazaquin (0.01)
fenhexamid (0.01)
fenitrothion (0.01)
fenoxycarb (0.01)
fenpropathrin (0.01)
fenpropimorph (0.01)
fenson (0.01)
fenthion (partial sum) (0.01)
fenvalerate & esfenvalerate (SS & RR Iso (0.01)
fipronil (sum) (0.01)
fluazinam (0.01)
flubendiamide (0.01)
flucythrinate (0.01)
flufenacet (0.01)
flufenoxuron (0.01)
fluopicolide (0.01)
fluoxastrobin (0.01)
fluquinconazole (0.01)
flurochloridone (0.01)
flusilazole (0.01)
flutolanil (0.01)
flutriafol (0.01)
folpet (0.01)
fonofos (0.01)
formothion (0.01)
fosthiazate (0.01)
furalaxyl (0.01)
furathiocarb (0.01)
Heptachlor (sum) (0.01)
heptenophos (0.01)
hexachlorocyclohexane (sum) (0.01)
hexaconazole (0.01)
hexazinone (0.01)
imazalil (0.01)
imidacloprid (0.01)
iprovalicarb (0.01)
isazophos (0.01)
isobenzan (0.01)
isocarbophos (0.01)
isodrin (0.01)
isofenphos (0.01)
isofenphos-methyl (0.01)
isoprocarb (0.01)
isoprothiolane (0.01)
myclobutanil (0.01)
napropamide (0.01)
nitrofen (0.01)
nitrothal-isopropyl (0.01)
nuarimol (0.01)
ofurace (0.01)
oxadiazon (0.01)
oxadixyl (0.01)
oxamyl (0.01)
oxydemeton-methyl (sum) (0.01)
oxyfluorfen (0.01)
paclobutrazol (0.01)
parathion (0.01)
penconazole (0.01)
pencycuron (0.01)
pendimethalin (0.01)
permethrin (0.01)
phenothrin (0.01)
phenthoate (0.01)
phorate (partial sum) (0.01)
phosalone (0.01)
phosphamidon (0.01)
phoxim (0.01)
picolinafen (0.01)
picoxystrobin (0.01)
pirimicarb (sum) (0.01)
pirimiphos-ethyl (0.01)
pirimiphos-methyl (0.01)
prochloraz (parent only) (0.01)
procymidone (0.01)
profenofos (0.01)
promecarb (0.01)
propachlor (0.01)
propanil (0.01)
propargite (0.01)
propazine (0.01)
propetamphos (0.01)
propham (0.01)
propiconazole (0.01)
propoxur (0.01)
propyzamide (0.01)
prosulfocarb (0.01)
prothioconazole (0.01)
prothiofos (0.01)
pyraclostrobin (0.01)
pyrazophos (0.01)
pyridaben (0.01)
pyridaphenthion (0.01)
pyrifenox (0.01)
pyriproxifen (0.01)
quinalphos (0.01)
quinoxyfen (0.01)
quintozene (sum) (0.01)
rotenone (0.01)
simazine (0.01)
spiromesifen (0.01)

cyflufenamid (0.01)
cyfluthrin (0.01)
cyproconazole (0.01)
cyprodinil (0.01)
DDT (sum) (0.01)
dialifos (0.01)
diazinon (0.01)
dichlobenil (0.01)
dichlofenthion (0.01)
dichlofluanid (0.01)
dichlorvos (0.01)
diclobutrazol (0.01)
dicloran (0.01)
dicrotophos (0.01)
diethofencarb (0.01)
difenoconazole (0.01)
diflubenzuron (0.01)
diflufenican (0.01)
dimethenamid (0.01)
dimethoate (sum) (0.01)
dimethomorph (0.01)
dimethylvinphos (0.01)
dimoxystrobin (0.01)
diniconazole (0.01)
dioxabenzophos (0.01)
diphenylamine (0.01)
ditalimfos (0.01)
dodine (0.01)
edifenphos (0.01)
endosulfan (sum) (0.01)
endrin (0.01)
isoproturon (0.01)
jodfenphos (0.01)
kresoxim-methyl (0.01)
lenacil (0.01)
leptophos (0.01)
lindane (0.01)
linuron (0.01)
lufenuron (0.01)
malathion (0.01)
mecarbam (0.01)
mepronil (0.01)
metalaxyl (0.01)
metamitron (0.01)
metazachlor (0.01)
metconazole (0.01)
methacrifos (0.01)
methamidophos (0.01)
methidathion (0.01)
methiocarb (sum) (0.01)
methomyl (sum) (0.01)
methoxychlor (0.01)
metobromuron (0.01)
metolachlor (0.01)
metolcarb (0.02)
metoxuron (0.01)
metrafenone (0.01)
metribuzin (0.01)
mevinphos (0.01)
molinate (0.01)
monocrotophos (0.01)
Monuron (0.01)
spiroxamine (0.01)
sulfotep (0.01)
tau-fluvalinate (0.01)
tebufenpyrad (0.01)
tecnazene (0.01)
teflubenzuron (0.01)
tefluthrin (0.01)
terbacil (0.01)
terbufos (0.01)
Terbufos (sum not defintion) (0.01)
terbuthylazine (0.01)
tetrachlorvinphos (0.01)
tetraconazole (0.01)
tetradifon (0.01)
tetramethrin (0.01)
tetrasul (0.01)
thiabendazole (0.01)
thiophanate-methyl (0.01)
tolclofos-methyl (0.01)
tolfenpyrad (0.01)
triallate (0.01)
triazophos (0.01)
triclopyr (0.01)
tricyclazole (0.01)
trietazine (0.01)
trifloxystrobin (0.01)
triflumuron (0.01)
trifluralin (0.01)
triforine (0.01)
triticonazole (0.01)
zoxamide (0.01)

Table 16a. Residues detected in retail samples of PEARS purchased between January and March 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
UK: 4 samples analysed		
boscalid	<0.01 (i.e. not found)	1
(MRL = 2)	0.07 - 0.1	3
chlorantraniliprole	<0.01 (i.e. not found)	1
(MRL = 0.5)	0.03	3
fludioxonil	<0.01 (i.e. not found)	2
(MRL = 5)	0.04	2
indoxacarb	<0.01 (i.e. not found)	2
(MRL = 0.5)	0.01, 0.02	2
paclobutrazol	<0.01 (i.e. not found)	3
(MRL = 0.5)	0.01	1
pyraclostrobin	<0.01 (i.e. not found)	1
(MRL = 0.5)	0.03 - 0.08	3
spirodiclofen	<0.01 (i.e. not found)	2
(MRL = 0.8)	0.02	2
Imported (EC): 20 samples analysed		
boscalid	<0.01 (i.e. not found)	8
(MRL = 2)	0.01 - 0.3	12
captan and folpet	<0.02 (i.e. not found)	10
(MRL = 3)	0.02 - 0.8	10
chlorantraniliprole	<0.01 (i.e. not found)	14
(MRL = 0.5)	0.01 - 0.1	6
chlormequat	<0.02 (i.e. not found)	18
(MRL = 0.1)	0.03, 0.09	2
cyprodinil	<0.05 (i.e. not found)	18
(MRL = 1.5)	0.1, 0.2	2
difenoconazole	<0.01 (i.e. not found)	16
(MRL = 0.8)	0.01 - 0.02	4
diflubenzuron	<0.01 (i.e. not found)	16
(MRL = 5)	0.03 - 0.07	4
dithiocarbamates	<0.05 (i.e. not found)	10
(MRL = 5)	0.05 - 0.5	10
dodine	<0.05 (i.e. not found)	19
(MRL = 0.9)	0.06	1
fludioxonil	<0.01 (i.e. not found)	10
(MRL = 5)	0.04 - 1.9	10
fluopyram	<0.01 (i.e. not found)	19
(MRL = 0.5)	0.2	1

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
imazalil	<0.02 (i.e. not found)	19
(MRL = 2)	0.03	1
indoxacarb	<0.01 (i.e. not found)	17
(MRL = 0.5)	0.01 - 0.06	3
iprodione	<0.02 (i.e. not found)	19
(MRL = 6)	0.03	1
methoxyfenozide	<0.01 (i.e. not found)	19
(MRL = 2)	0.02	1
phosmet (sum)	<0.01 (i.e. not found)	18
(MRL = 0.5)	0.01, 0.02	2
pyraclostrobin	<0.01 (i.e. not found)	12
(MRL = 0.5)	0.04 - 0.08	8
tebuconazole	<0.01 (i.e. not found)	17
(MRL = 0.3)	0.02 - 0.2	3
thiacloprid	<0.01 (i.e. not found)	19
(MRL = 0.3)	0.05	1
trifloxystrobin	<0.01 (i.e. not found)	19
(MRL = 0.5)	0.02	1

Imported (EC) samples of pears were from Belgium (5), Italy (9), Portugal (4), the Netherlands (2).
UK samples of pears (4).

Residues were distributed by country of origin, as follows:

boscalid	Belgium (4), Italy (4), Portugal (2), the Netherlands (2), UK (3)
chlormequat	Belgium (1), the Netherlands (1)
captan and folpet	Belgium (3), Italy (4), Portugal (1), the Netherlands (2)
chlorantraniliprole	Belgium (2), Italy (4), UK (3)
cyprodinil	Belgium (2)
diflubenzuron	Italy (1), Portugal (3)
difenoconazole	Belgium (4)
dodine	Italy (1)
dithiocarbamates	Belgium (2), Italy (4), Portugal (4)
fludioxonil	Belgium (4), Portugal (4), the Netherlands (2), UK (2)
fluopyram	Portugal (1)
indoxacarb	Italy (3), UK (2)
imazalil	Portugal (1)
iprodione	Italy (1)
methoxyfenozide	Belgium (1)
paclobutrazol	UK (1)
phosmet (sum)	Italy (2)
pyraclostrobin	Belgium (4), Portugal (2), the Netherlands (2), UK (3)
spirodiclofen	UK (2)
tebuconazole	Portugal (3)
thiacloprid	Portugal (1)
trifloxystrobin	Portugal (1)

Residues were found in all of the 4 UK samples
No residues were found in 4 of the 20 Imported (EC) samples

Table 16b. Residues detected in retail samples of PEARS purchased between January and March 2016 *continued*

Residues (1-7 compounds) were found in 20 of the 24 samples as follows:

Number of residues	Sample ID	Residues found (mg/kg)																						Country of origin
		BOS	CLQ	CPFOL	CTP	CYD	DIF	DIFC	DOD	DTC	FLUD	FPYM	IDX	IMZ	IPR	MXF	PAC	PMT	PYC	SPD	TBC	THC	TRFL	
(1)	1391/2016	-	-	-	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	UK
(3)	1140/2016	0.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.01	-	0.03	-	-	-	-	UK
	1306/2016	0.1	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	0.08	-	-	-	-	Belgium
	1049/2016	-	-	0.04	0.01	-	-	-	-	-	-	-	0.06	-	-	-	-	-	-	-	-	-	-	Italy
	1240/2016	-	-	-	-	-	0.03	-	-	0.3	1.9	-	-	-	-	-	-	-	-	-	-	-	-	Portugal
(4)	0100/2016	0.3	-	-	0.1	-	-	-	-	0.3	-	-	-	-	0.03	-	-	-	-	-	-	-	-	Italy
	0202/2016	0.09	-	0.1	-	-	0.03	-	-	0.2	-	-	-	-	-	-	-	-	-	-	-	-	-	Italy
	0020/2016	0.08	-	0.2	-	-	-	-	-	-	0.06	-	-	-	-	-	-	-	0.05	-	-	-	-	the Netherlands
(5)	0254/2016	0.09	-	-	-	0.1	-	-	-	0.05	0.04	-	-	-	-	-	-	-	0.07	-	-	-	-	Belgium
	1264/2016	0.08	0.09	0.1	-	-	-	-	-	-	0.09	-	-	-	-	-	-	-	0.05	-	-	-	-	the Netherlands
(6)	1204/2016	0.1	-	-	0.03	-	-	-	-	-	0.04	-	0.01	-	-	-	-	-	0.08	0.02	-	-	-	UK
	1295/2016	0.1	-	-	0.03	-	-	-	-	-	0.04	-	0.02	-	-	-	-	-	0.07	0.02	-	-	-	UK
	0224/2016	0.1	-	0.7	0.01	-	-	0.02	-	-	0.4	-	-	-	-	-	-	-	0.07	-	-	-	-	Belgium
	1444/2016	0.1	-	0.8	0.01	-	-	0.02	-	-	0.6	-	-	-	-	-	-	-	0.06	-	-	-	-	Belgium
	0087/2016	0.01	-	0.1	0.02	-	-	-	-	0.1	-	-	0.01	-	-	-	-	0.02	-	-	-	-	-	Italy
	1355/2016	-	-	-	-	-	-	-	-	0.4	1.9	0.2	-	-	-	-	-	-	-	-	0.2	0.05	0.02	Portugal
(7)	1423/2016	-	0.03	0.02	-	0.2	-	0.01	-	0.2	0.1	-	-	-	-	0.02	-	-	-	-	-	-	-	Belgium
	1323/2016	0.01	-	0.3	0.03	-	-	-	0.06	0.2	-	-	0.01	-	-	-	-	0.01	-	-	-	-	-	Italy
	0043/2016	0.1	-	-	-	-	0.05	-	-	0.5	1.7	-	-	0.03	-	-	-	-	0.04	-	0.02	-	-	Portugal
	1016/2016	0.08	-	0.2	-	-	0.07	-	-	0.5	0.5	-	-	-	-	-	-	-	0.04	-	0.02	-	-	Portugal

The abbreviations used for the pesticide names are as follows:

BOS	boscalid	CLQ	chlormequat	CPFOL	captan and folpet
CTP	chlorantraniliprole	CYD	cyprodinil	DIF	diflubenzuron

DIFC	difenoconazole	DOD	dodine	DTC	dithiocarbamates
FLUD	fludioxonil	FPYM	fluopyram	IDX	indoxacarb
IMZ	imazalil	IPR	iprodione	MXF	methoxyfenozide
PAC	paclobutrazol	PMT	phosmet (sum)	PYC	pyraclostrobin
SPD	spirodiclofen	TBC	tebuconazole	THC	thiacloprid
TRFL	trifloxystrobin				

Table 16c. Residues sought but not found in retail samples of PEARS purchased between January and March 2016

