

Crop protection and pesticides data report 2023

This report includes full data on crop protection and pesticides for the past six years. It applies to Co-op own brand products. Data relates to the calendar year.

For more detail, including the actions we take based on our data, please read our [Crop Protection policy](#).

Contents

Products tested.....	1
Detections by product.....	5
Tests by product region and country of origin.....	7
2023 Country summary statistics.....	9
Products tested by country.....	11
Residue statistics.....	12
WHO1a/1b and PAN HHP detections over time.....	14
Actives detected.....	14
Pesticide type by product.....	14
Active substances detections over time with WHO1a/1b and PAN HHP designation.....	15
Ten most detected active substances over time.....	19
Ten most detected active substances and the product detected in.....	20
Exceedances.....	21
2023 exceedances details.....	21
2022 exceedances details.....	21
2021 exceedances details.....	22
2020 exceedances details.....	23
2019 exceedances details.....	24
2018 exceedances details.....	24
Further data.....	25

Products tested

Products were selected for testing based on both the HSE pesticide testing survey and also products known to have potentially higher residue detections than others.

In 2023 95 different products were tested, with 372 samples in total. The table below is ordered by the most frequently tested products in 2023.

Products	2018	2019	2020	2021	2022	2023
Table Grapes	27	21	15	18	17	17
Beans with pod	17	16	9	13	14	15
Apples	24	16	14	16	15	13
Tomatoes	8	13	10	12	13	13
Spinach				9	7	12

Blueberries	19	14	10	9	11	10
Bananas	15	10	8	12	8	9
Carrots	12	11	6	9	9	9
Mangoes	10	7	7	7	7	9
Pineapples	10	8	5	7	4	9
Potatoes	11	11	8	9	11	9
Raspberries	15	12	10	10	8	9
Strawberries	15	15	9	11	9	9
Broccoli	12	13	8	10	12	8
Lemons	8	7	5	6	6	8
Mandarins	10	10	8	5	8	8
Oranges	8	8	6	6	7	8
Pears	12	9	10	9	8	8
Sweet Peppers	6	6	7	7	9	8
Asparagus		3	6	5	4	6
Lettuce	12	8	8	7	5	6
Blackberries	17	10	9	2	6	5
Cumin				1		5
Grapefruit	7	7	6	2	2	5
Mushrooms	8	6	4	5	5	5
Onions	2	4	6	4	6	5
Peas with pod	13	11	9	6	5	5
Plums	8	10	7	6	7	5
Ginger						5
Avocado	1	4	9	4	5	4
Butternut squash	2	5	6	4	5	4
Cucumber	2	3	4	3	2	4
Kale		3	2	3	1	4
Melons	4	6	5	6	4	4
Parsnips	6	8	4	5	2	4
Sweet Potatoes	1	3	5	4	1	4
Sesame seeds						4
Brussel sprouts		2	4	2	3	3
Celery		2	3	2	3	3
Cherries	9	7	5	4	5	3
Flour				2	2	3
Kiwi Fruit	2	5	4	4	3	3
Rocket		2	4	4	3	3
Shallots		1	2	1	2	3
Spring Onions		4	3	4		3
Sweetcorn	1	3	3	3	3	3
Watermelons	5	6	5	3	1	3
Wine				2	2	3

Apple juice				1	1	2
Apricots	2	4	3	4	4	2
Aubergines	2	3	5	2	3	2
Baby Leaves	8	10	7	3	3	2
Cabbage	6	9	7	4	5	2
Cauliflower	1	3	4	3	2	2
Coconut oil				2	1	2
Coriander	8	8	6	4	3	2
Courgettes	6	6	6	4	3	2
Fennel	1	2	2	2	2	2
Garlic		2	3	2	2	2
Rice				2	2	2
Walnuts				2		2
Bay leaves						2
Pumpkin seeds						2
Sunflower seeds						2
Raisins						2
Beef				1		1
Bread				5	5	1
Chilli Peppers	9	10	7	2		1
Clementines					2	1
Cranberries		1	1			1
Eggs					1	1
Honey					1	1
Leeks		3	3	2	2	1
Limes	7	5	5	5	6	1
Mint	6	3	6	1		1
Nectarines	10	5	4	3	2	1
Oats					1	1
Pak Choi	6	4	4	2	1	1
Pasta					5	1
Peaches	3	4	2	2	3	1
Peas without pod	1	3	1	1	1	1
Pumpkins	1	1	1		1	1
Radishes	4	3	4	1	2	1
Rosemary	1	2	3	1		1
Salmon				1	1	1
Sultanas				1	2	1
Swedes		2	2	3	3	1
Tangerine				1		1
Tea				1	2	1
Turmeric	1	1		1		1
Crisps						1

Paprika						1
Spice mix						1
Pecans						1
Popcorn						1
Baby corn	1	2	2	2	2	
Basil	6	5	6	3	1	
Beans without pod	1	2	1			
Brazil nuts				1	1	
Butter				1		
Cassava	3	1				
Chayotes	2	1				
Chilli powder					1	
Coconuts		2	1			
Coffee				1	1	
Cress			1			
Curry powder					1	
Dudhi	1	2				
Eddoes	2	1				
Figs	3	1				
Ginger Root	3	5	5	2	4	
Granola					1	
Lemon Grass	1	1				
Milk					2	
Mixed berries				7	1	
Mooli	4	2				
Nuts					1	
Okra	2	2	2			
Parsley	4	8	6	5	3	
Passion Fruit	4	8	3			
Persimmon	2	2	1			
Physalis	2	2				
Plantains	2	1				
Pomegranates	2		1			
Sage				1		
Spring Greens		1	3	1		
Thyme	2	4	3	3	1	
Watercress	1	3	3	1		
Total	470	480	402	380	363	372

Detections by product

This table includes only those products that were tested and a residue was detected.

