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#### Waitrose Pesticide Residue Testing Report: 2020 to 2023

At Waitrose we undertake an extensive independent pesticide testing program for fresh produce to ensure that it meets legislative requirements. This compliments the programs we have with our suppliers and growers worldwide to ensure the rational use of pesticides, Integrated Pest Management (IPM) and compliance with our pesticide policy.

Our testing program is conducted on the full range of fresh produce from around the world by accredited laboratories. Our laboratories independently take samples from products in our shops for analysis from an agreed annual program. Waitrose has no influence on which particular samples are taken.

The results of the last four years analysis data is summarised as below;

- I. Number of Tests per Product
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#### **Definitions:**

- MRL Maximum Residue Limit, the maximum level of a pesticide residue allowed by law in a product. Based on usage following Good Agricultural Practice.
- LOD Limit of Determination, the lowest level at which a pesticide can be reliably detected.

#### Published 2024



#### I. Number of Tests per Product

Product	2020	2021	2022	2023			
Apple	21	24	25	11			
Apricot	2	1	5	2			
Artichoke	1	2	3				
Asparagus	4	6	5	4			
Avocado	3	3	6	2			
Baby Corn	3	1	2	-			
Banana	10	4	3	1			
Beans	8	10	12	8			
Beetroot	2	1	1	-			
Blackberry	3	3	5	4			
Blueberries	7	10	11	6			
Broccoli	6	7	4	3			
Brussel Sprouts	1	3	5	3			
Cabbage	6	4	4	3			
Carrot	6	12	12	6			
Cauliflower	5	3	5	3			
Cavolo	2	-	-	-			
Cavolo Nero	-	1	2	-			
Celery	6	3	4	2			
Chard	2	1	2	1			
Cherries	6	7	7	3			
Chicory	3	3	4	3			
Chillies	-	-	-	1			
Chinese leaf	-	1	2	-			
Clementine	3	2	-	1			
Courgettes	5	6	5	5			
Cranberry	1	2	2	2			
Cucumber	7	4	4	3			
Dates	2	-	-	-			
Dragon Fruit	-	1	-	-			
Figs	-	3	4	2			
Garlic	1	2	3	-			
Gooseberries	1	1	2	1			
Grapes	13	12	17	8			
Greengage	-	-	-	1			
Horseradish	1	1	1	1			
Kale	5	5	1	2			
Kiwi fruit	5	5	6	4			
Leaf Greens	1	2	1	1			
Leeks	6	5	4	3			
Lemon	5	6	4	2			
Lettuce	9	9	8	3			

Product	2020	2021	2022	2023			
Lime	4	2	4	2			
Lychees	2	1	1	-			
Mandarin	2	2	-	-			
Mangetout pea	1	-	3	2			
Mango	5	7	6	1			
Melon	1	2	4	1			
Mushrooms	10	9	14	10			
Nectarine	5	3	8	3			
Okra	-	-	1	1			
Onion	12	12	10	4			
Orange	4	9	8	6			
Pak Choi	2	2	2	1			
Papaya	1	1	-	-			
Parsnip	4	5	6	6			
Passionfruit	2	1	3	1			
Peach	1	4	3	4			
Pears	12	12	11	7			
Peas	2	3	1	-			
Peppers	14	5	5	5			
Persimmon	1	1	1	1			
Physalis	-	-	-	1			
Pineapple	2	1	2	2			
Plum	6	8	6	5			
Plums	1	-	-	-			
Pomegranate	2	-	-	-			
Potato	26	22	23	13			
Radish	3	3	2	4			
Raspberries	8	9	/	3			
Redcurrants	-	2	-	1			
Rnubarb	1	2	2	1			
Salad cross	-	1	1	-			
Salau Cress	5	-	8	- 2			
Shallots	1	5	1	2			
Sharon Fruit	-		1				
Sninach	Δ	Δ	4	2			
Squash	5	1	4	1			
Strawberries	7	10	7	5			
Sugar Snap Peas	1	4	2	3			
Swede	-	-	-	1			
Sweetcorn	4	7	4	3			
Swiss Chard	1	-	-	-			
Tangerine	2	3	4	4			



Product	2020	2021	2022	2023
Tat Soi	1	2	1	1
Tomatoes	15	17	18	13
Turmeric	-	1	1	-
Turnip	-	3	-	1
Watermelon	-	2	1	-
Grand Total	352	362	382	226

For the explanation of numbers of tests carried out per year please see the relevant comments in Sections 12. Summary and Conclusions