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

1,4-dimethylnaphthalene (0.01)
2,4-D (sum) (0.01)
2,4-DB (0.01)
2-phenylphenol (0.05)
6-benzyladenine (0.01)
abamectin (sum) (0.01)
acephate (0.01)
acetamiprid (0.01)
acetochlor (0.01)
acibenzolar-s-methyl (0.02)
aclonifen (0.05)
acrinathrin (0.05)
alachlor (0.01)
aldicarb (sum) (0.01)
aldrin and dieldrin (0.01)
alpha-HCH (0.01)
ametoctradin (0.01)
amidosulfuron (0.01)
amitraz (0.01)
anthraquinone (0.01)
asulam (0.05)
atrazine (0.01)
azinphos-methyl (0.02)
azoxystrobin (0.01)
BAC (sum) (0.05)
benalaxyl (0.01)
bendiocarb (0.01)
benfuracarb (0.01)
benthiavalicarb (sum) (0.01)
beta-HCH (0.01)
bifenthrin (0.01)
biphenyl (0.01)
bispyribac-sodium (0.01)
bitertanol (0.01)
bromophos-ethyl (0.01)
bromopropylate (0.01)
bromoxynil (0.01)
bromuconazole (0.01)
bupirimate (0.01)
buprofezin (0.01)
butachlor (0.01)
butocarboxim (parent) (0.01)
butoxycarboxim (0.01)
cadusafos (0.01)
carbaryl (0.01)
carbendazim (0.01)
carbofuran (sum) (0.01)
carbosulfan (0.01)
carboxin (0.05)
chlorbufam (0.05)
chlordane (sum) (0.01)
chlorfenapyr (0.02)
chlorfenvinphos (0.01)
chloridazon (0.01)
chlorothalonil (0.01)
ethiofencarb (parent) (0.01)
ethion (0.01)
ethirimol (0.01)
ethofumesate (0.01)
ethoprophos (0.01)
etofenprox (0.01)
etoxazole (0.02)
etridiazole (0.05)
etrimfos (0.01)
famoxadone (0.01)
fenamidone (0.01)
fenamiphos (sum) (0.01)
fenarimol (0.01)
fenazaquin (0.01)
fenbuconazole (0.01)
fenbutatin oxide (0.05)
fenhexamid (0.05)
fenitrothion (0.01)
fenoxycarb (0.01)
fenpropathrin (0.01)
fenpropidin (0.05)
fenpropimorph (0.01)
fenpyroximate (0.01)
fensulfothion (sum) (0.01)
fenthion (partial sum) (0.01)
fenvalerate & esfenvalerate (all isomers (0.01)
fipronil (sum) (0.01)
flonicamid (sum) (0.01)
fluazifop-p-butyl (sum) (0.01)
fluazinam (0.01)
flubendiamide (0.01)
flucythrinate (0.05)
flufenacet (0.01)
flufenoxuron (0.02)
fluometuron (0.01)
fluopicolide (0.01)
fluoxastrobin (0.01)
fluquinconazole (0.01)
flurochloridone (0.05)
fluroxypyr (sum) (0.05)
flusilazole (0.01)
flutolanil (0.01)
flutriafol (0.01)
fluxapyroxad (0.01)
fonofos (0.01)
formetanate (0.05)
formothion (0.01)
fosthiazate (0.01)
furalaxyl (0.01)
furathiocarb (0.01)
furmecyclox (0.01)
halofenozide (0.01)
halosulfuron-methyl (0.01)
haloxyfop (sum) (0.01)
Heptachlor (sum) (0.01)
molinate (0.01)
monocrotophos (0.01)
monolinuron (0.01)
Monuron (0.01)
myclobutanil (0.01)
napropamide (0.05)
nitenpyram (0.01)
nitrothal-isopropyl (0.01)
nuarimol (0.01)
ofurace (0.01)
Oxadiargyl (0.01)
oxadixyl (0.01)
oxamyl (0.01)
oxasulfuron (0.01)
oxydemeton-methyl (sum) (0.01)
oxyfluorfen (0.05)
parathion (0.01)
parathion-methyl (sum) (0.01)
penconazole (0.01)
pencycuron (0.01)
pendimethalin (0.01)
pentanochlor (0.01)
permethrin (0.01)
phenmedipham (0.05)
phenthoate (0.01)
phorate (partial sum) (0.02)
phosalone (0.01)
phosphamidon (0.01)
phoxim (0.01)
picolinafen (0.01)
picoxystrobin (0.01)
piperonyl butoxide (0.01)
pirimicarb (sum) (0.01)
pirimiphos-ethyl (0.01)
pirimiphos-methyl (0.01)
prochloraz (parent only) (0.01)
procymidone (0.01)
profenofos (0.01)
promecarb (0.01)
prometryn (0.01)
propachlor (0.01)
propamocarb (0.01)
propaquizafop (0.05)
propargite (0.01)
propetamphos (0.01)
propiconazole (0.01)
propoxur (0.01)
propyzamide (0.01)
proquinazid (0.01)
prosulfocarb (0.05)
prosulfuron (0.02)
prothioconazole (0.01)
prothiofos (0.01)
pymetrozine (0.01)
pyrazophos (0.01)

chlorpropham (sum) (0.05)
chlorpyrifos (0.01)
chlorpyrifos-methyl (0.01)

chlorthal-dimethyl (0.01)
chlortoluron (0.01)
chlozolinate (0.01)
chromafenozide (0.01)
clethodim (0.05)
clofentezine (0.01)
clomazone (0.01)
clothianidin (0.01)
coumaphos (0.01)
cyazofamid (0.01)
cycloate (0.01)
cycloxydim (0.05)
cyflufenamid (0.01)
cyfluthrin (0.02)
Cyhalofop-butyl (sum) (0.01)
cymoxanil (0.01)

cypermethrin (0.05)
cyproconazole (0.01)
cyromazine (0.05)
DDAC (sum) (0.05)
DDT (sum) (0.01)
deltamethrin (0.05)
demeton-S-methyl (0.01)
desmedipham (0.05)

diafenthiuron (0.05)
diazinon (0.01)
dichlobenil (0.05)
dichlofluanid (0.01)
dichlofluanid and DMSA (0.01)
dichlorprop (0.01)
dichlorvos (0.01)
diclobutrazol (0.01)
dicloran (0.01)
dicofol (sum) (0.01)
dicrotophos (0.01)
diethofencarb (0.01)
diflufenican (0.01)
dimethenamid (0.01)
dimethoate (sum) (0.01)
dimethomorph (0.01)
dimoxystrobin (0.01)
diniconazole (0.01)
dinotefuran (0.01)
diphenylamine (0.05)
disulfoton (sum) (0.02)
diuron (0.01)
emamectin benzoate (0.01)
endosulfan (sum) (0.01)
EPN (0.01)
epoxiconazole (0.01)
EPTC (0.05)

heptenophos (0.01)
hexachlorobenzene (0.01)
hexachlorocyclohexane (sum) (0.01)
hexaconazole (0.01)
hexythiazox (0.01)
imidacloprid (0.01)
ioxynil (0.05)
iprovalicarb (0.01)
isazophos (0.01)
isocarbophos (0.01)
isofenphos (0.01)
isofenphos-methyl (0.01)
isoprocarb (0.01)
isoprothiolane (0.01)
isoproturon (0.01)
isopyrazam (0.01)
isoxaben (0.01)
isoxaflutole (0.01)
kresoxim-methyl (0.01)

lambda-cyhalothrin (0.02)
lenacil (0.01)
lindane (0.01)
linuron (0.01)
lufenuron (0.02)
malathion (0.01)
mandipropamid (0.01)
MCPA, MCPB and MCPA thioethyl expressed (0.01)
MCPB (0.01)
mecarbam (0.01)
mepanipyrim (sum) (0.01)
mepiquat (0.02)
mepronil (0.01)
mesosulfuron-methyl (0.01)
metaflumizone (0.05)
metalaxyl (0.01)
metamitron (0.01)
metconazole (0.01)
methabenzthiazuron (0.01)
methacrifos (0.01)
methamidophos (0.01)
methidathion (0.01)
methiocarb (sum) (0.01)
methomyl (sum) (0.01)
methoxychlor (0.01)
metobromuron (0.01)
metolachlor (0.01)
metolcarb (0.01)
metosulam (0.01)
metoxuron (0.01)
metrafenone (0.01)
metribuzin (0.05)
metsulfuron-methyl (0.05)
mevinphos (0.01)

pyrethrins (0.01)
pyridaben (0.01)
pyridaphenthion (0.01)

pyrimethanil (0.05)
pyriproxifen (0.01)
quassia (0.01)
quinalphos (0.01)
quinmerac (0.05)
Quinoclamine (0.01)
quinoxyfen (0.01)
quintozene (sum) (0.01)
rimsulfuron (0.01)
rotenone (0.01)
spinosad (0.01)
spiromesifen (0.01)
spirotetramat (sum) (0.01)
spiroxamine (0.01)
sulcotrione (0.05)
sum of butocarboxim and butocarboxim sul (0.01)
tau-fluvalinate (0.01)
tebufenozide (0.01)
tebufenpyrad (0.01)
tebuthiuron (0.01)
tecnazene (0.01)
teflubenzuron (0.01)
tefluthrin (0.01)
terbufos (0.01)

Terbufos (sum not defintion) (0.01)
terbuthylazine (0.05)
tetrachlorvinphos (0.01)
tetraconazole (0.01)
tetradifon (0.01)
tetramethrin (0.01)
thiabendazole (0.05)
thiamethoxam (sum) (0.01)
thiophanate-methyl (0.01)
tolclofos-methyl (0.01)
tolfenpyrad (0.01)
tolylfluanid (sum) (0.01)
triadimefon & triadimenol (0.01)
triallate (0.05)
triasulfuron (0.05)
triazamate (0.01)
triazophos (0.01)
triclopyr (0.05)
tricyclazole (0.01)
triflumizole (0.01)
triflumuron (0.01)
trifluralin (0.01)
triforine (0.05)
triticonazole (0.01)
vinclozolin (sum) (0.01)
zoxamide (0.01)

Table 17a. Residues detected in samples of PEPPERS collected between January and March 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
PEPPERS, FRESH Imported (Non-EC): 4 samples analysed		
flutriafol	<0.01 (i.e. not found)	3
(MRL = 1)	0.01	1
imidacloprid	<0.01 (i.e. not found)	3
(MRL = 1)	0.06	1
PEPPERS, FRESH Imported (EC): 14 samples analysed		
boscalid	<0.01 (i.e. not found)	12
(MRL = 3)	0.02	2
cyprodinil	<0.01 (i.e. not found)	13
(MRL = 1.5)	0.06	1
fenhexamid	<0.01 (i.e. not found)	13
(MRL = 3)	0.3	1
fludioxonil	<0.01 (i.e. not found)	11
(MRL = 1)	0.03 - 0.2	3
fluopyram	<0.01 (i.e. not found)	10
(MRL = 0.8)	0.01 - 0.09	4
flutriafol	<0.01 (i.e. not found)	6
(MRL = 1)	0.01 - 0.04	8
kresoxim-methyl	<0.01 (i.e. not found)	13
(MRL = 0.8)	0.03	1
methoxyfenozide	<0.01 (i.e. not found)	13
(MRL = 2)	0.02	1
metrafenone	<0.01 (i.e. not found)	12
(MRL = 2)	0.01, 0.02	2
myclobutanil	<0.01 (i.e. not found)	13
(MRL = 0.5)	0.02	1
pymetrozine	<0.01 (i.e. not found)	13
(MRL = 3)	0.05	1
spiromesifen	<0.01 (i.e. not found)	13
(MRL = 0.5)	0.03	1
thiacloprid	<0.01 (i.e. not found)	13
(MRL = 1)	0.02	1
triadimefon & triadimenol	<0.01 (i.e. not found)	11
(MRL = 1)	0.01 - 0.02	3

Imported (EC) samples of peppers were from Spain (14).
Imported (Non-EC) samples of peppers were from Israel (4).

Residues were distributed by country of origin, as follows:

boscalid	Spain (2)
cyprodinil	Spain (1)
flutriafol	Israel (1), Spain (8)
fludioxonil	Spain (3)
fenhexamid	Spain (1)
fluopyram	Spain (4)
imidacloprid	Israel (1)
kresoxim-methyl	Spain (1)
metrafenone	Spain (2)
methoxyfenozide	Spain (1)
myclobutanil	Spain (1)
pymetrozine	Spain (1)
spiromesifen	Spain (1)
thiacloprid	Spain (1)
triadimefon & triadimenol	Spain (3)

No residues were found in 2 of the 4 Imported (Non-EC) fresh samples
No residues were found in 3 of the 14 Imported (EC) fresh samples

Table 17b. Residues detected in samples of PEPPERS collected between January and March 2016 *continued*

Residues (1-6 compounds) were found in 13 of the 18 samples as follows:

Number of residues	Sample ID	Type of PEPPERS	Residues found (mg/kg)															Country of origin
			BOS	CYD	FLF	FLUD	FNHX	FPYM	IMI	KREM	MTF	MXF	MYC	PYMT	SPM	THC	TRSP	
(1)	1232/2016	FRESH	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	Israel
	1470/2016	FRESH	-	-	-	-	-	-	0.06	-	-	-	-	-	-	-	-	Israel
	0077/2016	FRESH	-	-	0.02	-	-	-	-	-	-	-	-	-	-	-	-	Spain
	0212/2016	FRESH	-	-	0.02	-	-	-	-	-	-	-	-	-	-	-	-	Spain
	1296/2016	FRESH	-	-	0.02	-	-	-	-	-	-	-	-	-	-	-	-	Spain
(2)	0044/2016	FRESH	0.02	-	-	-	-	0.02	-	-	-	-	-	-	-	-	-	Spain
	1050/2016	FRESH	-	-	-	-	-	0.09	-	-	-	-	-	-	-	-	0.02	Spain
	1327/2016	FRESH	-	-	0.03	0.03	-	-	-	-	-	-	-	-	-	-	-	Spain
	1392/2016	FRESH	-	-	0.01	-	-	-	-	-	0.02	-	-	-	-	-	-	Spain
(4)	0096/2016	FRESH	-	-	-	-	-	-	-	0.03	-	0.02	0.02	-	0.03	-	-	Spain
	1424/2016	FRESH	-	0.06	0.02	0.2	0.3	-	-	-	-	-	-	-	-	-	-	Spain
(5)	0200/2016	FRESH	-	-	0.02	-	-	0.01	-	-	-	-	-	0.05	-	0.02	0.01	Spain
(6)	1322/2016	FRESH	0.02	-	0.04	0.03	-	0.01	-	-	0.01	-	-	-	-	-	0.01	Spain

The abbreviations used for the pesticide names are as follows:

BOS	boscalid	CYD	cyprodinil	FLF	flutriafol
FLUD	fludioxonil	FNHX	fenhexamid	FPYM	fluopyram
IMI	imidacloprid	KREM	kresoxim-methyl	MTF	metrafenone
MXF	methoxyfenozide	MYC	myclobutanil	PYMT	pymetrozine
SPM	spiromesifen	THC	thiacloprid	TRSP	triadimefon & triadimenol

Table 17c. Residues sought but not found in samples of PEPPERS collected between January and March 2016

