



**The expert
committee
on
Pesticide
Residues in
Food (PRiF)**



**Annual Report
2015**



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- Advise on whether pesticides should be approved for use or withdrawn from the market.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 fifth annual report from the Expert Committee on Pesticide Residues in Food. It summarises the results from monitoring samples collected throughout 2015 and our conclusions about those results. It also describes the work that is being carried out in 2016 and the work planned for 2017.

Details of all the samples we have collected and tested are available on gov.uk:
<https://www.gov.uk/government/collections/pesticide-residues-in-food-results-of-monitoring-programme>

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



The expert committee on Pesticide Residues in Food (PRiF)

**Annual Report
2015**



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Contents

1	Chairman's Introduction	3
2	Executive Summary	4
3	About us	5
4	The monitoring programme	7
5	Where samples were collected in 2015	9
6	Food tested in 2015	10
7	Results from the 2015 programme	11
8	Results – Fruit and vegetables	12
9	Results – Starchy foods and grains	14
10	Results – Animal products	15
11	Results – Infant food	16
12	Results – Other groceries	17
13	Points of interest from 2015	18
14	The School Fruit and Vegetable Scheme	20
15	Organic samples	21
16	Suspected unapproved uses in the UK	22
17	Assessing the risk to people's health	23
18	Follow up action	25
19	The programme for 2016 and 2017	26
20	Information supplied by the food industry and local authorities	27
21	The law relating to pesticides	28
	The Monitoring of okra	29
22	Update from the Food Standards Agency	30
23	Communicating the results and work of the PRiF	32
24	Members of the Expert Committee on Pesticide Residues in Food	33
25	All residues found above the MRL in 2015	37
26	Analyte detections	45
27	Glossary	48
28	Frequently asked questions	53
	Contact details	58



1 Chairman's Introduction

Dear Reader,

This is the fifth 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 2015 monitoring programme, this report also includes some explanations of parts of our process which I hope you will find both interesting and useful.

Throughout 2015, 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 and potatoes as part of our rolling reporting programme. All these results have been published on gov.uk.

In 2015, 3,614 samples of food and drink from the UK supply chain were tested for pesticide residues. We tested for up to 388 pesticides in some of the commodities. The results showed us that 57% 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 3% 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 looks at foods where we expect to find residues. As our programme has improved capability with continuing developments in the sensitivity of the equipment used to test pesticide residues, we can now look for 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 risk to the health of people who have eaten the food.

During the year we found residues in excess of MRLs for two substances (BAC and DDAC) which are used as pesticides but more frequently used as disinfectants in the food industry. Since the microbiological safety of food is very important HSE and the Food Standards Agency have been discussing with the industry how to proceed and a summary of this issue is given in this report.

The centre pages of the report describe the monitoring of okra, which illustrates the actions that follow on from detection of excess pesticide residues in a food.

Our Open meeting in Worcester in October 2015 was generally considered to be a success. We look forward to welcoming you to the 2016 Open meeting in York on 19th October.

For information about the monitoring programme, please look on Gov.uk:

<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, Expert Committee on Pesticide Residues in Food



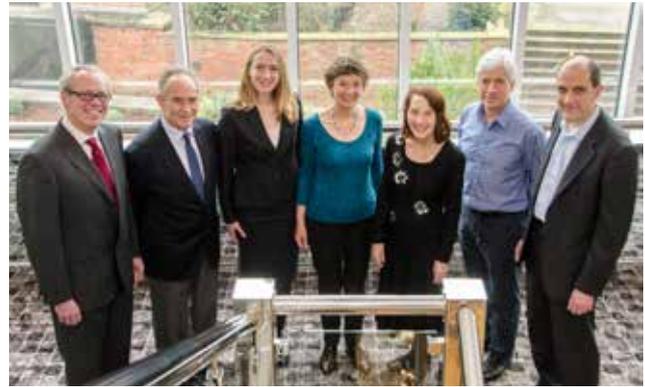
2 Executive Summary

- 3,614 samples of 47 different types of food were collected in 2015.
- 42.86% of these samples contained at least one residue.
- We tested for up to 388 pesticides in fruit and vegetables, 73 in animal products, 346 in starchy foods and grains, 353 in infant food and 346 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 21 detailed and 2 combined risk assessments where there was a concern for human health.
- We referred 8 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 European Commission about these samples who then notified all the countries which are members of the Rapid Alert System for Food and Feed (RASFF).
- We referred 16 samples of UK produced fruit and vegetables 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 regulations from the UK Government and the European Union (EU).



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 gov.uk, in an understandable way, and we aim to do this as quickly as possible without compromises of integrity.

The Defra 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.

The 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 and Rural Development for Northern Ireland.

We give advice on the monitoring programme to:

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

We meet four times a year and representatives from government departments attend our meetings as officials. HSE provides 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. The government and the EU allow pesticides to be used in UK agriculture, as long as 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 UK Expert Committee (ECP) is established to provide independent scientific advice on matters relating to the effective control of pests, including advice on approval and authorisation of pesticides. The committee takes account of the general purposes of Part III of the Food and Environment Protection Act 1985 (FEPA) as set out in Section 16(1) of the Act. These are:

- (a) The continuous development of means:
 - (i) To protect the health of people, creatures and plants;
 - (ii) To safeguard the environments; and
 - (iii) To secure safe, efficient and humane methods of controlling pests;
- (b) Making information about pesticides available to the public.

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, pesticide 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 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 not be used in the EU at all. However, some of the crops we eat are only grown outside Europe. In these cases the MRL may be set at the lowest level that official laboratories across Europe can normally detect. This is known as the limit of determination (LOD).

All MRLs are set on an EU-wide basis, under EU regulation 396/2005 (EC). The annexes to this regulation specify the foods and the pesticides covered by the rules.



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 – Section 11
- Other groceries – Section 12

We have also included sections on:

- Samples of organic foods that contained pesticide residues – Section 15
- Pesticide residues we found at levels above the MRL – Section 25
- The conclusion we reached from HSE's risk assessments in food in 2015 – Section 18

European Union Survey

All European Union (EU) countries are required to take part in a harmonised Europe-wide survey for pesticide residues as well as having their own national monitoring programme.

Every year the European Commission agrees with the member states a list of surveys that they should all carry out in their own countries. The number of samples that each country must test for each survey depends on the size of the population, with countries with larger populations testing more samples than countries with a small population. The UK is required to collect 66 samples for each of the EU surveys. All these results are published as a single report on the European Food Safety Authority's (EFSA) website (<http://www.efsa.europa.eu/>).



In 2015, EU surveys included aubergines, bananas, broccoli, table grapes, orange juice, peas without pods, peppers, wheat, olive oil, butter and chicken eggs. It is a legal requirement for member states to take part in these surveys.

Collecting and testing samples

EU law (Regulation 2002/63/EC) tells us the size of the samples that we need to test. 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
- Eurofins Laboratories – Wolverhampton
- LGC Ltd – Teddington
- 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 analytical suite we used in 2015 can be found on Gov.uk: <http://webarchive.nationalarchives.gov.uk/20151023160002/http://pesticides.gov.uk/Resources/CRD/PRiF/Documents/Other/2015/2015%20Analytical%20Suite%20MASTER.xlsx>

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. Milk is like this. In 2015 we did not find any of the residues we looked for in the 300 samples we tested. 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 purchase of bagged mixed salads in recent years. We bear 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 EU member states as well as information from the European Commission's Rapid Alert System for Food and Feed (RASFF). EU member states and other countries use the RASFF to share notifications of foods which could be a risk to human health.

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 2015 are available on Gov.uk: <https://www.gov.uk/government/collections/pesticide-residues-in-food-results-of-monitoring-programme>

Report	When samples are collected	When report is published
Quarter 1 2015	January to March 2015	September 2015
Quarter 2 2015	Up to June 2015	December 2015
Quarter 3 2015	Up to September 2015	March 2016
Quarter 4 2015	Up to December 2015	June 2016

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

Email: prif@hse.gov.uk



5 Where the samples were collected in 2015

Each year, samples are collected from different places throughout the UK, 2 towns or cities are chosen from each Government region. In 2015, we collected over 2,800 samples from retail outlets in 24 towns and cities in the UK. Government inspectors collected around 660 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 Food tested in 2015

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 2015 are available on Gov.uk. (<https://www.gov.uk/government/collections/pesticide-residues-in-food-results-of-monitoring-programme>)

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

Quarter 1 Report (January to March 2015, results published September 2015)	Quarter 2 Report (up to June 2015, results published December 2015)	Quarter 3 Report (up to September 2015, results published March 2016)	Quarter 4 Report (up to December 2015, results published June 2016)
Apples	Apples	Apples	Apples
Aubergine	Aubergine	Aubergine	Aubergine
Banana	Banana	Banana	Banana
Beans with pods	Beans with pods	Bean sprouts	Bean sprouts
Beef	Beef	Beans with pods	Beans with pods
Broccoli	Berries	Beef	Beef
Butter	Bread (gluten free)	Berries	Bread
Cheese	Broccoli	Bread	Broccoli
Eggs	Brussels sprouts	Broccoli	Butter
Grapes	Butter	Brussels sprouts	Cheese
Lettuce	Cheese	Butter	Chillies
Milk	Chillies	Celery	Courgette
Okra	Crème fraiche	Cheese	Crackers
Olive oil	Curry leaves	Crisps	Eggs
Orange juice	Eggs	Eggs	Grapes
Pears	Grapes	Ginger	Lettuce
Peas without pods	Lettuce	Grapes	Milk
Peppers	Mango	Infant food (cereal based)	Okra
Pineapple	Melon	Lettuce	Olive oil
Potatoes	Milk	Mango	Olives
Prepared fresh fruit	Okra	Melon	Orange juice
	Olive oil	Milk	Peanuts
	Olives	Okra	Pears
	Orange juice	Olive oil	Peas without pods
	Pears	Orange juice	Peppers
	Peas without pods	Pears	Potatoes
	Peppers	Peas without pods	Prepared fresh fruit
	Potatoes	Peppers	Radish
	Prepared fresh fruit	Pineapple	Smoked fish
	Radish	Plantain	Speciality fruit
	Raisins, currants & sultanas	Potatoes	Tea
	Smoked fish	Prepared fresh fruit	Wheat
	Speciality fruit	Venison	
	Tea		