372 samples were tested for multiple-residues each, resulting in 226526 test results. A single sample could have multiple residues of different active substances detected. From 372 samples tested, 153 had no residues present and 219 had at least 1 residue detected. There was a total of 665 detections.

Product	No. samples tested	No. samples with detection	No. detections	No. samples with 1 residue below MRL	No. samples with multiple residues below MRL	No. exceedances	% samples with residues detected	Average detections per sample
Apple juice	2	2	2	2	0		100	1.0
Apples	13	10	34	2	8		77	2.6
Apricots	2	2	10	0	2		100	5.0
Asparagus	6	0			0		0	0.0
Aubergines	2	1	2	0	1		50	1.0
Avocado	4	2	4	0	2		50	1.0
Baby leaves	2	2	13	0	2		100	6.5
Bananas	9	7	13	1	5	1	78	1.4
Bay leaves	2	0			0		0	0.0
Beans with pod	15	10	16	5	5		67	1.1
Beef	1	0			0		0	0.0
Blackberries	5	5	28	0	5		100	5.6
Blueberries	10	8	26	2	6		80	2.6
Bread	1	0			0		0	0.0
Broccoli	8	3	3	3	0		38	0.4
Brussel sprouts	3	3	5	2	1		100	1.7
Butternut squash	4	2	2	2	0		50	0.5
Cabbage	2	1	1	1	0		50	0.5
Carrots	9	2	3	1	1		22	0.3
Cauliflower	2	0			0		0	0.0
Celery	3	1	1	1	0		33	0.3
Cherries	3	3	13	0	3		100	4.3
Chilli Peppers	1	1	1	1	0		100	1.0
Clementines	1	1	2	0	1		100	2.0
Coconut oil	2	0			0		0	0.0
Coriander	2	2	8	0	2		100	4.0
Courgettes	2	0			0		0	0.0
Cranberries	1	0			0		0	0.0
Crisps	1	0			0		0	0.0
Cucumber	4	2	7	0	2		50	1.8
Cumin	5	3	8	0	3		60	1.6
Eggs	1	0			0		0	0.0
Fennel	2	2	3	1	1		100	1.5
Flour	3	3	6	2	1		100	2.0
Garlic	2	0			0		0	0.0

Ginger	5	0			0		0	0.0
Grapefruit	5	5	19	0	4	1	100	3.8
Honey	1	0			0		0	0.0
Kale	4	4	9	2	2		100	2.3
Kiwi Fruit	3	2	2	2	0		67	0.7
Leeks	1	0			0		0	0.0
Lemons	8	6	22	1	3	2	75	2.8
Lettuce	6	2	4	1	1		33	0.7
Limes	1	0			0		0	0.0
Mandarins	8	8	28	0	8		100	3.5
Mangoes	9	7	11	3	3	1	78	1.2
Melons	4	3	5	1	2		75	1.3
Mint	1	1	4	0	1		100	4.0
Mushrooms	5	0			0		0	0.0
Nectarines	1	1	6	0	1		100	6.0
Oats	1	0			0		0	0.0
Onions	5	2	2	2	0		40	0.4
Oranges	8	8	35	0	8		100	4.4
Pak Choi	1	1	1	1	0		100	1.0
Paprika	1	1	21	0	1		100	21.0
Parsnips	4	4	10	1	3		100	2.5
Pasta	1	1	1	1	0		100	1.0
Peaches	1	0			0		0	0.0
Pears	8	5	15	1	4		63	1.9
Peas with pod	5	2	6	0	2		40	1.2
Peas without pod	1	0			0		0	0.0
Pecans	1	0			0		0	0.0
Pineapples	9	7	9	5	1	1	78	1.0
Plums	5	4	6	3	1		80	1.2
Popcorn	1	0			0		0	0.0
Potatoes	9	5	5	5	0		56	0.6
Pumpkin seeds	2	2	3	1	0	1	100	1.5
Pumpkins	1	0			0		0	0.0
Radishes	1	0			0		0	0.0
Raisins	2	2	28	0	2		100	14.0
Raspberries	9	6	13	0	5	1	67	1.4
Rice	2	2	2	2	0		100	1.0
Rocket	3	3	12	0	3		100	4.0
Rosemary	1	1	3	0	1		100	3.0
Salmon	1	0			0		0	0.0
Sesame seeds	4	0			0		0	0.0
Shallots	3	0			0		0	0.0
Spice mix	1	1	4	0	1		100	4.0
Spinach	12	10	33	1	8	1	83	2.8
Spring Onions	3	0			0		0	0.0
Strawberries	9	7	25	1	5	1	78	2.8
Sultanas	1	0			0		0	0.0
Sunflower seeds	2	0			0		0	0.0
Swedes	1	0			0		0	0.0

Sweet Peppers	8	4	10	1	3		50	1.3
Sweet Potatoes	4	2	2	2	0		50	0.5
Sweetcorn	3	0			0		0	0.0
Table Grapes	17	17	80	3	14		100	4.7
Tangerine	1	1	4	0	1		100	4.0
Tea	1	0			0		0	0.0
Tomatoes	13	4	14	0	4		31	1.1
Turmeric	1	0			0		0	0.0
Walnuts	2	0			0		0	0.0
Watermelons	3	0			0		0	0.0
Wine	3	0			0		0	0.0
Grand Total	372	219	665	66	143	10		

Tests by product region and country of origin

Region	Number of tests
UK	94
EU	125
Rest of world	137
Unspecified	16
Total	372

Unspecified includes samples that were for products that originated from a packhouse or company often located in the UK, but the origin of the product was not specified.