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

1,2,3,6-tetrahydrophthalimide (0.01)
2,4-D (sum) (0.01)
2-phenylphenol (0.01)
3-chloroaniline (0.01)
4,4'dichlorobenzophenone (0.01)
abamectin (sum) (0.01)
acephate (0.01)
acetamiprid (0.01)
acetochlor (0.01)
acibenzolar-s-methyl (0.01)
aclonifen (0.01)
acrinathrin (0.01)
alachlor (0.01)
aldicarb (sum) (0.01)
aldrin and dieldrin (0.01)
allethrin (0.01)
alpha-HCH (0.01)
ametryn (0.01)
amitraz (0.01)
atraton (0.01)
atrazine (0.01)
Azaconazole (0.01)
azinphos-ethyl (0.01)
azinphos-methyl (0.01)
azoxystrobin (0.01)
BAC (sum) (0.01)
benalaxyl (0.01)
bendiocarb (0.01)
benthiavalicarb (sum) (0.01)
beta-HCH (0.01)
bifenox (0.01)
bifenthrin (0.01)
biphenyl (0.01)
bitertanol (0.01)
bromacil (0.01)
bromophos (0.01)
bromophos-ethyl (0.01)
bromophos-methyl (0.01)
bromopropylate (0.01)
bromoxynil (0.01)
bromuconazole (0.01)
bupirimate (0.01)
buprofezin (0.01)
butachlor (0.01)
butocarboxim (parent) (0.01)
butralin (0.01)
cadusafos (0.01)
captan (0.01)
carbaryl (0.01)
carbendazim (0.01)
carbofuran (sum) (0.01)
carbophenothion (0.01)
carboxin (0.01)
Carfentrazone-ethyl (0.01)
diuron (0.01)
edifenphos (0.01)
emamectin benzoate (0.01)
endosulfan (sum) (0.01)
endrin (0.01)
EPN (0.01)
epoxiconazole (0.01)
EPTC (0.01)
etaconazole (0.01)
ethephon (0.05)
ethiofencarb (parent) (0.01)
ethion (0.01)
ethirimol (0.01)
ethofumesate (0.01)
ethoprophos (0.01)
etofenprox (0.01)
etoxazole (0.01)
etrimfos (0.01)
famoxadone (0.01)
fenamidone (0.01)
fenamiphos (sum) (0.01)
fenarimol (0.01)
fenazaquin (0.01)
fenbuconazole (0.01)
fenbutatin oxide (0.02)
fenchlorphos (sum) (0.01)
fenitrothion (0.01)
fenoxycarb (0.01)
fenpiclonil (0.01)
fenpropathrin (0.01)
fenpropidin (0.01)
fenpropimorph (0.01)
fenpyroximate (0.01)
fenson (0.01)
fensulfothion (sum) (0.01)
fenthion (partial sum) (0.01)
fenvalerate & esfenvalerate (all isomers (0.01)
fipronil (sum) (0.01)
flamprop-isoproyl (0.01)
fluazifop-p-butyl (sum) (0.01)
fluazinam (0.01)
flubendiamide (0.01)
flucythrinate (0.01)
flufenacet (0.01)
flufenoxuron (0.01)
flumetralin (0.01)
flumioxazin (0.01)
fluopicolide (0.01)
fluoxastrobin (0.01)
flurochloridone (0.01)
flurtamone (0.01)
flusilazole (0.01)
flutolanil (0.01)
fluxapyroxad (0.01)
napropamide (0.01)
nitenpyram (0.01)
nitrofen (0.01)
nitrothal-isopropyl (0.01)
Norflurazon (0.01)
Novaluron (0.01)
nuarimol (0.01)
octhilinone (0.01)
ofurace (0.01)
oxadiazon (0.01)
oxadixyl (0.01)
oxamyl (0.01)
oxydemeton-methyl (sum) (0.01)
oxyfluorfen (0.01)
paclobutrazol (0.01)
Paraoxon-ethyl (0.01)
parathion (0.01)
parathion-ethyl (sum) (0.01)
parathion-methyl (sum) (0.01)
penconazole (0.01)
pencycuron (0.01)
pendimethalin (0.01)
pentanochlor (0.01)
permethrin (0.01)
Pethoxamid (0.01)
phenmedipham (0.01)
phenothrin (0.01)
phenthoate (0.01)
phorate (partial sum) (0.01)
phosalone (0.01)
Phosfolan (0.01)
phosmet (sum) (0.01)
phosphamidon (0.01)
phoxim (0.01)
picoxystrobin (0.01)
pirimicarb (sum) (0.01)
pirimiphos-ethyl (0.01)
pirimiphos-methyl (0.01)
pretilachlor (0.01)
prochloraz (parent only) (0.01)
procymidone (0.01)
profenofos (0.01)
promecarb (0.01)
prometon (0.01)
prometryn (0.01)
propachlor (0.01)
propamocarb (0.01)
propanil (0.01)
propaquizafop (0.01)
propargite (0.01)
propazine (0.01)
propetamphos (0.01)
propham (0.01)
propiconazole (0.01)

chlorantraniliprole (0.01)
chlordane (animal products) (0.01)
chlordane (sum) (0.01)
chlordimeform (0.01)
chlorfenapyr (0.01)
chlorfenson (0.01)
chlorfenvinphos (0.01)
chloridazon (0.01)
chlormephos (0.01)
chlormequat (0.02)
chlorothalonil (0.01)
chlorotoluron (0.01)
chlorpropham (sum) (0.01)
chlorpyrifos (0.01)
chlorpyrifos-methyl (0.01)
chlorthal-dimethyl (0.01)
chlorthion (0.01)
chlorthiophos (0.01)
chlortoluron (0.01)
chlozolinate (0.01)
clodinafop-propargyl (0.01)
clofentezine (0.01)
clomazone (0.01)
cloquintocet-mexyl (0.01)
clothianidin (0.01)
coumaphos (0.01)
crufomate (0.01)
cyanazine (0.01)
cyanophenphos (0.01)
cyazofamid (0.01)
cyflufenamid (0.01)
cyfluthrin (0.01)
cymoxanil (0.01)
cypermethrin (0.01)
cyproconazole (0.01)
cyromazine (0.01)
DDAC (sum) (0.01)
DDT (sum) (0.01)
DDT sum alternate (0.01)
deltamethrin (0.01)
demeton-S-methyl (0.01)
desmetryn (0.01)
diafenthiuron (0.01)
dialifos (0.01)
diazinon (0.01)
dichlobenil (0.01)
dichlofenthion (0.01)
dichlofluanid (0.01)
dichlofluanid and DMSA (0.01)
dichlorvos (0.01)
diclobutrazol (0.01)
dicloran (0.01)
dicofol (sum) (0.01)
dicrotophos (0.01)
diethofencarb (0.01)
difenoconazole (0.01)
diflubenzuron (0.01)
diflufenican (0.01)
dimethenamid (0.01)
dimethoate (sum) (0.01)
dimethomorph (0.01)
dimethylvinphos (0.01)
folpet (0.01)
fonofos (0.01)
formetanate (0.01)
formothion (0.01)
fosthiazate (0.01)
furalaxyl (0.01)
furathiocarb (0.01)
furmecyclox (0.01)
haloxyfop (sum) (0.01)
haloxyfop-methyl (0.01)
Heptachlor (sum) (0.01)
heptenophos (0.01)
hexachlorobenzene (0.01)
hexachlorocyclohexane (sum) (0.01)
hexaconazole (0.01)
hexaflumuron (0.01)
hexazinone (0.01)
hexythiazox (0.01)
imazalil (0.01)
indoxacarb (0.01)
inorganic bromide (10)
iodofenphos (0.01)
ioxynil (0.01)
iprodione (0.01)
iprovalicarb (0.01)
isazophos (0.01)
isobenzan (0.01)
isocarbophos (0.01)
isodrin (0.01)
isofenphos (0.01)
isofenphos-methyl (0.01)
isoprocarb (0.01)
isoprothiolane (0.01)
isoproturon (0.01)
isoxaben (0.01)
lambda-cyhalothrin (0.01)
lenacil (0.01)
leptophos (0.01)
lindane (0.01)
linuron (0.01)
lufenuron (0.01)
malathion (0.01)
mandipropamid (0.01)
MCPA (sum) (0.01)
MCPA-thioethyl (0.01)
mecarbam (0.01)
mepanipyrim (sum) (0.01)
mephosfolan (0.01)
mepiquat (0.02)
mepronil (0.01)
metaflumizone (0.01)
metalaxyl (0.01)
metamitron (0.01)
metazachlor (0.01)
metconazole (0.01)
methacrifos (0.01)
methamidophos (0.01)
methidathion (0.01)
methiocarb (sum) (0.01)
methomyl (sum) (0.01)
methoxychlor (0.01)
metobromuron (0.01)
propoxur (0.01)
propyzamide (0.01)
proquinazid (0.01)
prosulfocarb (0.01)
prothioconazole (0.01)
prothiofos (0.01)
pyraclostrobin (0.01)
Pyraflufen-ethyl (0.01)
pyrazophos (0.01)
pyrethrins (0.01)
pyridaben (0.01)
pyridalyl (0.01)
pyridaphenthion (0.01)
pyridate (0.01)
pyrifenox (0.01)
pyrimethanil (0.01)
pyrimidifen (0.01)
pyriproxifen (0.01)
quinalphos (0.01)
quinomethionate (0.01)
quinoxyfen (0.01)
quintozene (sum) (0.01)
quizalfop-ethyl (0.01)
rotenone (0.01)
secbumeton (0.01)
silafluofen (0.01)
simazine (0.01)
spinetoram (0.01)
spinosad (0.01)
spirodiclofen (0.01)
spiroxamine (0.01)
sulfallate (0.01)
sulfentrazone (0.01)
sulfotep (0.01)
sulprofos (0.01)
tau-fluvalinate (0.01)
tebuconazole (0.01)
tebufenozide (0.01)
tebufenpyrad (0.01)
tecnazene (0.01)
teflubenzuron (0.01)
tefluthrin (0.01)
Temephos (0.01)
terbufos (0.01)
Terbufos (sum not defintion) (0.01)
terbumeton (0.01)
tetrachlorvinphos (0.01)
tetraconazole (0.01)
tetradifon (0.01)
tetramethrin (0.01)
tetrasul (0.01)
thiabendazole (0.01)
thiamethoxam (sum) (0.01)
thiobencarb (0.01)
thiometon (0.01)
thiophanate-methyl (0.01)
tolclofos-methyl (0.01)
tolylfluanid (sum) (0.01)
triallate (0.01)
triazophos (0.01)
trichlorfon (0.01)
tricyclazole (0.01)

dimoxystrobin (0.01)
diniconazole (0.01)
dioxabenzophos (0.01)
dioxathion (0.01)
diphenamid (0.01)
diphenylamine (0.01)
disulfoton (sum) (0.01)
dithianon (0.01)
dithiocarbamates (0.05)
metolachlor (0.01)
metolcarb (0.01)
metoxuron (0.01)
metribuzin (0.01)
mevinphos (0.01)
molinate (0.01)
monocrotophos (0.01)
Monuron (0.01)
trietazine (0.01)
trifloxystrobin (0.01)
triflumuron (0.01)
trifluralin (0.01)
triforine (0.01)
triticonazole (0.01)
vinclozolin (sum) (0.01)
zoxamide (0.01)

Table 18a. Residues detected in samples of POTATOES collected between January and March 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
POTATOES, MAINCROP UK: 28 samples analysed		
Chlorpropham (potato definition)	<0.05 (i.e. not found)	10
(MRL = 10)	0.06 - 8.6	18
flonicamid (sum)	<0.01 (i.e. not found)	22
(MRL = 0.1)	0.01 - 0.06	6
flufenacet	<0.01 (i.e. not found)	27
(MRL = 0.15)	0.01	1
fluopicolide	<0.01 (i.e. not found)	27
(MRL = 0.03)	0.01	1
maleic hydrazide	<1 (i.e. not found)	16
(MRL = 50)	5.9 - 19	12
MCPA, MCPB and MCPA thioethyl expressed as MCPA	<0.01 (i.e. not found)	27
(MRL = 0.05*)	0.03	1
pencycuron	<0.01 (i.e. not found)	27
(MRL = 0.1)	0.01	1
pendimethalin	<0.01 (i.e. not found)	27
(MRL = 0.05*)	0.02	1
propamocarb	<0.01 (i.e. not found)	25
(MRL = 0.3)	0.01	3
POTATOES, NEW UK: 1 sample analysed		
Chlorpropham (potato definition)	<0.05 (i.e. not found)	0
(MRL = 10)	1.6	1
flonicamid (sum)	<0.01 (i.e. not found)	0
(MRL = 0.1)	0.03	1
pencycuron	<0.01 (i.e. not found)	0
(MRL = 0.1)	0.01	1
POTATOES, MAINCROP Imported (Non-EC): 4 samples analysed		
None found	-	4
POTATOES, NEW Imported (Non-EC): 5 samples analysed		
None found	-	5
POTATOES, MAINCROP Imported (EC): 2 samples analysed		
azoxystrobin	<0.01 (i.e. not found)	1
(MRL = 7)	0.03	1
Chlorpropham (potato definition)	<0.05 (i.e. not found)	1
(MRL = 10)	5	1

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
flonicamid (sum)	<0.01 (i.e. not found)	1
(MRL = 0.1)	0.04	1

NOTE: * Indicates MRL is set to the Limit Of Detection.

Imported (EC) samples of potatoes were from Cyprus (1), France (1).
Imported (Non-EC) samples of potatoes were from Egypt (1), Israel (8).
UK samples of potatoes (29).

Residues were distributed by country of origin, as follows:

azoxystrobin	France (1)
Chlorpropham (potato definition)	France (1), UK (19)
flonicamid (sum)	France (1), UK (7)
flufenacet	UK (1)
fluopicolide	UK (1)
MCPA, MCPB and MCPA thioethyl expressed	UK (1)
maleic hydrazide	UK (12)
propamocarb	UK (3)
pendimethalin	UK (1)
pencycuron	UK (2)

No residues were found in 6 of the 28 UK maincrop samples
Residues were found in all of the 1 UK new samples
No residues were found in any of the Imported (Non-EC) maincrop samples
No residues were found in any of the Imported (Non-EC) new samples
No residues were found in 1 of the 2 Imported (EC) maincrop samples

Table 18b. Residues detected in samples of POTATOES collected between January and March 2016 *continued*

Residues (1-4 compounds) were found in 24 of the 40 samples as follows:

Number of residues	Sample ID	Type of POTATOES	Residues found (mg/kg)										Country of origin
			AZOX	CPPOT	FLC	FLN	FPC	MCPAA	MH	PCB	PND	PNY	
(1)	4160/2016	MAINCROP	-	1.9	-	-	-	-	-	-	-	-	UK
	4184/2016	MAINCROP	-	-	-	-	-	-	7.6	-	-	-	UK
	4220/2016	MAINCROP	-	-	-	-	-	-	5.9	-	-	-	UK
	4223/2016	MAINCROP	-	-	0.01	-	-	-	-	-	-	-	UK
	4242/2016	MAINCROP	-	-	0.02	-	-	-	-	-	-	-	UK
	4244/2016	MAINCROP	-	1.3	-	-	-	-	-	-	-	-	UK
	4257/2016	MAINCROP	-	8.6	-	-	-	-	-	-	-	-	UK
	4267/2016	MAINCROP	-	2	-	-	-	-	-	-	-	-	UK
	4300/2016	MAINCROP	-	0.2	-	-	-	-	-	-	-	-	UK
(2)	4241/2016	MAINCROP	-	1.6	-	-	-	-	11	-	-	-	UK
	4274/2016	MAINCROP	-	1.9	-	-	-	-	7.1	-	-	-	UK
	4275/2016	MAINCROP	-	2.1	-	-	-	-	19	-	-	-	UK
	4287/2016	MAINCROP	-	0.08	-	-	-	-	-	0.01	-	-	UK
	4304/2016	MAINCROP	-	0.2	-	-	-	-	15	-	-	-	UK
	4224/2016	MAINCROP	-	0.7	-	-	-	-	-	0.01	-	-	UK
(3)	4151/2016	MAINCROP	-	3.6	-	-	0.01	-	-	0.01	-	-	UK
	4176/2016	NEW	-	1.6	0.03	-	-	-	-	-	-	0.01	UK
	4192/2016	MAINCROP	-	4.8	0.03	-	-	-	12	-	-	-	UK
	4205/2016	MAINCROP	-	3.1	0.06	-	-	-	6.5	-	-	-	UK
	4269/2016	MAINCROP	-	1.8	0.05	-	-	-	12	-	-	-	UK
	4291/2016	MAINCROP	-	0.6	-	-	-	-	10	-	-	0.01	UK
	4225/2016	MAINCROP	0.03	5	0.04	-	-	-	-	-	-	-	France
(4)	4239/2016	MAINCROP	-	0.06	-	0.01	-	-	10	-	0.02	-	UK
	4308/2016	MAINCROP	-	1.1	0.02	-	-	0.03	17	-	-	-	UK

The abbreviations used for the pesticide names are as follows:

AZOX	azoxystrobin	CPPOT	Chlorpropham (potato definition)	FLC	flonicamid (sum)
FLN	flufenacet	FPC	fluopicolide	MCPAA	MCPA, MCPB and MCPA thioethyl expressed as MCPA
MH	maleic hydrazide	PCB	propamocarb	PND	pendimethalin
PNY	pencycuron				