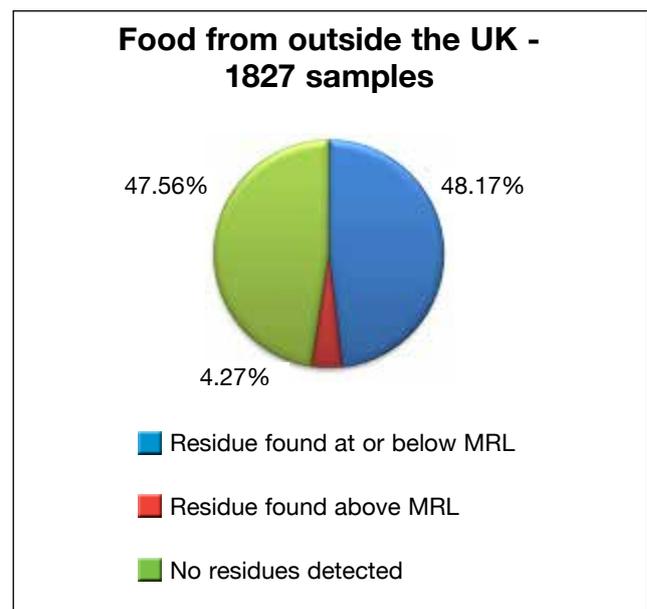
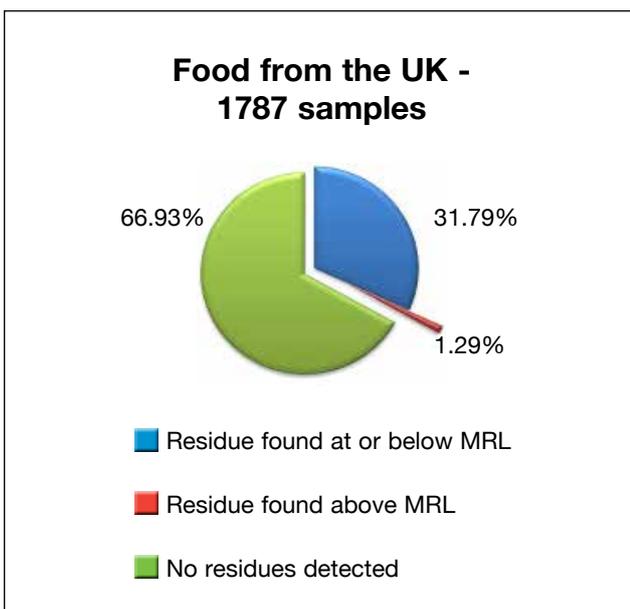
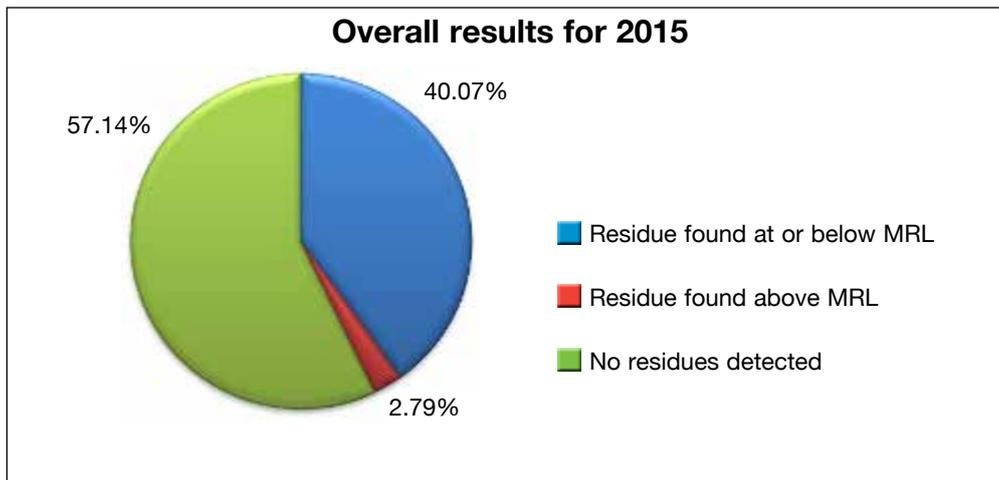
7 Results from the 2015 Programme

In 2015, we tested 3,614 samples. We tested each sample for many different pesticides. In total we tested around 934,603 food and pesticide combinations. Of the pesticides we looked for, we found that:

- 57.14% of samples contained none of the pesticides we looked for.
- 40.07% of samples contained residues at or below the MRL.
- 2.79% 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.

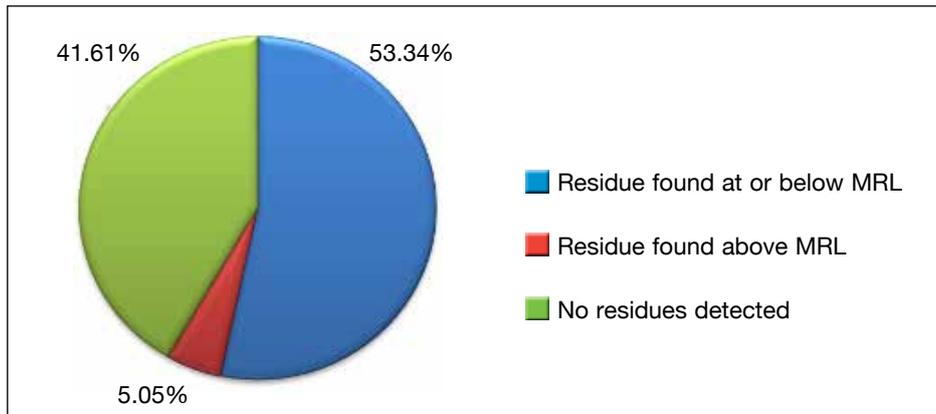


8 Results – Fruit and Vegetables

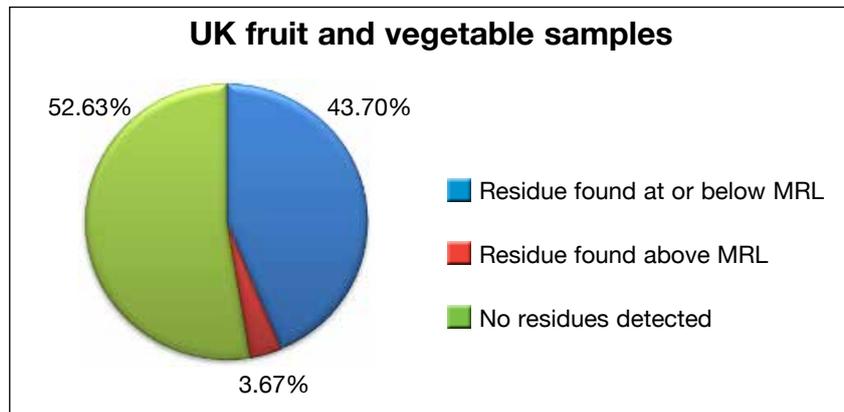
We tested 1,961 samples for up to 388 pesticides and we carried out around 659,168 food and pesticide tests.

We found residues in 1,145 of those samples (58.39%). 99 of those samples (5.05%) contained a residue above the MRL.

This year the MRL exceedance rate is higher than in previous years (2.76% in 2014 and 3.91% in 2013), this is linked to the continued sampling of speciality beans which have a known high non-compliance rate and also the testing of some prepared foods where pesticide residues are detected probably arising from disinfectant uses.



We tested 627 samples of UK fruit and vegetables. We found residues in 297 (47.37%) of those samples, 23 samples (3.67%) contained a residue above the MRL.



Main findings and actions

- We did not find any residues above the MRL in apples, aubergine, bananas, broccoli, Brussels sprouts, celery, courgette, lettuce, mango, pears, peas without pods, plantain, potatoes and radish.
- As with other years; out of the 28 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).
- All 22 samples of prepared fresh fruit contained a residue of either BAC or DDAC above the new MRL established later in the year of 0.1 mg/kg and the temporary trading level of 0.5 mg/kg in place before then. BAC & DDAC are used as disinfectants as well as pesticides, and are regulated for both uses. It is likely the residues we found came from the use of BAC & DDAC as disinfectants during the many stages of preparing and packing the fruits.

Results by food type

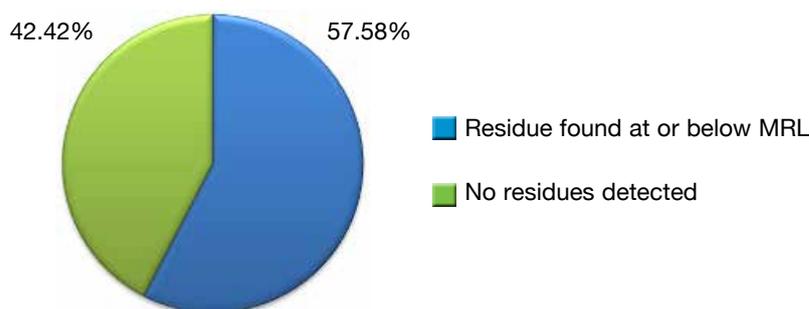
Food	Number of samples tested	Number of samples containing residues at or below the MRL	Number of samples containing residues above the MRL	Number of samples containing more than one pesticide residue
Apples	96	65	0	57
Aubergine	96	42	0	20
Banana	85	61	0	50
Bean Sprouts	48	14	5	5
Beans with pods	120	46	28	44
Berries	96	52	3	38
Broccoli	96	31	0	13
Brussels sprouts	54	41	0	9
Celery	48	29	0	17
Chilli peppers	48	19	7	15
Courgette	48	21	0	9
Curry leaves	22	0	6	3
Ginger	24	4	5	3
Grapes	120	105	4	95
Lettuce	72	45	0	21
Mango	48	35	0	13
Melon	60	30	2	16
Okra	90	37	9	22
Pears	96	90	0	84
Peas without pods	96	23	0	5
Peppers	72	42	1	22
Pineapple	48	44	1	25
Plantain	12	7	0	3
Potatoes	156	83	0	31
Prepared fresh fruit	96	25	22	26
Radish	54	29	0	2
Speciality fruit	60	26	6	13



9 Results – Starchy foods and grains

We tested 330 samples for up to 346 pesticides. We carried out tests on around 90,348 food and pesticide combinations.

We found residues in 190 (57.58%) of these samples, none of the samples that were tested contained a residue above the MRL.



Main findings

- We found none of the residues that we tested for in gluten free bread.
- 61 of the 63 samples of wheat that contained residues had a residue of chlormequat detected. Chlormequat is used widely as a growth regulator in wheat. In the bread survey, 63 of the 113 samples with a residue were also due to detections of chlormequat. Chlormequat in the bread samples is carried over from the wheat which is milled to produce the flour which is then used to make the bread.

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	204	113	0	36
Bread (gluten free)	12	0	0	0
Crackers	48	14	0*	8
Wheat	66	63	0	43

*No MRLs were applied to the cracker samples, residues detected were checked against the bread MRLs.

