


The Expert Committee on Pesticide Residues in Food (PRiF)

Annual Report 2016


PRiF
Pesticide Residues in Food


The Expert Committee on Pesticide Residues in Food oversees a programme that checks food and drink in the UK for traces of pesticide residues.

- One of the purposes of the programme is to check whether residues found in food and drink are above the maximum residue levels (MRLs) set by law.
- When we find residues we assess whether the levels found are likely to impact on human health.
- We assess whether residues might be of concern to particular groups of consumers such as babies, toddlers, and the elderly.
- Where more than one pesticide is found with similar modes of action, we assess if the impact of the sum of the residues is of concern.
- When problems are found we take action including focused testing and if necessary advise the regulatory authority so that enforcement action can be taken.
- We act as a check on the regulatory regime.
- We review residues found in sampling for the School Fruit and Vegetable Scheme which provides children between 4 & 6 in local authority maintained schools in England with a free piece of fruit or vegetable a day.

The Expert Committee on Pesticide Residues in Food does not:

- Advise on whether pesticides should be approved for use or withdrawn from the market.
- Set Government policy on pesticides.
- Take account of or assess the impact of pesticides on the environment.
- Promote the use of pesticides.

This is the sixth annual report from the Expert Committee on Pesticide Residues in Food. It summarises the results from monitoring samples collected throughout 2016 and our conclusions about those results. It also describes the work that is being carried out in 2017.

Details of all the samples we have collected and tested are available on our website: https://www.gov.uk/government/publications/pesticide-residues-in-food-quarterly-monitoring-results-for-2016

If you have any comments about this report, please send them to prif@hse.gov.uk

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1. CHAIRMAN'S INTRODUCTION

Dear Reader,

This is the sixth annual report from the Expert Committee on Pesticide Residues in Food (PRiF). The committee is made up entirely of independent members with a wide range of expertise.

In addition to a summary of results for the 2016 monitoring programme, this report also includes some explanations of parts of our process which I hope you will find both interesting and useful.

Throughout 2016, PRiF have published quarterly reports on the results that have been found in the monitoring programme. We have also reported monthly on beans with pods, grapes, milk, okra, potatoes and prepared fresh fruit as part of our rolling reporting programme. All these results have been published on our website.

In 2016, 3,451 samples of food and drink from the UK supply chain were tested for pesticide residues. We tested for up to 374 pesticides in some of the commodities. The results showed us that around 48% of the samples tested by the laboratory did not have any residues of the pesticides we tested for. The results also showed that less than 4% of the samples contained a residue above the MRL (maximum residue level) set by law. This report describes all of these results and details of the follow-up actions.

Part of the monitoring programme is targeted at foods where we expect to find residues. Our programme uses the latest technology for analysis, which is constantly improving; this means that each year we can look for more pesticides at lower levels. For these reasons we expect to see a rise in the number of samples with residues detected, including some over the MRL. Every sample that contains a residue at any level is assessed for risk to consumer health. From the results of these assessments we can see that even where food contains a residue above the MRL, there is very rarely any risk to the health of people who have eaten the food.

We held an Open meeting in York in October 2016 which was well attended and considered by attendees to be a success.

For information about the monitoring programme, please look on our website:
https://www.gov.uk/government/collections/pesticide-residues-in-food-results-of-monitoring-programme

Please contact us if you have any comments: prif@hse.gov.uk

Yours sincerely

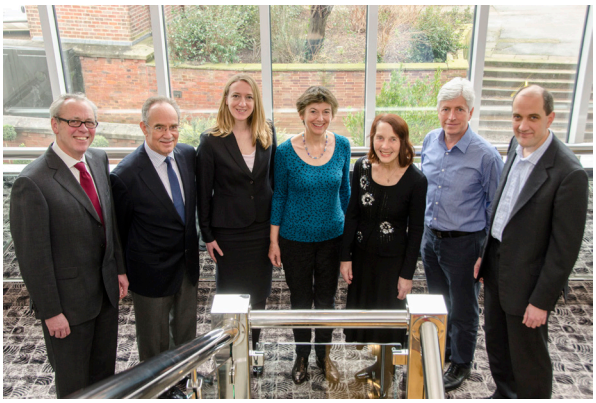
Dr Paul Brantom

Chairman,
The Expert Committee on Pesticide Residues in Food

2. EXECUTIVE SUMMARY

- 3,450 samples of 41 different types of food were collected in 2016.
- 47.86% of these samples contained a residue.
- We tested for up to 374 pesticides in fruit and vegetables, 365 in animal products, 371 in starchy foods and grains, 376 in infant food and 370 in other groceries.
- All the samples in which a residue was detected were checked by the Health and Safety Executive (HSE) for risk to consumers by means of a risk assessment screening mechanism. We published results of 16 detailed risk assessments where there was a concern for human health.
- We referred 5 samples to the Food Standards Agency (FSA) as we had concerns about the potential risk to the health of people eating these foods. The FSA notified the Rapid Alert System for Food and Feed (RASFF) about these samples.
- We referred 10 samples of UK produce to HSE as they contained residues of pesticides not approved for use in the UK on those crops. Where HSE could not identify an obvious reason for the residue they then investigated how these residues could have arisen.

3. ABOUT US



The pesticide residues surveillance programme monitors pesticide residues in food and drink in the UK supply chain. The term pesticide residue means the chemical trace of a pesticide which may be found in or on our food. The agriculture and food industries use pesticides to help protect their crops from pests, including insects, weeds or fungal infections. The agriculture and food industries must comply with the regulations.

We give advice on:

- Setting up monitoring programmes for pesticide residues in UK food
- How to take and process samples
- Methods of analysing samples
- How to assess the results

We publish the monitoring results regularly on our website, in an understandable way, and we aim to do this as quickly as possible without compromise of integrity.

The Expert Committee on Pesticide Residues in Food was formed in 2011, to carry on the monitoring work of the Pesticide Residues Committee (PRC), which ceased to operate in 2010.

Our members have been appointed by the Chief Executive of the FSA, ministers from the Department for Environment Food and Rural Affairs (Defra), the Department of Health, the Scottish Government, the National Assembly for Wales and Department of Agriculture, Environment and Rural Affairs for Northern Ireland.

We give advice on the monitoring programme to:

- Ministers
- The Chief Executive of the FSA
- The Health and Safety Executive's Chemicals Regulation Division (CRD)

We meet four times a year and representatives from government departments attend our meetings as officials. HSE provides our administration. We hold an annual open event where members of the public can join us to discuss pesticides residues in food. We also open one of our business meetings to the public each year.

The bigger picture

People are concerned about health, the environment and how food is produced. Pesticides used in the incorrect way or in the wrong amounts can harm people, wildlife and the environment, so they must be handled with care. Pesticides can only be used in UK agriculture if they are used in line with the law and guidance controlling their use.

As regulating pesticides is a complicated area, there are a number of different organisations involved. On behalf of Defra and the other UK agricultural departments, the Health and Safety Executive authorises and controls pesticides for use in the UK, as well as monitoring pesticide residues in the UK food supply no matter where the food was produced. The Food Standards Agency has overall responsibility for food safety.

The Expert Committee on Pesticides

The Expert Committee on Pesticides (ECP) is responsible in the UK for giving advice on using and handling pesticides, and for considering incidents related to the effect pesticides have on wildlife and pets. The ECP assesses pesticides before they can be used and sold in the UK. It advises the government if a pesticide should be approved, what crops it may be used on, how it may be used and how much can be used on a crop. It takes account of any new information about an approved pesticide to see if it should be used at a reduced rate, under different conditions or withdrawn from sale. We let the ECP know if we see something in our results that falls inside their remit.

Most residues come from pesticides being used on crops. To work effectively, pesticides must be used in the correct amounts and at the right time. The amount of residue in a food is dependent on:

- How much pesticide was used
- When it was applied in relation to harvest date
- How it is metabolised by plants and animals, and how it breaks down in the environment

In addition to this, residues can sometimes be due to contamination (small amounts of pesticide that remain in the environment after legitimate use). Due to significant technical improvements in laboratory analysis, we now have the capability to detect very low levels of residues and so it is possible that as methods become more sensitive that we may find more residues.

Our work and open reporting system has encouraged producers and retailers to be responsible about their use of pesticides and how they supply food to people. We are transparent about our work and publish the results, including brand names, where samples were obtained and where possible who produced them.

Maximum Residue Levels (MRLs)

MRLs are set in law at the highest level of pesticide that the relevant regulatory body would expect to find in that crop when it has been treated in line with good agricultural practice (GAP). When MRLs are set, effects of the residue on human health are also considered. The MRLs are set at a level where consumption of food containing that residue should not cause harm to consumers.

If a food has a higher level of residue than the MRL, it does not automatically mean that the food is not safe to eat. A residue above the MRL may show that the farmer has not used the pesticide properly. Some pesticides may be permitted for use in the country of export but not be permitted for use in the EU and hence the MRL may be set at the lowest level that official laboratories can normally detect. This is known as the limit of determination (LOD).

The Food Standards Agency (FSA) update

The main objective of the FSA in carrying out its functions is to protect public health from risks which may arise in connection with the consumption of food (including risks caused by the way in which it is produced or supplied) and otherwise to protect the interest of consumers in relation to food. The Food Standards Agency attends PRiF meetings as an assessor and works closely with us, and with HSE, on pesticide residues issues.

The Food Standards Agency also co-ordinates Local Authority border controls on food imports, which includes pesticide residue testing outside our programme. During 2016 seven consignments from six different countries outside the EU were found to contain pesticide residues above MRLs which associated with potential concerns for health. Six were sent for destruction and the seventh was re-despatched to a destination outside the EU.

4. THE MONITORING PROGRAMME

We are interested in whether pesticide residues meet legal trading levels and if there is any risk to people's health.

Survey categories

We have reported a summary of the results later in this report in the following sections:

- Fruit and vegetables (including potatoes) – Section 8
- Starchy food and grains (for example bread and oats) – Section 9
- Animal products (meat, fish and dairy products) – Section 10
- Infant food and Other groceries – Section 11

We have also included sections on:

- Samples of organic foods that contained pesticide residues – Section 14
- Pesticide residues we found at levels above the MRL – Section 21
- The conclusions we reached from HSE's risk assessments in food in 2016 – Section 16

Collecting and testing samples

The size of the sample and the number of individual units of a food within each sample is set down in regulation for example, for pears the sample must be made up of at least 10 pears and must weigh at least one kilogram.

We send samples to the following laboratories to be tested:

- Agri-Food and Biosciences Institute (AFBI) – Belfast
- Fera Science Ltd – York
- Science and Advice for Scottish Agriculture (SASA) – Edinburgh

Residues tested for

We test for pesticides that are expected to be found in those food products as well as other pesticides in a wider analytical suite.

Over the last 14 years the number of pesticides we test for has risen. The increase is consistent with the current capability of most laboratories which test food for pesticide residues.

The choice of pesticides tested for in a survey depends on:

- Which pesticides have been found before.
- What we know is being used to grow specific foods, that is, which pesticides are approved for certain crops.
- What we know about pesticides used in the UK and other countries.
- What we know about pesticides being found in tests in other countries.
- The risk residues of that pesticide may present.
- The Maximum Residue Levels set in law.

Why we choose certain foods

There is a wide range of foods available in the UK throughout the year. To make the most of resources and make sure we test a wide range of food the programme changes from year to year.

When we choose the foods to test in a year, we take account of many different factors. Some foods are so common in our diet that even if PRiF normally finds few or no residues, it is right to carry on checking them. Although there have been no recent health concerns we continue to monitor staples like milk and bread because of their role in our diet.

Other foods are less commonly consumed but are important in the diet of some groups of people; speciality fruit and vegetables are a good example. So we check these, especially to protect those who consume these foods most frequently or in the greatest amount. Some foods that are not staples in our diets are still included most years because we regularly find residues in them that are not compliant with the MRLs.

We also keep an eye out for new trends in diets, like the increased sale of pots of prepared fruit in recent years. We bare in mind different shopping habits in our sampling, like buying from street markets, greengrocers or supermarkets.

We also take account of monitoring data from other countries as well as information from the Rapid Alert System for Food and Feed (RASFF). Countries use the RASFF to share notifications of foods which could be a risk to human health.

Each year we contribute to Europe-wide surveys of main food groups collected to an agreed timetable. In 2016, apples, head cabbage, leeks, lettuce, peaches and nectarines, rye grains, strawberries, tomatoes, wine, cow's milk and swine meat formed part of this larger survey. These results are then shared with the European Food Safety Authority's (EFSA) who compile and publish a single annual report.

Each year we publish our proposed list of foods to be sampled for public comment. Any comments submitted are discussed by the committee to ensure that important issues are not missed.