Country	2018	2019	2020	2021	2022	2023
UK	96	118	96	96	119	106
Spain	78	83	65	56	58	68
Unspecified	12	6	13	101	63	51
Germany	3	4	2	1	1	17
Egypt	17	20	13	9	4	14
USA	2	3	3	1		13
Chile	14	14	12	7	5	10
Italy	15	17	18	13	10	9
Peru	9	11	13	10	8	8
Guatemala	17	10	9	5	3	8
Mexico	5	6	8	4		8
France		5	3	2	2	7
Kenya	17	14	9	10	6	5
Greece	4	3	2		2	5
China	5	4	3	2		5
Israel	7	3	5	1	1	4
Senegal	1	1	3	2		4
Morocco	27	26	21	9	15	3
Netherlands	7	12	15	5	8	3
India or Pakistan						3

Portugal	6	4	10	5	4	2
Ghana	2	2	3	1		2
Argentina	5	2	1			2
Central America						2
South Africa	25	27	18	9	16	1
Brazil	12	13	12	7	9	1
Colombia	10	14	6	6	6	1
Dominican Republic	9	5	2	4	4	1
India	6	10	4	4	3	1
Costa Rica	18	10	4	3	3	1
Belgium	5	3	3	3	5	1
Cote d'Ivoire	3	3	2		2	1
New Zealand	2	3	4		2	1
Namibia	1	1	2		1	1
Poland	6	1	1			1
Vietnam	3	2	1			1
NL/Portugal						1
Turkey	2	3	1		1	
Puerto Rico	2	1	1		1	
Norway					1	
Sri Lanka				2		
Honduras		2	1	1		
Indonesia				1		
Jordan	4	5	3			
Zimbabwe	6	1	4			
Thailand	2	2	1			
Ecuador	2	1				
Jersey		1	1			
Lebanon		1	1			
Tunisia		1	1			
Croatia		1				
Cyprus	1					
Hungary			1			
Ireland	1					
Mozambique	1					
Panama		1				
Zambia			1			
Total	470	480	402	380	363	372

2023 Country summary statistics

Country	No. samples	No. detections	No. samples with detection	No. exceedances	Percentage of samples with a detection	Average detections per sample
Argentina	6		0		0	0.0
Belgium	4	10	3		75	2.5
Brazil	10	22	8		80	2.2
Central America	2	1	1		50	0.5
Chile	9	40	9		100	4.4
China	1	1	1		100	1.0
Colombia	4	8	4		100	2.0
Costa Rica	8	9	7	1	88	1.1
Cote d'Ivoire	1	2	1		100	2.0
Dominican Republic	5	3	3		60	0.6
Egypt	13	28	8		62	2.2
France	15	41	10		67	2.7
Germany	2	4	1		50	2.0
Ghana	2	4	2	1	100	2.0
Greece	2	1	1		50	0.5
Guatemala	8	26	6		75	3.3
India	2	3	2		100	1.5
India or Pakistan	1	1	1		100	1.0
Israel	3	7	3	1	100	2.3
Italy	14	30	11		79	2.1
Kenya	8	11	6		75	1.4
Mexico	4		0		0	0.0
Morocco	14	22	7	1	50	1.6
Multiple	1	1	1		100	1.0
Namibia	2	7	2		100	3.5
New Zealand	1		0		0	0.0
NL	13	9	5		38	0.7
NL/Portugal	1	1	1		100	1.0
Peru	11	12	4	1	36	1.1
Poland	1		0		0	0.0
Portugal	5	6	3		60	1.2
Senegal	1		0		0	0.0
South Africa	17	56	16	1	94	3.3
Spain	68	148	42	2	62	2.2
UK	94	143	46	1	49	1.5
Unknown	1		0		0	0.0
Unspecified	14	6	2	1	14	0.4
USA	3	2	2		67	0.7
Vietnam	1		0		0	0.0
Grand Total	372	665	219	10		

Same table as above but sorted by average detections per sample.

Country	No. samples	No. detections	No. samples with detection	No. exceedances	Percentage of samples with a detection	Average detections per sample
Chile	9	40	9		100	4.4
Namibia	2	7	2		100	3.5
South Africa	17	56	16	1	94	3.3
Guatemala	8	26	6		75	3.3
France	15	41	10		67	2.7
Belgium	4	10	3		75	2.5
Israel	3	7	3	1	100	2.3
Brazil	10	22	8		80	2.2
Spain	68	148	42	2	62	2.2
Egypt	13	28	8		62	2.2
Italy	14	30	11		79	2.1
Colombia	4	8	4		100	2.0
Cote d'Ivoire	1	2	1		100	2.0
Germany	2	4	1		50	2.0
Ghana	2	4	2	1	100	2.0
Morocco	14	22	7	1	50	1.6
UK	94	143	46	1	49	1.5
India	2	3	2		100	1.5
Kenya	8	11	6		75	1.4
Portugal	5	6	3		60	1.2
Costa Rica	8	9	7	1	88	1.1
Peru	11	12	4	1	36	1.1
China	1	1	1		100	1.0
India or Pakistan	1	1	1		100	1.0
Multiple	1	1	1		100	1.0
NL/Portugal	1	1	1		100	1.0
NL	13	9	5		38	0.7
USA	3	2	2		67	0.7
Dominican Republic	5	3	3		60	0.6
Central America	2	1	1		50	0.5
Greece	2	1	1		50	0.5
Unspecified	14	6	2	1	14	0.4
Argentina	6		0		0	0.0
Mexico	4		0		0	0.0
New Zealand	1		0		0	0.0
Poland	1		0		0	0.0
Senegal	1		0		0	0.0
Unknown	1		0		0	0.0
Vietnam	1		0		0	0.0
Grand Total	372	665	219	10		