### 2. Tests by Country of Origin

Country of origin	2020	2021	2022	2023			
Argentina	2	3	4	2			
Belgium	4	2	3	3			
Brazil	5	6	13	5			
Burkina-Faso	-	1	-	-			
Chile	6	13	8	2			
China	-	-	1	-			
Colombia	1	1	1	3			
Costa Rica	2	2	2	2			
Cyprus	1	-	2	-			
Dominican Rep.	3	2	2	1			
Egypt	7	7	6	8			
Ethiopia	1	-	-	-			
France	4	5	5	3			
Gambia	1	-	-	-			
Germany	-	1	-	-			
Ghana	4	-	-	-			
Greece	5	-					
Guatemala	-	1	1	-			
Honduras	-	-	2	-			
Hungary	1	1	1	1			
India	1	1	4	-			
Indonesia	-	-	1	-			
Israel	3	2	3	-			
Italy	14	13	10	11			
Jersey		1	2	-			
Jordan	1	1	-	-			
Kenya	2	4	6	6			
Mexico	2	3	-	2			
Morocco	10	10	9	12			
Namibia	-	1	-	-			
Netherlands	13	11	10	6			
New Zealand	4	5	3	-			
Panama	1	-	1	-			
Peru	12	11	14	9			
Portugal	3	2	5	2			
Saint Lucia	1	1	-	-			
Senegal	4	4	4	3			



Country of origin	2020	2021	2022	2023
South Africa	26	30	40	19
Spain	66	62	65	43
St Lucia	-	-	1	-
Thailand	-	1	-	-
Turkey	-	1	2	1
UK	134	144	140	78
USA	2	3	4	3
Vietnam	2	3	2	1
Zambia	-	-	1	-
Zimbabwe	1	-	1	-
Unspecified	3	-	-	-
Grand Total	352	362	382	226

#### 3. Residue Statistics - Summary

All countries	2020	2020 (%)	2021	2021 (%)	2022	2022 (%)	2023	2023 (%)
Number of samples	352	N/A	362	N/A	382	N/A	226	N/A
Samples with zero residues	161	46%	185	51%	188	49%	106	47%
Samples with I residue below MRL	0	0	57	16%	81	21%	50	22%
Samples with multiple resides below MRL	190	54%	120	33%	111	29%	67	30%
Samples with at least I MRL exceedance	I	<1%	0	0%	2	1%	3	١%
Number of detections	426	N/A	220	N/A	357	N/A	241	N/A
Average detections per sample	1.2	N/A	0.6	N/A	0.9	N/A	1.0	N/A



United Kingdom	2020	2020 (%)	2021	2021 (%)	2022	2022 (%)	2023	2023 (%)
Number of samples	134	N/A	144	N/A	140	N/A	78	N/A
Samples with zero residues	76	57%	88	61%	86	61%	45	58%
Samples with I residue below MRL	-	-	25	17%	32	23%	19	24%
Samples with multiple resides below MRL	57	43%	31	22%	56	40%	13	17%
Samples with at least I MRL exceedance	I	<1%	-	-	I	<1%	I	١%
Number of detections	58	-	56	-	89	-	33	-
Average detections per sample	0.4	4 - 0.3		-	0.6	-	0.4	-

### 4. Residue Statistics - Split by Region

Europe	2020	2020 (%)	2021	2021 (%)	2022	2022 (%)	2023	2023 (%)	
Number of samples	109	N/A	99	N/A	100	N/A	68	N/A	
Samples with zero residues	41	38%	43	43%	45	45%	33	48%	
Samples with I residue below MRL	-	-	14	14%	20	20%	14	21%	
Samples with multiple resides below MRL	68	62%	42	42%	35	35%	21	31%	
Samples with at least I MRL exceedance	-	-	-	-	-	-	-	-	
Number of detections	68	-	56	-	55	-	68	-	
Average detections per sample	0.6	6 - 0.5		-	0.6	-	I	-	

Rest of World	2020	2020 (%)	2021	2021 (%)	2022	2022 (%)	2023	2023 (%)	
Number of samples	109	N/A	119	N/A	142	N/A	80	N/A	
Samples with zero residues	44	40%	54	45%	60	42%	28	35%	
Samples with I residue below MRL	-	-	18	15%	29	20%	17	21%	
Samples with multiple resides below MRL	65	60%	47	40%	52	37%	33	41%	
Samples with at least I MRL exceedance	-	-	-	-	I	<1%	2	3%	
Number of detections	65	-	65	-	82	-	78	-	
Average detections per sample	0.5	- 0.5		-	0.5	-	I	-	