We publish detailed results from the programme every three months; reports from 2016 are available on our website: https://www.gov.uk/government/publications/pesticide-residues-in-food-quarterly-monitoring-results-for-2016

Report	When samples are collected	When report was published
Quarter 1 2016	January to March 2016	September 2016
Quarter 2 2016	Up to June 2016	December 2016
Quarter 3 2016	Up to September 2016	March 2017
Quarter 4 2016	Up to December 2016	July 2017

You can also get copies of these reports from our secretariat:

Email: prif@hse.gov.uk

Food and drink being monitored in 2017

The 2017 programme started in January 2017. We will publish the result for each three-month period on our website.

Apples	Cucumber	Onions	Raspberries
Baked beans	Fish (oily)	Oranges	Rice
Beans (dried)	Grapes	Parsnips	Rye
Beans with pods	Infant formula & follow-on milk	Pears	Shellfish
Bread (ordinary & speciality)	Kiwi fruit	Peppers	Soya milk
Carrots	Lamb	Potatoes	Soya products
Cauliflower	Lemons & limes	Poultry	Speciality fruit
Cheese (hard)	Lettuce	Poultry (processed)	Spring greens & kale
Cherries	Okra	Prepared fresh fruit	Yoghurt

HSE is planning the programme for 2018. A proposed list of commodities for 2018 will be published for comments as a paper of a future PRiF meeting.

5. WHERE THE SAMPLES WERE COLLECTED IN 2016

Each year, samples are collected from different places throughout the UK, 2 towns or cities are chosen from each Government region. In 2016, we collected over 2,700 samples from retail outlets in 24 towns and cities in the UK. Government inspectors collected around 650 samples from places such as wholesalers, ports and supermarket distribution depots. This allows samples to be collected from non-retail sources making the surveys more representative of the food chain.

6. FOODS TESTED IN 2016

As some foods are available at different times throughout the year from different parts of the world, we may collect samples of these foods over three, six, nine or twelve months. We sometimes report results of tests every six months rather than every three months. We do this when there are only a small number of samples in a survey or when we do not expect there to be many residues of interest in the results because analysing larger batches of samples is more economical.

We publish detailed results from the programme every three months; reports for 2016 are available on our website. https://www.gov.uk/government/publications/pesticide-residues-in-food-quarterly-monitoring-results-for-2016

Details of the foods reported on in each quarter are below.

Quarter 1 Report (January to March 2016, results published September 2016)	Quarter 2 Report (up to June 2016, results published December 2016)	Quarter 3 Report (up to September 2016, results published March 2017)	Quarter 4 Report (up to December 2016, results published July 2017)
Apples	Apples	Apples	Apples
Beans with pods	Beans with pods	Apricots	Apricots
Cabbage	Cabbage	Beans with pods	Beans with pods
Cheese (processed)	Cooked meats	Bread	Bread
Fish (sea)	Fish (sea)	Cabbage	Breakfast cereal
Grapes	Gluten-free products	Cheese (buffalo, ewes & goats)	Cabbage
Leeks	Grapefruit	Fish (predator)	Cashew nuts
Lettuce	Grapes	Fish (sea)	Cheese (buffalo, ewes & goats)
Milk	Honey	Grapes	Cooked meat
Okra	Leeks	Infant food (fruit & vegetable based)	Fish (sea)
Peaches & nectarines	Lettuce	Jam	Grapefruit
Pears	Pasta	Leeks	Grapes
Peppers	Pears	Lettuce	Leeks
Potatoes	Potatoes	Milk	Lettuce
Prepared fresh fruit	Prepared fresh fruit	Okra	Milk
Strawberries	Strawberries	Peaches & nectarines	Non-dairy milk
Tomatoes	Tomatoes	Pears	Okra
		Peppers	Pasta
		Pork	Peaches & nectarines
		Potatoes	Pears
		Prepared fresh fruit	Peppers
		Speciality vegetables	Popcorn
		Spices (cumin)	Pork
		Spring onions	Pork (processed)
		Strawberries	Potatoes
		Tomatoes	Prepared fresh fruit
			Rye
			Rye flour
			Speciality vegetables
			Strawberries
			Tomatoes
			Tomatoes (tinned)
			Wine

7. RESULTS FROM THE 2016 PROGRAMME

In 2016, we tested 3,448 samples. We tested each sample for many different pesticides. In total we tested around 986,338 food and pesticide combinations.

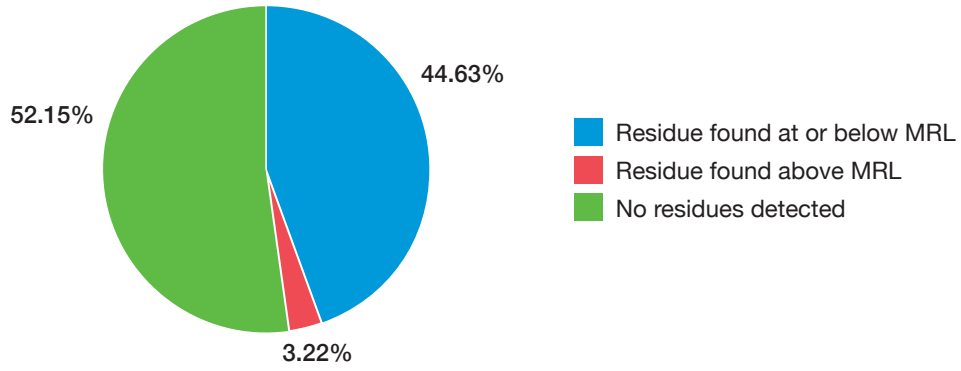
Of the pesticides we looked for, we found that:

- 52.15% of samples contained none of the pesticides we looked for.
- 44.63% of samples contained residues at or below the MRL.
- 3.22% of samples contained residues over the MRL.

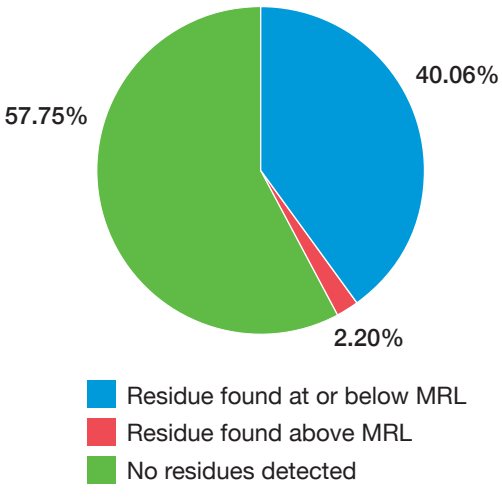
The monitoring programme looks at those foods in which we expect to find residues; because of this we cannot say that the results represent the UK food supply as a whole.

Some of the samples labelled as being from the UK may not have been grown in the country. The country of origin can be where the raw ingredient was produced, where the food was made, where it was packed from bulk for retail sale or it could be the home of the brand owner. For example, tinned tomatoes can be labelled as being from the UK, but the tomatoes in the tin could have been grown in Italy or China and then canned in the UK.

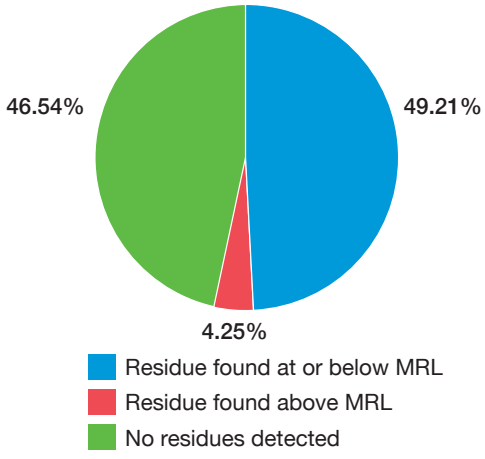
Overall results for 2016



Food from UK – 1,729 samples



Food from outside the UK – 1,719 samples

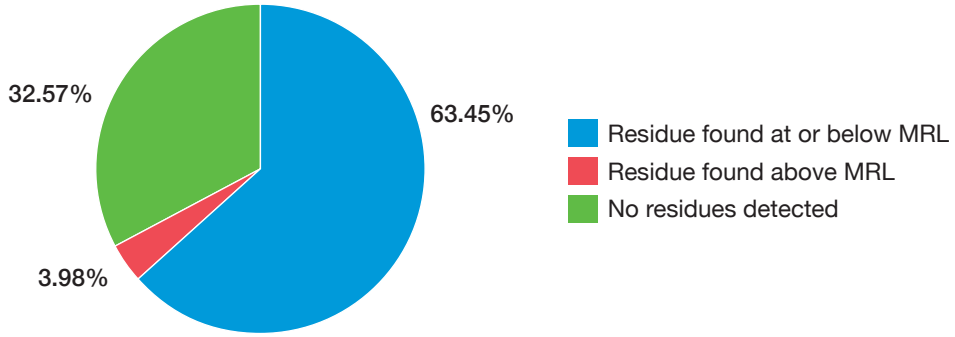


8. RESULTS – FRUIT AND VEGETABLES

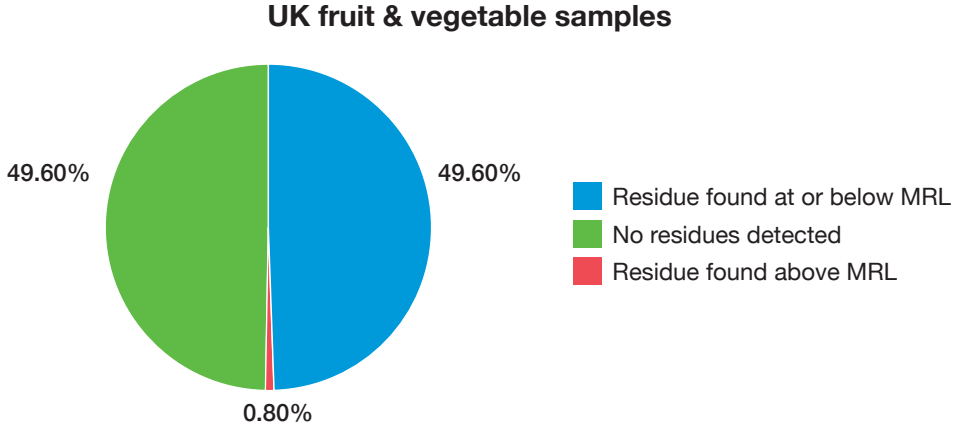
We tested 1,658 samples for up to 374 pesticides and we carried out around 574,682 food and pesticide tests.

We found residues in 1,118 of those samples (67.43%). 66 of those samples (3.98%) contained a residue above the MRL.

This year the MRL exceedance rate is similar to the higher level seen last year (5.05% in 2015), this is linked to the continued sampling of speciality beans and okra which have a known high non-compliance rate.



We tested 627 samples of UK fruit and vegetables. We found residues in 316 (50.4%) of those samples, 5 samples (0.8%) contained a residue above the MRL.



Main findings and actions

- We didn't find any residues above the MRL in apples, cabbages, leeks, peaches & nectarines, pears, peppers, potatoes, prepared fresh fruit and spring onions.
- As with other years, out of 29 samples of beans with pods that had a residue over the MRL, 27 were samples of speciality beans. Speciality beans are varieties that are not commonly grown in Europe, so many of the MRLs are set at the Limit of Determination (LOD).
- Similar to speciality beans, okra is also usually grown outside of Europe and therefore has a lot of MRLs set at the LOD. Out of the 24 samples with a residue over the MRL, 7 of these were in frozen okra which is usually from a different source than the fresh okra.
- The 5 samples from the UK with a residue over the MRL were 2 lettuces and 3 speciality vegetables.

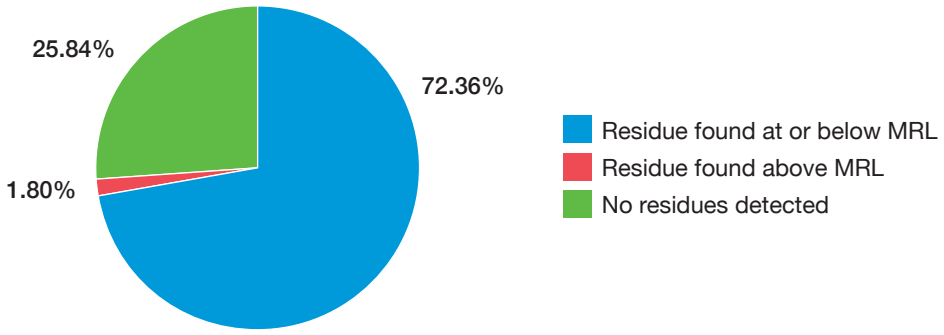
Results by food type

Food	Number of samples tested	Number of samples containing residues at or below the MRL	Number of samples containing residues above the MRL	Number of samples containing more than one pesticide residue
Apples	96	87	0	68
Apricots	73	69	1	58
Beans with pods	120	46	29	45
Cabbage	96	20	0	6
Grapefruit	96	92	3	93
Grapes	120	115	1	100
Leeks	96	25	0	9
Lettuce	72	48	2	30
Okra	91	26	24	19
Peaches & nectarines	92	86	0	75
Pears	96	81	0	72
Peppers	72	41	0	21
Potatoes	155	92	0	42
Prepared fresh fruit	96	20	0	2
Speciality vegetables	60	37	4	19
Spring onions	48	28	0	12
Strawberries	96	82	1	73
Tomatoes	83	57	1	28

9. RESULTS – STARCHY FOODS AND GRAINS

We tested 445 samples for up to 371 pesticides. We carried out tests on around 164,495 food and pesticide combinations.