Residue statistics

All countries	2018	2018 (%)	2019	2019 (%)	2020	2020 (%)	2021	2021 (%)	2022	2022 (%)	2023	2023 (%)
Number of samples	470		480		402		380		363		372	
Samples with zero residues	133	28.3	168	35	126	31.3	160	42.1	155	42.7	153	41.1
Samples with 1 residue below MRL	110	23.4	110	22.9	82	20.4	71	18.7	70	19.3	66	17.7
Samples with multiple residues all below MRL	218	46.4	191	39.8	181	45	139	36.6	132	36.4	143	38.4
Samples with at least 1 MRL exceedance	9	1.9	11	2.3	13	3.2	10	2.6	6	1.7	10	2.7
Number of detections	949		842		748		668		640		665	
Average detections per sample	2.02		1.75		1.86		1.76		1.8		1.79	
UK (including Jersey)	2018	2018 (%)	2019	2019 (%)	2020	2020 (%)	2021	2021 (%)	2022	2022 (%)	2023	2023 (%)
Number of samples	96	20.4	119	24.8	97	24.1	97		119		94	
Samples with zero residues	30	31.3	52	43.7	42	43.3	43	44.3	50	42	48	51.1
Samples with 1 residue below MRL	29	30.2	34	28.6	22	22.7	19	19.6	27	22.7	18	19.1
Samples with multiple residues all below MRL	36	37.5	32	26.9	30	30.9	32	33	39	32.8	27	28.7
Samples with at least 1 MRL exceedance	1	1	1	0.8	3	3.1	3	3.1	3	2.5	1	1.1
Number of detections	190		166		152		168		230		143	
Average detections per sample	1.98		1.39		1.57		1.73		1.9		1.52	
EU	2018	2018 (%)	2019	2019 (%)	2020	2020 (%)	2021	2021 (%)	2022	2022 (%)	2023	2023 (%)
Number of samples	126	26.8	133	27.7	120	29.9	84		91		125	
Samples with zero residues	37	29.4	43	32.3	37	30.8	26	31	38	41.8	48	38.4
Samples with 1 residue below MRL	28	22.2	21	15.8	22	18.3	18	21.4	13	14.3	19	15.2

Samples with multiple residues all below MRL	61	48.4	69	51.9	59	49.2	38	45.2	39	42.9	56	44.8
Samples with at least 1 MRL exceedance	0	0	0	0	2	1.7	2	2.4	1	1.1	2	1.6
Number of detections	241		255		223		177		157		250	
Average detections per sample	1.91		1.92		1.86		2.11		1.7		2.00	
Rest of world	2018	2018 (%)	2019	2019 (%)	2020	2020 (%)	2021	2021 (%)	2022	2022 (%)	2023	2023 (%)
Number of samples	236	50.2	222	46.3	172	42.8	98		90		137	
Samples with zero residues	62	26.3	70	31.5	41	23.8	29	29.6	30	33.3	44	32.1
Samples with 1 residue below MRL	51	21.6	54	24.3	36	20.9	19	19.4	16	17.8	28	20.4
Samples with multiple residues all below MRL	115	48.7	88	39.6	89	51.7	46	46.9	43	47.8	59	43.1
Samples with at least 1 MRL exceedance	8	3.4	10	4.5	6	3.5	4	4.1	1	1.1	6	4.4
Number of detections	491		414		352		203		200		265	
Average detections per sample	2.08		1.86		2.05		2.07		2.2		1.93	
Unspecified	2018	2018 (%)	2019	2019 (%)	2020	2020 (%)	2021	2021 (%)	2022	2022 (%)	2023	2023 (%)
Number of samples	12	2.6	6	1.3	13	3.2	101		63		16	
Samples with zero residues	4	33.3	3	50	6	46.2	62	61.4	37	58.7	13	81.3
Samples with 1 residue below MRL	2	16.7	1	16.7	2	15.4	15	14.9	14	22.2	1	6.3
Samples with multiple residues all below MRL	6	50	2	33.3	3	23.1	23	22.8	11	17.5	1	6.3
Samples with at least 1 MRL exceedance	0	0	0	0	2	15.4	1	1	1	1.6	1	6.3
Number of detections	27		7		21		120		53		7	
Average detections per sample	2.25		1.17		1.62		1.19		0.8		0.44	
Percentage is % of samples from this region												