Applying processing factors to MRLs

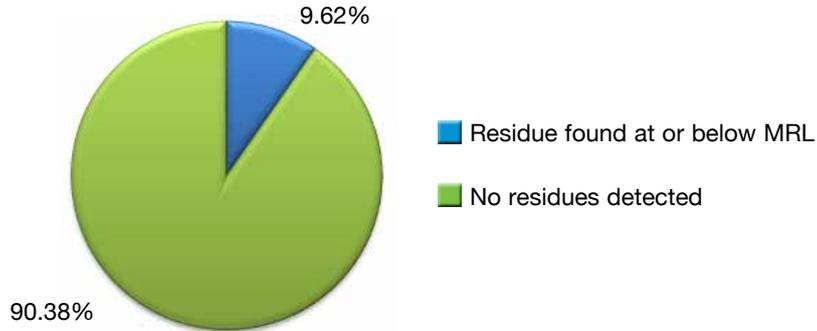
EU Maximum Residue Levels (MRLs) set under EC Regulation 396/2005, apply to all traded foods. They apply directly to foods when traded as raw produce. But they also apply to processed goods in which case the effect of processing needs to be taken into account.

In nearly all cases the EU MRL is set for the food in its raw, unprocessed form (these foods are listed in Annex I of Regulation 396/2005), but is then applied to processed foods using appropriate processing factors. Processing factors take account of the effect of processing on the food as traded. Different forms of processing factors may remove, concentrate or dilute residues and the effect may 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 the composition of their product – for instance, whether water is added/removed – that may assist in identifying appropriate processing factors. They also have information on the compliance of the raw ingredients used.

10 Results – Animal Products

We tested 812 samples for up to 73 pesticides. We carried out tests on around 29,692 food and pesticide combinations.

We found residues in 79 (9.73%) of these samples, none of the samples tested contained a residue above the MRL.



Main findings

- We didn't find any of the residues we tested for in beef, milk or venison.
- We found a residue of BAC in 11 samples of butter and 1 sample of cheese above the MRL of 0.1 mg/kg but below the temporary trading level of 0.5 mg/kg which was in place until 12 August 2015. BAC is used as a disinfectant as well as a pesticide, and is regulated for both uses. It is likely the residues we found came from the use of BAC as a disinfectant during the many stages of butter and 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
Beef	84	0	0	0
Butter	107	38	0	4
Cheese	72	15	0	5
Crème fraiche	24	9	0	0
Eggs	90	1	0	0
Milk	300	0	0	0
Smoked fish	108	15	0*	0
Venison	26	0	0	0

* No MRLs are established for residues in fish.



11 Results – Infant food

This year we tested cereal based infant food. We tested 67 products for 353 pesticides. We carried out around 23,651 food and pesticide combinations.

We found that out of 67 samples, only 1 sample contained a residue. This was below the MRL.

Main findings

- The residue detected in an infant food sample was Diphenylamine (DPA). It is most likely that the level detected came from a non-pesticide source of DPA, in particular DPA in plastics migrating to the food from the packaging.



Results by food type

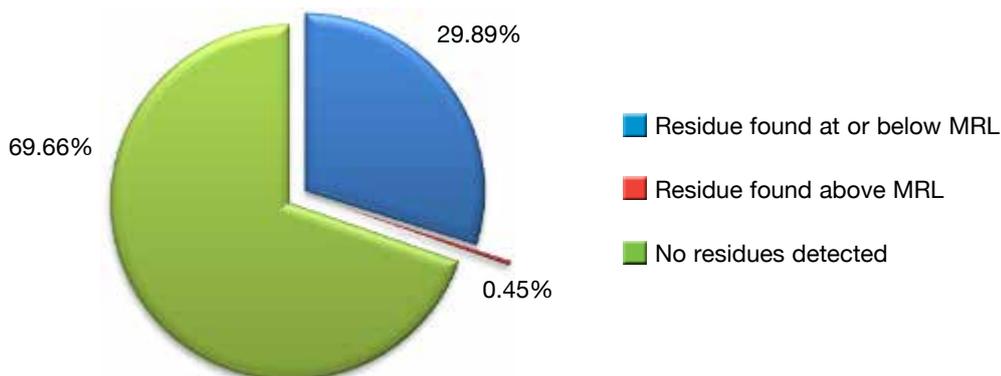
Food	Number of samples tested	Number of samples containing residues at or below the MRL	Number of samples containing residues above the MRL	Number of samples containing more than one pesticide
Infant food (cereal based)	67	1	0	0



12 Results – Other Groceries

The “other groceries” that we tested this year were crisps, olive oil, olives, orange juice, peanuts, raisins, currants and sultanas and tea.

We tested 445 samples for up to 346 pesticides. We carried out tests on around 131,781 food and pesticide combinations. We found residues in 135 (30.34%) of the samples. 2 of those samples (0.45%) contained a residue above the MRL.



Main findings

- One sample of raisins and one sample of sultanas had a residue of chlormequat above the MRL.
- For all residues found in raisins, currants & sultanas a processing factor of 5 was applied to the grape MRL to take into account the drying process. This enables us to check whether the fresh commodity was compliant with the MRL before it was processed.

Results by food type

Food	Number of samples tested	Number of samples containing a residue at or below the MRL	Number of samples containing a residue above the MRL	Number of samples containing more than one pesticide residue
Crisps	72	54	0	36
Olive oil	90	14	0	0
Olives	54	3	0	0
Orange juice	66	6	0	3
Peanuts	24	6	0	0
Raisins, currants & sultanas	49	41	2	31
Tea	90	9	0	4



13 Points of interest from 2015

Open Events

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 2015, we held our annual open event at The Worcester Whitehouse Hotel in Worcester. We had presentations from

- Our Chairman, Paul Brantom on the work of the PRiF, including how we check for risks to health
- Helen Kyle from HSE's Chemicals Regulation Directorate about the National and EU Pesticide Residue Monitoring programmes.
- Sadat Nawaz from Fera Science Ltd explaining how samples are tested at the laboratory
- Ian Finlayson who spoke about the challenges of growing and importing fresh vegetables from Kenya
- Tom Davies a British herb grower who spoke about growing herbs in the UK

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

The 2016 Open Event will be held in York on 19 October 2016, for more information see Section 23: Communicating the results and the work of the PRiF.



Benzalkonium chloride (BAC) and didecyldimethylammonium chloride (DDAC)

BAC & DDAC are quaternary ammonium compounds (QAC) widely used as disinfectants. Disinfection is an important hygiene measure, so EU countries originally agreed to allow the marketing of produce with residues over the default MRL of 0.01 mg/kg up to 0.5 mg/kg.

In the EU, the regulatory system for biocides covers the supply and use of this sort of disinfectant. However, because such products may also be used to protect plants from disease, residues left on food are covered by the EU's rules on pesticide (plant protection products) residues.

During 2012, it became known that these substances were leaving detectable residues on food after use as a disinfectant on surfaces and equipment used for food preparation (for instance disinfecting equipment or water used to wash food before packaging). It also became clear that many in the food industry had not appreciated that residues of these substances were covered by the rules on pesticide residues.

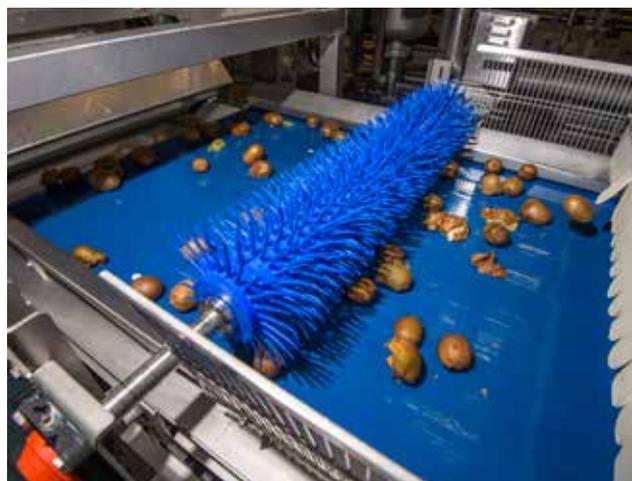
The European Food Safety Authority (EFSA) advised that the temporary guideline level of 0.5 mg/kg for all foods would be safe for all consumer groups. Meanwhile all EU member states agreed to look for BAC and DDAC during monitoring. The results were used as part of the process of setting specific MRLs to take account of appropriate disinfectant use as well as the safety of residues for consumers.

On 16 October 2014, The European Commission published its new MRL of up to 0.1 mg/kg for residues that may arise from biocide use ([SANCO/10842/2014](#)). The new MRL came in to force on 4 November 2014. To enable Member States, third countries and food business operators to prepare themselves to meet the requirement, the enforcement level of 0.5 mg/kg continued to apply to products produced before 12 August 2015.

In the monitoring programme we reported whether a residue was above the MRL of 0.01 mg/kg (before 4 November 2014) or 0.1 mg/kg (after 4 November 2014) although these were below the temporary guideline of 0.5 mg/kg. This made food businesses aware that if that level had been found after 12 August 2015 it would have been an MRL exceedance. In this report only residues that were found above 0.5 mg/kg have been detailed as an MRL exceedance.

It became clear that many parts of the industry had taken action to reduce the residues by changing to using disinfectants that did not have QACs in them. While the number of detections dropped, there was concern about what was being used as a replacement. The Food Standards Agency (FSA), Health and Safety Executive (HSE) and the industry have met repeatedly to discuss what changes can be put in place so that food hygiene is not compromised while reducing the level of residues being detected.

BAC & DDAC are still included in the monitoring programme analytical suite for 2016 so we will continue to monitor the residues and levels being found.



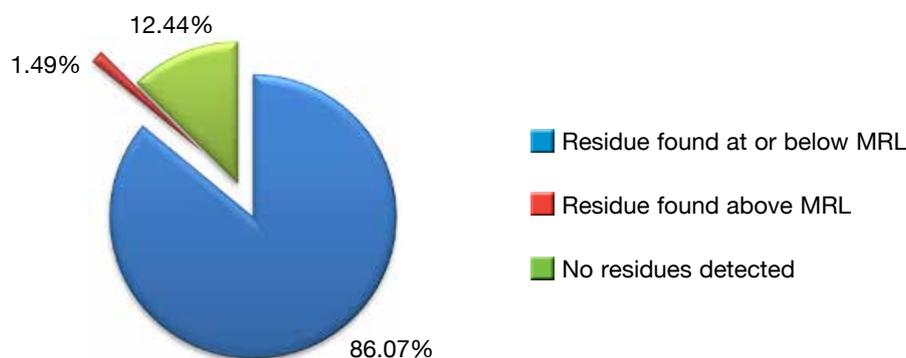
14 The School Fruit and Vegetable Scheme

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 2015, the scheme distributed around 440 million pieces of fruit and vegetables to some 16,000 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 Gov.uk: <https://www.gov.uk/government/publications/pesticides-residues-in-food-school-fruit-and-vegetable-scheme-2015>

We tested 201 samples for up to 349 pesticides, we found residues in 176 of those samples (13.93%). 3 of those samples (1.49%) contained a residue above the MRL.



Results by food type

Food	Number of samples tested	Number of samples containing a residue at or below the MRL	Number of samples containing a residue above the MRL	Number of samples containing more than one pesticide residue
Apples	40	39	0	36
Banana	36	29	0	25
Carrot	39	31	0	15
Pears	22	21	0	19
Raisins	13	11	2	13
Soft Citrus	31	30	1	31
Strawberries	2	2	0	2
Sugar snap peas	6	0	0	0
Tomatoes	12	10	0	1

15 Organic samples

In 2015, out of the 3,614 samples that we tested, 326 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. We are obliged to test some samples as part of the EU surveys.