We found residues in 330 (74.16%) of these samples, 8 of those samples (1.8%) contained a residue above the MRL.



Main findings

- We didn't find any residues above the MRL in bread, breakfast cereal, pasta and rye.
- Seven of the eight sample of rye flour with a residue above the MRL were all exceedances of clothianidin. Clothianidin is an insecticide that is used as a soil or seed treatment on winter seed rye.

Results by food type

Food	Number of samples tested	Number of samples containing residues at or below the MRL	Number of samples containing residues above the MRL	Number of samples containing more than one pesticide
Bread	216	187	0	55
Breakfast cereal	96	90	0	63
Pasta	72	18	0	4
Rye	24	23	0	18
Rye flour	37	4	8	3

Applying processing factors to find MRLs for processed foods

Maximum Residue Levels (MRLs) apply to all traded foods, **including foods used as ingredients**. The law specifies the level to apply to foods as they are traded. For almost all foods that means their raw, unprocessed form. But MRLs also apply to prepared and processed foods in which case the effect of processing needs to be taken into account.

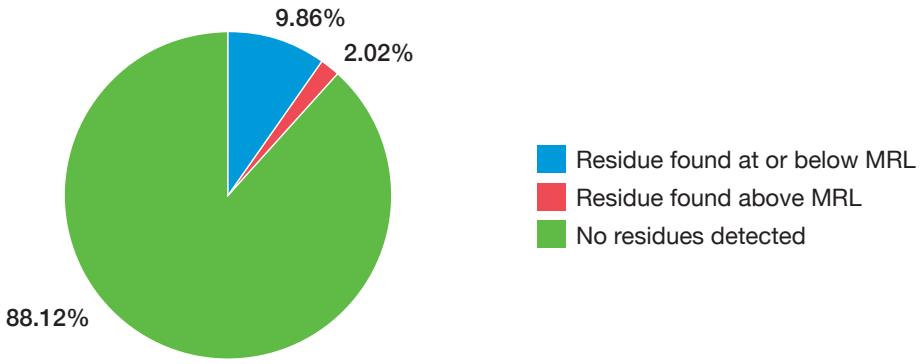
To check that prepared and processed foods were made with ingredients that complied with MRLs we use appropriate processing factors, based on scientific studies of the effect of preparation and processing. Different forms of processing remove, concentrate or dilute residues and the effect may also vary depending on the food and pesticide concerned.

Put another way, the use of processing factors enables checks that the original ingredient was compliant with MRLs. **Food manufacturers should have information on how they check their ingredients and also on their recipes and preparation techniques. For instance, how much water is added/removed, how much of ingredient x is used to make food.**

10. RESULTS – ANIMAL PRODUCTS

We tested 892 samples for up to 365 pesticides. We carried out tests on around 79,628 food and pesticide combinations.

We found residues in 106 (11.89%) of these samples, 18 of those samples (2.02%) contained a residue over the MRL.



Main findings

- We didn't find any of the residues we looked for in cooked meat and predator fish.
- All the MRL exceedances in pork and processed pork were residues of either BAC or DDAC. This is the first year we have looked for BAC and DDAC in meat samples, we expect that the residues will be from the use of BAC & DDAC as a disinfectant in preparation and processing stages of the pork products.
- The 11 samples of buffalo, ewes and goats cheese with a residue above the MRL were all residues of either BAC or DDAC. Like the pork and processed pork it is likely that the residues we found came from the use of BAC & DDAC as disinfectants during the many stages of cheese production.

Results by food type

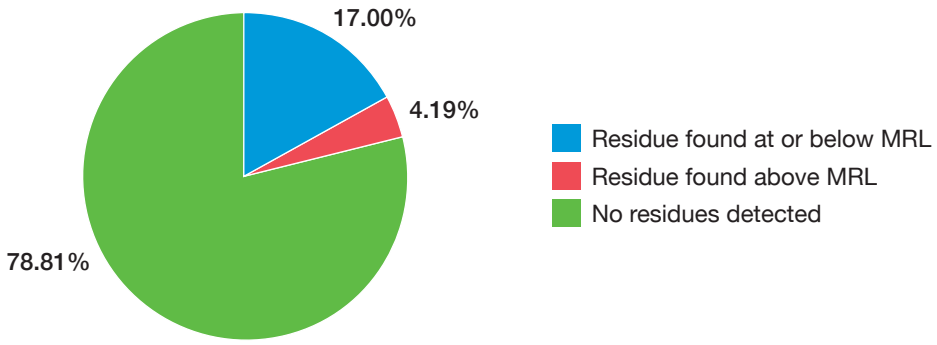
Food	Number of samples tested	Number of samples containing residues at or below the MRL	Number of samples containing residues above the MRL	Number of samples containing more than one residue
Cheese (buffalo, ewes & goats)	96	38	11	12
Cheese (processed)	36	27	0	3
Cooked meat	60	0	0	0
Fish (predator)	48	0	0*	0
Fish (sea)	108	2	0*	0
Honey	48	5	1	2
Milk	300	3	0	0
Pork	106	5	2	1
Pork (processed)	90	8	4	0

*No MRLs are available for residues in fish

11. RESULTS – INFANT FOOD AND OTHER GROCERIES

The "other groceries" that we tested this year were cashew nuts, gluten-free products, jam, non-dairy milk, popcorn, spices, tinned tomatoes and wine. The infant food that we tested was fruit and vegetable based.

We tested 453 samples for up to 376 pesticides. We carried out tests on around 166,992 food and pesticide combinations. We found residues in 96 (21.19%) of the samples. 19 of those samples (4.19%) contained a residue above the MRL. We didn't detect any residues in any of the infant food samples.



Main findings

- We didn't detect any of the residues we looked for in infant food or non-dairy milk.
- There was a wide range of different pesticides detected above the MRL in the cumin samples. 10 of the 12 samples with a residue above the MRL were of the same brand so although the samples were bought from different stores on different occasions, due to the long shelf life of spices it is likely these samples were from the same batch.

Results by food type

Food	Number of samples tested	Number of samples containing residues at or below the MRL	Number of samples containing residues above the MRL	Number of samples containing more than one pesticide residue
Cashew nuts	48	3	3	0
Gluten-free products	74	18	0	8
Infant food (fruit and vegetable based	66	0	0	0
Jam	48	25	1	14
Non-dairy milk	49	0	0	0
Popcorn	24	1	2	2
Spices (cumin)	24	6	12	18
Tomatoes (tinned)	24	1	0	0
Wine	96	23	1	13

12. PRiF OPEN EVENT 2016

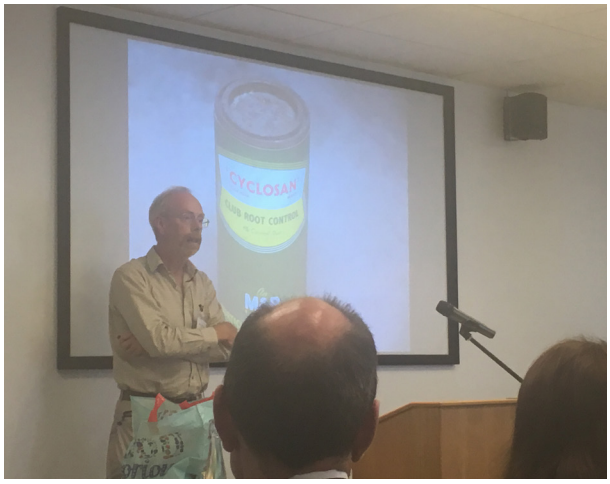
Each year we hold an open event. We alternate between York (our home base) one year and another UK location the next. Anyone interested in pesticide residues in food is welcome to attend.

As well as explaining our work, we invite speakers from different areas of food and drink production, marketing and regulation. Our aim is to give an overview of how steps are put in place at each part of the process to ensure food safety for the consumer.

In 2016, we held our annual open event at The National Railway Museum, York. We had presentations from

- Our Chairman, Dr Paul Brantom on the work of the PRiF, including how we check for risks to health
- Helen Kyle from HSE's Chemicals Regulation Division about how the pesticide residues programme has developed over the year
- Dr Sadat Nawaz and Mike Dickinson from Fera Science Ltd explaining the science of pesticide residue analysis, past, present and future.
- Chris Wallwork from Agrii Ltd shared his insights in to how farming practice has changed in response to consumer, customer, and government food and environmental standards.
- Christian Maltby from Barfoots of Botley explained how Barfoots are responding to the new challenges they are facing.

Nearly 100 people attended the event. They came from the general public, different parts of the food production and supply industries, and analytical laboratories as well as members of the public.



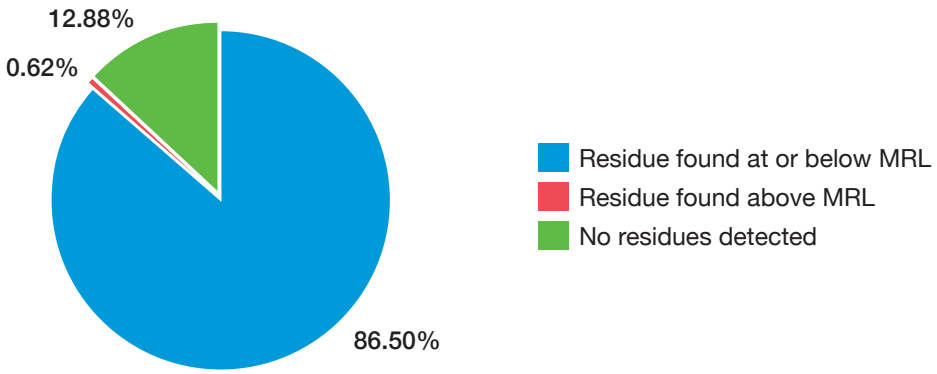
13. THE SCHOOL FRUIT AND VEGETABLE SCHEME

The Department of Health funds the School Fruit and Vegetable Scheme, which is part of a five-a-day programme to encourage children to eat at least five portions of fruit and vegetables each day. Under the scheme, all school children aged between four and six in local authority maintained infant, primary and special schools in England are entitled to a free piece of fruit or vegetable each school day. In 2016, the scheme distributed around 437 million pieces of fruit and vegetables to 16,300 schools across the UK.

The PRiF's role in the scheme is to check samples of the fruit and vegetables provided by the scheme for pesticide residues. As with other foods supplied to the public, any residues in these fruit and vegetables must comply with the MRLs. NHS Supply Chain, on behalf of the Department of Health, buy fruit and vegetables from growers who follow UK food safety schemes or the equivalent if food was produced abroad. HSE obtain samples of fruit and vegetables from the scheme's suppliers and then test them for residues at Fera Science Limited. We compare results for each sample with the relevant MRLs and assess whether any residues found would be likely to affect children's health.

We publish our findings for samples taken during each school term on our website: https://www.gov.uk/government/publications/pesticides-residues-in-food-school-fruit-and-vegetable-scheme-2015

We tested 163 samples for up to 373 pesticides, we found residues in 142 of those samples (87.11%). 1 of those samples (0.61%) contained a residue above the MRL.



Results by food type

Food	Number of samples tested	Number of samples containing residues at or below the MRL	Number of samples containing residues above the MRL	Number of samples containing more than one pesticide residue
Apples	31	30	0	26
Bananas	43	33	0	30
Carrots	32	26	0	18
Pears	24	23	1	24
Raisins	7	6	0	6
Soft Citrus	18	18	0	17
Strawberries	1	1	0	1
Sugar snap peas	3	2	0	0
Tomatoes	4	2	0	2

14. ORGANIC SAMPLES

In 2016, out of the 3,451 samples that we tested, 236 were labelled as organic. Although we do not specifically target organic foods in all our surveys, they are tested as part of the monitoring programme as they are available for people to buy.

Residues in organic samples

Organic farmers and growers are allowed to use a limited number of approved pesticides where other methods of control are inadequate to prevent damage by pests, diseases and weeds.

12 of the organic samples that we tested contained a pesticide residue. 8 of the samples contained a residue above the MRL. All the results were passed to the relevant authority in the country the food came from, and the section in Defra that deals with organic farming.

The following organic samples contained residues. None of the residues detected would be expected to have an effect on human health.