Active substances detections over time with WHO1a/1b and PAN HHP designation

Active	2018	2019	2020	2021	2022	2023	Total	WHO 1a, 1b	PAN HHP	Comments
Fludioxonil	73	67	56	52	59	62	369	No	No	
Boscalid	68	55	51	39	43	43	299	No	No	
Imazalil	37	36	30	21	27	29	180	No	Yes	
Spinosad	13	7	11	17	7	29	84	No	Yes	Includes A and B forms
Dithiocarbamates	44	29	33	30	18	26	180	No	No	
Pyraclostrobin	28	26	27	13	12	25	131	No	No	
Acetamiprid	20	20	24	22	18	23	127	No	No	
Azoxystrobin	48	42	41	30	32	23	216	No	No	
Pyrimethanil	33	46	32	25	34	23	193	No	No	
Thiabendazole	21	20	21	19	18	22	121	No	Yes	Added to PAN HHP in 2021
Fluopyram	27	26	33	29	25	21	161	No	No	
Dimethomorph	7	7	8	9	6	20	57	No	No	Includes E and Z forms
Difenoconazole	16	26	21	15	20	16	114	No	No	
Tebuconazole	17	13	14	13	5	16	78	No	Yes	
Cyprodinil	32	29	27	18	24	15	145	No	No	
Propamocarb	12	12	13	11	13	15	76	No	No	
Chlorantraniliprole	15	19	10	12	10	12	78	No	Yes	
Mandipropamid	11	12	10	10	11	12	66	No	No	
Lambda-cyhalothrin	19	20	9	4	8	11	71	No	Yes	
Deltamethrin	9	11	8	13	9	10	60	No	Yes	
Fosetyl-Al		22	6	4	9	10	51	No	No	
cis-1,2,3,6-Tetrahydrophthalimide				13	12	8	33	No	No	
Ethephon	11	4	7	7	5	8	42	No	No	
Imidacloprid	21	12	7	6	2	8	56	No	Yes	
Fenhexamid	23	20	11	15	15	7	91	No	Yes	Added to PAN HHP in 2021
Cyantraniliprole		3	6	5	7	6	27	No	No	
2-Phenylphenol	5	10	7	4		5	31	No	No	
Benzalkonium chloride C12					2	5	7	No	No	
Indoxacarb	9	7	11	2	3	5	37	No	Yes	
Methoxyfenozide	8	3	6	2	5	5	29	No	No	
Myclobutanil	9	10	10	5	4	5	43	No	No	
Phthalimide	4			2	2	5	13	No	No	
Trifloxystrobin	9	14	9	9	9	5	55	No	No	
Bifenthrin	9	4	4	2	1	4	24	No	Yes	
Carbendazim	7	6	5	1		4	23	No	Yes	
Clothianidin		1	2		1	4	8	No	Yes	
Copper	17	9	13	2	1	4	46	No	No	
Flupyradifurone		1	5	4	3	4	17	No	Yes	

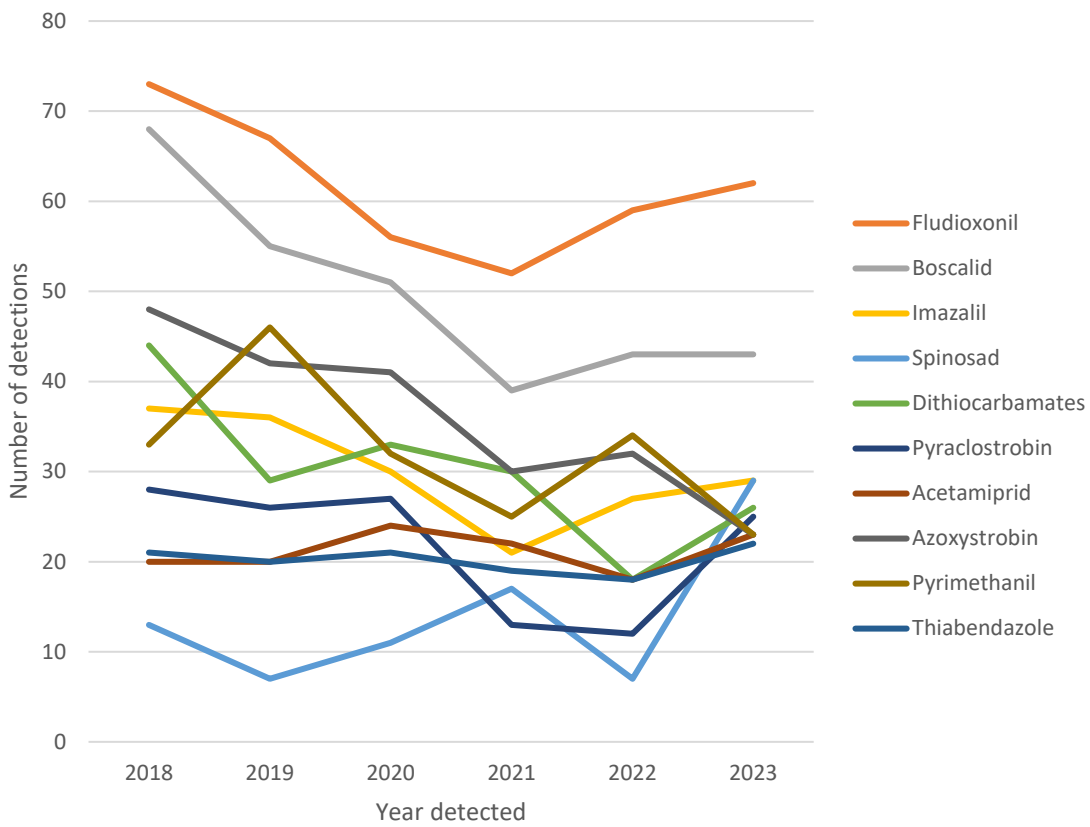
Metalaxyl	9	4	4	9	5	4	35	No	No	
Metrafenone	4	9	5	7	6	4	35	No	No	
Pirimicarb	6	4	1	1		4	16	No	Yes	
Pyriproxyfen	4	5	9	9	4	4	35	No	No	
Spirotetramat	6	2	5	3	5	4	25	No	No	
Sulfoxaflor				1	2	4	7	No	Yes	
Benzalkonium chloride C16					4	3	7	No	No	
Chlormequat				1	6	3	10	No	No	
Fluopicolide	4	1	3	10	5	3	26	No	No	
Fluxapyroxad	4	2	1	6	9	3	25	No	No	
Hexythiazox	1	3	1	3	2	3	13	No	Yes	
Isopyrazam	2	1	4	2	2	3	14	No	Yes	
Spinetoram	1	4	3	2		3	13	No	Yes	
Tau-Fluvalinate					1	3	4	No	Yes	
Biphenyl					1	2	3	No	Yes	
Chlorates			13	5	1	2	21	No	No	
Chloridazon			1	5	4	2	12	No	No	
Cyazofamid		2	2		1	2	7	No	No	
Cypermethrin	22	10	8	3	3	2	48	No	Yes	
Desthio-prothioconazole						2	2	No	No	
Flubendiamide						2	2	No	Yes	
Flutriafol	3	3	1	1	2	2	12	No	No	
Kresoxim-methyl	1	1	1		2	2	7	No	Yes	
Maleic hydrazide	1			1	1	2	5	No	No	
Penconazole	4	3	1	2	3	2	15	No	No	
Perchlorate				3	3	2	8	No	No	
Piperonyl butoxide	2	2	2	1	1	2	10	No	No	
Profenofos					1	2	3	No	Yes	
Spiromesifen	3	1	2	2	4	2	14	No	No	
Tetraconazole	2		1	1	1	2	7	No	Yes	Added to PAN HHP in 2021
Triallate	3		1	2	1	2	9	No	Yes	
Aclonifen		4	3	6	2	1	16	No	No	
Ametoctradin		1	2	3	3	1	10	No	No	
Atrazine						1	1	No	No	
Azadirachtin		1			1	1	3	No	No	
Bifenazate	5	3	2	4	1	1	16	No	No	
Bupirimate	6	2			1	1	10	No	No	
Buprofezin	5	2				1	8	No	No	
Captan	24	14	11	19	4	1	73	No	Yes	Added to PAN HHP in 2021
Chlorfenapyr						1	1	No	Yes	
Cyflufenamid					3	1	4	No	No	
Dodine				2	2	1	5	No	Yes	
Famoxadone	2	2	1	1	4	1	11	No	No	
Fenpyroximate	1	1		6	5	1	14	No	Yes	
Fenvalerate				1	1	1	3	No	Yes	
Fipronil						1	1	No	Yes	
Isoprothiolane						1	1	No	No	