Table 18c. Residues sought but not found in samples of POTATOES collected between January and March 2016

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

1,4-dimethylnaphthalene (0.01)
2,4-D (sum) (0.01)
2,4-DB (0.01)
2-phenylphenol (0.05)
6-benzyladenine (0.01)
abamectin (sum) (0.01)
acephate (0.01)
acetamiprid (0.01)
acetochlor (0.01)
acibenzolar-s-methyl (0.02)
aclonifen (0.05)
acrinathrin (0.05)
alachlor (0.01)
aldicarb (sum) (0.01)
aldrin and dieldrin (0.01)
alpha-HCH (0.01)
ametoctradin (0.01)
amidosulfuron (0.01)
amitraz (0.01)
anthraquinone (0.01)
asulam (0.05)
atrazine (0.01)
azinphos-methyl (0.02)
BAC (sum) (0.05)
benalaxyl (0.01)
bendiocarb (0.01)
benfuracarb (0.01)
benthiavalicarb (sum) (0.01)
beta-HCH (0.01)
bifenthrin (0.01)
biphenyl (0.01)
bispyribac-sodium (0.01)
bitertanol (0.01)
boscalid (0.01)
bromophos-ethyl (0.01)
bromopropylate (0.01)
bromoxynil (0.01)
bromuconazole (0.01)
bupirimate (0.01)
buprofezin (0.01)
butachlor (0.01)
butocarboxim (parent) (0.01)
butoxycarboxim (0.01)
cadusafos (0.01)
captan (0.02)
carbaryl (0.01)
carbendazim (0.01)
carbofuran (sum) (0.01)
carbosulfan (0.01)
carboxin (0.05)
chlorantraniliprole (0.01)
chlorbufam (0.05)
chlordane (sum) (0.01)
chlorfenapyr (0.02)
chlorfenvinphos (0.01)
epoxiconazole (0.01)
EPTC (0.05)
ethiofencarb (parent) (0.01)
ethion (0.01)
ethirimol (0.01)
ethofumesate (0.01)
ethoprophos (0.01)
etofenprox (0.01)
etoxazole (0.02)
etridiazole (0.05)
etrimfos (0.01)
famoxadone (0.01)
fenamidone (0.01)
fenamiphos (sum) (0.01)
fenarimol (0.01)
fenazaquin (0.01)
fenbuconazole (0.01)
fenbutatin oxide (0.05)
fenhexamid (0.05)
fenitrothion (0.01)
fenoxycarb (0.01)
fenpropathrin (0.01)
fenpropidin (0.05)
fenpropimorph (0.01)
fenpyroximate (0.01)
fensulfothion (sum) (0.01)
fenthion (partial sum) (0.01)
fenvalerate & esfenvalerate (all isomers (0.01)
fipronil (sum) (0.01)
fluazifop-p-butyl (sum) (0.01)
fluazinam (0.01)
flubendiamide (0.01)
flucythrinate (0.05)
fludioxonil (0.01)
flufenoxuron (0.02)
fluometuron (0.01)
fluopyram (0.01)
fluoxastrobin (0.01)
fluquinconazole (0.01)
flurochloridone (0.05)
fluroxypyr (sum) (0.05)
flusilazole (0.01)
flutolanil (0.01)
flutriafol (0.01)
fluxapyroxad (0.01)
folpet (0.01)
fonofos (0.01)
formetanate (0.05)
formothion (0.01)
fosthiazate (0.01)
furalaxyl (0.01)
furathiocarb (0.01)
furmecyclox (0.01)
halofenozide (0.01)
halosulfuron-methyl (0.01)
molinate (0.01)
monocrotophos (0.01)
monolinuron (0.01)
Monuron (0.01)
myclobutanil (0.01)
napropamide (0.05)
nitenpyram (0.01)
nitrothal-isopropyl (0.01)
nuarimol (0.01)
ofurace (0.01)
Oxadiargyl (0.01)
oxadixyl (0.01)
oxamyl (0.01)
oxasulfuron (0.01)
oxydemeton-methyl (sum) (0.01)
oxyfluorfen (0.05)
paclobutrazol (0.01)
parathion (0.01)
parathion-methyl (sum) (0.01)
penconazole (0.01)
pentanochlor (0.01)
permethrin (0.01)
phenmedipham (0.05)
phenthoate (0.01)
phorate (partial sum) (0.02)
phosalone (0.01)
phosmet (sum) (0.01)
phosphamidon (0.01)
phoxim (0.01)
picolinafen (0.01)
picoxystrobin (0.01)
piperonyl butoxide (0.01)
pirimicarb (sum) (0.01)
pirimiphos-ethyl (0.01)
pirimiphos-methyl (0.01)
prochloraz (parent only) (0.01)
procymidone (0.01)
profenofos (0.01)
promecarb (0.01)
prometryn (0.01)
propachlor (0.01)
propaquizafop (0.05)
propargite (0.01)
propetamphos (0.01)
propiconazole (0.01)
propoxur (0.01)
propyzamide (0.01)
proquinazid (0.01)
prosulfocarb (0.05)
prosulfuron (0.02)
prothioconazole (0.01)
prothiofos (0.01)
pymetrozine (0.01)
pyraclostrobin (0.01)
pyrazophos (0.01)

chloridazon (0.01)
chlorothalonil (0.01)
chlorpyrifos (0.01)
chlorpyrifos-methyl (0.01)
chlorthal-dimethyl (0.01)

chlortoluron (0.01)
chlozolinate (0.01)
chromafenozide (0.01)
clethodim (0.05)
clofentezine (0.01)
clomazone (0.01)
clothianidin (0.01)
coumaphos (0.01)
cyazofamid (0.01)
cycloate (0.01)
cycloxydim (0.05)
cyflufenamid (0.01)
cyfluthrin (0.02)
Cyhalofop-butyl (sum) (0.01)
cymoxanil (0.01)

cypermethrin (0.05)
cyproconazole (0.01)
cyprodinil (0.05)
cyromazine (0.05)
DDAC (sum) (0.05)
DDT (sum) (0.01)
deltamethrin (0.05)
demeton-S-methyl (0.01)
desmedipham (0.05)
diafenthiuron (0.05)
diazinon (0.01)
dichlobenil (0.05)
dichlofluanid (0.01)
dichlofluanid and DMSA (0.01)
dichlorprop (0.01)
dichlorvos (0.01)
diclobutrazol (0.01)
dicloran (0.01)
dicofol (sum) (0.01)
dicrotophos (0.01)
diethofencarb (0.01)
difenoconazole (0.01)
diflubenzuron (0.01)
diflufenican (0.01)
dimethenamid (0.01)
dimethoate (sum) (0.01)
dimethomorph (0.01)
dimoxystrobin (0.01)
diniconazole (0.01)
dinotefuran (0.01)
diphenylamine (0.05)
disulfoton (sum) (0.02)
diuron (0.01)
dodine (0.05)
emamectin benzoate (0.01)
endosulfan (sum) (0.01)
EPN (0.01)

haloxyfop (sum) (0.01)
Heptachlor (sum) (0.01)
heptenophos (0.01)
hexachlorobenzene (0.01)
hexachlorocyclohexane (sum) (0.01)
hexaconazole (0.01)
hexythiazox (0.01)
imazalil (0.02)
imidacloprid (0.01)
indoxacarb (0.01)
ioxynil (0.05)
iprodione (0.02)
iprovalicarb (0.01)
isazophos (0.01)
isocarbophos (0.01)
isofenphos (0.01)
isofenphos-methyl (0.01)
isoprocarb (0.01)
isoprothiolane (0.01)
isoproturon (0.01)

isopyrazam (0.01)
isoxaben (0.01)
isoxaflutole (0.01)
kresoxim-methyl (0.01)
lambda-cyhalothrin (0.02)
lenacil (0.01)
lindane (0.01)
linuron (0.01)
lufenuron (0.02)
malathion (0.01)
mandipropamid (0.01)
MCPB (0.01)
mecarbam (0.01)
mepanipyrim (sum) (0.01)
mepronil (0.01)
mesosulfuron-methyl (0.01)
metaflumizone (0.05)
metalaxyl (0.01)
metamitron (0.01)
metconazole (0.01)
methabenzthiazuron (0.01)
methacrifos (0.01)
methamidophos (0.01)
methidathion (0.01)
methiocarb (sum) (0.01)
methomyl (sum) (0.01)
methoxychlor (0.01)
methoxyfenozide (0.01)
metobromuron (0.01)
metolachlor (0.01)
metolcarb (0.01)
metosulam (0.01)
metoxuron (0.01)
metrafenone (0.01)
metribuzin (0.05)
metsulfuron-methyl (0.05)
mevinphos (0.01)

pyrethrins (0.01)
pyridaben (0.01)
pyridaphenthion (0.01)
pyrimethanil (0.05)
pyriproxifen (0.01)

quassia (0.01)
quinalphos (0.01)
quinmerac (0.05)
Quinoclamine (0.01)
quinoxyfen (0.01)
quintozene (sum) (0.01)
rimsulfuron (0.01)
rotenone (0.01)
spinosad (0.01)
spirodiclofen (0.01)
spiromesifen (0.01)
spirotetramat (sum) (0.01)
spiroxamine (0.01)
sulcotrione (0.05)
sum of butocarboxim and butocarboxim sul (0.01)
tau-fluvalinate (0.01)
tebuconazole (0.01)
tebufenozide (0.01)
tebufenpyrad (0.01)
tebuthiuron (0.01)
tecnazene (0.01)
teflubenzuron (0.01)
tefluthrin (0.01)
terbufos (0.01)
Terbufos (sum not defintion) (0.01)
terbuthylazine (0.05)
tetrachlorvinphos (0.01)
tetraconazole (0.01)
tetradifon (0.01)
tetramethrin (0.01)
thiabendazole (0.05)
thiacloprid (0.01)
thiamethoxam (sum) (0.01)
thiophanate-methyl (0.01)
tolclofos-methyl (0.01)
tolfenpyrad (0.01)
tolylfluanid (sum) (0.01)
triadimefon & triadimenol (0.01)
triallate (0.05)
triasulfuron (0.05)
triazamate (0.01)
triazophos (0.01)
triclopyr (0.05)
tricyclazole (0.01)
trifloxystrobin (0.01)
triflumizole (0.01)
triflumuron (0.01)
trifluralin (0.01)
triforine (0.05)
triticonazole (0.01)
vinclozolin (sum) (0.01)
zoxamide (0.01)

Table 19a. Residues detected in retail samples of PREPARED FRESH FRUIT purchased between January and March 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
MELON UK: 3 samples analysed		
None found	-	3
MIXED UK: 8 samples analysed		
Chlorate	<0.01 (i.e. not found)	6
(MRL = 0.01*)	0.03	2
However we do not think that these chlorate findings should be treated as breaches of the legislation. – see our summary conclusions on 32.		
PINEAPPLE UK: 11 samples analysed		
Chlorate	<0.01 (i.e. not found)	10
(MRL = 0.01*)	0.01	1
DDAC (sum)	<0.01 (i.e. not found)	10
(MRL = 0.1)	0.01	1
WATERMELON UK: 1 samples analysed		
None found	-	1
MANGO Imported (EC): 1 sample analysed		
None found	-	1

NOTE: * Indicates MRL is set to the Limit Of Detection.

Imported (EC) samples of prepared fresh fruit were from EU (1).
UK samples of prepared fresh fruit (23).

Residues were distributed by country of origin, as follows:

Chlorate	UK (3)
DDAC (sum)	UK (1)

No residues were found in any of the UK melon samples
No residues were found in 6 of the 8 UK mixed samples
No residues were found in 10 of the 11 UK pineapple samples
No residues were found in any of the UK watermelon samples
No residues were found in any of the Imported (EC) mango samples

Table 19b. Residues detected in retail samples of PREPARED FRESH FRUIT purchased between January and March 2016 *continued*

Residues (1-2 compounds) were found in 3 of the 24 samples as follows:

Number of residues	Sample ID	Type of PREPARED FRESH FRUIT	Residues found (mg/kg)		Country of origin
			CLOR	DDAC	
(1)	1071/2016	MIXED	0.03	-	UK
	1100/2016	MIXED	0.03	-	UK
(2)	1131/2016	PINEAPPLE	0.01	0.01	UK

The abbreviations used for the pesticide names are as follows:

CLOR Chlorate DDAC DDAC (sum)

Table 19c. Residues sought but not found in retail samples of PREPARED FRESH FRUIT purchased between January and March 2016

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

BAC (sum) (0.01)

Table 20a. Residues detected in retail samples of STRAWBERRIES purchased between January and February 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
STRAWBERRIES, Imported (Non-EC): 5 samples analysed		
azoxystrobin	<0.01 (i.e. not found)	3
(MRL = 10)	0.01, 0.02	2
boscalid	<0.01 (i.e. not found)	4
(MRL = 10)	0.01	1
cyprodinil	<0.01 (i.e. not found)	4
(MRL = 5)	0.2	1
etoxazole	<0.01 (i.e. not found)	4
(MRL = 0.2)	0.02	1
fenhexamid	<0.01 (i.e. not found)	4
(MRL = 10)	0.02	1
fludioxonil	<0.01 (i.e. not found)	4
(MRL = 4)	0.1	1
iprodione	<0.01 (i.e. not found)	3
(MRL = 20)	0.1, 0.4	2
myclobutanil	<0.01 (i.e. not found)	4
(MRL = 1)	0.01	1
quinoxyfen	<0.01 (i.e. not found)	4
(MRL = 0.3)	0.04	1
STRAWBERRIES, Imported (EC): 19 samples analysed		
abamectin (sum)	<0.01 (i.e. not found)	17
(MRL = 0.1)	0.01, 0.02	2
azoxystrobin	<0.01 (i.e. not found)	18
(MRL = 10)	0.03	1
chlorpyrifos-methyl	<0.01 (i.e. not found)	17
(MRL = 0.5)	0.01, 0.1	2
clofentezine	<0.01 (i.e. not found)	18
(MRL = 2)	0.01	1
cyprodinil	<0.01 (i.e. not found)	14
(MRL = 5)	0.02 - 0.4	5
dimethomorph	<0.01 (i.e. not found)	18
(MRL = 0.7)	0.01	1
etoxazole	<0.01 (i.e. not found)	15
(MRL = 0.2)	0.03 - 0.09	4
fenhexamid	<0.01 (i.e. not found)	18
(MRL = 5)	0.5	1
fludioxonil	<0.01 (i.e. not found)	14
(MRL = 4)	0.03 - 0.2	5

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
fluopyram	<0.01 (i.e. not found)	18
(MRL = 2)	0.03	1
myclobutanil	<0.01 (i.e. not found)	17
(MRL = 1)	0.01, 0.03	2
penconazole	<0.01 (i.e. not found)	16
(MRL = 0.5)	0.02 - 0.03	3
pyrethrins	<0.01 (i.e. not found)	18
(MRL = 1)	0.02	1
spinosad	<0.01 (i.e. not found)	17
(MRL = 0.3)	0.02, 0.03	2
tetraconazole	<0.01 (i.e. not found)	18
(MRL = 0.2)	0.02	1
triadimefon & triadimenol	<0.01 (i.e. not found)	18
(MRL = 0.5)	0.04	1
trifloxystrobin	<0.01 (i.e. not found)	15
(MRL = 1)	0.01 - 0.1	4

NOTE: * Indicates MRL is set to the Limit of Determination.

Imported (EC) samples of strawberries were from Spain (19).
Imported (Non-EC) samples of strawberries were from Egypt (3), Morocco (2).