### 5. Residue Statistics - Split by Product

		20	20		2020 Total	2021			2021 Total	2022				2022 Total	2023			2023 Total		
Product Description	Not Detected	Single Residue	Multiple Residues	MRL Exceedance		Not Detected	Single Residue	Multiple Residues	MRL Exceedance		Not Detected	Single Residue	Multiple Residues	MRL Exceedance		Not Detected	Single Residue	Multiple Residues	MRL Exceedance	
Apple	4		17		21	4	7	13		24	1	8	16		25	3	2	6		11
Apricot	1		1		2	1				1		2	3		5	1		1		2
Artichoke	1				1	1		1		2	3				3					
Asparagus	4				4	6				6	4		1		5	4				4
Avocado	1		2		3		2	1		3	4	1	1		6	1		1		2
Baby Corn	3				3	1				1	2				2					
Banana	3		7		10	2		2		4	1		2		3			1		1
Beans	3		3		6	5	2	3		10	9	1	2		12	5		3		8
Beetroot	2				2	1				1	1				1					
Blackberry			3		3	2		1		3	1	1	3		5	3		1		4
Blueberries	3		4		7	6	2	2		10	3	4	4		11	3	2	1		6
Broccoli	2		4		6	6		1		7	3		1		4	2	1			3
Brussel Sprouts			1		1	2		1		3	2	2	1		5	1	1	1		3
Cabbage	5		1		6	3		1		4	4				4	3				3
Carrot	4		2		6	7	3	2		12	10	1	1		12	3	2	1		6
Cauliflower	2		3		5	2	1			3	5				5	3				3
Cavolo			2		2															
Cavolo Nero						1				1		1	1		2					
Celery	3		3		6	1		2		3	2	2			4	2				2
Chard	1		1		2			1		1	1		1		2	1				1



		20	20		2020 Total	020 2021 otal			2021 Total	2022			2022 Total	2 2023			2023 Total			
Product Description	Not Detected	Single Residue	Multiple Residues	MRL Exceedance		Not Detected	Single Residue	Multiple Residues	MRL Exceedance		Not Detected	Single Residue	Multiple Residues	MRL Exceedance		Not Detected	Single Residue	Multiple Residues	MRL Exceedance	
Cherries			6		6	1	2	4		7		2	5		7		2	1		3
Chicory	1		2		3	3				3	1	3			4	2		1		3
Chillies																	1			1
Chinese leaf						1				1	2				2					
Clementine			3		3			2		2								1		1
Courgettes	2		3		5	4	1	1		6	5				5	4	1			5
Cranberry	1				1	2				2	1	1			2	1	1			2
Cucumber	3		4		7	2	1	1		4	2	2			4	1	1	1		3
Dates	2				2															
Dragon Fruit						1				1										
Easy Peelers			3		3	1		2		3	1		6		7			1		1
Figs						3				3	4				4	2				2
Garlic	1				1		1	1		2	3				3					
Gooseberries			1		1			1		1			2		2			1		1
Grapes	2		11		13	2	2	8		12	6	2	9		17	2	1	5		8
Green Beans	1		1		2															
Greengage																	1			1
Horseradish	1				1	1				1	1				1	1				1
Kale	2		2		4	3		2		5			1		1			1	1	2
Kalettes			1		1															
Kiwi fruit	4		1		5	3	1	1		5	6				6	3	1			4
Leaf Greens			1		1		1	1		2			1		1	1				1



		20	20		2020 Total			2021 Total	2022			2022 Total	2023			2023 Total				
Product Description	Not Detected	Single Residue	Multiple Residues	MRL Exceedance		Not Detected	Single Residue	Multiple Residues	MRL Exceedance		Not Detected	Single Residue	Multiple Residues	MRL Exceedance		Not Detected	Single Residue	Multiple Residues	MRL Exceedance	
Leeks	4		2		6	4		1		5	4				4	2	1			3
Lemon	1		4		5	2		4		6		1	3		4			2		2
Lettuce	6		3		9	5	1	3		9	5	2	1		8	3				3
Lime			4		4	1	1			2	2		2		4	1			1	2
Lychees	2				2	1				1	1				1					
Mandarin			2		2			2		2										
Mangetout pea			1		1						1	1	1		3			2		2
Mango	1		4		5	4	2	1		7	1	4	1		6		1			1
Melon			1		1		1	1		2		2	2		4		1			1
Mushrooms	9		1		10	7	1	1		9	9	3	1	1	14	6	4			10
Nectarine			5		5	1	1	1		3	2	4	2		8		3			3
Okra											1				1	1				1
Onion	11		1		12	11	1			12	10				10	4				4
Orange	1		3		4	2		7		9		1	7		8	2	1	3		6
Pak Choi	1			1	2	1		1		2	2				2	1				1
Рарауа	1				1	1				1										
Parsnip	4				4	5				5	2	3	1		6	4	1	1		6
Passionfruit	2				2		1			1	1	1	1		3			1		1
Peach	1				1	1		3		4	1		2		3			4		4
Pears	2		10		12	3	2	7		12	1	2	8		11	2	1	4		7
Peas	2				2	1	1	1		3	1				1					
Peppers	10		4		14	3	1	1		5	4		1		5	3	1	1		5