Lufenuron		1				1	2	No	Yes	
Metaflumizone		1		1		1	3	No	Yes	
Novaluron						1	1	No	No	
Propyzamide		1	1	1	3	1	7	No	No	
Proquinazid		1	1	2	2	1	7	No	No	
Prosulfocarb	3	1	4	1		1	10	No	No	
Pyrethrins	3			1		1	5	No	Yes	Added to PAN HHP in 2021
Pyridaben	1			2		1	4	No	Yes	
Spirodiclofen	4	3		3	1	1	12	No	Yes	
Spiroxamine	2				2	1	5	No	No	
Tebufenozide	1			1	1	1	4	No	No	
Thiamethoxam	4	5	3		1	1	14	No	Yes	
2,4,6-Trichlorophenol			1	1			2	No	No	
2,4-D			1				1	No	Yes	Added to PAN HHP in 2021
Abamectin	2	1	1	1			5	WHO 1b	Yes	
Acephate	2		1				3	No	Yes	
Benfluralin	1						1	No	No	
Bromuconazole					2		2	No	No	
Chlorothalonil	5	8	4	5			22	No	Yes	
Chlorpropham	7	4	1		1		13	No	Yes	Added to PAN HHP in 2021
Chlorpyrifos	6	3	2		1		12	No	Yes	
Chlorpyrifos-methyl	3	4					7	No	Yes	
Clofentezine	1				1		2	No	No	
Cyflumetofen					1		1	No	No	
Cyfluthrin	2		3				5	WHO 1b	Yes	
Cymoxanil				1			1	No	No	
Cyromazine	9	2	2				13	No	No	
DDT					1		1	No	Yes	
Diazinon			2				2	No	Yes	
Didecyldimethyl-ammonium chloride					3		3	No	No	
Dieldrin	1		1				2	No	No	
Dimethoate		1		1			2	No	Yes	
Emamectin				1			1	No	Yes	
Emamectin benzoate	3	1	1				5	No	Yes	
Ethirimol	3						3	No	Yes	
Ethylene oxide				2			2	No	Yes	
Etofenprox	6	2	1	2	1		12	No	Yes	
Etoxazol	1	3					4	No	No	
Fenamidone	1						1	No	No	
Fenazaquin	2						2	No	Yes	
Fenbuconazole	2	3			1		6	No	Yes	Added to PAN HHP in 2021
Fenpropathrin				1			1	No	Yes	
Fenpropidin				1	2		3	No	No	
Fenpropimorph	1	1	1	2	3		8	No	No	
Fenpyrazamine			1	2	1		4	No	No	