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.

16 of the organic samples that we tested contained a pesticide residue. 1 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)
Banana	Dominican Republic	Spinosad	0.01	2
Butter	UK	BAC	0.01	0.1
Butter	UK	BAC	0.04	0.1
Butter	UK	BAC	0.2	0.1
Butter	UK	BAC	0.2	0.1
Butter	UK	BAC	0.2	0.1
Butter	UK	BAC	0.04	0.1
		DDAC	0.02	0.1
Butter	UK	BAC	0.3	0.1
Butter	UK	BAC	0.04	0.1
Butter	UK	BAC	0.03	0.1
Olive oil	Palestine	Oxyfluorfen	0.05	5
Cheese	Greece	BAC	0.01	0.1
		DDT	0.005	0.24
Raisins	Turkey	Chlormequat	0.2	0.25
Sultana	Turkey	Chlormequat	0.2	0.25
Sultana	Turkey	Chlormequat	0.3	0.25
Sultana	UK	Chlormequat	0.04	0.25

For residues of BAC & DDAC above the MRL, there was a temporary trading limit of 0.5 mg/kg in place until 12 August 2015. While residues found were above the MRL of 0.1 mg/kg, they were below the trading level.



16 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 which was treated legally in another country and the residue has carried over from the seed.
- A food has been grown overseas but the country of origin on the packaging is that of the brand owner or where it was packed.
- If the residues are very low, this may have been caused indirectly e.g. through pesticide spray drift or equipment not being correctly cleaned between uses.
- Illegal use.

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 2015:

Food	Pesticide residue found	Amount of residue found (mg/kg)	MRL (mg/kg)
Pepper	chlorantraniliprole	0.01	1
	methoxyfenozide	0.02	2
Bean sprouts (13 samples)	haloxyfop	0.01 – 0.05	0.05
Beans with pods	boscalid	0.07	3
Pear	chlormequat	0.03	0.1

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. There were no safety implications from these findings.



17 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 set by the European Food Safety Authority (EFSA), other international bodies such as the Joint Food and Agriculture Organisation/World Health Organisation Meeting on Pesticide Residues (JMPPR), and occasionally by the Expert Committee on Pesticides (ECP) in the UK.

HSE's Chemical Regulation Directorate (CRD) 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. CRD 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 CRD assumes. Other assumptions in CRD'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 CRD'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 21 detailed risk assessments during 2015. 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 Gov.uk:

Quarterly Reports: <https://www.gov.uk/government/collections/pesticide-residues-in-food-results-of-monitoring-programme>

School Fruit & Vegetable Scheme: <https://www.gov.uk/government/collections/pesticide-residues-in-food-results-of-monitoring-programme#school-fruit-and-vegetable-scheme>



18 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 could suggest 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 Determination (the lowest amount that can normally be detected by official laboratories across Europe), which is a default level that does not take account of the use 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, HSE 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 told other member states using 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 2015 the commodities in the rolling reporting programme were beans with pods, grapes, milk, okra and potatoes.

If we are concerned about anything we find we can take the following actions:

- In serious cases involving another EU member state we can inform the European Commission Inspectors from the European Commission's Food and Veterinary Office who will then investigate the problem.
- If we suspect that pesticides are being used illegally in the UK, the Health and Safety Executive (HSE) may carry out further investigation. HSE is able to prosecute growers or suppliers they find breaking the law.

Examples of follow up action

- 13 samples of bean sprouts from the UK contained a residue of haloxyfop which is not approved for use on bean sprouts in the UK. HSE investigated the findings and concluded that the mung beans that the bean sprouts were sprouted from were treated legally with haloxyfop in Australia where they were grown.
- 2 samples of sultanas and a sample of raisins from Turkey labelled as organic contained a residue of chlormequat. We passed details of these samples to the Defra Organic Teams who investigated the findings. We also informed the Turkish Embassy who passed the information on to the Ministry of Economy in Turkey who are in charge of foreign trade including export controls of agricultural products for their own investigation to take place. A detailed report of the findings concluded that the residues were due to contamination.
- A number of organic butter samples contained a residue of BAC, we notified the organic certification body who investigated. Although all the butter samples were from different retail outlets they were traced back to the same dairy. The organic certification body confirmed that the dairy had put steps in place to eliminate future detections of BAC in their butter.



19 The programme for 2016 and 2017

Food and drink being monitored in 2016

The 2016 programme started in January 2016. We will publish the result for each three-month period on Gov.uk.

Apples	Fish (sea)	Non-dairy milk	Prepared fresh fruit
Apricots	Free from products	Okra	Rye
Beans with pods	Grapefruit	Pasta	Speciality vegetables
Bread	Grapes	Peaches & nectarines	Spices
Cabbage	Honey	Pears	Spring onion
Cashew nuts	Infant food (fruit & veg based)	Peppers	Strawberries
Cheese (processed)	Jam	Popcorn	Tomatoes
Cheese (buffalo, ewes & goats)	Leeks	Pork	Tomatoes (tinned)
Cooked meats	Lettuce	Pork (processed)	Wine
Fish (predator)	Milk	Potatoes	

Food and drink being planned to be monitored in 2017

CRD is planning the programme for 2017. The following is the proposed list of commodities for 2017. These may change based on information we receive in 2016.

Apples	Chilli peppers	Lettuce	Poultry products
Beans (dried)	Cucumber	Milk	Prepared fresh fruit
Beans (tinned)	Fish (oily)	Noodles	Rice
Beans with pods	Grapes	Okra	Rye grain
Bread	Herbs	Onion	Shellfish
Breakfast Cereal	Infant formula	Orange	Soft citrus
Carrot	Juice (vegetable based)	Parsnip	Soya milk & products
Cauliflower	Kale	Pears	Speciality fruit
Cereal bars	Kiwi fruit	Peppers	Spices
Cheese	Lamb	Potatoes	Tea (unprocessed)
Cherries	Lemons & limes	Poultry	Yoghurt

These proposals have been made on the basis that the current budget doesn't change. If it does change then what we will be able to test will also change.

We welcome your suggestions for foods we should monitor. Our contact details are at the back of this report.



20 Information supplied by the food industry and local authorities

The food industry produces a lot of monitoring information about pesticide residues. We encourage them to share their information with us because it is useful for our monitoring programme.

We are grateful to the following, who have contributed monitoring information:

- 2 Sisters Food Group
- Bakkavor Group
- Co-operative Food
- Dairy UK
- Greenvale AP
- International Procurement and Logistics Ltd
- J E Piccaver & Co
- Mack
- Merko (Europe) Ltd
- Orchard House Foods
- Primafruit

We would also like to thank the companies who sent us information but did not want to be mentioned.

If we receive information containing results we would not expect, or that shows residues above the MRLs, we assess the risk to people's health. We also ask the company that gave us the information to comment on whether the results were confirmed by the laboratory that did their tests and what follow-up action was taken. We expect to hear that when these results are found, the food industry takes the appropriate action. This may include inspecting records of spraying and carrying out further monitoring.

We want to encourage the food industry to give us monitoring information and hope that the amount of information we receive continues to increase. We also welcome developments, such as major retailers publishing their own test results for residues on their website.

The information we receive, and HSE's comments on their food safety calculations, will be available on Gov.uk as a supplement to this report when the data is complete.



21 The law relating to pesticides

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. The main rules on selling and using pesticides and on residues in food are increasingly being set in European Union (EU) Regulations.

EU law on approving pesticides and their sale, supply and advertisement

Regulation (EC) No 1107/2009 lays down how member states assess pesticides for authorisation in the EU, and which active substances (the ingredients in pesticides that make them work as pesticides) can be used in them. This Regulation provides for:

- approving active substances for use in pesticides in the EU;
- reviewing those approvals on a regular basis;
- setting the common rules member states have to use when authorising pesticides that contain any active substance on the list.

All new active substances are checked for safety by scientists from all the Member States and the European Food Safety Authority (EFSA) before they are added to the list of approved active substances. Member States may authorise products containing approved active substances as long as they meet further safety conditions set in the regulation.

Controls of storage, use and disposal

Controls also apply to the safe and sustainable use and storage of pesticides. They are applied through a variety of means including requirements to be trained in the use of pesticides and for the conditions of authorisation for products (for example, details of how much pesticide can be applied in particular situations and how often) to be followed; legal requirements on users (for example to take all reasonable precautions to protect human health and the environment when using or storing pesticides) and through advice and guidance such as that in Codes of Practice for safe use or storage.

The Plant Protection Products (Sustainable Use) Regulation 2012 came in to effect in the UK on 18 July 2012. The use of pesticides had been regulated in the UK for many years, so many of the measures in this regulation are already features in earlier domestic legislation and are an established part of UK good practice.



Port Health Officials carry out border inspections at import points for some foods from certain origins due to those foods posing a higher risk to the consumer.

Currently border inspections for okra cover:

- Vietnam – 20% border inspections under regulation 669/2009
- India – 50% border inspections under regulation 91/2013 Indian okra must also be accompanied by an analytical certificate from India or a country it has travelled through to show it has been tested before arriving in the EU.

Foods that fail border inspections are refused entry at the port; the importer is given the choice of destruction or to export to a non-EU country.



Samples of okra are collected by Government Inspectors from a range of points in the supply chain or bought by a market research company from retail outlets across the UK.

Okra has been tested as part of the National Monitoring Programme each year since 2012.

In the 2015, we have tested 90 samples of okra which were from:

- India
- Jordan
- Honduras
- Dominican Republic
- Thailand
- Uganda
- Sri Lanka
- Oman
- Nicaragua
- Albania

9 of those samples contained a residue above the MRL.