		20	20		2020 Total		20	21		2021 Total		20	22		2022 Total		20	23		2023 Total
Product Description	Not Detected	Single Residue	Multiple Residues	MRL Exceedance		Not Detected	Single Residue	Multiple Residues	MRL Exceedance		Not Detected	Single Residue	Multiple Residues	MRL Exceedance		Not Detected	Single Residue	Multiple Residues	MRL Exceedance	
Persimmon	1				1	1				1	1				1	1				1
Physalis																		1		1
Pineapple			2		2		1			1		2			2		2			2
Plum	2		4		6	1	1	6		8	2	2	2		6	1		4		5
Plums			1		1															
Pomegranate			2		2															
Potato	16		10		26	15	6	1		22	12	11			23	6	7			13
Radish	2		1		3	1	1	1		3	1	1			2	1	3			4
Raspberries	3		5		8	5	2	2		9	5	1	1		7	1	1	1		3
Redcurrants								2		2								1		1
Rhubarb	1				1	2				2	2				2	1				1
Romanesco						1				1	1				1					
Salad cress												1			1					
Satsuma			2		2								1		1			1		1
Shallots	1				1						1				1					
Sharon Fruit											1				1					
Spinach			4		4	1		3		4	1	1	2		4	2				2
Squash	5				5	1				1	3	1			4	1				1
Strawberries			7		7	2	1	7		10	2	3	2		7	1	1	3		5
Sugar Snap Peas	1				1	3	1			4	1			1	2		1	1	1	3
Swede																1				1
Sweetcorn	3		1		4	6		1		7	4				4	3				3



		20	20		2020 Total		20	21		2021 Total		20	22		2022 Total		20	23		2023 Total
Product Description	Not Detected	Single Residue	Multiple Residues	MRL Exceedance		Not Detected	Single Residue	Multiple Residues	MRL Exceedance		Not Detected	Single Residue	Multiple Residues	MRL Exceedance		Not Detected	Single Residue	Multiple Residues	MRL Exceedance	
Swiss Chard			1		1															
Tangerine			2		2			3		3			4		4			4		4
Tat Soi	1				1	1	1			2	1				1	1				1
Tomatoes	5		10		15	11	1	5		17	12	1	5		18	4	4	5		13
Turmeric						1				1	1				1					
Turnip							3			3						1				1
Watermelon						2				2	1				1					
Grand Total	161	0	190	1	352	185	57	120	0	362	188	81	111	2	382	106	50	67	3	226

#### 6. Exceedance Details

From 2020 to 2023 a total of 6 pesticide residues were found to be above the MRL, which equates to 0.45% of all tests

#### 2020 Exceedance details

Date sample	Crop or Crop Group	Country	Pesticide	Level found mg/kg	<b>MRL</b> mg/kg		
September 2020	Pak Choi	United Kingdom	Cyantra- niliprole	0.019	0.01		
Actions	The grower had applied this pesticide to the crop early in the season and testing conducted identified no issues. Corrective actions were to carry out more testing at a later stage in the growing cycle or at point of harvest.						

#### 2021 Exceedance details

Date sample	Crop or Crop Group	Country	Pesticide	Level found mg/kg	<b>MRL</b> mg/kg	
NONE						

#### 2022 Exceedance details

Date sample	Crop or Crop Group	Country	Pesticide	Level found mg/kg	MRL mg/kg			
April 2022	Sugar snaps	Guatemala	Chlorotha- Ionil	0.25	0.01			
Actions	The UK MRL was reduced to LOD (0.01mg/kg). Due to earlier differences between the UK and EU LOD this caused some confusion with the grower. Subsequently this pesticide was removed by the grower from usage.							
October 2022	Mushrooms	United Kingdom	Fluazinam	0.03	0.01			
Actions	Pesticide was not applied to the crop suggesting cross contamination. The supplier's residue testing did not include Fluazinam and subsequently was not detected. The corrective action was to review the risk assessment and to ensure that this pesticide was included in future testing							