Flonicamid	1		1	3	1		6	No	No
Flufenoxuron					1		1	No	Yes
Folpet		1					1	No	Yes
Fosetyl				4			4	No	No
Furmecyclox					1		1	No	No
Glyphosate				1			1	No	Yes
Iprodione	7	2	1				10	No	Yes
Iprovalicarb			1				1	No	Yes
Linuron	10	7					17	No	Yes
Malathion	1	1	1	1			4	No	Yes
Mepanipyrim		2		2			4	No	Yes
Mepiquat					2		2	No	No
Methamidophos	2			1			3	WHO 1b	Yes
Methiocarb	1	1					2	WHO 1b	Yes
Metribuzin			1				1	No	Yes
Nicotine		1					1	WHO 1b	Yes
Omethoate		1					1	WHO 1b	Yes
p,p'-DDE					1		1	No	No
Pendimethalin	9	3	6	6	4		28	No	Yes
Penthiopyrad			1		2		3	No	No
Perchlorates			6				6	No	No
Phenmedipham		1	1	3			5	No	No
Phosmet	4	1		2	1		8	No	Yes
Phosphorous Acid					5		5	No	No
Prochloraz	6	4	2	1	2		15	No	No
Propiconazole		6	3	2	2		13	No	Yes
Prothioconazole	1	2	1				4	No	No
Pymetrozine	4	5					9	No	Yes
Pyridalyl		1	1	1	1		4	No	Yes
Quinoxifen	2	1	2				5	No	Yes
Quizalofop					1		1	No	Yes
Tebufenpyrad	1	1			1		3	No	No
Teflubenzuron		2	1				3	No	No
TFNA				1			1	No	No
Thiacloprid	16	14	10				40	No	Yes
Thiophanate-methyl		1					1	No	Yes
Tolfenpyrad		1					1	No	Yes
Triadimenol	1	1	1				3	No	Yes
Zoxamide				1			1	No	No
TOTAL	949	842	748	668	640	665	4512	6	82

		2021	2022	2023
Actives substances	No. Actives detected	101	109	97
	WHO 1a 1b	2	0	0
	PAN HHP	44	40	39

Ten most detected active substances over time



Ten most detected active substances and the product detected in

Active substance	Apples	Apricots	Avocado	Baby leaves	Bananas	Beans with pod	Blackberries	Blueberries	Broccoli	Brussel sprouts	Butternut squash	Cabbage	Carrots	Cherries	Clementines	Coriander	Cucumber	Grapefruit	Kale	Kiwi Fruit	Lemons	Lettuce	Mandarins	Mangoes	Melons	Mint	Nectarines	Oranges	Paprika	Parsnips	Pears	Peas with pod	Pineapples	Plums	Potatoes	Pumpkin seeds	Raisins	Raspberries	Rocket	Rosemary	Spice mix	Spinach	Strawberries	Sweet Peppers	Sweet Potatoes	Table Grapes	Tangerine	Tomatoes	Grand Total
Fludioxonil	7						3	3					1	2	1	1				2			3	7			1	3			4		7	2							1	1	2	4		1	62		
Boscalid	3	1		1	3	1	3	4		1			2	2		1			2										1	2	2		1				1		2		1			7			43		
Imazalil															1			5			5		7		2			8																1			29		
Dithiocarbamates					1		1		1	1		1						2			2	1		1				2			2			1						3			1	4		1	26		
Pyraclostrobin	2	1					2	3										2	2		2							2	1		2				1							1			1		25		
Acetamiprid	3	1					4	2					2										1			1		1	1		1							1			1		2	1		23			
Azoxystrobin					6	1	1	1		1						1								1					1	2			1					1			5					23			
Primethanil	5						2	1													2		3					3			2												3	1		23			
Thiabendazole			2															5			4		4	1				6																		22			
Spinosad (Spinosyn A & D)		3					3	3									3																								2			6	6	10			
Grand Total	20	6	2	1	#	2	19	17	1	2	1	1	3	6	2	3	3	14	4	2	15	1	18	10	2	1	1	25	4	4	11	2	7	4	1	1	8	3	8	1	2	6	6	5	2	26	4	8	305

Exceedances

2023 exceedances details

There were 10 exceedances in 2023. Five of these exceedances were active substances that are on the PAN HHP list: Imazalil, Thiabendazole, Tetraconazole, Dodine, Fipronil.

Date sampled	Crop or Crop Group	Country	Pesticide	Level Found (mg/kg)	UK MRL (mg/kg)	EU MRL (mg/kg)	Comments
26/01/2023	Bananas	Ghana	Boscalid	0.709	0.60	0.6	
14/02/2023	Lemons	Spain	Imazalil	7.07	5.00	5	
14/02/2023	Pumpkin seeds	Unspecified	Pyraclostrobin	0.06	0.02	0.02	
14/02/2023	Grapefruit	Israel	Imazalil	4.09	4.00	4	
14/03/2023	Mangoes	Peru	Thiabendazole	0.034	0.01	5	Note divergence of EU and GB MRL
14/03/2023	Strawberries	Morocco	Tetraconazole	0.271	0.20	0.01	Isomer F has 0.15 MRL in EU
25/05/2023	Lemons	South Africa	Buprofezin	0.011	0.01	0.01	
28/07/2023	Raspberries	UK	Dodine	0.096	0.01	0.01	
27/09/2023	Pineapples	Costa Rica	Novaluron	0.016	0.01	0.01	
30/11/2023	Spinach	Spain	Fipronil	0.01	0.01	0.005	

Blue shading indicates active that is on the PAN HHP list.

2022 exceedances details

There were 7 exceedances in 2022. Three of these exceedances were active substances that are on the PAN HHP list: Chlorpropham, Deltamethrin, Chlorpyrifos.