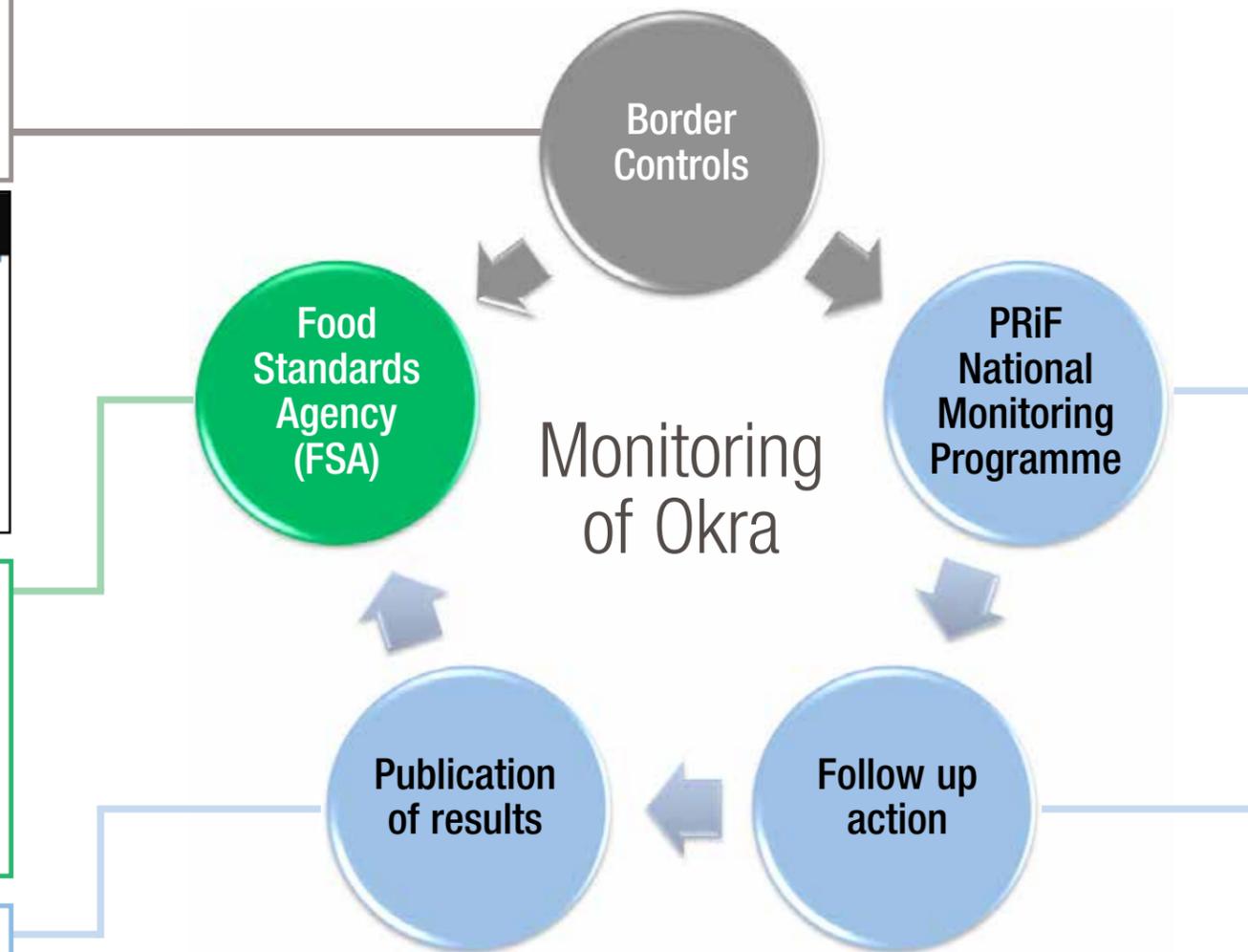
The FSA issue Rapid Alert System for Food and Feed (RASFF) notifications for any foods where a residue is found at a level above the MRL and where there is a concern to the consumer's health.

The FSA reviews all available monitoring data such as data from import controls and the national monitoring programme. It decides whether to recommend further controls or different levels of controls for any commodities.

We publish results for okra throughout the year as part of our Rolling Reporting programme on <https://www.gov.uk/government/collections/pesticide-residues-in-food-results-of-monitoring-programme#rolling-reports>

We also include the results in each of our Quarterly Report on <https://www.gov.uk/government/collections/pesticide-residues-in-food-results-of-monitoring-programme#quarterly-reports>

All our results are published with brand name details of where the sample was collected and where possible the grower details as well.



For every non-compliant sample, we write to the supply point the sample was collected from. We give opportunity for the supplier to have the sample re-tested and give time for them to supply a comment or explanation to the PRiF for consideration.

We also write to the Embassy of the country the sample was exported from.



Maximum Residue Levels (MRLs)

There are controls on the amount of pesticide residues allowed in food marketed within the European Union. These controls set maximum residue levels (MRLs) for individual pesticides in specific foods under EC Regulation 396/2005. MRLs are statutory trading levels, based on the highest level of a residue expected to be in a food when the pesticide is used in line with the terms of its authorisation. MRLs are set below the level considered to be safe for people. It is illegal to import, distribute, supply or sell food with residues above the MRL.

The main features on Regulation 396/2005 include the following:

- A list of foods subject to MRLs (Annex I).
- Definitive EU MRLs (Annex II) – this annex lists MRLs that are set across the EU using procedures in Regulation 396/2005.
- Temporary EU MRLs (Annex III) – levels based on MRLs that were originally set by member states on a national basis. These are called “temporary MRLs” because they will eventually be reviewed and included in Annex II.
- A list of active substances for which MRLs are not set (Annex IV) – because residues that arise from the use of pesticides cannot be distinguished from residues occurring naturally.
- A list of EU MRLs (Annex V) – for active substances that are not approved for use in the EU, and where all MRLs are set at the lowest practical limit of determination for that substance.
- A “default” MRL of 0.01 mg/kg (milligrams of pesticides in every kilogram of food). The level applies for pesticides in foods where definitive MRLs (in Annex II), temporary MRLs (in Annex III) or limit of determination MRLs (in Annex V) have not been set.

Where practical, 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

All the countries in the European Union (EU) are required under MRL legislation to have in place a pesticide residue testing programme which is representative of their 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.

In addition, each year a regulation is published requiring all countries in the EU to take part in a co-ordinated programme of work. The programme covers around 30 foods sampled over a rolling 3-year programme. The results enable the European Food Safety Authority (EFSA) to check compliance but also to make an assessment of the risks to consumers throughout the EU.

Increasingly the obligation forms a larger percentage of the national UK programme as more foods and more pesticides are added to the joint programme in the Community Control Plan.

The most recent report summarising the results for 2013 can be found at:
<http://www.efsa.europa.eu/en/efsajournal/pub/4038.htm>



22 Update from the Food Standards Agency (FSA)

Import controls for pesticide residues

For border controls, the Food Standards Agency is the Competent Authority for pesticide residues, with responsibility for enforcement delegated to the Port Health Authorities. Where necessary, FSA will seek expert advice from CRD with regard to the interpretation of Regulation 396/2005 (as amended).

In the event of a non-compliant consignment, a Rapid Alert will normally only be raised if a risk assessment indicates a potential health concern. Within the Rapid Alert System for Food and Feed (RASFF), for border control of imports from third countries there are three categories of non-compliance. These are border release (whereby the non-compliance is detected after a consignment has been released for onward distribution), border rejection and border control (when a consignment has been released under customs seal).

A breakdown of the Rapid Alerts for 2015 is shown in the following table.

RASFF category	No. raised by UK	EU total	UK percentage
Border release	0	61	0
Border rejection	21	253	8.3
Border control	1	75	1.3

For the UK, the majority (12) of the border rejections, as well as the single border control, were for dried beans from Nigeria containing the unauthorised insecticide dichlorvos plus various other residues above their relevant MRL. Dried beans from Nigeria were already subject to an increased level of control under Commission Regulation (EC) No 669/2009 and a temporary 12-month suspension on import was put in place in June 2015 through Commission Implementing Regulation 2015/943. A further four rejections were of consignments from India comprising okra (2), betel leaves and curry. All contained unauthorised substances including monocrotophos, profenofos, phorate and/or triazophos. The remaining UK border rejections were products from China (2), Bangladesh, Peru and Vietnam (one each).



23 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 Gov.uk every quarter.
- Publish the results of our rolling reporting on Gov.uk 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 13](#) for a brief report of last year's event).

Our Chairman is available for interviews with the media.

We have also prepared some extra background and explanatory information:

- A pesticide glossary (section 26)
- Frequently asked questions (section 27)
- Annual points of interest pages (section 13)

In these pages we try to explain points that are interesting or topical in a clear and engaging way).

We also include our glossary in each of our quarterly reports.



PRiF The Expert Committee on Pesticide
Pesticide Residues in Food Residues in Food Open Event 2016



Wednesday 19 October 2016

The National Railway Museum, York*

For more information or to book a ticket visit: <https://www.eventbrite.co.uk/e/the-expert-committee-on-pesticides-in-food-prif-open-event-2016-tickets-26028769751>

* Venue image supplied by the National Railway Museum

24 Members of the Expert Committee on Pesticide Residues in Food (PRiF)



Dr Paul Brantom
Chairman

Dr Paul Brantom (Chairman) 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 and the European Research Agency (ERA) on a number of projects and working groups.



Julian Davies

Julian Davies has over 25 years' agronomy experience on vegetable and glasshouse crop. He is Agronomy and Commercial Director at Stockbridge Technology Centre Ltd (STC), an independent and industry owned applied research and development company in horticulture. He is particularly interested in reconnecting school children with where their food comes from and established the centre's education projects at STC in 2003. Julian also runs business and enterprise projects with local schools. He has been involved with several Lottery funded projects aimed at getting people growing food in their local community.

Julian's term on the committee ended in December 2015.



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, Ann was Defra's consumer adviser and ran its Consumer Representatives Group. Ann takes a special interest in food, health and standards issues. Ann co-founded the Fairtrade Foundation and chaired its Certification Committee for eleven years. Ann chairs the PRiF Communications Sub-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 Fresh, 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 chain and retailer residue monitoring programmes and following up on root cause investigation's 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.

John was appointed to the committee in January 2016



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.

Tony was appointed to the committee in January 2016



Dr Rosemary Waring

Dr Rosemary Waring is a fellow of the Royal College of Pathologists. She has a long-term research interest in the metabolism of environmental compounds, including pesticides and their possible effects on human health. She is a toxicologist at the University of Birmingham where her group has studied neurotoxicology and endocrine disruption. As well as being a member of the PRiF Committee, Rosemary is a past member of the Advisory Committee on Pesticides (ACP), COMEAP (Committee on Medical Effects of Air Pollution), COC (Committee for Carcinogenicity) and an EC committee on consumer safety (SCCS, Cosmetic Ingredients Panel).

Rosemary's term on the committee ended in December 2015.



Dr Glenis Wedzicha

Dr Glenis Wedzicha read chemistry at the University of London, where her PhD research was on free radicals in an industrial context. 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.



Debbie Winstanley

Debbie Winstanley has a BSc in Agriculture from the University of Wales. She was a commercial farm agronomist in the NW of England for 20 years before working on potato agronomy at Cambridge University Farm. Subsequently, Debbie joined Co-op Retail where she worked with fresh produce suppliers and then, she joined Sainsbury's where she was first Product Technologist for potatoes and vegetables, and then the Company Agronomist, notably working on pesticide residue reduction. She is also an examiner for BASIS, who set standards for and certify the competence of professionals who work with pesticides. She has recently retired as UK Agronomist for PepsiCo where her work covered potatoes for Walkers Crisps, oats for Quaker Oats and apples for Copella Apple Juice. Debbie is now working part-time on projects: ARTIS, a training platform delivered by NIAB, a collaborative project on the impact of free living nematodes in potatoes, her work sponsored by PepsiCo and a field based development project for potatoes for Sainsbury's. She also sits on the steering group (unpaid work) of the Allerton Project, a charity which champions biodiversity and good farming practice in commercial agriculture.

