
PESTICIDE RESIDUE CONTROL RESULTS

NATIONAL SUMMARY REPORT

Country: HELLAS

Year: 2020

Table of contents

Table of contents	2
1. Country: Hellas	3
1. Name of the national competent authority/organization	3
2. Objective and design of the national control programme	3
3. Key findings, interpretation of the results and comparability with the previous year results	4
4. Non-compliant samples: possible reasons. ARfD exceedances and actions taken	7
4.1. Possible reasons for non compliance	7
4.2. ARfD exceedances	9
4.3. Actions taken	9
5. Quality assurance	10
6. Processing factors	10

1. Country: Hellas

1. Name of the national competent authority/organization

The Hellenic Ministry of Rural Development and Food is the national authority responsible for coordinating the implementation of Regulation (EC) 396/2005 according to law 4036/2012. It is also responsible for the planning and the coordination of the official controls for plant origin food. The competent authorities responsible of the sampling of plant origin products are the Regional Centres of Plant Protection and Quality Control (RCPP&QC) of the Ministry of Rural Development and Food and the Directorates General of Regional Rural Economy and Veterinary Medicine.

The authority responsible for the planning and the coordination of the monitoring of processed foods is EFET (Hellenic Food Authority) while the controls of pesticide residues in wine are organised by the General Chemical State (GCS).

The official laboratories which analyzed the samples taken in 2020 were the Laboratory of Pesticides Residues of Benaki Phytopathological Institute (BPI), the Laboratory of Pesticide Residues of the Centre of Plant Protection and Quality Control of Thessaloniki (RCPP&QC) and the laboratory of Pesticide Residues of the General Chemical State.

The control programs for pesticide residues and the report of results of the national residue monitoring are published on the official web site of the Hellenic Ministry of Rural Development and Food on an annual basis (<http://www.minagric.gr/index.php/el/for-farmer-2/crop-production/fytoprostasiamenu/ypoleimatafyto>

<http://www.minagric.gr/index.php/en/citizen-menu/foodsafety-menu>)

2. Objective and design of the national control programme

National control program of 2020 for pesticide residues (monitoring) as part of the Multi Annual Control Program (EU-MACCP) has been established according to terms and conditions of Articles 26-35 of Regulation (EC) No 396/2005.

The program was based on several risk analysis criteria and parameters: number of samples (domestic and imported) for each product, agricultural produce, cultivation area per culture, expected imports, results from previous years' monitoring programs, dietary intake contribution of each product, sampling location, community control program, pesticides used in practice by the farmers, relevant RASFF notifications for pesticide residues, personnel and analytical capacity of the official laboratories, recommendations from EFSA. It aims at ensuring compliance with maximum levels and assessing consumer exposure in order to achieve a high level of protection and application of good agricultural practice in all stages of production and harvest of agricultural products.

The responsibilities of the laboratories involved, regarding the number of samples of each commodity that should be analyzed and the areas of sampling were defined. The sampling was carried out by the responsible for sampling regional and local authorities.

Sampling strategy was based on "from the farm to the fork" rationale, taking into account the specialties of each region of the country. The sampling methods, necessary for carrying out such controls of pesticide residues, were those provided for in JMD 91972/2003-Directive 2002/63/EC. Samples were taken by domestic production and imports, proportionally, covering points of collection, storage, packing and trade of products of plant origin.

Furthermore, a significant number of selective samples was taken by the competent authorities responsible of the sampling.

The official laboratories, analyzing samples for pesticide residues are accredited and participate in the Community Proficiency Tests. The methods of analysis used by the laboratories comply with the criteria set out in relevant EU law provisions and other adopted technical guidelines.

3. Key findings, interpretation of the results and comparability with the previous year results

3149 samples were analysed in total. 2429 samples were domestic (77.14%), 214 samples originated from EU (6.80%), 474 originated from third countries (15.05%) while the origin of 32 samples was unknown (1.02%).

48.14% of samples were free of quantifiable residues, 51.86% of samples contained quantifiable residues at or below Mrl, 6.48% of samples contained residues exceeding EU Mrls and 3.91% of samples were non compliant (contained residues exceeding EU Mrls taking into account the measurement uncertainty). The percentages of samples containing residues are comparable with the corresponding ones of 2019.

For random sampling, the percentage of non compliant samples was 2.60%. For selective sampling the percentage of non compliant samples was 6.79% and for suspect sampling, the percentage of non compliant samples was 14.94%.