Food	Country of origin	Pesticide residue found	Amount of residue found (mg/kg)	MRL (mg/kg)*
Green beans	Egypt	carbendazim	0.09	0.2
		Thiophanate-methyl	0.01	0.1
Breakfast cereals	UK	Chlormequat	0.06	9
Pepper	UK	Spiromesifen	0.02	0.5
Rye flour	UK	chlorpropham	0.04	0.01*
Rye flour	UK	clothianidin	0.04	0.02*
Rye flour	UK	clothianidin	0.06	0.02*
Rye flour	UK	clothianidin	0.08	0.02*
Rye flour	UK	clothianidin	0.1	0.02*
Rye flour	UK	clothianidin	0.1	0.02*
Rye flour	UK	clothianidin	0.2	0.02*
Rye flour	UK	clothianidin	0.2	0.02*
Tomato	Spain	Spinosad	0.02	0.7

*__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.

15. SUSPECTED UNAPPROVED USES IN THE UK

We are able to check the samples of UK produce to see if they contain residues of pesticides which are not approved for use on those crops in the UK.

Sometimes we do find residues of pesticides which have not been approved for use on particular UK grown crops. There are different reasons this may occur, such as:

- the crop has been grown from imported seed or seedling which was treated legally in another country. The residue is still detectable in the adult plant
- a food was grown or produced overseas but the country of origin on the packaging is that of the brand owner or where it was packed. Processed foods may be grown in one country but processed in another
- if the residues are very low, this may have been caused by poor agricultural practice, such as failing to take appropriate steps to control spray drift or equipment not being correctly cleaned between uses
- illegal use
- accidents and unexpected consequences

If we find a residue of a pesticide that has not been approved for use in the UK on that crop, we inform the Health and Safety Executive (HSE) about our results so they can consider investigating.

We referred the following samples to HSE in 2016:

Food	Pesticide residue found	Amount of residue found (mg/kg)	MRL (mg/kg)*
Breakfast cereal – bran flakes	Chlorpropham	0.01	No MRL
Breakfast cereal – bran flakes	Chlorpropham	0.02	No MRL
Breakfast cereal – shredded wheat	Chlorpropham	0.01	No MRL
Chard	Prothioconazole	0.3	0.01*
	Tebuconazole	0.7	0.02*
Leek	Cypermethrin	0.05	0.5
Leek	Ioxynil	0.01	3
Lettuce	Dithiocarbamates	6.8	5
Pak choi	Oxadixyl	0.02	0.01*
	Propyzamide	0.01	0.01*
Potato	MCPA	0.03	0.05*
Strawberry	Fluopyram	0.04	2

*__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.

HSE's investigation into most of these cases found that no illegal use had taken place and the residue was present for another reason. In some cases, the investigation is still on-going and the results will be published in one of the quarterly reports once the investigation has been completed.

16. ASSESSING THE RISK TO PEOPLE'S HEALTH

Since 2008, every result which contained a residue has been checked to see if the residues found could have an effect on human health. We call these checks risk assessment screens.

Risk assessment screening

In nearly all cases the risk assessment screening showed that people would eat less than the acute reference dose (ARfD), which is the amount of pesticide that a person can eat in one day without affecting their health, and less than the acceptable daily intake (ADI), which is the amount of that pesticide it is safe to eat every day for a lifetime. The risk assessment screening considers the amount eaten by 10 different groups of people based on consumption data supplied by the FSA. These groups are infants, toddlers, young people (4 different age groups), adults, vegetarians, elderly people living in their own homes and elderly people living in residential accommodation.

The ARfD and ADI values that we use in risk assessment screens are generally set by international bodies such as the European Food Safety Authority (EFSA), and the Joint Food and Agriculture Organisation/ World Health Organisation Meeting on Pesticide Residues (JMPR).

HSE assesses the health risk of any residues in food. The assessment is made by assuming someone has eaten near the maximum that we find in consumption patterns, identified from UK Government food surveys. HSE takes the 97.5th consumption percentile as representing a high level of consumption. That means for every 100 people, 97 will have eaten less than HSE assumes. Other assumptions in HSE's assessments tend to overestimate rather than underestimate the risk. For example, for most fruits a first assessment assumes people have eaten the peel. This is not just for apples and pears, which are often consumed including the peel, but also for fruit which is more often eaten after being peeled. Risk assessments may then be refined using registration data about the distribution of residues in that food.

We take account of the more extreme consumption patterns of foods; so we ensure that HSE's risk assessments address the safety of consumers in general.

Detailed risk assessments

We publish risk assessments:

- For all situations where consumption patterns could lead to people eating more than the acute reference dose or acceptable daily intake of specific pesticides.
- Where a sample contains a residue of more than one organophosphate or carbamate pesticide (or both) or residues of certain fungicides from the same chemical group (e.g. captan and folpet; triazoles; organophosphates). Each of these groups of pesticides can have similar effects on people, so we check to see what could happen if these effects are added together.

We considered 16 detailed risk assessments during 2016. In each case we considered specific advice on the possible health risks. In most cases we found that risks to people's health were unlikely. Where the risk assessment showed that there might be a risk to health, we informed the Food Standards Agency.

The full text of all the detailed risk assessments is in our reports (which we publish every three months) or in our reports on samples taken from the School Fruit and Vegetable Scheme.

You can download these reports from our website:

Quarterly Reports: https://www.gov.uk/government/publications/pesticide-residues-in-food-quarterly-monitoring-results-for-2016

School Fruit & Vegetable Scheme: https://www.gov.uk/government/publications/pesticides-residues-in-food-school-fruit-and-vegetable-scheme-2015

17. FOLLOW UP ACTION

If we find a residue above the relevant MRL it could just be in one sample. However, if we find that a number of samples contain residues of that particular pesticide above the MRL in one survey or in further surveys of the same food, it suggests that:

- The pesticide's approval is not in line with the MRL (pesticides approved for use in the UK are rarely out of line with the MRLs, but there may be problems with imported foods).
- The MRL is set as the Limit of Detection (the lowest amount that can normally be detected by official laboratories), which is a default level that does not take account of the uses not covered by the MRL setting system, in particular use in countries outside Europe.
- Some people who grow or store food are not using pesticides properly.

Main Actions

- All samples with residues over the MRL were reported to the retailers, suppliers and growers involved. We asked them to explain why the residues were over the MRL. Where they asked us to, we published these explanations in our reports.
- All UK samples with a pesticide not approved for use in the UK were reported to HSE for further investigation.
- For all samples of non-UK produce with residues over the MRL, we wrote to the relevant authorities in the countries the produce was exported from.
- When we found a residue that could be a risk to health we informed the FSA. They informed the Rapid Alert System for Food and Feed (RASFF). Our quarterly reports include details of RASFF notifications issued as follow up to the monitoring results.
- Any residues detected in organic samples were reported to the team in Defra that deal with organic produce.
- We can target further monitoring of a food where we have found residues of interest.
- Alongside the quarterly reporting we run a programme called "rolling reporting". Rolling reporting is 4 or 5 commodities which are being sampled and reported on every month throughout the year. In 2016 the commodities in the rolling reporting programme were beans with pods, grapes, milk, okra, potatoes and prepared fresh fruit.
- HSE is able to prosecute growers or suppliers they find breaking the law. If we suspect that pesticides are being used illegally in the UK, the Health and Safety Executive (HSE) may carry out further investigation.

Examples of follow up action

- 12 samples of cumin contained a range of pesticides that were substantially above the MRL. We saw similar results in cumin when we last tested it in 2012, Following those findings HSE liaised with Spice Associations to rectify the problem. The results from this survey have showed that the growers in the Spice Associations HSE worked with have improved their compliance rate, but other growers still have problems.
- Due to the continued high rate of non-compliance on beans with pods and okra, HSE has begun to send all of the non-compliant results to the Food Standards Agency for them to include in the data when deciding what foods should be included on import controls.

18. LEGAL CONTROLS ON PESTICIDE RESIDUES

Maximum Residue Levels (MRLs)

It is illegal to sell, supply distribute or import food with residues above Maximum Residue Levels (MRLs). MRLs are set for individual pesticides in specific foods based on the highest level of a residue expected to be in a food when the pesticide is used in line with good agricultural practice. So MRLs are set at levels which may occur when the pesticide is used properly, taking into account worker and environmental safety as well as the level needed to work as a pesticide. MRLs are also set below the level considered to be safe for people eating the food.

For any pesticide without a specific MRL, a default value of 0.01 mg/kg is set. Our laboratories' reporting levels (the lowest levels our tests are set to measure) when testing samples are set in line with the default MRL (0.01 mg/kg).

Pesticide residue testing

MRL legislation requires an annual pesticide residue testing programme which is representative of the countries food supply market. The programme must take samples close enough to the point where produce enters the food supply market to enable follow up activity to take place if the food does not comply with the law.

The UK also shares its results with a Europe-wide monitoring programme. Results are compiled and published by the European Food Safety Authority (EFSA).

As well as the laws on the levels of pesticide residues allowed in food, there are laws on the authorisation, selling, supplying, using, storing, importing and advertising of pesticides. More information is available on the HSE website.

19. MEMBERS OF THE EXPERT COMMITTEE ON PESTICIDE RESIDUES IN FOOD (PRiF)

Dr Paul Brantom
Chairman

Dr Paul Brantom is a registered toxicologist and has worked in toxicology of food-related chemicals for more than 40 years. He was previously head of toxicology at BIBRA International and manager of the University of Surrey Centre for Toxicology. He is currently semi-retired but continues to work as an independent consultant in toxicological risk assessment, mainly for International and National organisations. Following previous research experience, he retains particular interests in toxicological risk assessment including non-animal testing methods and carcinogenicity.
Dr Brantom is a past member of UK Advisory Committees on Novel Foods and Processes (ACNFP), Veterinary Products (VPC), Veterinary Residues (VRC) and Animal Feedingstuffs (ACAF). He is also a past member of the FEEDAP Panel of EFSA (European Food Safety Authority) and continues to work with EFSA on a number of working groups.

Ann Davison

Ann Davison began her career at Which? She has worked in consumer affairs for most of her career, running consumer organisations and networks such as Foodaware: the Consumers' Food Group. She won the UK Woman of Europe 2000 Award. Ann has served as a consumer representative on a number of government committees – Defra Expert Panel on Air Quality Standards, the Adult Learning Committee of the Learning and Skills Council and currently the Food Standards Agency's Advisory Committee on Animal Feeding Stuffs. For nearly six years, she was Defra's consumer adviser and ran its Consumer Representatives Group. Ann takes a special interest in food, health and standards issues. She co-founded the Fairtrade Foundation and chaired its Certification Committee for eleven years, she chairs the PRiF Communications Sub-committee and serves on the National Consumer Federation's Communications Committee and BSI's Consumer and Public Interest Strategic Advisory Committee.

Dr Stuart Freeman

Dr Stuart Freeman is a fellow of the Royal College of Pathologists and an independent toxicology consultant with 25 years' experience of the pharmaceutical and consumer products industries. During this time, he worked at Smith Kline and French, AstraZeneca, where he was Head of the Reproductive and Developmental Toxicology group, and GlaxoSmithKline Consumer Healthcare, where he was Head of Toxicology for the worldwide business. Dr Freeman has served on numerous industry committees and published and presented extensively in the field of toxicology.

Katie Knaggs

Katie Knaggs is the Group Sustainability Manager at International Procurement and Logistics Ltd (IPL). In her role she develops projects and informs policies on economic, social and environmental sustainability performance across a range of food supply chains including primary agricultural production. Katie has worked in the fresh produce industry for over 15 years both in retail and in the supply chain serving all the UK retailers. Katie is from a livestock and arable farming background and has a BSc in Agri Food Marketing and Management. Katie's expertise in pesticides is managing supply chains, retailer residue monitoring programmes and follow up investigations to grower level.

John Points

John Points is a consultant providing advice to food retailers and producers on chemical risk management, analytical testing, and interpretation of results. He also works on laboratory capacity-building projects for developing countries who need to test food for residues prior to export to the EU. His previous career has been with Sainsbury's and with LGC, one of the UK's National Reference Laboratories, where he led the teams responsible for food, residues, consumer safety and workplace drugs testing. At Sainsbury's his role included management of residue monitoring programmes and follow up of results within the own-brand supply chain. John has previously been a member of the UK Veterinary Residues Committee, and has acted as a National Expert on EC Food and Veterinary Office inspection missions to both EU and non-EU countries.

Tony Vallance

Tony Vallance has worked in the fresh produce industry since 1996, and is currently the Agronomy Manager at Mack, a leading importer and packer of fresh fruit and vegetables for the UK market. Tony works with growers in the UK and overseas to ensure compliance with legal requirements and retailer standards for food safety, worker welfare and crop production including the use of crop protection products and associated chemical residues. Tony's role includes management of the Company's pesticide residue testing programme. Tony has a BSc (Hons) degree in Commercial Horticulture (fruit) from the University of Greenwich. His background is in top fruit (apples and pears) and soft fruit, and he has also worked in cereals and salad production. Tony's knowledge of pesticides has been gained during 18 years of managing pesticide use and residue monitoring programmes in the supply chain.