Debbie's term on the committee ended in December 2015.

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 2015 were:

- **Helen Kyle** – HSE's Chemicals Regulation Directorate (Chairman)
- **Dr Sadat Nawaz** – National Reference Laboratory (NRL) Representative
- **Helen Barker** – Fera Science Ltd
- **David Sanderson** – Agri-Food and Biosciences Institute (AFBI)
- **Kirsty Reid** – Science and Advice for Scottish Agriculture (SASA)
- **Laura Melton** – Science and Advice for Scottish Agriculture (SASA)
- **Ian Rock** – Eurofins Ltd
- **Dr Neil Schroeder** – Eurofins Ltd
- **Dr Joanna Topping** – LGC Ltd
- **Antoanela Plevnik** – LGC Ltd



Cost of our surveys

The UK pesticide residues monitoring programme in 2015 cost £2.1 million. 60% of this money came from the charge on sales of approved pesticides by manufacturers and suppliers in the UK. The rest came from the Government. Most of the money was spent of 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.

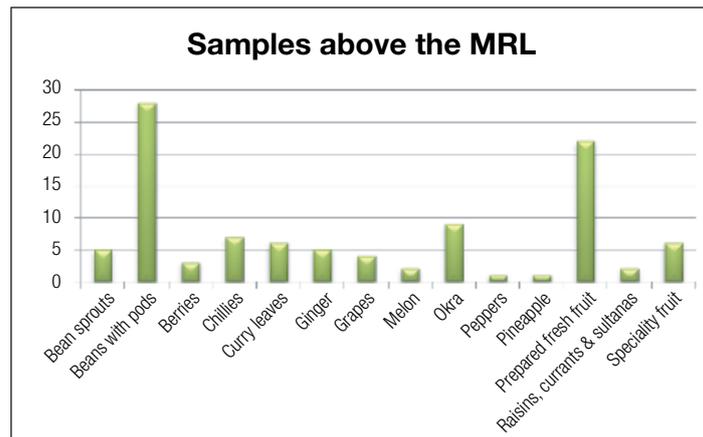
The following table shows the main areas where money was spent in 2015:

Area of work	Amount spent
Members fees and meetings including our open event	£15,000
Collecting samples	£185,000
Analysing samples	£1,900,000

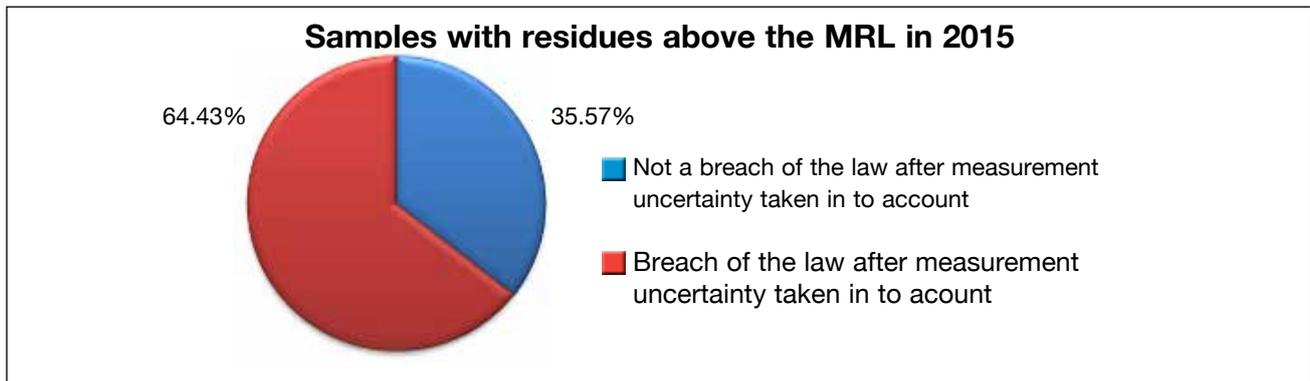
25 All residues found above the MRL in 2015

Of the 3,614 samples tested, 101 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 2015 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 across the EU). This is set when the pesticide must not be used in the EU at all, or cannot be used on these crops in the EU. As foods grown outside the EU are not all covered by the European standards for pesticide residues, residues above these MRLs do not necessarily mean the farmer did not follow good agricultural practice (GAP).



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 EU guideline, 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 Directorate. It should not be applied by 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
1936/2015	Bean Sprouts	UK	BAC (sum)	0.4	0.1	Yes
2223/2015	Bean Sprouts	UK	BAC (sum)	0.6	0.1	Yes
3438/2015	Bean Sprouts	UK	BAC (sum)	0.4	0.1	Yes
1601/2015	Bean sprouts	UK	BAC (sum)	0.7	0.1	No
1721/2015	Bean sprouts	UK	BAC (sum)	0.8	0.1	No
3897/2015	Beans with pods: yardlong beans	Dominican Republic	chlorpyrifos	0.2	0.05*	Yes
			endosulfan (sum)	0.2	0.05*	Yes
3980/2015	Beans with pods: guar beans	India	dimethoate (sum)	0.04	0.02*	No
3983/2015	Beans with pods: guar beans	India	dimethoate (sum)	0.03	0.02*	No
3988/2015	Beans with pods: guar beans	India	dimethoate (sum)	0.03	0.02*	No
			monocrotophos	0.1	0.01*	Yes
4032/2015	Beans with pods: papi beans	Bangladesh	emamectin benzoate	0.02	0.01*	Yes
			hexaconazole	0.02	0.01*	Yes
4034/2015	Beans with pods: ceem beans	Bangladesh	dimethoate (sum)	0.3	0.02*	Yes
4038/2015	Beans with pods: long beans	Dominican Republic	endosulfan (sum)	0.08	0.05*	No
4039/2015	Beans with pods: papi beans	Bangladesh	abamectin (sum)	0.03	0.01*	Yes
			carbendazim	0.3	0.2	No
			dimethoate (sum)	0.8	0.02*	Yes
			emamectin benzoate	0.04	0.01*	Yes
4040/2015	Beans with pods: ceem beans	Bangladesh	carbendazim	0.4	0.2	Yes
			dimethoate (sum)	0.2	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
4136/2015	Beans with pods: hyacinth beans	India	carbendazim	0.8	0.2	Yes
			dithiocarbamates	2.4	1	Yes
0036/2015	Beans with pods: green beans	Egypt	propargite	0.02	0.01*	No
3888/2015	Beans with pods: guar beans	India	dimethoate (sum)	0.1	0.02*	Yes
			thiophanate-methyl	0.6	0.1*	Yes
4000/2015	Beans with pods: yardlong beans	Ghana	chlorpyrifos	0.2	0.05*	Yes
4162/2015	Beans with pods: guar beans	India	dimethoate (sum)	0.2	0.02*	Yes
4175/2015	Beans with pods: yardlong beans	Malaysia	carbofuran (sum)	0.08	0.01*	Yes
			methamidophos	0.03	0.01*	Yes
4182/2015	Beans with pods: yardlong beans	India	ethion	0.2	0.01*	Yes
4274/2015	Beans with pods: yardlong beans	Dominican Republic	endosulfan (sum)	0.07	0.05*	No
4208/2015	Beans with pods: yardlong beans	Malaysia	chlorfenapyr	0.4	0.01*	Yes
4213/2015	Beans with pods: yardlong beans	Malaysia	chlorfenapyr	0.4	0.01*	Yes
			dithiocarbamates	1.5	1	No
4214/2015	Beans with pods: seem beans	Bangladesh	dimethoate (sum)	0.17	0.02*	Yes
			fenprothrin	0.02	0.01*	No
4220/2015	Beans with pods: Uri beans	Malaysia	chlorfenapyr	0.3	0.01*	Yes
			diafenthiuron	0.03	0.01*	Yes
			dithiocarbamates	2	1	Yes
			fipronil (sum)	0.02	0.005*	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
4221/2015	Beans with pods: yardlong beans	Malaysia	chlorfenapyr	0.2	0.01*	Yes
			dithiocarbamates	1.1	1	No
4396/2015	Beans with pods: valour beans	India	chlorpyrifos	0.07	0.05*	No
4434/2015	Beans with pods: guar beans	India	dimethoate (sum)	0.03	0.02*	No
4381/2015	Beans with pods: Uri beans	Malaysia	chlorfenapyr	0.2	0.01*	Yes
			dithiocarbamates	1.8	1	No
			tolfenpyrad	0.03	0.01*	Yes
4384/2015	Beans with pods: hyacinth beans	Bangladesh	dimethoate (sum)	0.7	0.02*	Yes
			emamectin benzoate	0.07	0.01*	Yes
			hexaconazole	0.02	0.01*	No
			metalaxyl	0.2	0.05*	Yes
			propargite	0.09	0.01*	Yes
4433/2015	Beans with pods: valour beans	Kenya	dimethoate (sum)	0.08	0.02*	Yes
5119/2015	Beans with pods: valour beans	Kenya	dimethoate (sum)	0.2	0.02*	Yes
			hexaconazole	0.03	0.01*	Yes
2660/2015	Berries: blackberries	Serbia	dithiocarbamates	0.1	0.05*	Yes
2972/2015	Berries: blackberries	Mexico	acephate	0.05	0.01*	Yes
1725/2015	Berries: blueberries	Spain	myclobutanil	0.04	0.02*	Yes
			thiophanate-methyl	0.5	0.1*	Yes
3864/2015	Chilli peppers	India	profenofos	0.5	0.01*	Yes
3895/2015	Chilli peppers	Egypt	chlorpyrifos	1.1	0.5	Yes
			profenofos	1.3	0.01*	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
3964/2015	Chilli peppers	India	acephate	0.02	0.01*	No
			ethion	0.4	0.01*	Yes
			thiophanate-methyl	0.6	0.1*	Yes
3982/2015	Chilli peppers	India	monocrotophos	0.3	0.01*	Yes
			profenofos	0.4	0.01*	Yes
3999/2015	Chilli peppers	Pakistan	thiophanate-methyl	0.2	0.1*	No
4001/2015	Chilli peppers	India	ethion	0.05	0.01*	Yes
			flonicamid (sum)	0.2	0.15	No
4024/2015	Chilli peppers	Israel	flonicamid (sum)	0.2	0.15	No
1224/2015	Curry Leaves	Gambia	oxamyl	0.05	0.02*	Yes
1225/2015	Curry Leaves	Ghana	chlorpyrifos	0.09	0.05*	No
1227/2015	Curry Leaves	Ghana	chlorpyrifos	0.3	0.05*	Yes
1535/2015	Curry Leaves	Ghana	diuron	0.04	0.02*	No
1536/2015	Curry Leaves	Ghana	acetamiprid	13	3	Yes
			carbofuran (sum)	0.8	0.02*	Yes
			diazinon	0.5	0.02*	Yes
			isoprothiolane	0.03	0.01*	Yes
1967/2015	Curry Leaves	India	chlorpyrifos	0.1	0.05*	Yes
			deltamethrin	0.8	0.5	No
			isoprothiolane	0.03	0.01*	Yes
1380/2015	Ginger	China	clothianidin	0.2	0.05*	Yes
			imidacloprid	0.2	0.05*	Yes
			thiamethoxam (sum)	0.3	0.05*	Yes
1689/2015	Ginger	China	thiamethoxam (sum)	0.09	0.05*	No
3313/2015	Ginger	China	cyromazine	0.6	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
3356/2015	Ginger	China	clothianidin	0.07	0.05*	No
			thiamethoxam (sum)	0.08	0.05*	No
3393/2015	Ginger	China	cyromazine	0.9	0.1*	Yes
4472/2015	Grapes	Greece	ethephon	2	1	No
3881/2015	Grapes	Namibia	ethephon	2.2	0.7	Yes
4236/2015	Grapes	India	flonicamid (sum)	0.06	0.05*	No
4280/2015	Grapes	Egypt	ethephon	1.1	1	No
0014/2015	Melon	Brazil	procymidone	0.02	0.01*	Yes
2537/2015	Melon	Brazil	procymidone	0.02	0.01*	Yes
4386/2015	Okra	Jordan	acetamiprid	0.3	0.2	No
4401/2015	Okra	Jordan	abamectin (sum)	0.02	0.01*	No
			acetamiprid	0.3	0.2	No
3894/2015	Okra	India	abamectin (sum)	0.02	0.01*	Yes
3984/2015	Okra	India	acephate	0.06	0.01*	Yes
			atrazine	0.4	0.05*	Yes
			cyfluthrin	0.05	0.02*	Yes
			monocrotophos	0.02	0.01*	Yes
3985/2015	Okra	Uganda	profenofos	0.02	0.01*	Yes
4210/2015	Okra	Jordan	abamectin (sum)	0.02	0.01*	No
			acetamiprid	0.3	0.2	No
4439/2015	Okra	Jordan	abamectin (sum)	0.02	0.01*	No
			acetamiprid	0.4	0.2	No
4453/2015	Okra	Jordan	abamectin (sum)	0.02	0.01*	No
			acetamiprid	0.3	0.2	No
4457/2015	Okra	Jordan	abamectin (sum)	0.02	0.01*	No
			acetamiprid	0.4	0.2	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
5105/2015	Peppers	Poland	ethephon	5	0.05*	Yes
3388/2015	Pineapple	Costa Rica	novaluron	0.02	0.01*	No
0330/2015	Prepared fresh fruit: mango	UK	BAC (sum)	1.4	0.1	Yes
2681/2015	Prepared fresh fruit: mango	UK	BAC (sum)	1.2	0.1	Yes
0208/2015	Prepared fresh fruit: mixed	UK	BAC (sum)	2.3	0.1	Yes
0354/2015	Prepared fresh fruit: mixed	UK	BAC (sum)	8	0.1	Yes
2530/2015	Prepared fresh fruit: mixed	South Africa	DDAC (sum)	2.9	0.1	Yes
2719/2015	Prepared fresh fruit: mixed	UK	BAC (sum)	0.7	0.1	No
2729/2015	Prepared fresh fruit: mixed	UK	BAC (sum)	0.7	0.1	No
2737/2015	Prepared fresh fruit: mixed	UK	BAC (sum)	2.5	0.1	Yes
0344/2015	Prepared fresh fruit: pineapple	UK	BAC (sum)	2.3	0.1	Yes
0479/2015	Prepared fresh fruit: pineapple	UK	BAC (sum)	2.4	0.1	Yes
2771/2015	Prepared fresh fruit: mango	UK	BAC (sum)	1.8	0.1	Yes
2869/2015	Prepared fresh fruit: mango	UK	BAC (sum)	2.4	0.1	Yes
			DDAC (sum)	0.6	0.1	No
0581/2015	Prepared fresh fruit: mixed	UK	BAC (sum)	1	0.1	Yes
1355/2015	Prepared fresh fruit: mixed	UK	BAC (sum)	1.3	0.1	Yes
1507/2015	Prepared fresh fruit: mixed	South Africa	BAC (sum)	0.6	0.1	No
			DDAC (sum)	1.1	0.1	Yes