The percentage of samples which exceeded numerically the Mrls was 4.86% for the domestic samples, 5.61% for EU samples and 15.40% for third countries while the percentage of non compliant samples was 2.96% for domestic samples, 3.27% for EU samples and 8.86% for third countries' samples.

Among the domestic samples analysed, potatoes and grape leaves were the most frequently non compliant products. From third countries the most frequently non compliant products were tomatoes (mostly containing chlorfenapyr) and apples (mostly containing chlorpyrifos).

Chlorpyrifos was the most frequently found pesticide in non compliant samples for another year because of incorrect GAP application taking into account that grace period for the use of plant protection products containing this active substance was the 16th of April 2020.

154 samples were organic, out of which 15 samples were cereals, 3 samples were baby food, 100 samples were fruits, vegetables and nuts, 23 samples were other products, and 3 samples were processed commodities. 87.66% of the organic samples contained no detectable residues, 10.39% of organic samples contained residues below Mrls and 1.95% of the organic samples were non compliant.

Table 1: Summary results 2016-2020

Category	Year 2016	%	Year 2017	%	Year 2018	%	Year 2019	%	Year 2020	%
Total number of samples	2287	100.00	2623	100.00	3571	100.00	3454	100.00	3149	100.00
Number of samples without detectable residues	1180	51.60	1307	49.83	1701	47.63	1724	49.91	1516	48.14
Number of samples with detectable residues at or below EU MRL	1016	44.42	1160	44.22	1606	44.97	1531	44.33	1429	45.38
Number of samples with residues exceeding EU MRLs	91	3.98	156	5.95	264	7.39	199	5.76	204	6.48
Non compliant samples	53	2.32	90	3.43	158	4.42	119	3.45	123	3.91

Table 2: Summary results 2020 per type of product (surveillance and enforcement)

Products	Samples	Residues below LOQ	%	Residues between LOQ and MRL	%	Exceeding MRL	%	Non Compliant	%
Animal products	41	41	100.00	0	0	0	0	0	0.00
Baby food	23	23	100.00	0	0	0	0	0	0.00
Cereals (including processed products)	95	69	72.63	22	23.16	4	4.21	2	2.11
Other products (including processed products)	265	196	73.96	56	21.13	13	4.91	10	3.77
Sum of fruits and nuts, vegetables, other plant products	2725	1187	43.56	1351	49.58	187	6.86	111	4.07
Total	3149	1516	48.14	1429	45.38	204	6.48	123	3.91

Table 3: Summary results 2019 (surveillance and enforcement)

Products	Samples	Residues below LOQ	%	Residues between LOQ and MRL	%	Exceeding MRL	%	Non Compliant	%
Animal products	37	37	100.00	0	0	0	0	0	0.00
Baby food	10	10	100.00	0	0	0	0	0	0.00
Cereals (including processed products)	139	100	71.94	37	26.62	2	1.44	1	0.72
Other products (including processed products)	235	174	81.69	29	13.62	10	4.69	3	1.41
Sum of fruits and nuts, vegetables, other plant products	3033	1381	45.53	1465	48.30	187	6.17	115	3.79
Total	3454	1724	49.91	1531	44.33	199	5.76	119	3.45

Table 4: Summary results 2020 for random and selective sampling

Products	Samples	Residues below LOQ	%	Residues between LOQ and MRL	%	Exceeding MRL	%	Non Compliant	%
Animal products	41	41	100.00	0	0.00	0	0	0	0
Baby food	23	23	100.00	0	0.00	0	0	0	0
Cereals	91	67	73.63	20	21.98	4	4.40	2	2.19
Fruits and nuts	1226	361	29.45	808	65.91	57	4.65	29	2.37
Other plant products	239	181	75.73	51	21.34	7	2.93	6	2.51
Vegetables	1375	775	56.36	600	43.64	104	7.56	63	4.58
Total	2995	1448	48.35	1461	48.78	172	5.74	100	3.34

Table 5: Summary results 2019 for random and selective sampling

Products	Samples	Residues below LOQ	%	Residues between LOQ and MRL	%	Exceeding MRL	%	Non Compliant	%
Animal products	37	37	100.00	0	0.00	0	0	0	0.0
Baby food	10	10	100.00	0	0.00	0	0	0	0.0
Cereals	136	99	72.79	36	26.47	1	0.74	0	6.3
Fruits and nuts	1178	392	33.27	733	62.22	53	4.50	26	2.0
Other plant products	229	193	84.28	26	11.35	10	4.37	3	0.6
Vegetables	1755	946	53.90	693	39.49	116	6.61	79	5.1
Total	3345	1677	50.13	1488	44.48	180	5.21	108	3.8