Dr Glenis Wedzicha

Dr Glenis Wedzicha read chemistry at the University of London, where her PhD research was on free radicals in an industrial content. She did post graduate teaching training at the University of Oxford and her teaching career included teaching physics and chemistry to 'A' level. She also wrote media articles as a free-lancer about complex scientific and technical issues that affect society. Glenis is the Science Co-ordinator on the Board of Trustees of North Yorkshire East (NYE) Federation of Women's Institute (WI), Chairman of their Public Affairs and International Committee as well as holding a position on the Membership and Training sub-committee for the WI. She leads the scientific strategy of the Federation, and her role includes helping members understand the impact of science on their lives and society in general. She has a particular interest in the communication of food and environmental issues. Recently, Glenis has been appointed a member of the UK Chemicals Stakeholder Forum on which she represents the National Federation of WI's.

Analytical Sub Group

The Expert Committee on Pesticide Residues in Food's Analytical Sub Group (ASG) reviews the results of analysis by the laboratories before they are sent to HSE, to ensure their reliability.

Most of the members of the group are from laboratories, the group members during 2016 were:

- Helen Kyle – HSE's Chemicals Regulation Division (Chairman)
- Dr Sadat Nawaz – National Reference Laboratory (NRL) Representative
- Helen Barker – Fera Science Ltd
- Mark Kearney – Agri-Food and Biosciences Institute (AFBI)
- Kirsty Reid – Science and Advice for Scottish Agriculture (SASA)
- Laura Melton – Science and Advice for Scottish Agriculture (SASA)

Cost of our surveys

The budget for the UK pesticide residues monitoring programme is made up by from a charge on the sale of approved pesticides by manufacturers and suppliers in the UK and the rest from the Government. The largest proportion of the budget was spent on testing samples for pesticide residues.

HSE pays members a fee for each meeting attended. HSE also provides support to the committee and the sub-group.

20. COMMUNICATING THE RESULTS AND WORK OF THE PRIF

We want as many people as possible to be aware of the official pesticide residue testing programme, to understand what we do. To do this we:

- publish all the monitoring data on our website every quarter
- publish the results of our rolling reporting on our website every month
- publish an annual report written in plain English
- open one of our quarterly meetings each year to the public
- hold an annual one-day workshop for members of the public, with presentations and opportunities to interact (see section 12 for a brief report of this year's event)

Our Chairman is available for interviews with the media.

We have also prepared some extra background and explanatory information:

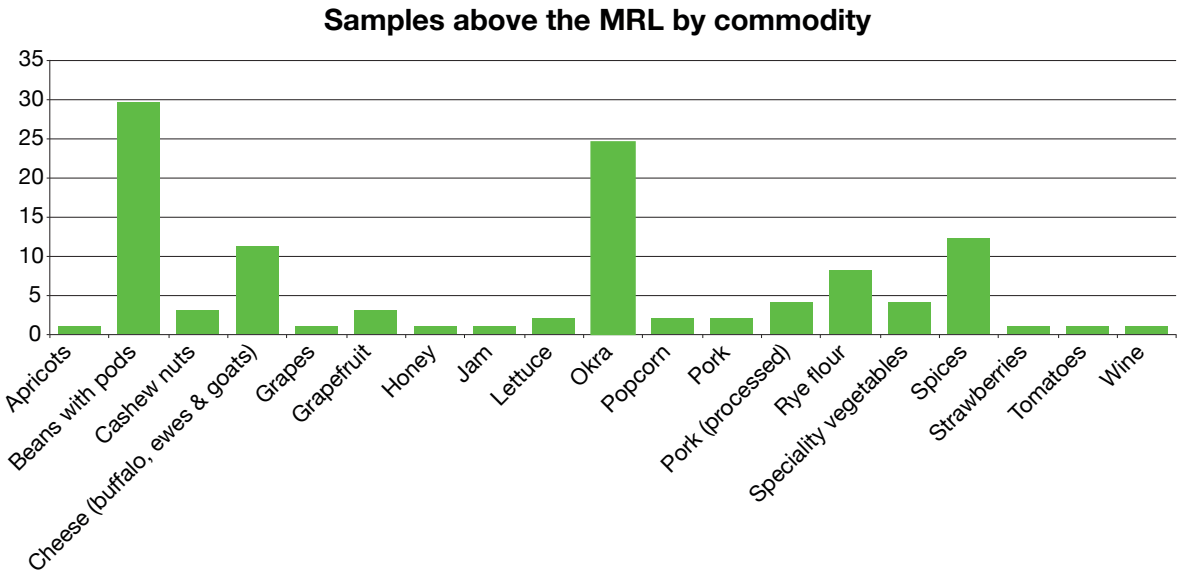
- Frequently asked questions (section 23)
- We also include our glossary in each of our quarterly reports.

If you would like to receive notifications of publications and open events, please email prif@hse.gov.uk to join our mailing list.

21. ALL RESIDUES FOUND ABOVE THE MRL IN 2016

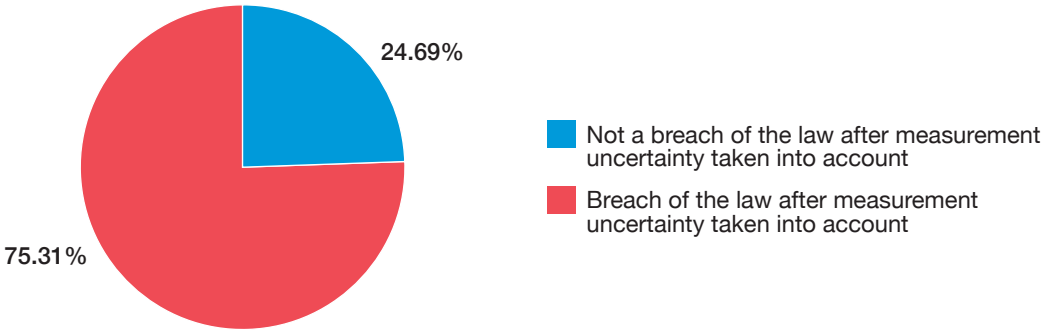
Of the 3,450 samples tested, 113 contained one or more residues above the relevant MRL.

MRLs are trading standards rather than safety levels, therefore these results do not automatically mean the levels of residue detected are a risk to people's health. The samples containing residues above the MRL were mainly fruit and vegetable samples.



The table below shows all samples from 2016 where we found at least one residue above the MRL. A number of the MRLs have (*) next to them, this means that the MRL is set at the limit of determination (the lowest level that can normally be detected by official laboratories). This often means that there are no authorised uses on those crops or that the pesticide itself is not authorised for use. As foods grown in other countries are not all covered by the MRL setting system, residues above these MRLs do not necessarily mean the farmer did not follow good agricultural practice (GAP).

Samples with residues above the MRL in 2016



Analytical Measurement Uncertainty

No measurement can ever be guaranteed to be exact and this can be caused by many things. Measurement uncertainty is a calculated indicator of our confidence in the accuracy of the amount of pesticide we detected. It is not expressing a doubt about which pesticides we have found.

It has been agreed for reporting purposes only that measurement uncertainty will be applied to any result that contained a residue over the MRL. In line with the international guidance, we use a default value of 50% for measurement uncertainty. This means that when a sample has a residue over the MRL we subtract 50% of the reported value and check this value against the MRL. All residues still over the MRL after the 50% measurement uncertainty has been applied are highlighted as breaching the law in our quarterly reports.

Measurement uncertainty can only be applied by a regulatory authority which in the UK is the Health and Safety Executive's Chemicals Regulation Division. It should not be applied by the food industry to determine whether a product is compliant with an MRL.

Sample reference number	Food	Country of origin	Pesticide residue found	Residue amount detected (mg/kg)	MRL (mg/kg)	Breach of the law after allowing for measurement uncertainty
5319/2016	Apricots	South Africa	thiabendazole	0.06	0.05*	No
0036/2016	Beans with pods: Fine Beans	Egypt	methomyl (sum)	0.08	0.02*	Yes
3606/2016	Beans with pods: Valour Beans	Bangladesh	carbendazim	0.6	0.2	Yes
			chlorpyrifos	4.3	0.05*	Yes
4063/2016	Beans with pods: Valor Beans	India	triazophos	0.4	0.01*	Yes
4064/2016	Beans with pods: Guar Beans	India	dimethoate (sum)	0.2	0.02*	Yes
4061/2016	Beans with pods: Papri Beans	Pakistan	lufenuron	0.04	0.02*	No
2516/2016	Beans with pods: French Beans	Morocco	dimethoate (sum)	0.1	0.02*	Yes

Sample reference number	Food	Country of origin	Pesticide residue found	Residue amount detected (mg/kg)	MRL (mg/kg)	Breach of the law after allowing for measurement uncertainty
3766/2016	Beans with pods: Uri Beans	Malaysia	amitraz	0.1	0.05*	Yes
			chlorfenapyr	0.09	0.01*	Yes
			dithiocarbamates	2.3	1	Yes
			tolfenpyrad	0.1	0.01*	Yes
3925/2016	Beans with pods: Guar Beans	Dominican Republic	dithiocarbamates	2	1	Yes
3596/2016	Beans with pods: Yard Long Beans	India	triazophos	0.03	0.01*	Yes
4072/2016	Beans with pods: Guar Beans	India	monocrotophos	0.2	0.01*	Yes
3612/2016	Beans with pods: Asian Flat Beans	Malaysia	diafenthiuron	0.09	0.01*	Yes
			dimethoate (sum)	0.04	0.02*	Yes
			dithiocarbamates	2.8	1	Yes
			fipronil (sum)	0.01	0.005*	Yes
3611/2016	Beans with pods: Gwar Beans	India	dimethoate (sum)	0.03	0.02*	No
3769/2016	Beans with pods: Yard Long Beans	Malaysia	chlorfenapyr	0.02	0.01*	No
3875/2016	Beans with pods: Uri Beans	Malaysia	chlorfenapyr	0.2	0.01*	Yes
			dithiocarbamates	2	1	No
3876/2016	Beans with pods: Uri Beans	Malaysia	chlorfenapyr	0.2	0.01*	Yes
			dithiocarbamates	4.8	1	Yes
			emamectin benzoate	0.02	0.01*	No
4112/2016	Beans with pods: Long Bean	Malaysia	fipronil (sum)	0.006	0.005*	No
3671/2016	Beans with pods: Guwar Beans	India	monocrotophos	0.03	0.01*	Yes
4079/2016	Beans with pods: Valor Beans	India	dithiocarbamates	1.7	1	No
			hexaconazole	0.03	0.01*	Yes
			profenofos	0.04	0.01*	Yes
4090/2016	Beans with pods: Hyacinth Beans	Malaysia	chlorfenapyr	0.2	0.01*	Yes
			dithiocarbamates	3.3	1	Yes
			lufenuron	0.05	0.02*	Yes
3749/2016	Beans with pods: Yard Long Beans	Malaysia	diafenthiuron	0.02	0.01*	Yes
4129/2016	Beans with pods: Uri Beans	Malaysia	chlorfenapyr	0.3	0.01*	Yes
			dithiocarbamates	3	1	Yes
4729/2016	Beans with pods: Uri Beans	Malaysia	dithiocarbamates	1.1	1	No