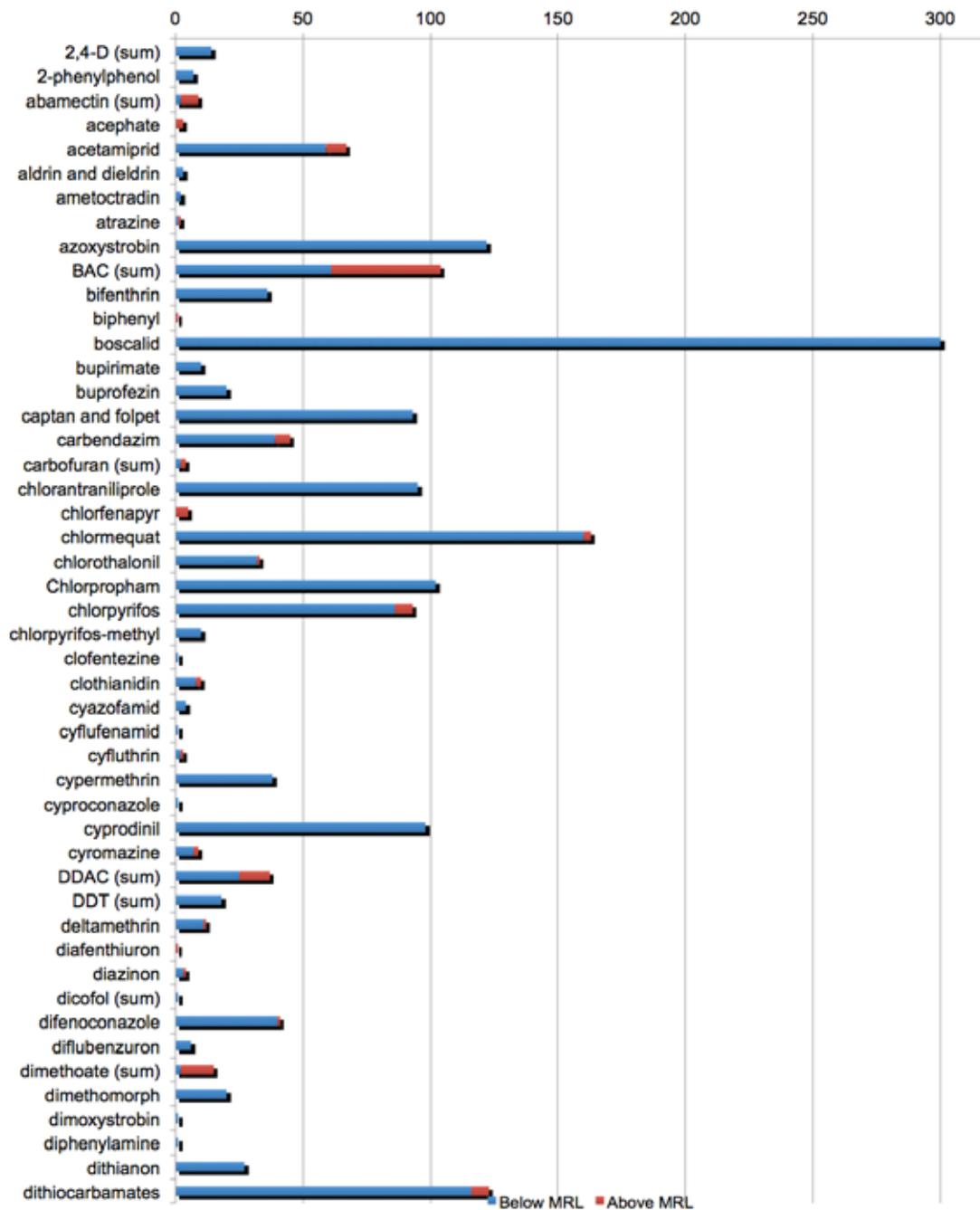


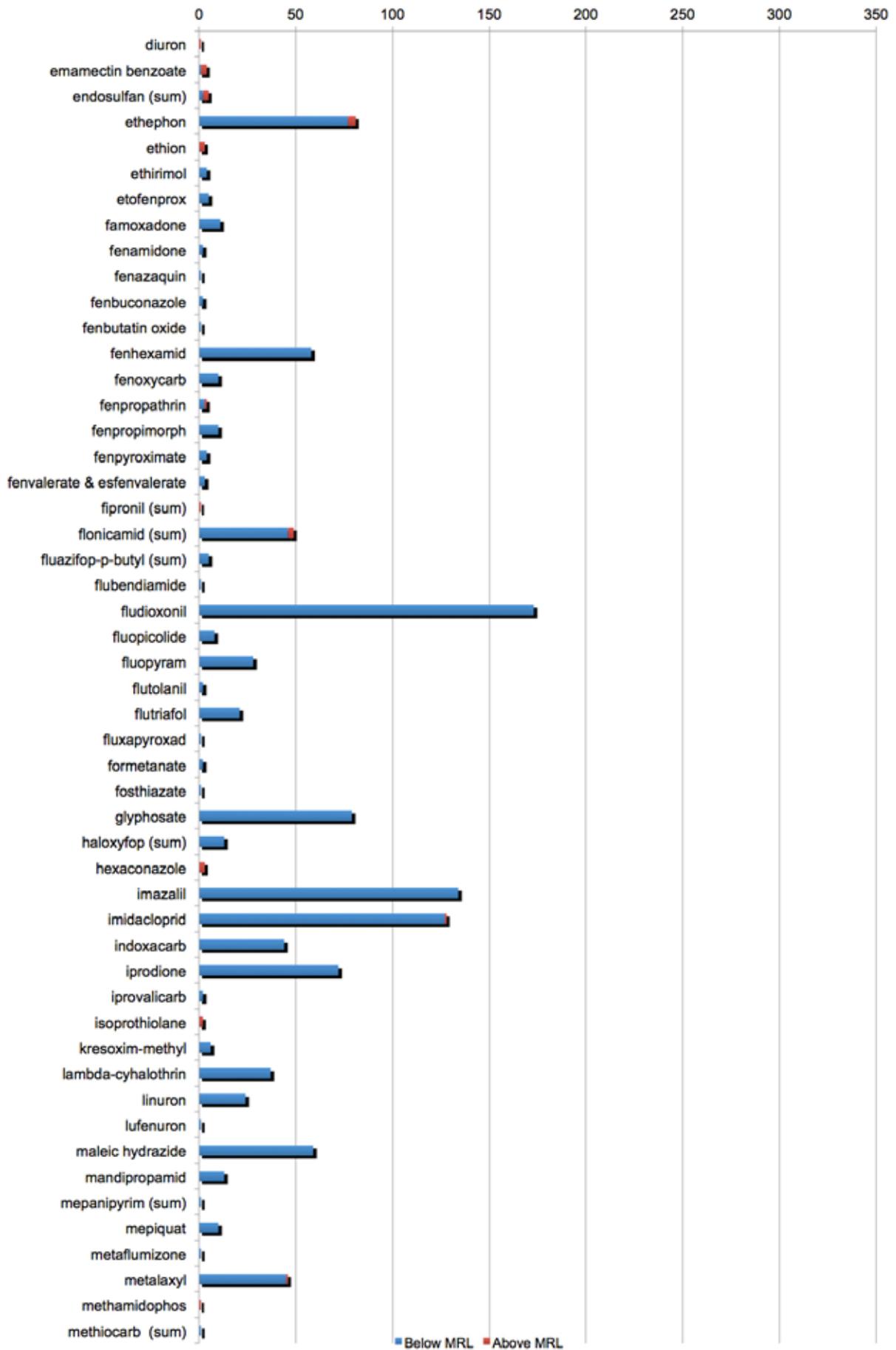
Sample reference number	Food	Country of origin	Pesticide residue found	Residue amount detected (mg/kg)	MRL (mg/kg)	Breach of the law after allowing for measurement uncertainty
1985/2015	Prepared fresh fruit: mixed	UK	BAC (sum)	0.7	0.1	No
2944/2015	Prepared fresh fruit: mixed	UK	BAC (sum)	0.6	0.1	No
0622/2015	Prepared fresh fruit: pineapple	UK	BAC (sum)	3.5	0.1	Yes
1568/2015	Prepared fresh fruit: mango	UK	BAC (sum)	1.7	0.1	Yes
3361/2015	Prepared fresh fruit: melon	UK	BAC (sum)	1	0.1	No
0745/2015	Prepared fresh fruit: mango	Brazil	BAC (sum)	9	0.1	Yes
3437/2015	Prepared fresh fruit: mango	Brazil	BAC (sum)	6.1	0.1	Yes
1737/2015	Raisins, currants & sultanas	Turkey	chlormequat	0.4	0.25	No
2610/2015	Raisins, currants & sultanas	Turkey	chlormequat	0.3	0.25	No
1961/2015	Speciality fruit: passion fruit	Colombia	difenoconazole	0.2	0.1	No
2566/2015	Speciality fruit: pomegranate	Turkey	prochloraz (sum)	1.89	0.05*	Yes
3896/2015	Speciality fruit: pomegranate	Turkey	acetamiprid	0.02	0.01*	No
1343/2015	Speciality fruit: rambutan	Thailand	carbendazim	0.4	0.1*	Yes
2577/2015	Speciality fruit: star fruit	Malaysia	carbendazim	0.2	0.1*	No
0286/2015	Speciality fruit: passion fruit	Colombia	carbendazim	0.2	0.1*	Yes
			dithiocarbamates	0.2	0.05*	Yes