#### 2023 Exceedance details

Date sample	Crop or Crop Group	Country	Pesticide	Level found mg/kg	MRL mg/kg				
January 2023	Kale	United Kingdom	Propyzamide	0.02	0.01				
Actions	Supplier investigations showed that the issue was most likely to have been caused by spray drift. The corrective action was that the supplier reviewed risk assessments with the farm management.								
September 2023	Sugar snaps	Peru	Fipronil	0.08	0.005				
Actions	There was no history of the use of this pesticide on the farm. However a product called Xipronil was used on a neighbouring potato crop due to insect infestation (active ingredient is fipronil). Likely cause was spray drift from the neighbouring farm. The corrective actions were more training of farm management, increased visits by technical staff, updated risk assessment to further cover risk of spray drift from neighbouring farms, and the frequency of residue testing has been increased by the supplier								
September 2023	Limes	Brazil	Chlorfenapyr	0.02	0.01				
Actions	Pesticide detected was not part of the spray program for this crop, further testing conducted by the supplier showed no detections. The supplier has increased annual residue sampling. Investigations suggest that the cause was spray drift from a neighbouring farm, and that gaps in hedgerows were identified as potential root cause. Maintenance of field hedgerows and boundaries were increased to protect against possible spray drift.								

\* Not including residues from cleaning or water treatment chemicals

### 7. Summary of Pesticides Detected at over 50% of the MRL

From 2021 to 2023 a total of 13 pesticide residues were found to be above 50% of the MRL, which equates to 1.3% of all tests

SAMPLE DATE	CROP	соо	RESIDUE	<b>RESULT</b> mg/kg	<b>MRL</b> mg/kg	% of MRL
May 2021	Grapes	Chile	Phosmet	0.04	0.05	80%
May 2021	Beans	Italy	Dithio- carbamates	0.07	0.1	70%
September 2021	Oranges	South Africa	Imazalil	2.14	4	53%
January 2022	Tangerine	Turkey	Etoxazole	0.05	0.1	50%
May 2022	Grapes	Brazil	Etofenprox	3.56	4	89%
May 2022	Satsuma	South Africa	Imazalil	3.37	5	67%
August 2022	Orange	South Africa	Imazalil	2.34	4	58%
October 2022	Grapes	Brazil	Azoxystrobin	1.59	3	53%
November 2022	Cavolo Nero	UK	Triallate	0.06	0.1	60%
November 2022	Easy Peeler	South Africa	Imazalil	3.69	5	74%
December 2022	Orange	South Africa	Imazalil	2.86	4	71%
July 2023	Satsuma	South Africa	Imazalil	2.69	5	54%
October 2023	Orange	South Africa	Imazalil	3.30	4	82%



#### 8. Pesticide Residues Detected as a Percentage of the MRL

Over the 4 years from 2020 to 2024 the vast majority of pesticide residues detected (62%) were at less than 5% of the MRL. 17% were found between 5 and 10% of the MRL and 10% were found at 10 to 20% and 9% were found between 20 and 50%.

As illustrated in the sections above, 1.3% of all tests were found over 50% of the MRL whilst 0.45% of all tests were found above the MRL.

It should be noted that the MRL is not a safety limit but a legal maximum that should be achieved by carrying out Good Agricultural Practices in normal conditions.

### 9. Pesticide Active Ingredients Detected

Active	20	20	20	21	20	22	20	23
	N	(%)	N	(%)	N	(%)	N	(%)
I-Naphthylacetamide	I	0.2	0	0.0	0	0.0	0	0.0
I-Naphthylacetic	I	0.2	0	0.0	0	0.0	0	0.0
Acetamiprid	14	3.1	5	2.6	13	3.8	11	5.4
Ametoctradin	2	0.4	0	0.0	0	0.0	0	0.0
Azoxystrobin	22	4.9	8	4.1	25	7.3	18	8.8
Benzalkonium	3	0.7	0	0.0	0	0.0	0	0.0
Boscalid	38	8.5	27	13.8	34	9.9	17	8.3
Captan	19	4.2	0	0.0	0	0.0	0	0.0
Captan/THPI	4	0.9	0	0.0	0	0.0	0	0.0
Carbendazim	I	0.2	I	0.5	0	0.0	0	0.0
Benomyl	2	0.4	0	0.0	0	0.0	0	0.0
Chlorantraniliprole	2	0.4	6	3.1	6	1.8	I	0.5
Chlorothalonil	0	0.0	0	0.0	I	0.3	0	0.0
Chlorpropham	7	1.6	0	0.0	0	0.0	0	0.0
Chlorpyrifos	I	0.2	0	0.0	0	0.0	0	0.0
Clothianidin	I	0.2	0	0.0	0	0.0	0	0.0
Cyantraniliprole	I	0.2	0	0.0	0	0.0	0	0.0
Cyazofamid	I	0.2	0	0.0	0	0.0	4	2.0
Cyhalothrin	4	0.9	4	2.1	4	1.2	0	0.0
Cypermethrin	0	0.0	0	0.0	I	0.3	0	0.0
Cyprodinil	16	3.6	12	6.2	12	3.5	7	3.4
DDAC	2	0.4	I	0.5	0	0.0	0	0.0
Deltamethrin	2	0.4	0	0.0	5	1.5	2	1.0
Dialkyldimethylammonium	2	0.4	0	0.0	0	0.0	0	0.0
Difenoconazole	10	2.2	5	2.6	7	2.0	7	3.4
Dimethomorph	4	0.9	I	0.5	3	0.9	2	1.0
Dithiocarbamates	13	2.9	3	1.5	4	1.2	2	1.0
Dodine	3	0.7	0	0.0	0	0.0	0	0.0
Etofenprox	3	0.7	0	0.0	6	1.8	2	1.0