Sample reference number	Food	Country of origin	Pesticide residue found	Residue amount detected (mg/kg)	MRL (mg/kg)	Breach of the law after allowing for measurement uncertainty
4775/2016	Beans with pods: Valor Beans	India	carbendazim	0.4	0.2	Yes
			profenofos	0.07	0.01*	Yes
4095/2016	Beans with pods: Yard Long Beans	India	dimethoate (sum)	0.04	0.02*	No
4096/2016	Beans with pods: Papri Beans	India	carbendazim	0.5	0.2	Yes
			dithiocarbamates	1.3	1	No
			fenvalerate & esfenvalerate (all isomers)	1	0.1	Yes
			triazophos	3.5	0.01*	Yes
4099/2016	Beans with pods: Guar Beans	India	dimethoate (sum)	0.03	0.02*	No
3703/2016	Beans with pods: Yard Long Beans	Malaysia	flutriafol	0.02	0.01*	Yes
3751/2016	Beans with pods: Yard Long Beans	India	acephate	0.2	0.01*	Yes
			chlorpyrifos	0.2	0.05*	Yes
			methamidophos	0.02	0.01*	Yes
4100/2016	Beans with pods: Yard Long Beans	India	dimethoate (sum)	0.1	0.02*	Yes
1599/2016	Cashew nuts	UK	BAC (sum)	0.2	0.1	No
0024/2016	Cashew nuts	Poland	chlorpyrifos	0.07	0.05*	Yes
0383/2016	Cashew nuts	Poland	chlorpyrifos	0.2	0.05*	Yes
0605/2016	Cheese (buffalo, goats & ewes)	UK	BAC (sum)	0.2	0.1	No
0502/2016	Cheese (buffalo, goats & ewes)	France	DDAC (sum)	0.2	0.1	No
0558/2016	Cheese (buffalo, goats & ewes)	Wales (UK)	BAC (sum)	1	0.1	Yes
0513/2016	Cheese (buffalo, goats & ewes)	UK	BAC (sum)	3.3	0.1	Yes
0569/2016	Cheese (buffalo, goats & ewes)	UK	BAC (sum)	1.1	0.1	Yes
3235/2016	Cheese (buffalo, goats & ewes)	France	DDAC (sum)	0.2	0.1	No
2416/2016	Cheese (buffalo, goats & ewes)	UK	BAC (sum)	0.2	0.1	No
3397/2016	Cheese (buffalo, goats & ewes)	France	DDAC (sum)	0.4	0.1	Yes
3426/2016	Cheese (buffalo, goats & ewes)	UK	BAC (sum)	0.2	0.1	No
2458/2016	Cheese (buffalo, goats & ewes)	France	DDAC (sum)	0.3	0.1	Yes

Sample reference number	Food	Country of origin	Pesticide residue found	Residue amount detected (mg/kg)	MRL (mg/kg)	Breach of the law after allowing for measurement uncertainty
3304/2016	Cheese (buffalo, goats & ewes)	UK	BAC (sum)	0.2	0.1	No
1243/2016	Grapes	Brazil	ethephon	1.2	1	No
3574/2016	Grapefruit	Turkey	imazalil	6.2	5	No
3951/2016	Grapefruit	Turkey	fenvalerate & esfenvalerate (all isomers)	0.04	0.02	No
3650/2016	Grapefruit	South Africa	thiabendazole	7.8	5	No
2523/2016	Honey	Romania	amitraz	0.03	0.01*	Yes
0744/2016	Jam	UK	BAC (sum)	0.8	0.1	Yes
3201/2016	Lettuce	England (UK)	propyzamide	1.8	0.6	Yes
0150/2016	Lettuce	UK	dithiocarbamates	6.8	5	No
4093/2016	Okra	Jordan	abamectin (sum)	0.02	0.01*	No
3942/2016	Okra	Jordan	abamectin (sum)	0.03	0.01*	Yes
3859/2016	Okra	Jordan	myclobutanil	0.04	0.02*	Yes
3768/2016	Okra	Jordan	dimethoate (sum)	1.8	0.02*	Yes
4084/2016	Okra	Jordan	abamectin (sum)	0.02	0.01*	Yes
1830/2016	Okra	Thailand	flonicamid (sum)	0.1	0.05*	Yes
3687/2016	Okra	Jordan	abamectin (sum)	0.09	0.01*	Yes
3697/2016	Okra	Jordan	oxamyl	0.05	0.01*	Yes
4080/2016	Okra	Jordan	abamectin (sum)	0.1	0.01*	Yes
			acetamiprid	0.5	0.2	Yes
			oxamyl	0.07	0.01*	Yes
3747/2016	Okra	Jordan	abamectin (sum)	0.05	0.01*	Yes
1945/2016	Okra	India	flonicamid (sum)	0.3	0.05*	Yes
0617/2016	Okra	India	flonicamid (sum)	0.2	0.05*	Yes
0618/2016	Okra	India	flonicamid (sum)	0.2	0.05*	Yes
0660/2016	Okra	India	flonicamid (sum)	0.2	0.05*	Yes
0661/2016	Okra	India	flonicamid (sum)	0.3	0.05*	Yes
1944/2016	Okra	India	flonicamid (sum)	0.2	0.05*	Yes
2875/2016	Okra	India	flonicamid (sum)	0.2	0.05*	Yes
4105/2016	Okra	India	flonicamid (sum)	0.04	0.03*	No
4098/2016	Okra	India	flonicamid (sum)	0.07	0.03*	Yes
3879/2016	Okra	India	flonicamid (sum)	0.05	0.03*	No
3746/2016	Okra	Honduras	oxamyl	0.02	0.01*	No
3773/2016	Okra	Jordan	dimethoate (sum)	0.1	0.02*	Yes
			imidacloprid	1	0.5	Yes

Sample reference number	Food	Country of origin	Pesticide residue found	Residue amount detected (mg/kg)	MRL (mg/kg)	Breach of the law after allowing for measurement uncertainty
4050/2016	Okra	India	flonicamid (sum)	0.1	0.03*	Yes
3705/2016	Okra	Honduras	oxamyl	0.03	0.01*	Yes
5039/2016	Popcorn	UK	pirimiphos-methyl	1.5	0.6	No
5040/2016	Popcorn	UK	pirimiphos-methyl	1.1	0.6	No
5287/2016	Pork	Germany	BAC (sum)	0.3	0.1	Yes
0677/2016	Pork	Scotland (UK)	BAC (sum)	0.3	0.1	Yes
0655/2016	Pork (processed)	Denmark	BAC (sum)	0.2	0.1	No
0525/2016	Pork (processed)	the Netherlands	BAC (sum)	0.3	0.1	Yes
0550/2016	Pork (processed)	Denmark	BAC (sum)	0.3	0.1	Yes
1894/2016	Pork (processed)	UK	DDAC (sum)	0.3	0.1	Yes
3346/2016 Organic	Rye Flour	UK	clothianidin	0.1	0.02*	Yes
5445/2016 Organic	Rye Flour	UK	clothianidin	0.2	0.02*	Yes
5488/2016 Organic	Rye Flour	UK	clothianidin	0.1	0.02*	Yes
5075/2016 Organic	Rye Flour	UK	clothianidin	0.04	0.02*	Yes
5185/2016 Organic	Rye Flour	UK	chlorpropham	0.04	0.01*	Yes
5399/2016 Organic	Rye Flour	UK	clothianidin	0.08	0.02*	Yes
5447/2016 Organic	Rye Flour	UK	clothianidin	0.06	0.02*	Yes
5371/2016 Organic	Rye Flour	UK	clothianidin	0.2	0.02*	Yes
4790/2016	Speciality vegetables: Chard	UK	prothioconazole	0.3	0.01*	Yes
			tebuconazole	0.7	0.02*	Yes
3683/2016	Speciality vegetables: Cavolo nero	UK	thiamethoxam	0.03	0.02*	No
3775/2016	Speciality vegetables: Chinese Cabbage	Poland	dimethoate (sum)	0.07	0.02*	Yes
3783/2016	Speciality vegetables: Pak Choi	UK	oxadixyl	0.02	0.01*	No

Sample reference number	Food	Country of origin	Pesticide residue found	Residue amount detected (mg/kg)	MRL (mg/kg)	Breach of the law after allowing for measurement uncertainty
2884/2016	Spices: Cumin	UK	acetamiprid	0.06	0.05*	No
			clothianidin	0.09	0.05*	No
			profenofos	0.07	0.05*	No
			thiamethoxam (sum)	0.1	0.05*	Yes
2891/2016	Spices: Cumin	UK	acetamiprid	0.5	0.05*	Yes
			carbendazim	1	0.1*	Yes
			clothianidin	0.1	0.05*	No
			cypermethrin	0.2	0.1*	Yes
			kresoxim-methyl	0.1	0.05*	No
			profenofos	1.4	0.05*	Yes
			Tricyclazole	0.6	0.05*	Yes
			thiamethoxam (sum)	0.2	0.05*	Yes
			triazophos	0.03	0.02*	No
2887/2016	Spices: Cumin	UK	acetamiprid	1.1	0.05*	Yes
			carbofuran (sum)	0.08	0.05*	No
			carbendazim	0.7	0.1*	Yes
			clothianidin	0.08	0.05*	No
			imidacloprid	0.2	0.05*	Yes
			propiconazole	0.3	0.1*	Yes
			profenofos	0.5	0.05*	Yes
			tricyclazole	0.4	0.05*	Yes
			thiamethoxam (sum)	0.2	0.05*	Yes
			triazophos	0.09	0.02*	Yes
2888/2016	Spices: Cumin	UK	acetamiprid	0.8	0.05*	Yes
			carbendazim	4	0.1*	Yes
			clothianidin	0.09	0.05*	No
			chlorantraniliprole	0.03	0.02*	No
			cypermethrin	0.3	0.1*	Yes
			imidacloprid	0.1	0.05*	Yes
			profenofos	1.1	0.05*	Yes
			tricyclazole	1	0.05*	Yes
			thiamethoxam (sum)	0.1	0.05*	Yes
			trifloxystrobin	0.07	0.05*	No

Sample reference number	Food	Country of origin	Pesticide residue found	Residue amount detected (mg/kg)	MRL (mg/kg)	Breach of the law after allowing for measurement uncertainty
2571/2016	Spices: Cumin	UK	acetamiprid	0.5	0.05*	Yes
			carbendazim	0.9	0.1*	Yes
			clothianidin	0.1	0.05*	Yes
			cypermethrin	0.3	0.1*	Yes
			kresoxim-methyl	0.07	0.05*	No
			profenofos	1.4	0.05*	Yes
			tricyclazole	0.4	0.05*	Yes
			thiamethoxam (sum)	0.2	0.05*	Yes
			triazophos	0.05	0.02*	Yes
2691/2016	Spices: Cumin	UK	acetamiprid	0.5	0.05*	Yes
			carbendazim	1.5	0.1*	Yes
			clothianidin	0.1	0.05*	No
			cypermethrin	0.2	0.1*	Yes
			imidacloprid	0.2	0.05*	Yes
			kresoxim-methyl	0.09	0.05*	No
			propiconazole	0.3	0.1*	Yes
			profenofos	0.9	0.05*	Yes
			tricyclazole	0.7	0.05*	Yes
			thiamethoxam (sum)	0.2	0.05*	Yes
			triazophos	0.05	0.02*	Yes
2560/2016	Spices: Cumin	UK	acetamiprid	1	0.05*	Yes
			carbofuran (sum)	0.09	0.05*	No
			carbendazim	4	0.1*	Yes
			Clothianidin	0.1	0.05*	Yes
			chlorantraniliprole	0.03	0.02*	No
			Cypermethrin	0.4	0.1*	Yes
			Imidacloprid	0.1	0.05*	Yes
			profenofos	1.4	0.05*	Yes
			tricyclazole	1.1	0.05*	Yes
			thiamethoxam (sum)	0.2	0.05*	Yes
			Trifloxystrobin	0.1	0.05*	Yes

Sample reference number	Food	Country of origin	Pesticide residue found	Residue amount detected (mg/kg)	MRL (mg/kg)	Breach of the law after allowing for measurement uncertainty
2561/2016	Spices: Cumin	UK	acetamiprid	0.5	0.05*	Yes
			carbendazim	1.7	0.1*	Yes
			clothianidin	0.08	0.05*	No
			cypermethrin	0.3	0.1*	Yes
			fipronil (sum)	0.009	0.005*	No
			imidacloprid	0.1	0.05*	Yes
			kresoxim-methyl	0.2	0.05*	Yes
			propiconazole	0.4	0.1*	Yes
			profenofos	1.2	0.05*	Yes
			tricyclazole	1.1	0.05*	Yes
			thiamethoxam (sum)	0.2	0.05*	Yes
			triazophos	0.09	0.02*	Yes
2562/2016	Spices: Cumin	UK	acetamiprid	0.7	0.05*	Yes
			carbofuran (sum)	0.08	0.05*	No
			carbendazim	4.3	0.1*	Yes
			clothianidin	0.08	0.05*	No
			chlorantraniliprole	0.04	0.02*	No
			cypermethrin	0.5	0.1*	Yes
			imidacloprid	0.2	0.05*	Yes
			profenofos	1	0.05*	Yes
			tricyclazole	1	0.05*	Yes
			thiamethoxam (sum)	0.1	0.05*	Yes
2573/2016	Spices: Cumin	UK	acetamiprid	0.6	0.05*	Yes
			carbendazim	1.8	0.1*	Yes
			clothianidin	0.09	0.05*	No
			cypermethrin	0.3	0.1*	Yes
			fipronil (sum)	0.008	0.005*	No
			imidacloprid	0.1	0.05*	Yes
			kresoxim-methyl	0.2	0.05*	Yes
			propiconazole	0.4	0.1*	Yes
			profenofos	1.1	0.05*	Yes
			Tricyclazole	1.2	0.05*	Yes
			thiamethoxam (sum)	0.2	0.05*	Yes
			triazophos	0.09	0.02*	Yes