Residues were distributed by country of origin, as follows:

abamectin (sum)	Spain (2)
azoxystrobin	Egypt (1), Morocco (1), Spain (1)
boscalid	Egypt (1)
clofentezine	Spain (1)
chlorpyrifos-methyl	Spain (2)
cyprodinil	Egypt (1), Spain (5)
dimethomorph	Spain (1)
etoxazole	Egypt (1), Spain (4)
fludioxonil	Egypt (1), Spain (5)
fenhexamid	Egypt (1), Spain (1)
fluopyram	Spain (1)
iprodione	Egypt (2)
myclobutanil	Morocco (1), Spain (2)
penconazole	Spain (3)
pyrethrins	Spain (1)
quinoxyfen	Morocco (1)
spinosad	Spain (2)
trifloxystrobin	Spain (4)
triadimefon & triadimenol	Spain (1)
tetraconazole	Spain (1)

No residues were found in 1 of the 5 Imported (Non-EC) samples
No residues were found in 7 of the 19 Imported (EC) samples

Table 20b. Residues detected in retail samples of STRAWBERRIES purchased between January and February 2016

Residues (1-8 compounds) were found in 16 of the 24 samples as follows:

Number of residues	Sample ID	Residues found (mg/kg)																			Country of origin
		ABA	AZOX	BOS	CLF	CPFME	CYD	DMR	EXZ	FLUD	FNHX	FPYM	IPR	MYC	PNZ	PYTH	QINO	SPN	TRFL	TRSP	TTZ	
(1)	1147/2016	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Morocco
	1098/2016	-	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	Spain
	1108/2016	-	-	-	-	-	-	-	0.03	-	-	-	-	-	-	-	-	-	-	-	-	Spain
	1129/2016	-	0.03	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Spain
(2)	0132/2016	-	-	-	-	-	-	-	-	-	0.02	-	0.1	-	-	-	-	-	-	-	-	Egypt
	1191/2016	-	-	-	-	-	-	-	-	-	-	-	-	0.01	-	-	0.04	-	-	-	-	Morocco
	1038/2016	0.01	-	-	-	-	-	-	0.09	-	-	-	-	-	-	-	-	-	-	-	-	Spain
	1052/2016	-	-	-	-	-	-	-	-	-	0.5	-	-	-	-	-	-	-	0.1	-	-	Spain
	1070/2016	-	-	-	-	0.1	-	-	-	-	-	-	-	-	-	-	-	-	0.06	-	-	Spain
(3)	0018/2016	-	-	-	-	-	-	-	-	-	-	-	-	-	0.03	-	-	-	0.05	0.04	-	Spain
	1393/2016	-	-	-	-	-	0.02	-	-	0.05	-	-	-	-	0.02	-	-	-	-	-	-	Spain
(4)	0244/2016	-	-	-	-	0.01	0.05	-	-	0.09	-	-	-	-	-	-	-	0.02	-	-	-	Spain
(5)	0040/2016	-	-	-	-	-	0.1	-	-	0.1	-	-	-	0.03	-	-	-	0.03	-	-	0.02	Spain
	0128/2016	-	-	-	0.01	-	0.02	-	0.04	0.03	-	-	-	0.01	-	-	-	-	-	-	-	Spain
(6)	0078/2016	-	0.02	0.01	-	-	0.2	-	0.02	0.1	-	-	0.4	-	-	-	-	-	-	-	-	Egypt
(8)	1008/2016	0.02	-	-	-	-	0.4	-	0.05	0.2	-	0.03	-	-	0.03	0.02	-	-	0.01	-	-	Spain

The abbreviations used for the pesticide names are as follows:

ABA	abamectin (sum)	AZOX	azoxystrobin	BOS	boscalid
CLF	clofentezine	CPFME	chlorpyrifos-methyl	CYD	cyprodinil
DMR	dimethomorph	EXZ	etoxazole	FLUD	fludioxonil
FNHX	fenhexamid	FPYM	fluopyram	IPR	iprodione
MYC	myclobutanil	PNZ	penconazole	PYTH	pyrethrins
QINO	quinoxyfen	SPN	spinosad	TRFL	trifloxystrobin
TRSP	triadimefon & triadimenol	TTZ	tetraconazole		

Table 20c. Residues sought but not found in retail samples of STRAWBERRIES purchased between January and February 2016

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

2,4-D (sum) (0.02)
2,4-DB (0.01)
2-phenylphenol (0.01)
acephate (0.01)
acetamiprid (0.01)
acetochlor (0.01)
acibenzolar-s-methyl (0.01)
aclonifen (0.01)
acrinathrin (0.01)
alachlor (0.01)
aldicarb (sum) (0.01)
aldrin and dieldrin (0.01)
allethrin (0.01)
alpha-HCH (0.01)
ametoctradin (0.01)
aminocarb (0.01)
amitraz (0.01)
atrazine (0.01)
azinphos-ethyl (0.01)
azinphos-methyl (0.01)
BAC (sum) (0.01)
benalaxyl (0.01)
bendiocarb (0.01)
benthiavalicarb (sum) (0.01)
beta-HCH (0.01)
bifenthrin (0.01)
biphenyl (0.01)
bispyribac-sodium (0.01)
bitertanol (0.05)
bromopropylate (0.01)
bromoxynil (0.01)
bromuconazole (0.01)
bupirimate (0.01)
buprofezin (0.01)
butocarboxim (parent) (0.01)
butoxycarboxim (0.01)
cadusafos (0.01)
captan and folpet (0.01)
carbaryl (0.01)
carbendazim (0.01)
carbetamide (0.01)
carbofuran (sum) (0.01)
carboxin (0.01)
chlorantraniliprole (0.01)
chlorbufam (0.01)
chlordane (sum) (0.01)
chlorfenapyr (0.01)
chlorfenvinphos (0.01)
chlorfluazuron (0.01)
chloridazon (0.01)
chlorobenzilate (0.01)
chlorothalonil (0.01)
chlorotoluron (0.01)
chlorpropham (sum) (0.05)
chlorpyrifos (0.01)
chlorthal-dimethyl (0.01)
ethoprophos (0.01)
etofenprox (0.01)
etrimfos (0.01)
famoxadone (0.01)
fenamidone (0.01)
fenamiphos (sum) (0.01)
fenarimol (0.01)
fenazaquin (0.01)
fenbuconazole (0.01)
fenbutatin oxide (0.01)
fenitrothion (0.01)
fenoxycarb (0.01)
fenpropathrin (0.01)
fenpropidin (0.01)
fenpropimorph (0.01)
fenpyrazamine (0.01)
fenpyroximate (0.01)
fensulfothion (sum) (0.01)
fenthion (partial sum) (0.01)
fenthion (sum) (0.01)
fenvalerate & esfenvalerate (all isomers (0.01)
fipronil (sum) (0.01)
flonicamid (sum) (0.01)
fluazifop-p-butyl (sum) (0.01)
fluazinam (0.01)
flubendiamide (0.01)
flucythrinate (0.01)
flufenacet (0.01)
flufenoxuron (0.01)
fluometuron (0.01)
fluopicolide (0.01)
fluoxastrobin (0.01)
fluquinconazole (0.01)
flusilazole (0.01)
flutolanil (0.01)
flutriafol (0.01)
fluxapyroxad (0.01)
fonofos (0.01)
formetanate (0.01)
formothion (0.01)
fosthiazate (0.01)
fuberidazole (0.01)
furalaxyl (0.01)
furathiocarb (0.001)
halofenozide (0.01)
halosulfuron-methyl (0.01)
haloxyfop (sum) (0.01)
Haloxyfop-R methyl (0.01)
Heptachlor (sum) (0.01)
heptenophos (0.01)
hexachlorobenzene (0.01)
hexachlorocyclohexane (sum) (0.01)
hexaconazole (0.01)
hexaflumuron (0.01)
hexazinone (0.01)
hexythiazox (0.01)
nitrothal-isopropyl (0.01)
nuarimol (0.01)
ofurace (0.01)
Oxadiargyl (0.01)
oxadiazon (0.01)
oxadixyl (0.01)
oxamyl (0.01)
oxasulfuron (0.01)
oxydemeton-methyl (sum) (0.01)
oxyfluorfen (0.01)
paclobutrazol (0.01)
parathion (0.01)
parathion-methyl (sum) (0.01)
pencycuron (0.01)
pendimethalin (0.01)
penflufen (0.01)
penthiopyrad (0.01)
permethrin (0.01)
phenmedipham (0.01)
phenthoate (0.01)
phorate (sum) (0.02)
phosalone (0.01)
phosmet (sum) (0.01)
phosphamidon (0.01)
phoxim (0.01)
picolinafen (0.01)
picoxystrobin (0.01)
piperonyl butoxide (0.01)
pirimicarb (sum) (0.01)
pirimiphos-ethyl (0.01)
pirimiphos-methyl (0.01)
prochloraz (parent only) (0.01)
procymidone (0.01)
profenofos (0.01)
promecarb (0.01)
prometryn (0.01)
propamocarb (0.01)
propanil (0.01)
propaquizafop (0.01)
propargite (0.01)
propetamphos (0.01)
propham (0.01)
propiconazole (0.01)
propoxur (0.01)
propyzamide (0.01)
proquinazid (0.01)
prosulfocarb (0.01)
prosulfuron (0.01)
prothioconazole (0.01)
prothiofos (0.01)
pymetrozine (0.01)
pyraclostrobin (0.01)
pyrazophos (0.01)
pyridaben (0.01)
pyridaphenthion (0.01)
pyrifenox (0.01)

chlozolinate (0.01)
chromafenozide (0.01)
cinidon-ethyl (0.01)
clethodim (0.01)
clomazone (0.01)
clothianidin (0.01)
coumaphos (0.01)
crufomate (0.01)
cyanazine (0.01)
cyazofamid (0.01)
cycloate (0.01)
cycloxydim (0.01)
cyflufenamid (0.01)
cyfluthrin (0.01)
Cyhalofop-butyl (sum) (0.01)
cymoxanil (0.01)

cypermethrin (0.01)
cyproconazole (0.01)
cyromazine (0.01)
DDAC (sum) (0.01)
DDT (sum) (0.01)
deltamethrin (0.01)
desmedipham (0.01)
desmetryn (0.01)
diafenthiuron (0.01)
diazinon (0.01)
dichlofluanid (0.01)
dichlorprop (0.01)
dichlorvos (0.01)
diclobutrazol (0.01)
dicloran (0.01)
dicofol (sum) (0.02)
dicrotophos (0.01)
diethofencarb (0.01)
difenoconazole (0.01)
diflubenzuron (0.01)
diflufenican (0.01)
dimethoate (sum) (0.01)
dimoxystrobin (0.01)
diniconazole (0.01)
dinocap (0.01)
dinotefuran (0.01)
dioxathion (0.01)
diphenylamine (0.05)
disulfoton (sum) (0.01)
dithiocarbamates (0.05)
diuron (0.01)
dodine (0.05)
emamectin benzoate (0.01)
endosulfan (sum) (0.01)
endrin (0.01)
EPN (0.01)
epoxiconazole (0.01)
EPTC (0.01)
ethiofencarb (parent) (0.01)
ethion (0.01)
ethirimol (0.01)
ethofumesate (0.01)
imazalil (0.01)
imidacloprid (0.01)
indoxacarb (0.01)
ioxynil (0.01)
iprovalicarb (0.01)
isazophos (0.01)
isocarbophos (0.01)
isofenphos (0.01)
isofenphos-methyl (0.01)
isoprocarb (0.01)
isoprothiolane (0.01)
isoproturon (0.01)
isopyrazam (0.01)
isoxaben (0.01)
isoxaflutole (0.01)
kresoxim-methyl (0.01)

lambda-cyhalothrin (0.01)
lenacil (0.01)
lindane (0.01)
linuron (0.01)
lufenuron (0.01)
malathion (0.01)
mandipropamid (0.01)
MCPA (sum) (0.01)
MCPB (0.01)
mecarbam (0.01)
mepanipyrim (sum) (0.01)
mepronil (0.01)
mesosulfuron-methyl (0.01)
metaflumizone (0.01)
metalaxyl (0.01)
metamitron (0.01)
metazachlor (0.01)
metconazole (0.02)
methabenzthiazuron (0.01)
methacrifos (0.01)
methamidophos (0.01)
methidathion (0.01)
methiocarb (sum) (0.01)
methomyl (sum) (0.01)
methoxychlor (0.01)
methoxyfenozide (0.01)
metobromuron (0.01)
metolachlor (0.01)
metolcarb (0.01)
metosulam (0.01)
metoxuron (0.01)
metrafenone (0.01)
metribuzin (0.01)
metsulfuron-methyl (0.01)
mevinphos (0.01)
molinate (0.01)
monocrotophos (0.01)
monolinuron (0.01)
Monuron (0.01)
napropamide (0.01)
neburon (0.01)
nitenpyram (0.01)
pyrimethanil (0.01)
pyriproxifen (0.01)
pyroxsulam (0.01)
quassia (0.01)
quinalphos (0.01)
quinmerac (0.01)
Quinoclamine (0.01)
quintozene (sum) (0.01)
Quizalofop, incl. quizalfop-P (0.01)
rotenone (0.01)
simazine (0.01)
spirodiclofen (0.01)
spiromesifen (0.01)
spirotetramat (sum) (0.01)
spiroxamine (0.01)
sum of butocarboxim and butocarboxim sul (0.01)
tau-fluvalinate (0.01)
tebuconazole (0.01)
tebufenozide (0.01)
tebufenpyrad (0.01)
tebuthiuron (0.01)
tecnazene (0.01)
teflubenzuron (0.01)
tefluthrin (0.01)
terbacil (0.01)
terbufos (0.01)
Terbufos (sum not defintion) (0.01)
terbumeton (0.01)
terbuthylazine (0.01)
terbutryn (0.01)
tetrachlorvinphos (0.01)
tetradifon (0.01)
tetramethrin (0.01)
thiabendazole (0.01)
thiacloprid (0.01)
thiamethoxam (sum) (0.01)
thiophanate-methyl (0.01)
tolclofos-methyl (0.01)
tolfenpyrad (0.01)
tolylfluanid (sum) (0.01)
triallate (0.01)
triasulfuron (0.01)
triazamate (0.01)
triazamate (acid) (0.01)
triazamate (ester) (0.01)
triazophos (0.01)
trichlorfon (0.01)
triclopyr (0.05)
tricyclazole (0.01)
triflumuron (0.01)
trifluralin (0.01)
triforine (0.05)
triticonazole (0.01)
Tritosulfuron (0.01)
vamidothion (0.01)
vinclozolin (sum) (0.01)
zoxamide (0.01)

Table 21a. Residues detected in retail samples of TOMATO purchased between January and February 2016

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
CHERRY Imported (Non-EC): 1 sample analysed		
cyprodinil	<0.05 (i.e. not found)	0
(MRL = 1.5)	0.1	1
dithiocarbamates	<0.05 (i.e. not found)	0
(MRL = 3)	0.08	1
fludioxonil	<0.01 (i.e. not found)	0
(MRL = 3)	0.04	1
ROUND Imported (Non-EC): 1 sample analysed		
boscalid	<0.01 (i.e. not found)	0
(MRL = 3)	0.04	1
imidacloprid	<0.01 (i.e. not found)	0
(MRL = 0.5)	0.02	1
metalaxyl	<0.01 (i.e. not found)	0
(MRL = 0.2)	0.01	1
SALAD Imported (Non-EC): 2 samples analysed		
azoxystrobin	<0.01 (i.e. not found)	1
(MRL = 3)	0.01	1
boscalid	<0.01 (i.e. not found)	1
(MRL = 3)	0.04	1
difenoconazole	<0.01 (i.e. not found)	1
(MRL = 2)	0.02	1
fluopyram	<0.01 (i.e. not found)	1
(MRL = 0.9)	0.01	1
pyraclostrobin	<0.01 (i.e. not found)	1
(MRL = 0.3)	0.01	1
pyridaben	<0.01 (i.e. not found)	1
(MRL = 0.3)	0.01	1
spiromesifen	<0.01 (i.e. not found)	1
(MRL = 1)	0.03	1
tau-fluvalinate	<0.01 (i.e. not found)	1
(MRL = 0.1)	0.01	1
thiacloprid	<0.01 (i.e. not found)	1
(MRL = 0.5)	0.04	1
CHERRY Imported (EC): 1 sample analysed		
bupirimate	<0.01 (i.e. not found)	0
(MRL = 2)	0.01	1
dithiocarbamates	<0.05 (i.e. not found)	0