Active	20	20	20	21	20	22	20	23
	N	(%)	N	(%)	N	(%)	N	(%)
Fenhexamid	5	1.1	2	1.0	2	0.6	3	1.5
Fenpyrazamine	I	0.2	0	0.0	0	0.0	0	0.0
Fipronil	0	0.0	0	0.0	0	0.0	I	0.5
Flonicamid	2	0.4	0	0.0	0	0.0	I	0.5
Fludioxonil	44	9.8	25	12.8	61	17.8	31	15.2
Fluopicolid	4	0.9	0	0.0	0	0.0	0	0.0
Fluopyram	12	2.7	0	0.0	0	0.0	6	2.9
Flupyradifurone	4	0.9	0	0.0	0	0.0	0	0.0
Flutriafol	3	0.7	I	0.5	0	0.0	I	0.5
Fluxapyroxad	I	0.2	0	0.0	0	0.0	2	1.0
Imazalil	14	3.1	10	5.1	24	7.0	7	3.4
Imidacloprid	5	1.1	I	0.5	3	0.9	0	0.0
Indoxacarb	6	1.3	2	1.0	5	1.5	0	0.0
Isopyrazam	I	0.2	0	0.0	0	0.0	0	0.0
Malathion	0	0.0	0	0.0	I	0.3	2	1.0
Maleic	2	0.4	I	0.5	6	1.8	2	1.0
Mandipropamid	I	0.2	I	0.5	2	0.6	0	0.0
Mepanipyrim	I	0.2	I	0.5	0	0.0	0	0.0
Metalaxyl	3	0.7	2	1.0	0	0.0	0	0.0
Metalaxyl/Metalaxyl-M	3	0.7	2	1.0	0	0.0	0	0.0
Methoxyfenozide	2	0.4	0	0.0	I	0.3	0	0.0
Metrafenone	I	0.2	2	1.0	3	0.9	4	2.0
Myclobutanil	5	1.1	6	3.1	2	0.6	I	0.5
Pendimethalin	I	0.2	2	1.0	4	1.2	2	1.0
Penthiopyrad	2	0.4	0	0.0	0	0.0	0	0.0
Phosmet	2	0.4	I	0.5	0	0.0	0	0.0
Pirimicarb	0	0.0	2	1.0	2	0.6	I	0.5
Prochloraz	4	0.9	0	0.0	2	0.6	3	1.5
Propamocarb	15	3.3	8	4.1	8	2.3	6	2.9
Propiconazole	3	0.7	0	0.0	0	0.0	0	0.0

Active	2020		20	21	2022		2023		
	N	(%)	N	(%)	N	(%)	N	(%)	
Prothioconazole-desthio	0	0.0	0	0.0	0	0.0	I	0.5	
Pyraclostrobin	15	3.3	5	2.6	12	3.5	11	5.4	
Pyrimethanil	30	6.7	22	11.3	36	10.5	21	10.3	
Pyriproxyfen	5	1.1	2	1.0	5	1.5	3	1.5	
Spinosad	14	3.1	6	3.1	7	2.0	0	0.0	
Spiromesifen	I	0.2	0	0.0	I	0.3	2	1.0	
Spirotetramate	19	4.2	0	0.0	0	0.0	0	0.0	
Sulfoxaflor	2	0.4	0	0.0	0	0.0	2	1.0	
Tebuconazole	6	1.3	3	1.5	10	2.9	8	3.9	
Tebufenozide	I	0.2	0	0.0	0	0.0	0	0.0	
Thiabendazole	12	2.7	11	5.6	13	3.8	7	3.4	
Thiacloprid	7	1.6	I	0.5	0	0.0	0	0.0	
Thiamethoxam	I	0.2	0	0.0	0	0.0	0	0.0	
Triallate	I	0.2	I	0.5	3	0.9	I	0.5	
Trifloxystrobin	6	1.3	2	1.0	8	2.3	2	1.0	
Triflumizol/FM-6-1	I	0.2	0	0.0	0	0.0	0	0.0	
Triflumuron	2	0.4	0	0.0	0	0.0	0	0.0	
Total	449	100	195	100	342	100	204	100	