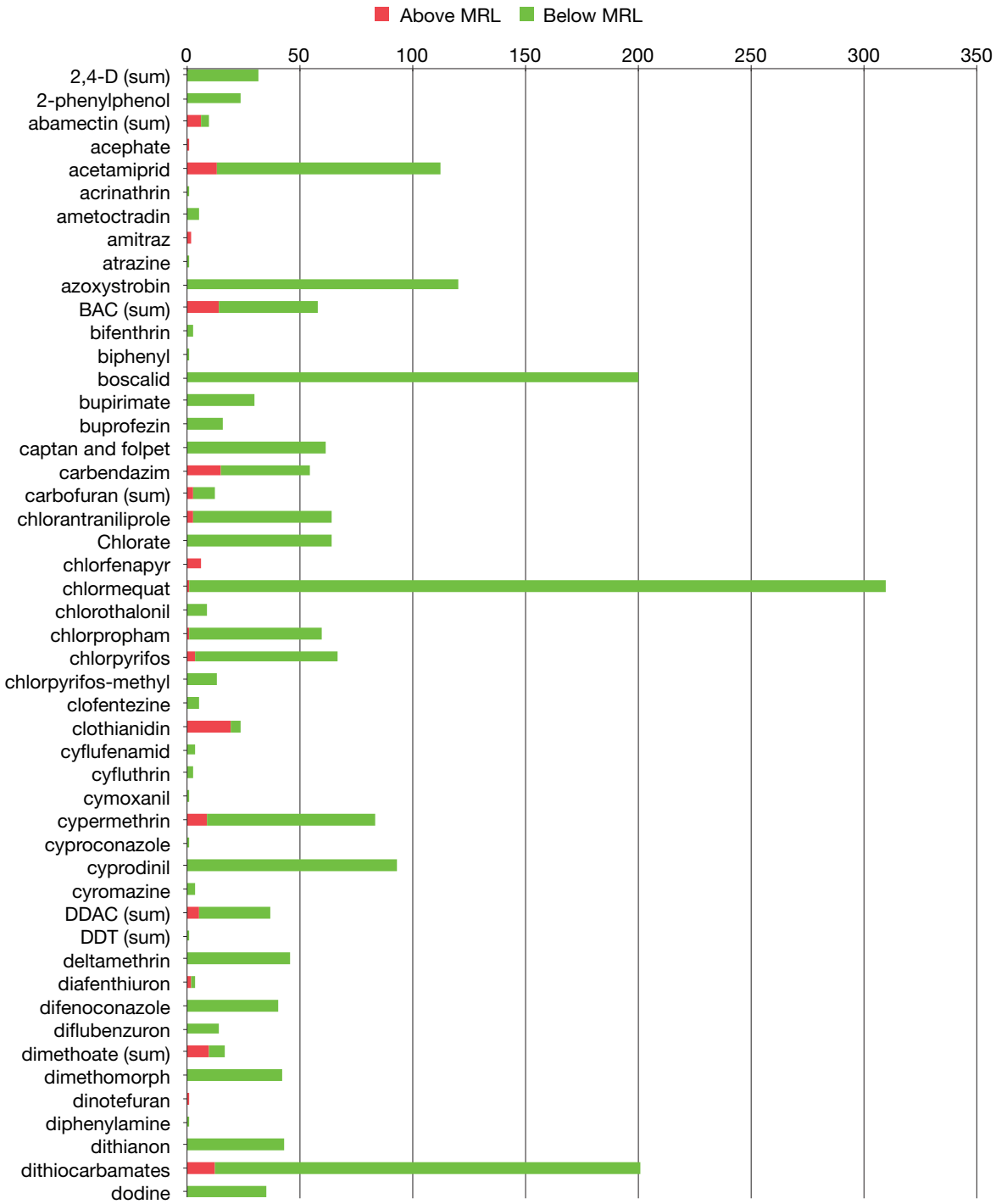
Sample reference number	Food	Country of origin	Pesticide residue found	Residue amount detected (mg/kg)	MRL (mg/kg)	Breach of the law after allowing for measurement uncertainty
2889/2016	Spices: Cumin	UK	Acetamiprid	0.4	0.05*	Yes
			carbendazim	0.5	0.1*	Yes
			clothianidin	0.1	0.05*	No
			imidacloprid	0.06	0.05*	No
			profenofos	0.5	0.05*	Yes
			tricyclazole	0.4	0.05*	Yes
			thiamethoxam (sum)	0.2	0.05*	Yes
2908/2016	Spices: Cumin	UK	acetamiprid	0.5	0.05*	Yes
			carbendazim	0.9	0.1*	Yes
			clothianidin	0.1	0.05*	Yes
			cypermethrin	0.2	0.1*	Yes
			kresoxim-methyl	0.06	0.05*	No
			profenofos	1.4	0.05*	Yes
			tricyclazole	0.4	0.05*	Yes
			thiamethoxam (sum)	0.2	0.05*	Yes
			triazophos	0.05	0.02*	Yes
3016/2016	Strawberries	Egypt	methomyl (sum)	0.1	0.02*	Yes
3128/2016	Tomatoes	Poland	dinotefuran	0.05	0.01*	Yes
			pirimiphos-methyl	0.1	0.01*	Yes
2972/2016	Wine	Australia	chlormequat	0.2	0.05*	Yes

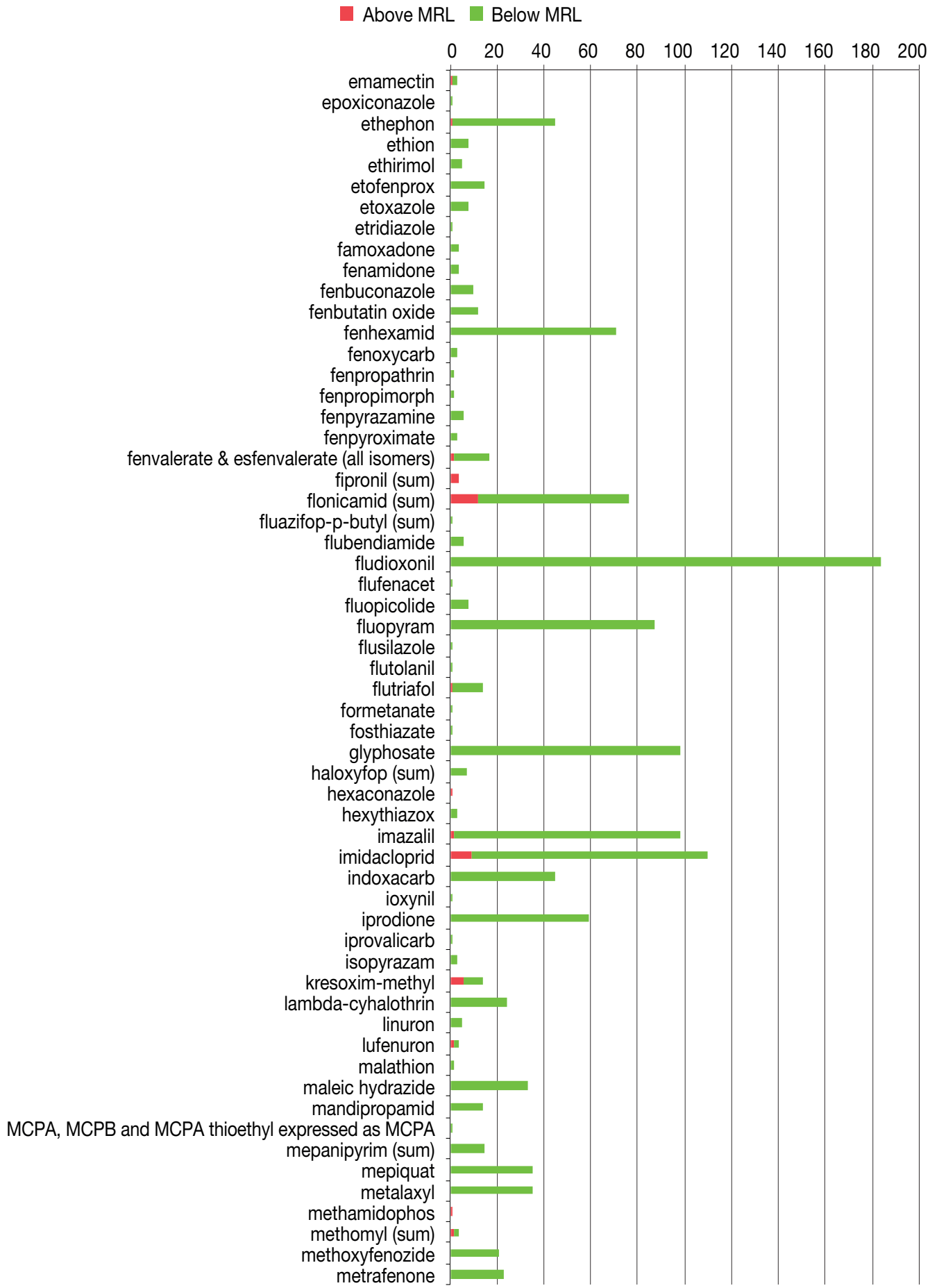
*__Maximum Residue Levels set at the LOD (LOD MRL):__ These MRLs are set at a default level, i.e. at the limit of determination (LOD) as specified in EC Regulation 396/2005.

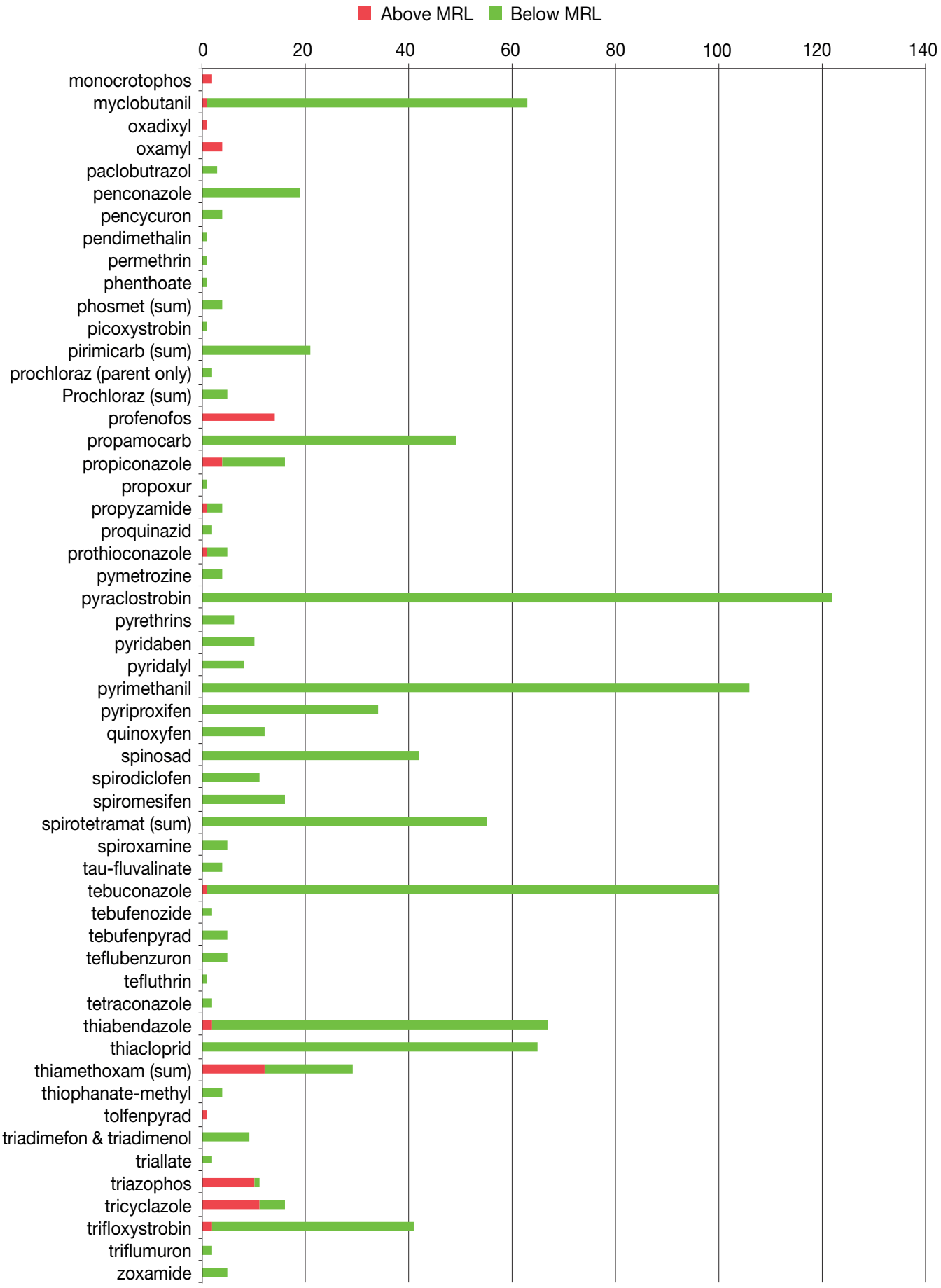
22. ANALYTE DETECTIONS

The UK programme tests for around 388 pesticides. During 2016, 161 different pesticides were found, this will vary each year depending on the different foods tested.