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
(MRL = 3)	0.3	1
pyriproxifen	<0.01 (i.e. not found)	0
(MRL = 1)	0.02	1
PLUM Imported (EC): 2 samples analysed		
iprodione	<0.02 (i.e. not found)	1
(MRL = 5)	0.05	1
spinosad	<0.01 (i.e. not found)	1
(MRL = 0.7)	0.02	1
ROUND Imported (EC): 3 samples analysed		
None found	-	3
SALAD Imported (EC): 2 samples analysed		
boscalid	<0.01 (i.e. not found)	1
(MRL = 3)	0.02	1
buprofezin	<0.01 (i.e. not found)	1
(MRL = 1)	0.03	1
cyprodinil	<0.05 (i.e. not found)	0
(MRL = 1.5)	0.06, 0.2	2
dithiocarbamates	<0.05 (i.e. not found)	1
(MRL = 3)	0.06	1
flubendiamide	<0.01 (i.e. not found)	1
(MRL = 0.2)	0.02	1
fludioxonil	<0.01 (i.e. not found)	0
(MRL = 3)	0.01, 0.2	2
propamocarb	<0.01 (i.e. not found)	1
(MRL = 4)	0.7	1
spiromesifen	<0.01 (i.e. not found)	1
(MRL = 1)	0.08	1
thiacloprid	<0.01 (i.e. not found)	1
(MRL = 0.5)	0.02	1
VINE Imported (EC): 6 samples analysed		
boscalid	<0.01 (i.e. not found)	5
(MRL = 3)	0.07	1
chlorantraniliprole	<0.01 (i.e. not found)	5
(MRL = 0.6)	0.01	1
dithiocarbamates	<0.05 (i.e. not found)	5
(MRL = 3)	0.06	1
metrafenone	<0.01 (i.e. not found)	5
(MRL = 0.4)	0.02	1
pyriproxifen	<0.01 (i.e. not found)	5

Commodity/Pesticide	Concentration range (mg/kg)	Number of samples in range
(MRL = 1)	0.04	1

Imported (EC) samples of tomato were from Spain (14).
Imported (Non-EC) samples of tomato were from Morocco (4).

Residues were distributed by country of origin, as follows:

azoxystrobin	Morocco (1)
boscalid	Morocco (2), Spain (2)
buprofezin	Spain (1)
bupirimate	Spain (1)
chlorantraniliprole	Spain (1)
cyprodinil	Morocco (1), Spain (2)
difenoconazole	Morocco (1)
dithiocarbamates	Morocco (1), Spain (3)
flubendiamide	Spain (1)
fludioxonil	Morocco (1), Spain (2)
fluopyram	Morocco (1)
imidacloprid	Morocco (1)
iprodione	Spain (1)
metrafenone	Spain (1)
metalaxyl	Morocco (1)
propamocarb	Spain (1)
pyridaben	Morocco (1)
pyraclostrobin	Morocco (1)
pyriproxifen	Spain (2)
spiromesifen	Morocco (1), Spain (1)
spinosad	Spain (1)
tau-fluvalinate	Morocco (1)
thiacloprid	Morocco (1), Spain (1)

Residues were found in all of the 1 Imported (Non-EC) cherry samples
Residues were found in all of the 1 Imported (Non-EC) round samples
Residues were found in all of the 2 Imported (Non-EC) salad samples
Residues were found in all of the 1 Imported (EC) cherry samples
Residues were found in all of the 2 Imported (EC) plum samples
No residues were found in any of the Imported (EC) round samples
Residues were found in all of the 2 Imported (EC) salad samples
No residues were found in 2 of the 6 Imported (EC) vine samples

Table 21b. Residues detected in retail samples of TOMATO purchased between January and February 2016 *continued*

Residues (1-7 compounds) were found in 13 of the 18 samples as follows:

Number of residues	Sample ID	Type of TOMATO	Residues found (mg/kg)																						Country of origin
			AZOX	BOS	BUF	BUP	CTP	CYD	DIFC	DTC	FLB	FLUD	FPYM	IMI	IPR	MTF	MTX	PCB	PYB	PYC	PYX	SPM	SPN	TAUF	THC	
(1)	0247/2016	VINE	-	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Spain
	1112/2016	PLUM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	-	-	Spain
	1207/2016	VINE	-	0.07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Spain
	1242/2016	PLUM	-	-	-	-	-	-	-	-	-	-	-	-	0.05	-	-	-	-	-	-	-	-	-	-	Spain
	1426/2016	VINE	-	-	-	-	-	-	-	0.06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Spain
(2)	1298/2016	SALAD	-	-	-	-	-	-	-	-	-	-	0.01	-	-	-	-	-	-	-	-	0.03	-	-	-	Morocco
	1440/2016	VINE	-	-	-	-	-	-	-	-	-	-	-	-	-	0.02	-	-	-	-	0.04	-	-	-	-	Spain
(3)	1325/2016	CHERRY	-	-	-	-	-	0.1	-	0.08	-	0.04	-	-	-	-	-	-	-	-	-	-	-	-	-	Morocco
	1363/2016	ROUND	-	0.04	-	-	-	-	-	-	-	-	-	0.02	-	-	0.01	-	-	-	-	-	-	-	-	Morocco
	0222/2016	CHERRY	-	-	-	0.01	-	-	-	0.3	-	-	-	-	-	-	-	-	-	-	0.02	-	-	-	-	Spain
(5)	0198/2016	SALAD	-	0.02	0.03	-	-	0.06	-	-	-	0.01	-	-	-	-	-	-	-	-	-	-	-	-	0.02	Spain
(6)	0098/2016	SALAD	-	-	-	-	-	0.2	-	0.06	0.02	0.2	-	-	-	-	-	0.7	-	-	-	0.08	-	-	-	Spain
(7)	1267/2016	SALAD	0.01	0.04	-	-	-	-	0.02	-	-	-	-	-	-	-	-	-	0.01	0.01	-	-	-	0.01	0.04	Morocco

The abbreviations used for the pesticide names are as follows:

AZOX	azoxystrobin	BOS	boscalid	BUF	buprofezin
BUP	bupirimate	CTP	chlorantraniliprole	CYD	cyprodinil
DIFC	difenoconazole	DTC	dithiocarbamates	FLB	flubendiamide
FLUD	fludioxonil	FPYM	fluopyram	IMI	imidacloprid
IPR	iprodione	MTF	metrafenone	MTX	metalaxyl
PCB	propamocarb	PYB	pyridaben	PYC	pyraclostrobin
PYX	pyriproxifen	SPM	spiromesifen	SPN	spinosad
TAUF	tau-fluvalinate	THC	thiacloprid		

Table 21c. Residues sought but not found in retail samples of TOMATO purchased between January and February 2016

The following pesticide(s) were actively sought but not found at or above their reporting limits (in parentheses in mg/kg):

1,4-dimethylnaphthalene (0.01)
2,4-D (sum) (0.01)
2,4-DB (0.01)
2-phenylphenol (0.05)
6-benzyladenine (0.01)
abamectin (sum) (0.01)
acephate (0.01)
acetamiprid (0.01)
acetochlor (0.01)
acibenzolar-s-methyl (0.02)
aclonifen (0.05)
acrinathrin (0.05)
alachlor (0.01)
aldicarb (sum) (0.01)
aldrin and dieldrin (0.01)
alpha-HCH (0.01)
ametoctradin (0.01)
amidosulfuron (0.01)
amitraz (0.01)
anthraquinone (0.01)
asulam (0.05)
atrazine (0.01)
azinphos-methyl (0.02)
BAC (sum) (0.05)
benalaxyl (0.01)
bendiocarb (0.01)
benfuracarb (0.01)
benthiavalicarb (sum) (0.01)
beta-HCH (0.01)
bifenthrin (0.01)
biphenyl (0.01)
bispyribac-sodium (0.01)
bitertanol (0.01)
bromophos-ethyl (0.01)
bromopropylate (0.01)
bromoxynil (0.01)
bromuconazole (0.01)
butachlor (0.01)
butocarboxim (parent) (0.01)
butoxycarboxim (0.01)
cadusafos (0.01)
captan and folpet (0.02)
carbaryl (0.01)
carbendazim (0.01)
carbofuran (sum) (0.01)
carbosulfan (0.01)
carboxin (0.05)
chlorbufam (0.05)
chlordane (sum) (0.01)
chlorfenapyr (0.02)
chlorfenvinphos (0.01)
chloridazon (0.01)
chlormequat (0.02)
chlorothalonil (0.01)
chlorpropham (sum) (0.05)
EPTC (0.05)
ethephon (0.05)
ethiofencarb (parent) (0.01)
ethion (0.01)
ethirimol (0.01)
ethofumesate (0.01)
ethoprophos (0.01)
etofenprox (0.01)
etoxazole (0.02)
etridiazole (0.05)
etrimfos (0.01)
famoxadone (0.01)
fenamidone (0.01)
fenamiphos (sum) (0.01)
fenarimol (0.01)
fenazaquin (0.01)
fenbuconazole (0.01)
fenbutatin oxide (0.05)
fenhexamid (0.05)
fenitrothion (0.01)
fenoxycarb (0.01)
fenpropathrin (0.01)
fenpropidin (0.05)
fenpropimorph (0.01)
fenpyroximate (0.01)
fensulfothion (sum) (0.01)
fenthion (partial sum) (0.01)
fenvalerate & esfenvalerate (all isomers (0.01)
fipronil (sum) (0.01)
flonicamid (sum) (0.01)
fluazifop-p-butyl (sum) (0.01)
fluazinam (0.01)
flucythrinate (0.05)
flufenacet (0.01)
flufenoxuron (0.02)
fluometuron (0.01)
fluopicolide (0.01)
fluoxastrobin (0.01)
fluquinconazole (0.01)
flurochloridone (0.05)
fluroxypyr (sum) (0.05)
flusilazole (0.01)
flutolanil (0.01)
flutriafol (0.01)
fluxapyroxad (0.01)
fonofos (0.01)
formetanate (0.05)
formothion (0.01)
fosthiazate (0.01)
furalaxyl (0.01)
furathiocarb (0.01)
furmecyclox (0.01)
halofenozide (0.01)
halosulfuron-methyl (0.01)
haloxyfop (sum) (0.01)
mevinphos (0.01)
molinate (0.01)
monocrotophos (0.01)
monolinuron (0.01)
Monuron (0.01)
myclobutanil (0.01)
napropamide (0.05)
nitenpyram (0.01)
nitrothal-isopropyl (0.01)
nuarimol (0.01)
ofurace (0.01)
Oxadiargyl (0.01)
oxadixyl (0.01)
oxamyl (0.01)
oxasulfuron (0.01)
oxydemeton-methyl (sum) (0.01)
oxyfluorfen (0.05)
paclobutrazol (0.01)
parathion (0.01)
parathion-methyl (sum) (0.01)
penconazole (0.01)
pencycuron (0.01)
pendimethalin (0.01)
pentanochlor (0.01)
permethrin (0.01)
phenmedipham (0.05)
phenthoate (0.01)
phorate (partial sum) (0.02)
phosalone (0.01)
phosmet (sum) (0.01)
phosphamidon (0.01)
phoxim (0.01)
picolinafen (0.01)
picoxystrobin (0.01)
piperonyl butoxide (0.01)
pirimicarb (sum) (0.01)
pirimiphos-ethyl (0.01)
pirimiphos-methyl (0.01)
prochloraz (parent only) (0.01)
procymidone (0.01)
profenofos (0.01)
promecarb (0.01)
prometryn (0.01)
propachlor (0.01)
propaquizafop (0.05)
propargite (0.01)
propetamphos (0.01)
propiconazole (0.01)
propoxur (0.01)
propyzamide (0.01)
proquinazid (0.01)
prosulfocarb (0.05)
prosulfuron (0.02)
prothioconazole (0.01)
prothiofos (0.01)

chlorpyrifos (0.01)
chlorpyrifos-methyl (0.01)
chlorthal-dimethyl (0.01)
chlortoluron (0.01)
chlozolinate (0.01)
chromafenozide (0.01)
clethodim (0.05)
clofentezine (0.01)
clomazone (0.01)
clothianidin (0.01)
coumaphos (0.01)
cyazofamid (0.01)
cycloate (0.01)
cycloxydim (0.05)
cyflufenamid (0.01)
cyfluthrin (0.02)
Cyhalofop-butyl (sum) (0.01)
cymoxanil (0.01)
cypermethrin (0.05)
cyproconazole (0.01)
cyromazine (0.05)
DDAC (sum) (0.05)
DDT (sum) (0.01)
deltamethrin (0.05)
demeton-S-methyl (0.01)
desmedipham (0.05)
diafenthiuron (0.05)
diazinon (0.01)
dichlobenil (0.05)
dichlofluanid (0.01)
dichlofluanid and DMSA (0.01)
dichlorprop (0.01)
dichlorvos (0.01)
diclobutrazol (0.01)
dicloran (0.01)
dicofol (sum) (0.01)
dicrotophos (0.01)
diethofencarb (0.01)
diflubenzuron (0.01)
diflufenican (0.01)
dimethenamid (0.01)
dimethoate (sum) (0.01)
dimethomorph (0.01)
dimoxystrobin (0.01)
diniconazole (0.01)
dinotefuran (0.01)
diphenylamine (0.05)
disulfoton (sum) (0.02)
diuron (0.01)
dodine (0.05)
emamectin benzoate (0.01)
endosulfan (sum) (0.01)
EPN (0.01)
epoxiconazole (0.01)
Heptachlor (sum) (0.01)
heptenophos (0.01)
hexachlorobenzene (0.01)
hexachlorocyclohexane (sum) (0.01)
hexaconazole (0.01)
hexythiazox (0.01)
imazalil (0.02)
indoxacarb (0.01)
inorganic bromide (20)
ioxynil (0.05)
iprovalicarb (0.01)
isazophos (0.01)
isocarbophos (0.01)
isofenphos (0.01)
isofenphos-methyl (0.01)
isoprocarb (0.01)
isoprothiolane (0.01)
isoproturon (0.01)
isopyrazam (0.01)
isoxaben (0.01)
isoxaflutole (0.01)
kresoxim-methyl (0.01)
lambda-cyhalothrin (0.02)
lenacil (0.01)
lindane (0.01)
linuron (0.01)
lufenuron (0.02)
malathion (0.01)
mandipropamid (0.01)
MCPA, MCPB and MCPA thioethyl expressed (0.01)
MCPB (0.01)
mecarbam (0.01)
mepanipyrim (sum) (0.01)
mepiquat (0.02)
mepronil (0.01)
mesosulfuron-methyl (0.01)
metaflumizone (0.05)
metamitron (0.01)
metconazole (0.01)
methabenzthiazuron (0.01)
methacrifos (0.01)
methamidophos (0.01)
methidathion (0.01)
methiocarb (sum) (0.01)
methomyl (sum) (0.01)
methoxychlor (0.01)
methoxyfenozide (0.01)
metobromuron (0.01)
metolachlor (0.01)
metolcarb (0.01)
metosulam (0.01)
metoxuron (0.01)
metribuzin (0.05)
metsulfuron-methyl (0.05)
pymetrozine (0.01)
pyrazophos (0.01)
pyrethrins (0.01)
pyridaphenthion (0.01)
pyrimethanil (0.05)
quassia (0.01)
quinalphos (0.01)
quinmerac (0.05)
Quinoclamine (0.01)
quinoxyfen (0.01)
quintozene (sum) (0.01)
rimsulfuron (0.01)
rotenone (0.01)
spirodiclofen (0.01)
spirotetramat (sum) (0.01)
spiroxamine (0.01)
sulcotrione (0.05)
sum of butocarboxim and butocarboxim sul (0.01)
tebuconazole (0.01)
tebufenozide (0.01)
tebufenpyrad (0.01)
tebuthiuron (0.01)
tecnazene (0.01)
teflubenzuron (0.01)
tefluthrin (0.01)
terbufos (0.01)
Terbufos (sum not defintion) (0.01)
terbuthylazine (0.05)
tetrachlorvinphos (0.01)
tetraconazole (0.01)
tetradifon (0.01)
tetramethrin (0.01)
thiabendazole (0.05)
thiamethoxam (sum) (0.01)
thiophanate-methyl (0.01)
tolclofos-methyl (0.01)
tolfenpyrad (0.01)
tolylfluanid (sum) (0.01)
triadimefon & triadimenol (0.01)
triallate (0.05)
triasulfuron (0.05)
triazamate (0.01)
triazophos (0.01)
triclopyr (0.05)
tricyclazole (0.01)
trifloxystrobin (0.01)
triflumizole (0.01)
triflumuron (0.01)
trifluralin (0.01)
triforine (0.05)
triticonazole (0.01)
vinclozolin (sum) (0.01)
zoxamide (0.01)