#### 10. Waitrose Pesticide Restricted List Detections 2020-2023

Waitrose Category	Number of Detections (Number of Pesticides)
Black List Pesticides Not to be used for crops destined to Waitrose	0 (0)
<b>Red List Pesticides</b> Pesticides not to be used unless a valid justification is conducted. Risk analysis and elimination plans must be in place and available to Waitrose	9 (4)
Amber List Pesticides Pesticides that may be used providing suppliers and growers understand the risks associated with these chemicals, that these risks are controlled and usage is monitored by suppliers throughout the Waitrose grower base	310 (19)

#### Summary of Waitrose Red list pesticides detected;

Pesticide	Product	Level Detected mg/kg	MRL mg/kg
Methomyl	Asparagus	0.01	0.01
Bifenthrin	Bananas Bananas Beans	0.01 0.02 0.03	0.10 0.10 0.10
Phosmet	Grapes	0.04	0.05
Imidacloprid	Mangetout peas Melon Melon Tangerine	0.01 0.01 0.01 0.01	5 0.5 0.5 I

### List of Waitrose Amber list pesticides detected:

Acetamiprid Azoxystrobin Boscalid Carbendazim Cyhalothrin, lambda



Cypermethrin Cyprodinil Deltamethrin Difenoconazole Fludioxonil Imazalil Malathion Maleic hydrazide Metalaxyl Myclobutanil Pirimicarb Prochloraz Tebuconazole Thiabendazole



#### II. Summary of Most Detected Pesticides by Year





Of the most common pesticides found in the Waitrose residue testing program all are fungicides with the exception of Spinosad, an insecticide which is also approved for use in organic farming systems and Acetamiprid, an insecticide widely used to control aphids and other sucking insects. Imazalil, Pyrimethanil, Thiabendazole, Azoxystrobin, Fludioxonil are most commonly used as post harvest fungicides on products such as citrus fruits.

Summary and descriptions of the 10 most commonly detected pesticides, 2020-2024

Pesticide	Description
Fludioxonil	A broad-spectrum fungicide for control of a range of diseases on fruit and vegetables. Commonly used as a post harvest application on fruit with no edible peel
Boscalid	A fungicide active against a broad range of fungal pathogens in a wide range of crops including vegetables and other crops
Pyrimethanil	A fungicide used to control fungal pathogens on fruit, vegetables and ornamentals. Commonly used as a post harvest application on fruit with no edible peel
Azoxystrobin	A post-emergence broad spectrum strobilurin fungicide, Commonly used as a post harvest application on fruit with no edible peel
Imazalil	A fungicide used to control a wide range of fungi on fruit, vegetables and ornamentals, Commonly used as a post harvest application on fruit with no edible peel
Cyprodinil	A broad spectrum foliar fungicide used to control a range of pathogens mainly on fruit
Acetamiprid	A pyridylmethylamine neonicotinoid insecticide used for the control of sucking and chewing pests, This insecticide is not included in the EU/UK moratorium on other neonicotinoids
Pyraclostrobin	A broad-spectrum fungicide for control of a range of diseases on fruit and vegetables
Thiabendazole	A mainly post-harvest fungicide used to control a wide range of diseases for fruit and other crops
Propamocarb	Propamocarb is a systemic fungicide used for control of soil, root and leaf disease caused by fungal pathogens on a wide range of fruit, vegetables and ornamentals.

Source: The Pesticide Properties Database, University of Hertfordshire



#### 12. Summary and Conclusions

Waitrose carries out a comprehensive independent pesticide residue analysis program of its fresh produce. The results published in this report detail the residue data from more than 90 fresh produce crops, grown in 50 different countries. Samples are collected by the laboratory from our shops and Waitrose has no influence on which individual samples are taken for analysis.

In this report we have detailed the results of over 1000 fresh produce residue tests. The number of tests in 2023 was lower than previous years (226) since we reduced our own testing as further data became available via shared analytical reports from our Pesticide Management Service Provider. These results were from supplier submitted tests and as such we have not included these in this year's report, which focuses on our own independent testing. However from 2024 we have started a program of independent sampling and testing in several countries of origin which will further enhance our dataset. We will look to incorporate this data and supplier submitted data into subsequent reports.

From 2020 to 2023 a total of 6 pesticide residues were found to be above the MRL, which equates to 0.45% of all tests. It should be noted that the MRL is not a safety limit but a legal maximum that should be achieved by carrying out Good Agricultural Practices in normal conditions.

For the period of 2021 to 2023 a total of 13 pesticide residues were found to be above 50% of the MRL, which equates to 1.3% of tests.