The graph below shows the number of detections of each analyte below the MRL and above the MRL. Some of the analytes are "sum" residues, this means the full residue definition (parent and metabolites) have been sought.




Above MRL
Below MRL
0
20
40
60
80
100
120
140
160
180
200
emamectin
epoxiconazole
ethephon
ethion
ethirimol
etofenprox
etoxazole
etridiazole
famoxadone
fenamidone
fenbuconazole
fenbutatin oxide
fenhexamid
fenoxycarb
fenpropathrin
fenpropimorph
fenpyrazamine
fenpyroximate
fenvalerate & esfenvalerate (all isomers)
fipronil (sum)
flonicamid (sum)
fluazifop-p-butyl (sum)
flubendiamide
fludioxonil
flufenacet
fluopicolide
fluopyram
flusilazole
flutolanil
flutriafol
formetanate
fosthiazate
glyphosate
haloxyfop (sum)
hexaconazole
hexythiazox
imazalil
imidacloprid
indoxacarb
ioxynil
iprodione
iprovalicarb
isopyrazam
kresoxim-methyl
lambda-cyhalothrin
linuron
lufenuron
malathion
maleic hydrazide
mandipropamid
MCPA, MCPB and MCPA thioethyl expressed as MCPA
mepanipyrim (sum)
mepiquat
metalaxyl
methamidophos
methomyl (sum)
methoxyfenozide
metrafenone


Above MRL
Below MRL
0
20
40
60
80
100
120
140
monocrotophos
myclobutanil
oxadixyl
oxamyl
paclobutrazol
penconazole
pencycuron
pendimethalin
permethrin
phenthoate
phosmet (sum)
picoxystrobin
pirimicarb (sum)
prochloraz (parent only)
Prochloraz (sum)
profenofos
propamocarb
propiconazole
propoxur
propyzamide
proquinazid
prothioconazole
pymetrozine
pyraclostrobin
pyrethrins
pyridaben
pyridalyl
pyrimethanil
pyriproxifen
quinoxyfen
spinosad
spirodiclofen
spiromesifen
spirotetramat (sum)
spiroxamine
tau-fluvalinate
tebuconazole
tebufenozide
tebufenpyrad
teflubenzuron
tefluthrin
tetraconazole
thiabendazole
thiacloprid
thiamethoxam (sum)
thiophanate-methyl
tolfenpyrad
triadimefon & triadimenol
triallate
triazophos
tricyclazole
trifloxystrobin
triflumuron
zoxamide

23. FREQUENTLY ASKED QUESTIONS (FAQS)

About the results

Where can I find your results?

Our latest reports are linked from: https://www.gov.uk/government/collections/pesticide-residues-in-food-results-of-monitoring-programme

We can send you an email announcing publication of results and other news. We generally send at the most 3 emails a month. Please let us know if you'd like to join the mailing list by emailing us at prif@hse.gov.uk – all we need is an email address.

What do the results show overall?

The vast majority of food tested in 2016 complied with legal limits (MRLs).

- 52.15% of samples contained none of the pesticides being looked for.
- 44.63% of samples contained residues at or below the MRL.
- 3.22% of samples contained residues above the MRL.

There were few residues that we thought were of possible concern for consumers' health.

- 16 detailed risk assessments were carried out in 2016. In most cases there was unlikely to be a risk to people's health.

Are you finding more residues year-on-year?

Proportionally, the number of residues above the legal Maximum Residue Level and instances of residues which we think are of concern for consumers' health show little variation.

Over the years, as the knowledge and equipment of laboratories improves, we are increasingly able to test for more pesticides at lower amounts and so we do find more. A typical fruit and vegetable survey undertaken in 2003 by PRiF's predecessor, the PRC (Pesticide Residue Committee), looked for just over 150 pesticides; in 2016 we looked for over 388 individual pesticides.

How can residues above the legal limit (MRL) still be safe?

MRLs are legal limits, not safety limits. Residues above the MRL are not necessarily therefore a cause for health concern.

MRLs are set at a level consistent with good agricultural practice, that is consistent with using the pesticide as authorised. Authorisation considers issues such as the personal safety of those exposed to the pesticide and environment safety as well as safety for consumers. That means that MRL levels are often set far below levels that might otherwise be set just on consumer safety grounds alone.

All detected residues are screened for safety issues, whether or not they are above the MRL.

Do you consider the risk to children?

Yes. Our risk assessments consider the risk to several different groups of consumers (people who eat the relevant food) which includes various age groups including infants and children. As part of the risk assessment we take account of:

- The different eating habits, including the amounts of food that different people might eat
- People's different sizes (bodyweights and growth stages)

About the survey programme and the samples

Do you test imported food?

Yes. Imported food including food from Europe is part of the monitoring programme because it is part of the UK's general food supply.

We try to include imported samples in all surveys of any food roughly in proportion to the UK market share of the food. For example, when we survey bananas all the samples will be imported, but for swedes and turnips almost all samples will be from the UK.

Do you test baby food and baby milk?

Yes. Every year we test at least one sort of baby food or baby milk. We also take into account the law on pesticides residues in these special foods. They are separate, different legal controls for these foods which are intended to be extra precautionary.

You can find out more about the rules for baby food and baby milk at http://www.gov.uk/government/publications/infant-formula-and-foods-for-particular-nutritional-uses-parnuts-notification-requirements

Do you test organic food?

Yes. Organic food is part of the monitoring programme because it is part of the UK's general food supply. Our laboratories check many different foods for pesticide residues and organic samples are included amongst them. We try to include organic samples in all surveys of any food roughly in proportion to the UK market share of that food. We consider whether any residues found could be a risk to consumer health and if so also consider what action should be taken.

Some pesticides are allowed to be used in organic food production as well as in conventional (non-organic) farming. When we test foods, we test all the samples of the same sort of food for the same range of pesticides.

We are not responsible for checking compliance with organic rules. So when we find residues of pesticides in organic foods we send those findings through to the relevant organic certification company.

Do you test samples from all across the UK? Who collects your samples?

Yes. Every year we collect samples from retail outlets across the UK all year round. We change the particular locations used every year, as shown in our annual reports. We use market research shoppers at retail outlets for most of our surveys.

For some surveys, government inspectors collect samples from various points in the supply chain (such as ports, depots and pack houses) in England and Wales only. Plant Health and Seed Inspectors collect samples of potatoes, and Horticultural Marketing Inspectors collect samples of fresh fruit and vegetables.

How do you decide which foods to sample at retail (supermarkets and other shops) and which to sample from the food chain including wholesalers?

We tend to use inspectors to collect food at wholesale markets, import points and processing plants for foods that are:

- Not routinely stocked by most retailers and even then often not stocked in large enough quantities to buy a sample. Examples include okra, eddoes, quince and mooli (daikon).
- Often sold loose at retail, which makes it harder for shoppers to collect traceability information. Examples include oranges and grapes.

We also use inspectors to collect samples of food where previously there have been compliance issues which have led to them being considered as a higher overall priority within the programme.

How do you decide where to get retail samples? Why do you keep coming to my shop?

We ask our shoppers to behave like normal shoppers. Our shoppers are based in a particular location, so that means they will go to the same supermarkets, greengrocers, butchers throughout the year.

Our aim is to get a snapshot that broadly reflects the market share of different chains and types of shops. We broadly collect in line with market share. We check to make sure that no particular retail chain or type of shop has been noticeably over or under represented.

We schedule special shopping trips to independent outlets - market stalls, independent greengrocers, butchers and bakers, farm shops and so on.

How do you decide where to get samples from the non-retail parts of the food chain, such as wholesale markets and packers?

We ask the inspectors we use to collect samples alongside their normal work.

Horticultural Marketing Inspectors make sure that fresh fruit and vegetables are labelled with the right class standard (for instance “class 1”). As well as working at wholesale markets they visit ports, airports, packing houses and shops.

Plant Health and Seed Inspectors have a wide range of duties relating to plant health. This includes checking that potatoes are free of diseases that could spread to growing potatoes and devastate harvests. They visit potato stores, potato packers, ports, airports, processors (for instance crisps and frozen chip factories) and farm shops.

What exactly do you tell shoppers and inspectors to do? What are the protocols for collecting samples?

Our protocols – or instructions to samplers - are based on international guidelines which tells us everything about taking samples. As well as the size and make up of the samples that we have to test, it tells us what a lot is and how many points in the lot we need to sample from.

We produce new sampling instructions every year for that year’s programme, and if necessary we update them throughout the year. We don’t publish these online as they go out of date so quickly. If you have any detailed questions or particular concern about the way a food is sampled, please do get in touch.

How much is a sample? For instance, is a sample of apples, 1 apple?

To ensure results are comparable, we follow international guidelines on the size and make-up of the samples we test. We increase the amounts recommended a little bit, to allow for things like miscounting and variation in weighing scales. Otherwise the laboratory would have to reject the samples.

For example, for apples the guidance says a sample must be made up of at least 10 apples and must weigh at least one kilogram. So we ask our samplers to get 12 apples and at least 1.2 kilograms, to be on the safe side.

How do you prevent cross contamination during sampling and transport?

Our shoppers shop like ordinary shoppers; that includes wrapping and packing foods appropriately. Our shoppers and inspectors also wrap and pack samples with bubble wrap to prevent breakage and leakage in transit. Analysts expect this to be sufficient to prevent contamination. Samples are sent to the laboratory by a next-day courier service. If the laboratory thinks that contamination has occurred or that the contents have deteriorated in transit, then those samples are rejected.

About the tests (analysis)

What pesticides do you test for?

Most years our laboratories increase the number of pesticides they test for. This is driven by changes in the law about pesticides as much as improvements in analytical technology and techniques.

The actual pesticide tested for in each food also depends on the chemistry of that food. Some foods are just harder to analyse than others; they may be fatty, acidic, highly coloured or aromatic all of which can affect the isolation and identification of the pesticide.

We publish details of the planned monitoring programme every year which includes information on pesticides we plan to test for. In our quarterly reports we publish lists of all the pesticides we looked for but didn't find as well of course as the pesticides we did find.

Are your laboratories UKAS accredited? Are they accredited for all the tests they do for the programme?

Yes. Legislation requires all official laboratories to be appropriately accredited. HSE interpret that to mean that all results should be from tests covered by the laboratory's UKAS (United Kingdom Accreditation Service) accreditation under ISO/IEC 17025.

Do you test for neonicotinoid pesticides?

Yes. Our standard tests for fruit and vegetables include certain neonicotinoid pesticides. Other foods are also tested for certain neonicotinoids where appropriate. Each individual pesticide is tested for and reported separately and each has its own separate MRL.

Do you test for endocrine disrupting chemicals (EDCs)?

Endocrine disruption has only recently been recognised as a potential problem, (although data is already available for the possible effects of pesticides on reproduction including offspring).

The definition of what is an endocrine disrupting chemical hasn't been decided yet. Whatever the definition chosen, it's almost certain that we test for some pesticide residues that fall into that definition.

Each individual pesticide is tested for and reported separately because each has its own separate MRL.

Where can I find out more about laboratory procedures and practices?

Our laboratories, follow the latest version of "Method Validation and Quality Control Procedures for Pesticide Residues Analysis in Food and Feed" as published by the Reference Laboratories for Pesticide Residues. UKAS checks that our laboratories are following these rules as part of their accreditation checks.

How do the laboratories make sure the results are not due to cross-contamination or interference?

Our laboratories follow the rules for this in the analytical guidance. Any possible cross-contamination or interference is addressed during our Analytical Sub-Group's consideration of results.

About PRiF

Who are the members and who do they represent? Have they made declarations of interest?

We are appointed for our expertise to provide independent advice to the government. We do not act as representatives for particular sectors. We receive a basic fee and expenses for this work.

We have published a list of members including our biographical details as well as our declarations of interest.

What are your terms of reference?

Our terms of reference are:

To advise Ministers, the Health and Safety Executive and 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 and new methods of analysis

The Committee will make its findings and recommendations available to Government, consumers and the food and farming industries in a way which aims to be comprehensive, understandable and timely.

24. CONTACT DETAILS

Expert Committee on Pesticide Residues in Food (PRiF)

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Website: https://www.gov.uk/government/collections/pesticide-residues-in-food-results-of-monitoring-programme
Email: prif@hse.gov.uk

Food Standards Agency (UK Headquarters)

Food Standards Agency
Aviation House
125 Kingsway
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WC2B 6NH

Website: http://www.food.gov.uk/
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Health and Safety Executive (HSE)

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