Appendix D
Additional Action Taken

Action taken by HSE

HSE wrote to:

- the suppliers of all samples containing residues above the MRL
- the authorities of the exporting countries of all samples containing residues above the MRL
- The suppliers of UK samples that contained residues that were not approved for that crop.
- the Organics branch of Defra about samples that were labelled as organic and contained residues of pesticides not approved for organic production
- The suppliers and certification organisation of all organic samples containing residues of pesticides not approved for organic production.

Recipients of the letters are given 4 weeks to provide a statement for inclusion in the report. The Expert Committee on Pesticide Residues in Food reviews any replies received.

Appendix E
Pesticides analysed as multi-component analytes and their reporting limits

Why some results cover more than one substance

Both the legal controls and our analytical tests are aimed at checking food for the presence of residues of specific pesticides. Residues are the chemical traces left behind after pesticides are used. In most cases the residue of a pesticide is measured by first identifying the pesticide and then measuring the quantity of that pesticide in the food itself. But for some pesticides the residue remaining in the food is known to be chemically different from the original pesticide and so the laboratory needs to looks for more than one component. There are various reasons why this happens, for example:

- the animal or plant can change the pesticide into related chemicals
- the pesticide can change in the environment into related chemicals
- some pesticides are mixtures of chemicals , so the relevant components of the mixture need to be checked for
- in the laboratory sample preparation and/or analysis may change pesticides into related chemicals
- related chemicals may be pesticides in their own right

The MRL setting process takes account of all these issues. The EU may set a complex residue definition to ensure that the identity and quantity of the residue found is representative of the pesticide present. A complex residue definition may be set where it is necessary for safety reasons or to be able to accurately identify the pesticide residue present in the food. This definition usually includes the actual pesticide, plus other related chemicals. These residues are usually reported together as a "sum". Sometimes different foods need different definitions because different pesticide residues are known to occur in that food. For instances, plants and animals may metabolise a pesticide differently, which forms different residues.

The full definitions of pesticides that we have found in our surveys are described in the table below. If you would like more detail about a particular residue definition, please get in touch. You can email us at prif@hse.gis.gov.uk and other contact details are on the back cover.

Where the detailed individual analysis results tell us something useful, we mention that in our conclusions.

How we calculate sums

Unless the definition says otherwise, the summed result is a simple addition. For individual components that are not detected that result is treated as a zero.

Where a residue definition says "expressed as", that means that the individual component results are adjusted by molecular weight before being added together. The residue definition is set this way so that the final calculated result for the whole definition is an expression of the level of the most toxic component, and so that value can be used directly in consumer risk assessment without further adjustment.

The EU Reference Laboratories for pesticide residues have an e-learning package aimed at analytical chemists on this very technical subject at http://www.eupt.es/e-learning/.

Complex residue definitions used in our reports

There are a large number of pesticides used and types of food in the world. So other complex residue definitions may apply to food/pesticide combinations not yet considered by PRiF. You can look up all the EU MRL definitions for pesticide residues at the European Commission's pesticide database at http://ec.europa.eu/food/plant/pesticides/pesticides_database/index_en.htm

Short name we use in our reports	Legal residue definition – These definitions apply to all foods unless otherwise stated
2,4-D (sum)	2,4-D (sum of 2,4-D and its esters expressed as 2,4-D)
abamectin (sum)	Abamectin (sum of Avermectin B1a, AvermectinB1b and delta-8,9 isomer of Avermectin B1a)
aldicarb (sum)	Aldicarb (sum of Aldicarb, its sulfoxide and its sulfone, expressed as Aldicarb)
aldrin and dieldrin	Aldrin and Dieldrin (Aldrin and dieldrin combined expressed as dieldrin), aka dieldrin (sum)
amitraz	Amitraz (amitraz including the metabolites containing the 2,4 - dimethylaniline moiety expressed as amitraz)
BAC (sum)	Benzalkonium chloride (mixture of alkylbenzyldimethylammonium chlorides with alkyl chain lengths of C_8, C_{10}, C_{12}, C_{14}, C_{16} and C_{18})
benthiavalicarb (sum)	Benthiavalicarb (Benthiavalicarb-isopropyl (KIF-230 R-L) and its enantiomer (KIF-230 S-D) and diastereomers (KIF-230 R-L and KIF-230 S-D)
bixan (animal products)	Sum of bixafen and desmethyl bixafen expressed as bixafen This definition applies to animal products only
captan and folpet	Sum of captan and folpet aka captan/folpet This definition applies only to pome fruit (fruits such as apples and pears), strawberries, raspberries, currants, tomatoes and beans. For all other foods there are separate MRLs for captan only and for folpet only.
carbendazim (animal products)	Carbendazim and thiophanate-methyl, expressed as carbendazim
Carbendazim (sum)	Carbendazim and benomyl (sum of benomyl and carbendazim expressed as carbendazim)
carbofuran (sum)	Carbofuran (sum of carbofuran and 3-hydroxy-carbofuran expressed as carbofuran)
chlordane (animal products)	Chlordane (sum of cis- and trans-isomers and oxychlordane expressed as chlordane) This definition applies to animal products only
chlordane (sum)	Chlordane (sum of cis- and trans- isomers) This definition applies to all foods except animal products
chlorpropham (potatoes)	Chlorpropham only This definition applies only to potatoes
chlorpropham (sum for animal products)	Chlorpropham and 4-hydroxychlorpropham-O-sulphonic acid (4-HSA),expressed as chlorpropham This definition applies only to animal products
chlorpropham (sum)	Chlorpropham (Chlorpropham and 3-chloroaniline, expressed as Chlorpropham) This definition applies to all foods except potatoes and animal products

Short name we use in our reports	Legal residue definition – These definitions apply to all foods unless otherwise stated
DDAC (sum)	Didecyldimethylammonium chloride (mixture of alkyl-quaternary ammonium salts with alkyl chain lengths of C_8, C_{10} and C_{12})
DDT (sum)	DDT (sum of p,p'-DDT, o,p'-DDT, p-p'-DDE and p,p'-TDE (DDD) expressed as DDT)
dichlorprop	Sum of Dichlorprop, including dichlorprop-p and its conjugates, expressed as dichlorprop
dicofol (sum)	Dicofol (sum of p, p' and o,p' isomers)
dimethenamid	Dimethenamid–p (Dimethenamid-p including other mixtures of constituent isomers (sum of isomers))
dimethoate (sum)	Dimethoate (sum of dimethoate and omethoate expressed as dimethoate)
disulfoton (sum)	Disulfoton (sum of disulfoton, disulfoton sulfoxide and disulfoton sulfone expressed as disulfoton)
dithiocarbamates	Dithiocarbamates are a group of pesticides that are chemically similar. Testing for them individually in routine analysis is not possible, so MRLs are set for a test for the group.
endosulfan (sum)	Endosulfan (sum of alpha- and beta-isomers and endosulfan-sulphate expresses as endosulfan)
fenamiphos (sum)	Fenamiphos (sum of fenamiphos and its sulphoxide and sulphone expressed as fenamiphos)
fenchlorphos (sum)	Fenchlorphos (sum of fenchlorphos and fenchlorphos oxon expressed as fenchlorphos)
fensulfothion (sum)	Fensulfothion (sum of fensulfothion, its oxygen analogue and their sulfones, expressed as fensulfothion).
fenthion (sum)	Fenthion (fenthion and its oxygen analogue, their sulfoxides and sulfone expressed as parent)
fenvalerate & esfenvalerate (all isomers)	Fenvalerate (any ratio of constituent isomers (RR, SS, RS & SR) including esfenvalerate)
fipronil (infant food)	Sum of fipronil and fipronil-desulfinyl, expressed as fipronil This definition applies to foods for babies only
fipronil (sum)	Fipronil (sum Fipronil and sulfone metabolite (MB46136) expressed as Fipronil) This definition applies to all foods except foods for babies
flonicamid (sum)	Flonicamid (sum of flonicamid, TNFG and TNFA) This definition applies to all food except animal prodcuts
fluazifop-p-butyl (sum)	Fluazifop-P-butyl (fluazifop acid (free and conjugate))
haloxyfop (sum)	Haloxyfop including haloxyfop-R (Haloxyfop-R methyl ester, haloxyfop-R and conjugates of haloxyfop-R expressed as haloxyfop-R)
Heptachlor (infant food)	Sum of heptachlor and trans heptachlor epoxide This definition applies to foods for babies only
Heptachlor (sum)	Heptachlor (sum of heptachlor and heptachlor epoxide expressed as heptachlor) This definition applies to all foods except infant foods

Short name we use in our reports	Legal residue definition – These definitions apply to all foods unless otherwise stated
hexachlorocyclohexane (sum)	Hexachlorocyclohexane (HCH), sum of isomers, except the gamma isomer This definition applies to all foods except animal products (For animal products the alpha and beta isomers have separate MRls)
malathion	Malathion (sum of malathion and malaoxon expressed as malathion)
MCPA (animal prdocuts)	[Residue defintion, animal products] MCPA, MCPB and MCPA thioethyl expressed as MCPA This definition applies to animal products only
MCPA (sum)	MCPA and MCPB (MCPA, MCPB including their salts, esters and conjugates expressed as MCPA) This definition applies to all foods except animal prdoucts
mepanipyrim (sum)	Mepanipyrim and its metabolite (2-anilino-4-(2-hydroxypropyl)-6-methylpyrimidine) expressed as mepanipyrim
methiocarb (sum)	Methiocarb (sum of methiocarb and methiocarb sulfoxide and sulfone, expressed as methiocarb)
methomyl (sum)	Sum of methomyl and thiodicarb expressed as methomyl
oxydemeton-methyl (sum)	Oxydemeton-methyl (sum of oxydemeton-methyl and demeton-S-methylsulfone expressed as oxydemeton-methyl)
parathion-methyl (sum)	Parathion-methyl (sum of Parathion-methyl and paraoxon-methyl expressed as Parathion-methyl)
Permethrin	Permethrin (sum of isomers)
phorate (sum)	Phorate (sum of phorate, its oxygen analogue and their sulfones expressed as phorate)
phosmet (sum)	Phosmet (phosmet and phosmet oxon expressed as phosmet) This definition applies to all foods except animal products
pirimicarb (sum)	Pirimicarb (sum of Pirimicarb and Desmethyl pirimicarb expressed as Pirimicarb)
Prothioconazole (sum)	Prothioconazole (sum of prothioconazole-desthio and its glucuronide conjugate, expressed as prothioconazoledesthio) This definition applies to animal products only
PTU & propineb	Sum of PTU and propineb This definition applies to food for babies only
quintozene (sum)	Quintozene (sum of quintozene and pentachloro-aniline expressed as quintozene)
Prochloraz (sum)	Prochloraz (sum of prochloraz and its metabolites containing the 2,4,6-Trichlorophenol moiety expressed as prochloraz)
Terbufos (sum)	Terbufos (sum of terbufos, its sulfoxide and sulfone This definition applies only to foods for babies
thiamethoxam (sum)	Thiametoxam (sum of thiametoxam and clothianidin expressed as thiametoxam) There are also separate clothianidin MRLs
tolylfluanid (sum)	Tolylfluanid (Sum of tolylfluanid and dimethylaminosulfotoluidide expressed as tolylfluanid)

Short name we use in our reports	Legal residue definition – These definitions apply to all foods unless otherwise stated
triadimefon & triadimenol	Triadimefon and triademenol
vinclozolin (animal products)	Vinclozolin, iprodione, procymidone, sum of compounds and all metabolites containing the 3,5-dichloroaniline moiety expressed as 3,5-dichloroaniline This definition applies to animal products only
vinclozolin (sum)	Vinclozolin (sum of vinclozolin and all metabolites containing the 3,5-dichloraniniline moiety, expressed as vinclozolin) This definition applies to all foods except animal products

Glossary

This is a 'standard' glossary which defines the key terms used in the PRiF reports. Not all the terms listed here are used in this particular report.

Acceptable Daily Intake (ADI): This is the amount of a chemical which can be consumed every day for a lifetime in the practical certainty, on the basis of all known facts, that no harm will result. It is expressed in milligrams of the chemical per kilogram of body weight of the consumer. The starting point for the derivation of the ADI is usually the 'no observed adverse effect level' (NOAEL) that has been observed in animal studies for toxicity. This is then divided by an uncertainty factor (most often 100) to allow for the possibility that animals may be less sensitive than humans and also to account for possible variation in sensitivity between individuals. The studies from which NOAELs and hence ADIs are derived take into account any impurities in the pesticide active substance as manufactured, and also any toxic breakdown products of the pesticide.

Acute Reference Dose (ARfD): The definition of the ARfD is similar to that of the ADI, but it relates to the amount of a chemical that can be taken in at one meal or on one day without appreciable health risk to the consumer. It is normally derived by applying an appropriate uncertainty factor to the lowest NOAEL in studies that assess acute toxicity or developmental toxicity.

As a matter of policy the EU does not use NOAELs from tests that involve deliberate administration of pesticides to humans to determine ADIs and ARfDs. However, where such data have been ethically and scientifically derived some authorities, e.g. the World Health Organization, do consider such data. Where human data are used there is usually less uncertainty in the resulting reference value compared to extrapolating from animal tests to humans, and a lower uncertainty factor (most often 10) is used to account for the variation in sensitivity between individuals.

The initial risk assessments in PRiF reports use the agreed EU reference values. However, where intakes are above the EU value and a reference value based on acceptable human data is available a refined assessment, which is a more appropriate indicator of the risk, is also reported.

Analyte: This is the name for the substance that the PRiF surveys look for and measure if present; it could be a pesticide itself or a product from a pesticide when it is degraded, or metabolised.