62% of detections of a pesticide residue were at less than 5% of the MRL. Around 90% of all detections had pesticide residues at less than 20% of the MRL. 98% of all detections showed pesticide residue levels at less than 50% of the MRL.

The most common result was that no pesticide residues were detected, at 48% of all tests, whilst 14% had one residue detected. 37% of tests had more than one residue detected at less than the MRL. It should be pointed out that although multiple residues are detected in samples the levels are very low and as pointed out previously about 90% of all residues are detected at less than 20% of the MRL and 98% of all detections showed pesticide residue levels at less than 50% of the MRL

The most commonly detected residues are fungicides and those that are used in post harvest applications, especially on fruit and vegetables with non edible peel. These treatments are important to reduce food spoilage and hence food waste. It should be noted that although these are applied specifically for post harvest activity only 7 tests showed residues above 50% of the MRL and none above the MRL.

We will continue the work to understand why certain products are prone to multiple residues and, in conjunction with our growers, to further develop minimisation strategies.



Of the ten commonly detected pesticides most are fungicides of which five are most commonly used as post harvest fungicides, as explained in the paragraph above. Other pesticides detected were other fungicides with wide usage and two were insecticides.

No detections of Waitrose prohibited pesticides (Black List) were found. 9 detections of 4 restricted pesticides were found (Red List, pesticides that can be used subject to risk assessment). 310 of detections of 19 pesticides on the Amber list (monitored pesticides) were noted.

In conclusion the results of the Waitrose fresh produce pesticide residue testing program shows that residue levels generally are either nil or where present they are very low, and the level of MRL exceedance is extremely low. No residues of Waitrose prohibited pesticides were found.

13. <b>A</b>	ppendix: Summary	of Non-Fresh	Produce	Pesticide	Residue	Testing	2020-2023
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Product Category	PASS Total	OOS* Total	Grand Total	% Pass
Bakery	4		4	100
Beans, grains, lentils	5		5	100
Biscuits	ļ		ļ	100
Bread	12		12	100
Cereals	13		13	100
Cheese, yoghurt, butter	29		29	100
Сосоа	I		I	100
Coffee	5		5	100
Dips, Soups and Sauces	8		8	100
Dried fruit, nuts and seeds	23	2	25	92
Eggs	4		4	100
Fish	17		17	100
Flour	13		13	100
Frozen fruit	8		8	100
Frozen veg	П		11	100
Grains	П		11	100
Herbs and Spices	4		4	100
Ice cream	I		I	100
Jam, honey, preserves, nut butters	16		16	100
Meat	22		22	100
Milk and cream	11		11	100
Olive oil	2		2	100
Olives	I		I	100
Pasta	4		4	100
Poultry	13		13	100
Prepared Salad	2		2	100
Rice	20	2	22	91
Soft drinks	3		3	100
Теа	2	I	3	67
Tinned fruit	I		I	100
Tomato puree	2		2	100
Wine	I		I	100
Grand Total	270	5	275	98

\*OOS - Out of Specification Result

\* Not including residues from cleaning or water treatment chemicals

### Summary of Out of Specification Results, Non-Fresh Produce Pesticide Testing 2020-2023

Date	Product	Pesticide Detected	Level mg/kg	MRL mg/kg		
2020	White Basmati Aged Rice	Buprofezin 0.017		0.01		
Action:	Product within MRL at time of import into the UK, MRL lowered during storage period.					
2020	Brown Basmati Aged Rice	Buprofezin Chlorpyrifos	0.2 0.037	0.1 0.01		
Action:	Product within MRL at time of import into the UK, MRL lowered during storage period.					
2020	Organic dried mango	Imidacloprid	0.11	0.1		
Action:	<ul> <li>Product was from Burkina Faso and there is no known use of this pesticide on mangoes. Investigated by the Soil Association, no residues detected and no further issues or breaches of standards raised. Corrective Actions: Surveillance testing at source increased from grower group to individual producer</li> </ul>					
2021	Organic dried mango	Diphenylamine (DPA)	0.014	0.01		
Action:	There is no history of the use of DPA in Burkina Faso for mango with our growers or production facilities. For dried fruit the extrapolation back to raw material would have been a residue of 0.0014mg/kg and such a low level could be attributed to environmental contamination. Corrective Actions: Further testing of raw materials and final packed product carried out					
2021	Organic camomile infusion tea	Chlorpyrifos	0.016	0.005		
Action:	The residue detected falls within the BNN Guidelines on "Orientation Value for Pesticides - A Guideline to Evaluate Residues in Organic Products". Investigations showed that wind drift from neighbouring farms was the most likely cause of contamination. Corrective Actions: Increase residue testing on camomile crops by the supplier.					