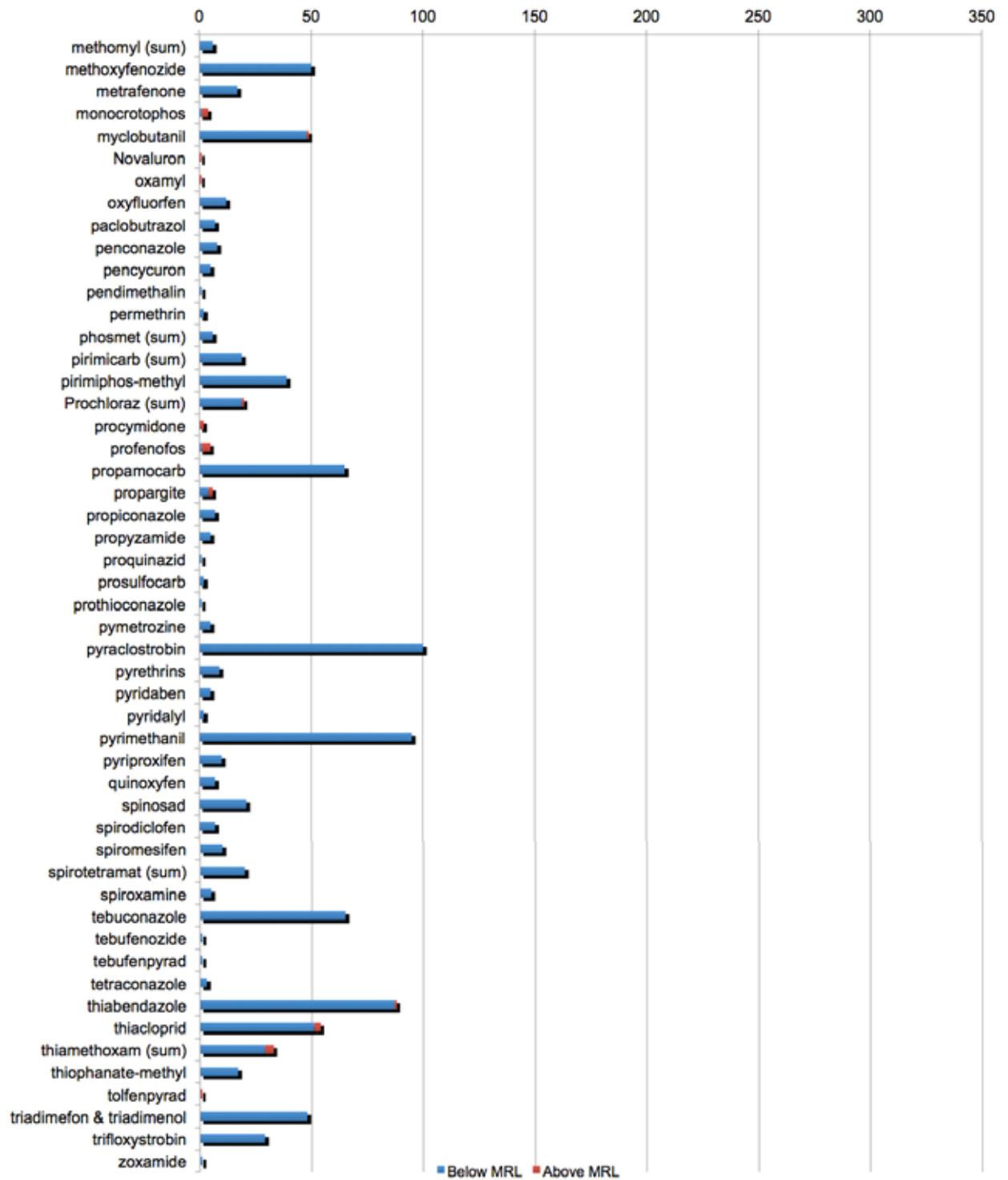
26 Analyte detections

The UK programme tests for around 388 pesticides. This include pesticides that are currently authorised for use in the EU, those not authorised in the EU and those which are no longer used but where residues may continue to be found. During 2015, 155 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.







27 Glossary

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 African Caribbean and Pacific Countries (ACP). Its specialised information and advisory services are open to all ACP Countries' companies in the horticultural export sector and are financed by the European Commission. It has two overriding objectives to enable ACP Countries' companies to comply with European food safety and traceability requirements and to consolidate the position of small-scale producers in the ACP Countries horticultural export sector.

Cryogenic Milling: Processing of commodities at very low temperatures can be achieved by milling/grinding pre-frozen samples in the presence of dry ice.

Good Agricultural Practice in the Use of Pesticides (GAP)/Good Plant Protection Practice (GPPP): 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. The term GAP remains in widespread use. Under Regulation 1107/2009, the term Good Plant Protection Practice is referred to specifically to describe the Good Agricultural Practice in the use of pesticides.

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 97.5th 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. For acute exposure assessment, internationally the consumption value for the high-level consumer is sometimes referred to as the Large Portion (LP) data.

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.

Further information on MRLs can be found at:

http://webarchive.nationalarchives.gov.uk/20151023155227/http://www.pesticides.gov.uk/guidance/industries/pesticides/topics/food-safety/maximum-residue-levels/?wbc_purpose=Basic.rss

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 a MRL may not have been set.

UKT MRL: For certain pesticides a temporary national MRL has been set. UKT MRLs are worked out by HSE's Chemicals Regulation Directorate (CRD). 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 (97.5th 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: <http://webarchive.nationalarchives.gov.uk/20151023155227/http://www.pesticides.gov.uk/guidance/industries/pesticides/topics/pesticide-approvals/pesticides-registration/applicant-guide>

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 (97.5th 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: <http://webarchive.nationalarchives.gov.uk/20151023155227/http://www.pesticides.gov.uk/guidance/industries/pesticides/topics/pesticide-approvals/pesticides-registration/applicant-guide>

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. In the PRiF report the origin is 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.

Processing factor: MRLs are generally set for raw, unprocessed foods. Processing can affect (dilute or concentrate) residue levels. So to check that processed food was made with ingredients that complied with the MRL processing factors are applied to the MRL for the raw food. The processing factor depends on the pesticide detected, the food and the processing type.

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 Member 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 notification. 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: apples – 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 CRD 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.

28 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?

This is an extract from our (latest) annual report for 2015:

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

- 57.14% of samples contained none of the pesticides being looked for.
- 40.07% of samples contained residues at or below the MRL.
- 2.79% of samples contained residues above the MRL.

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

- 21 detailed risk assessments were carried out in 2015. 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 2015 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 i.e. 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 as well as food from other EU countries 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 different rules about pesticides residues in these special foods. The EU set the rules for pesticide residues in baby food and baby milk first before the general rules about pesticide residues in other foods. They 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.

More about organic food: <http://webarchive.nationalarchives.gov.uk/20151023155227/http://www.pesticides.gov.uk/guidance/industries/pesticides/advisory-groups/PRiF/PRiF-help/organic-food-faq.htm>

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 from the Animal and Plant Health Agency (APHA) collect samples of potatoes, Horticultural Marketing Inspectors from the Rural Payment Agency 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.
- EU food surveys, which are surveys of particular foods that all EU member states are required to monitor for pesticide residues in a particular year.

We also use inspectors to collect samples of food where historically 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 EU law (Commission Directive 2002/63/EC) 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?

EU law (Commission Directive 2002/63/EC) tells us the size and make up of the samples we test.



We increase these amounts 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 law 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.

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 pesticides 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. EU law requires all official laboratories to be appropriately accredited, and CRD interpret that to mean that all results should be from tests covered by the UKAS (United Kingdom Accreditation Service) accreditation of the laboratories.

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 EU definition of what is an endocrine disrupting chemical hasn't been set 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, and all official laboratories across the EU, follow the latest version of “Method Validation and Quality Control Procedures for Pesticide Residues Analysis in Food and Feed” as published by the EU 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 Chief Executives of the Chemicals Regulation Directorate (CRD) 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.

Contact Details

Expert Committee on Pesticide Residues in Food (PRiF)

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Chemicals Regulation Directorate
Health and Safety Executive
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York
YO1 7PX

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)

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Chemicals Regulation Directorate

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