COLEACP (Europe-Africa-Caribbean-Pacific Liaison Committee): It aims to promote the competitive export of fresh fruit, vegetables, flowers and ornamental plants from the ACP. Its specialised information and advisory services are open to all ACP companies in the horticultural export sector and are financed by the European Commission. It has two overriding objectives to enable ACP companies to comply with European food safety and traceability requirements and to consolidate the position of small-scale producers in the ACP horticultural export sector.

Cholinergic: In relation to the animal nervous system, processes and structures are cholinergic if they release or use acetylcholine. Acetylcholine is a neurotransmitter, a chemical that carries signals through the nervous system.

Cryogenic Milling: Processing of commodities at very low temperatures can be achieved by milling/grinding pre-frozen samples in the presence of dry ice, a procedure known as 'cryogenic milling'.

Good Agricultural Practice in the Use of Pesticides (GAP): The nationally authorised safe uses of pesticides under conditions necessary for effective and reliable pest control (the way products should be used according to the statutory conditions of approval which are stated on the label). GAP encompasses a range of pesticide applications up to the highest authorised rates of use, applied in a manner which leaves a residue which is the smallest practicable. Authorised safe uses are determined at the national level and include nationally registered recommended uses, which take into account public and occupational health and environmental safety considerations. Actual conditions include any stage in the production, storage, transport, distribution and processing of food commodities and animal feed.

High-level Consumer: A term used in UK risk assessment calculations to describe the amount of food consumed by a person. In line with internationally agreed approaches, the PRiF uses the 97.5^{th} percentile value, which is generally about three times the average amount consumed. This takes account of different eating patterns that may occur throughout the population.

Human Data: See under Acute Reference Dose

Import Tolerance: an MRL set for imported products where the use of the active substance in a plant protection product on a commodity is not authorised in the European Community (EC) or an existing EC MRL is not sufficient to meet the needs of international trade. All import tolerances are assessed for consumer safety.

Imported: The tables in the reports record whether the sample was of UK origin, or imported. This can mean different things depending on the commodity. See also 'Origin'. The PRiF report the country from where the produce has been imported only if this is clear from the packaging or labelling.

JMPR: Joint FAO/WHO Meeting on Pesticide Residues, which conducts scientific evaluations of pesticide residues in food.

Limit of Quantification (LOQ): The limit of quantification is the lowest concentration of a pesticide residue or contaminant that can be routinely identified and quantitatively measured in a specified food, agricultural commodity or animal feed with an acceptable degree of certainty by the method of analysis.

Maximum Residue Level (MRL): The maximum concentration of a pesticide residue (expressed as mg/kg) legally permitted in or on food commodities and animal feeds. MRLs are based on good agricultural practice data and residues in foods derived from commodities that comply with the respective MRLs are intended to be toxicologically acceptable.

MRLs are intended primarily as a check that GAP is being followed and to assist international trade in produce treated with pesticides. **MRLs are not in themselves 'safety limits'**, and exposure to residues in excess of an MRL does not automatically imply a hazard to health.

The MRLs applicable in the UK are now largely set under EC legislation.

Futher information on MRLs can be found at:
www.pesticides.gov.uk/guidance/industries/pesticides/topics/food-safety/maximum-residue-levels

Maximum Residue Limits (CODEX or CAC): In cases where there is no UK or EC MRLs, the acceptability of residues may be judged against Codex Maximum Residue Limits. Although not embodied in UK statute, Codex limits are taken as presumptive standards. These limits give an indication of the likely highest residue that should occur in edible crops. These are based on worldwide uses and the residues trials data to support those uses, at the time of evaluation (date of setting the limits is specified and thus the Maximum Residue Limit applicable up to that year, but will not take into account subsequent approved uses.)

There are occasions where the MRL that has been set by Codex may not reflect current UK Good Agricultural Practice (e.g. the Codex MRLs for dithiocarbamates and propamocarb on lettuce). In such circumstances it is possible to exceed the Codex MRL through a UK approved use. This factor needs to be taken into account when assessing results.

Maximum Residue Levels set at the LOD (LOD MRL): For some pesticides and commodities, insufficient trials data are available on which to set a maximum residue level or there may be no use of the pesticide on that crop. In these cases, the MRL may be set at a default level, i.e. at the limit of determination (LOD) where analytical methods can reasonably detect the presence of the pesticide. **These MRLs are not based on Good Agricultural Practice (GAP).**

MRL exceedances: When a residue is found at a level higher than that set for the MRL.

MRL Exceedances and Relationship with the Acceptable Daily Intake (ADI): Before permitting any use of a pesticide, a detailed assessment is made to ensure that residues in foods derived from commodities comply with MRLs and will not give rise to unacceptable risks to consumers. MRLs do take account of consumer safety aspects and, in effect, are set at levels below safety limits. However, MRLs must not be confused with safety limits, which are expressed in terms of the acceptable daily intake (ADI) of a particular pesticide residue from all sources. The ADI (expressed as mg/kg bw/day) is the amount of chemical that can be consumed every day of an individual's entire lifetime in the practical certainty, on the basis of all known facts, that no harm will result. See ADI for further information.

Whenever unexpectedly high or unusual residues occur during monitoring, the risk to consumers, from exposure to residues at the highest levels found, is assessed by comparison of predicted intakes with the ADI or ARfD as appropriate.

No MRL: For certain pesticides an MRL may not have been set.

UKT MRL: For certain pesticide a temporary national MRL has been set. UKT MRLs are worked out by HSE. The level indicates the amount of residue expected when the pesticide is applied in accordance with good agricultural practice (GAP). The UK has a number of UKT MRLs, these take precedence over provisional EC levels.

Extraneous Residue Limit (ERL): An ERL refers to a pesticide residue or a contaminant arising from environmental sources (including former agricultural uses) other than the use of a pesticide or a contaminant substance directly or indirectly on the commodity. It is the maximum concentration of a pesticide residue or contaminant that is recommended by the Codex Alimentarius Commission (CAC) to be legally permitted or recognised as acceptable in or on a food, agricultural commodity or animal feed.

Metabolite: A degradation or conversion product from a pesticide when it is metabolised.

Multiple Residues: In this report this term is used to describe when more than one pesticide is found in an individual food sample. It may have arisen because the crop was treated at different times with pesticides applied singularly, or when pesticides are applied as mixtures (several pesticides mixed in the spray tank at the same time) or the marketed pesticide product contains more than one pesticide or any combination of these three situations. Mixtures may be used in response to specific pest pressures and also as part of strategies to minimise pesticide resistance building up on pest populations.

NEDI: National Estimate of Daily Intake. An estimate of intake of pesticide in the diet over the long-term to compare to the ADI. The NEDI is based on median or mean residue levels and a high level consumption (97.5^{th} percentile value) for the daily amounts of the food item consumed over the long term. For further details on the calculation of NEDIs please refer to section 3 of the data requirements handbook: www.pesticides.gov.uk/guidance/industries/pesticides/topics/pesticide-approvals/pesticides-registration/applicant-guide/the-applicant-guide-contents.

NESTI: National Estimate of Short Term Intake. An estimate of peak intake of pesticide in the diet to compare to the ARfD. The NESTI is based on the highest residue found multiplied by a variability factor (see glossary description) and a high level consumption (97.5^{th} percentile value) for the amount of the food item consumed over a single day. For further details on the calculation of NESTIs please refer to section 3 of the data requirements handbook: www.pesticides.gov.uk/guidance/industries/pesticides/topics/pesticide-approvals/pesticides-registration/applicant-guide/the-applicant-guide-contents.

Neurotoxicity: Neurotoxicity is the effect of substances (called neurotoxins) which alter the normal working of an animal's nervous systems and/or damage the nervous tissue.

No Observed Adverse Effect Level (NOAEL): The greatest concentration or amount of a substance, found by experiment or observation, which causes no detectable adverse alteration of morphology, functional capacity, growth, development or life span of the target organism under defined conditions of exposure.

Origin: The brand name annex reports the origins of the samples tested. This can mean different things depending on the commodity. For example, butter is often labelled as 'UK origin'; however, the majority of it comes in bulk from New Zealand and is split into smaller blocks and packaged in the UK. Lettuce is a fresh produce and 'UK origin' usually means that it has been grown and packaged in the UK. Processed commodities such as cereal bars often contain multiple raw ingredients, each of which may come from a different source/origin. Therefore, the origin of the produce usually reflects the place where it was manufactured. The PRiF report the origin as stated on the packaging or labelling of the commodity concerned, unless other more accurate information is available to indicate that the origin is from elsewhere. Some products are listed as 'unknown origin' because the labelling does not give this information.

Parent: The chemical form of a pesticide as applied to plants, as opposed to metabolites and breakdown products.

Percentile: A percentile is a value that divides a sample of measurements at a specific point when they are listed in ascending order of magnitude. For example, the 97.5th percentile from a food consumption survey is a value that is equal to or more than 97.5% of the measurements and equal to or less than 2.5% of the measurements. So in a sample of 40 daily food consumption values, the 97.5th percentile is equal to or more than 39 of the measurements. Such high percentile estimates of food consumption are used in risk assessments as they are more protective than using average consumption levels.

Permitted Level (PL): The permitted levels (expressed as mg/kg), in specific commodities, of some substances which can be classified as pesticides but are controlled under the Miscellaneous Food Additives Regulations 1995 (S.I. 1995 No. 3187).

Pesticide: A pesticide is any substance, preparation or organism prepared or used for destroying any pest. The majority of pesticides sought by the PRiF in its monitoring are those used to control pests in agricultural crops, although non-agricultural products may be included where there is a specific reason for doing so, e.g. where there are implications in terms of possible intakes of residues.

Probabilistic Modelling: The usual estimates of consumer exposure use single high values for both consumption amounts and residue levels. Whilst these are based on realistic UK dietary survey data and residue levels, they tend to overestimate most representative intakes. This is because they do not take into account actual variations in both amounts consumed and residue levels. Probabilistic modelling is a technique that considers all the possible different combinations of consumption and residue levels. This provides information on the probability of particular intakes occurring.

Rapid Alert System for Food and Feed (RASFF): The European Commission operates an EU rapid alert system for food, which was set up in 1992. This provides the competent authorities in the Member States of the European Union with the means of notifying cases where high residues of pesticides have been found in imported samples. Since its introduction this system has proved a successful method for disseminating information between Members States allowing swift action where necessary. HSE notify the Food Standards Agency of any residues where the predicted intakes are above the ARfD. RASFFs are only raised when a potential consumer risk has been identified. In general, for intakes exceeding the ARfD by more than 1.1 times, the FSA will raise a RASFF. If a significant consumer health concern has been identified, then the product will be withdrawn/recalled and the FSA will also issue a food alert.

Relationship between GAP and MRLs: The MRL can be defined as the maximum concentration of a pesticide residue (expressed as mg/kg) likely to occur in or on food commodities and animal feeds, after the use of the pesticide according to the GAP.

Reporting Limit: The reporting limit is the lowest calibrated level employed during analysis to detect residues. The reporting limit may vary slightly from laboratory to laboratory depending on the equipment available and operating procedures used.

'None were detected above the Set RL': This term is used in the Brand Name Annex, where no residues were found above their reporting limit.

Residue: Residues may be present in vegetable and animal products following the application(s) of a pesticide(s). They may not only include the pesticide that was applied but other degradation or reaction products and metabolites that may be of toxicological significance. The levels or amounts of residues present are expressed in milligrams of the chemical in a kilogram of crop/food/commodity (mg/kg), or parts per million.

Risk Assessment: A risk assessment is carried out when residues are found in foods to determine whether, at the levels found, they present a concern for consumer health or not. Consumer risk assessments are routinely conducted as part of the approval process for pesticides and are based on residue trials. Approval of a pesticide is only recommended when the consumer risk is acceptable.

Safety Factor: Values used in extrapolation from experimental studies in animals (usually 100) or humans (usually 10) to the population: for PRiF assessments this represents a value by which the NOAEL is divided to derive an ADI or ARfD. The value depends on the nature of the effect, the dose-response relationship, and the quality of the toxicological information available. The use of such a factor accounts for possible differences in susceptibility between the animal species tested and humans, and for variation between different individuals in the population. The terms 'uncertainty factor' and 'assessment factor' are also sometimes used for this factor; the PRiF will use 'safety factor'.

Sample: The nature of all samples is as designated in the EC's 'sampling' Directive – 2002/63/EC. Examples are: apple – at least 10 apples weighing at least 1 kg; grapes – at least 5 bunches, weighing at least 2 kg.

Specific Off-Label Approval (SOLA): For many reasons, label recommendations of approved pesticides do not cover the control of every problem which may arise. This is particularly true for crops that are grown on a comparatively small scale in the UK as well as for sporadic pests and diseases. It is for this reason that the extrapolations presented in the Long Term Arrangements for Extension of Use have been developed. If these do not address particular needs growers or their representatives may apply to HSE for a specific off-label approval (SOLA).

Technical Exceedances: When an MRL has been set at the LOD because there have been no data to support a higher level. In the context of this report, 'technical exceedances' always relate to produce from third countries.

Variability Factor: A value that describes the variation in residue levels between the highest unit level and the average level in samples made up of many units. Internationally this is agreed to be the 97.5th percentile unit residue level divided by the average of the sum. The variability factor multiplied by the measured residue level from a composite sample (i.e. a sample made up by mixing several units before analysis) gives an estimate of the likely higher residue levels that may have occurred in individual units. These estimated higher levels are used in short-term risk assessments involving fruit and vegetables where consumers eat only a portion of a single item, e.g. melon, or a small number of units e.g. apples and potatoes.

Ware: Ware potatoes, sometimes referred to as main crop potatoes, are harvested between August and November, and are available throughout the period August to June because they are stored under controlled temperature after October.

Follow-up from Previous Reports

Quarter 3 2015

Bean sprouts

Haloxyfop: Sample numbers 1180/2015, 1525/2015, 3400/2015, 0570/2015, 0991/2015, 2319/2015, 2371/2015, 3109/2015, 0312/2015, 0571/2015, 0605/2015, 0606/2015 & 2704/2015

We passed 13 samples of bean sprouts from the UK that contained haloxyfop to HSE. HSE have established that the beansprouts were from mung beans imported from Australia. In Australia, the mung bean plants from which the beans were harvested were treated with haloxyfop while they were growing. The beans themselves were not treated, that is they were imported as a foodstuff not as seed. HSE have therefore concluded that the sample is compliant with UK law on pesticides – that is, that the producers did not use either haloxyfop or haloxyfop treated seed in producing the beansprouts. HSE actions are complete, so we have included brand name details in the annex to this report.

Quarter 4 2015

Beans with Pods

Boscalid: Sample number 2270/2015
We passed details of a sample of beans with pods from the UK that contained boscalid to HSE. HSE have established that the beans were grown in France before being frozen and shipped to the UK. Therefore boscalid was applied legally in France. HSE actions are complete, so we have included brand name details in the annex to this report.

Pear:

Chlormequat: Sample number 2185/2015
We passed details of a sample of pears from the UK that contained chlormequat to HSE. HSE's enquiries are not yet complete; an update will appear in a future report.

Quarter 2 of 2016 will look at residues in:		
Apples	Beans with Pods	Cabbage
Cooked Meat	Fish (sea)	Free-from Products
Grapefruit	Grapes	Honey
Leeks	Lettuce	Pasta
Pears	Potatoes	Prepared Fresh Fruit
Strawberries	Tomatoes	

For further details on information contained in this report, previous surveys or information concerning pesticide residues in food

Please contact:

Expert Committee on Pesticide Residues in Food
Chemicals Regulation Directorate
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Or visit our website at:

https://www.gov.uk/government/groups/expert-committee-on-pesticide-residues-in-food-prif