Date sampled	Crop or Crop Group	Country	Pesticide	Level Found (mg/kg)	UK MRL	EU MRL	Comments
21-Dec-22	Rocket	Spain	Acetamiprid	3.33	3	3	
17-Mar-22	Shallots	UK	Chlorpropham	0.02	0.05	0.01	Note divergence of UK and EU MRL. This was an EU exceedance.
22-Jun-22	Spinach	UK	Deltamethrin	0.03	0.01	0.01	
24-Feb-22	Cherries	Unspecified	Fosetyl-Al	7.83	2	2	The two exceedances in cherries were from the same sample.
24-Feb-22	Cherries	Unspecified	Phosphorous Acid	5.8	2	2	
22-Dec-22	Table Grapes	Namibia	Ethephon	1.72	1	1	
22-Jun-22	Mandarins	UK	Chlorpyrifos	0.01	0.01	0.01	

Blue shading indicates active that is on the PAN HHP list.

2021 exceedances details

Date sampled	Crop or Crop Group	Country	Pesticide	Level Found (mg/kg)	UK MRL
15/06/2021	Raspberries	UK	Flonicamid	0.06	0.03
27/08/2021	Bread	Unspecified	Ethylene oxide	0.083	0.02
27/08/2021	Cumin	France	Ethylene oxide	1.3	0.1
03/09/2021	Asparagus	Mexico	TFNA	0.076	0.03
04/09/2021	Dwarf beans	Egypt	Fosetyl-Al	2.56	2
24/09/2021	Coriander	UK	Propyzamide	0.29	0.2
02/11/2021	Mixed berries	Mexico	Dimethoate	0.05	0.01
02/11/2021	Mixed berries	Mexico	Methamidophos	0.02	0.01
08/11/2021	Garlic	Spain	Prochloraz	0.18	0.03
11/11/2021	Blackberries	UK	Cyantraniliprole	0.02	0.01

Blue shading indicates active that is on the PAN HHP list.

2020 exceedances details

Date sampled	Crop or Crop Group	Country	Pesticide	Level Found	MRL	Comments
03-Mar-20	Lettuce		Chlorates	0.024	0.01	Chlorates MRL 0.7 from 28/06/2020
03-Mar-20	Lettuce		Chlorates	0.197	0.01	Chlorates MRL 0.7 from 28/06/2020
31-Mar-20	Baby Leaf Spinach	Italy	Chlorates	0.015	0.01	Chlorates MRL 0.7 from 28/06/2020
31-Mar-20	Butternut squashes	Brazil	Imazalil	0.08	0.05	
31-Mar-20	Blackberries	Mexico	Iprodione	0.05	0.01	
31-Mar-20	Cauliflower	UK	Chlorates	0.088	0.01	Chlorates MRL 0.06 from 28/06/2020
31-Mar-20	Rocket	Italy	Chlorates	0.244	0.01	Chlorates MRL 0.7 from 28/06/2020
06-Aug-20	Parsley	UK	Dithiocarbamates	6.2	5	
07-Sep-20	Cherries	UK	Fosetyl-aluminium	9.2	2	Environmental contaminant
02-Oct-20	Avocados	Dominican Republic	Chlorothalonil	0.06	0.01	
02-Oct-20	Pea with pod	Kenya	Famoxadone	0.02	0.01	
29-Oct-20	Ginger Root	Brazil	Clothianidin	0.07	0.01	
23-Dec-20	Blackberries	Mexico	Dithiocarbamates	0.06	0.05	

2019 exceedances details

Date sampled	Crop or Crop Group	Country	Pesticide	Level Found	MRL	Comments
29-Jan-19	Basil	Kenya	Dithiocarbamates	10	5	
28-Feb-19	Raspberries	Zimbabwe	Nicotine	0.03	0.01	Environmental contaminant
28-Feb-19	Blueberries	Morocco	Fosetyl-aluminium	28.3	2	
28-Feb-19	Pea with pod	Guatemala	Omethoate	0.02	0.01	
29-Mar-19	Basil	Jordan	Lufenuron	0.21	0.02	
29-Mar-19	Basil	Jordan	Tolfenpyrad	0.03	0.02	
28-May-19	Butternut squashes	South Africa	Fludioxonil	0.34	0.3	
01-Aug-19	Passion Fruit	Colombia	Difenoconazole	0.11	0.1	
30-Aug-19	Plums	UK	Fosetyl-aluminium	7.11	2	Environmental contaminant
30-Aug-19	Pea with pod	Peru	Dithiocarbamates	1.5	1	
02-Oct-19	Passion Fruit	Colombia	Fosetyl-aluminium	2.2	2	Environmental contaminant
04-Dec-19	Mandarins	Turkey	Buprofezin	0.05	0.01	

2018 exceedances details

Date sampled	Crop or Crop Group	Country	Pesticide	Level Found	MRL	Comments
26-Feb-18	Mint	Kenya	Spiromesifen	0.18	0.02	
28-Mar-18	Blackberries	Mexico	Acephate	0.22	0.01	
28-Mar-18	Bean with pod	Kenya	Acephate	0.06	0.01	
28-Mar-18	Bean with pod	Kenya	Methamidophos	0.03	0.01	
28-Mar-18	Basil	Kenya	Spiromesifen	0.06	0.02	
28-Aug-18	Mint	Kenya	Dithiocarbamates	14	5	
25-Oct-18	Blackberries	Guatemala	Famoxadone	0.02	0.01	
25-Oct-18	Figs	Israel	Cyromazine	0.09	0.05	
27-Nov-18	Head Cabbage	UK	Prothioconazole	0.16	0.09	
27-Nov-18	Pomegranates	Turkey	Acetamiprid	0.04	0.01	

Further data

Further data can be found on our [crop protection page](#).