Table 6: Summary results 2020 for enforcement samples (suspect samples)

Products	Samples	Residues below LOQ	%	Residues between LOQ and MRL	%	Exceeding MRL	%	Non Compliant	%
Animal products	0	0	0	0	0	0	0	0	0
Baby food	0	0	0	0	0	0	0	0	0
Cereals	4	2	50.0	2	50.0	0	0	0	0
Fruits and nuts	28	6	21.43	15	53.57	7	25.0	4	14.29
Other plant products	26	15	57.69	5	19.23	6	23.08	4	15.38
Vegetables	96	45	46.87	32	33.33	19	19.79	15	15.62
Total	154	68	44.16	54	35.06	32	20.78	23	14.94

Table 7: Summary results 2019 for enforcement samples (suspect samples)

Products	Samples	Residues below LOQ	%	Residues between LOQ and MRL	%	Exceeding MRL	%	Non Compliant	%
Animal products	0	0	0	0	0	0	0	0	0
Baby food	0	0	0	0	0	0	0	0	0
Cereals	3	1	33.33	1	33.33	1	33.33	1	33.33
Fruits and nuts	28	2	7.14	16	57.14	10	35.71	7	25.0
Other plant products	6	3	50.0	3	50.0	0	0	0	0
Vegetables	72	41	56.95	23	31.94	8	11.11	3	4.17
Total	109	47	43.12	43	39.45	19	17.43	11	10.10

4. Non-compliant samples: possible reasons. ARfD exceedances and actions taken

4.1. Possible reasons for non compliance

Reasons for MRL non-compliance	Pesticide/food product ^(a)	Frequency ^(b)	Comments	
GAP not respected: use of a pesticide not approved in the EU ^(c)	methamidophos / eggplants	1		
	chlorpyrifos / courgettes	2	Use after the grace period	
	chlorpyrifos / olives for oil production	1	Use after the grace period	
	chlorfenapyr / tomatoes	3		
	chlorfenapyr / cherry tomatoes	1	origin: Italy	
	cyfluthrin / tomatoes	1		
	chlorfenapyr / tomatoes	3	origin: Italy	
	buprofezin / tomatoes	2	origin: Italy	
	GAP not respected: use of an approved pesticide not authorised on the specific crop ^(c)	phosmet / apricots	1	
		dimethomorph / beans with pods	1	
indoxacarb / beetroots		1		
dimethomorph / carrots		1		
indoxacarb / celeriacs/turnip rooted celeries		1		
metalaxyl / celeriacs/turnip rooted celeries		2		
fluopyram / celeriacs/turnip rooted celeries		1		
flupyradifurone / cherries		1		
diflubenzuron / mushrooms		2		
formetanate / courgettes		1		
formetanate / cucumbers		4		
dimethomorph / grape leaves		4		
penconazole / grape leaves		2		
cyflufenamid / grape leaves		1		
spiroxamine / grape leaves		2		
tau-fluvalinate / grape leaves		1		
cypermethrin / grape leaves		1		
cyprodinil / grape leaves		1		
acetamiprid / kiwi fruits		3		
fluopyram / kiwi fruits		1		
tebuconazole / kiwi fruits		1		
carbendazim / olives for oil production		1	metabolite of thiophanate methyl	
captan / parsley		1		
etofenprox / rice grain, brown		1		
dodine / spinaches		2		
famoxadone / spinaches		1	frozen (processed)	
tebuconazole / spinaches		1	frozen (processed)	
famoxadone / sweet peppers/bell peppers		1		
cypermethrin / teas		2		
pyriproxyfen / thyme		1		
phosmet / tomatoes		1		
propamocarb / wine grapes		1		
thiacloprid / pistachios		1		

GAP not respected: use of an approved pesticide, but application rate, number of treatments, application method or PHI not respected			
	carbendazim / apples	1	metabolite of thiophanate methyl
	chlorpyrifos / apples	1	
	tau-fluvalinate / beetroots	1	
	azoxystrobin / celeriacs	1	
	boscalid / pomegranates	1	
	forchlorfenuron / kiwis	3	
	chlorpyrifos / mandarins	1	
	omethoate / mandarins	1	metabolite of dimethoate
	pyraclostrobin / olives for oil production	1	
	chlorpyrifos / oranges	1	
	chlorpyrifos / potatoes	10	
	chlorantraniliprole / potatoes	2	
	fosthiazate / potatoes	1	
	tefluthrin / potatoes	1	
	deltamethrin / spinaches	1	
	omethoate / table grapes	1	metabolite of dimethoate
	thiacloprid / oranges	1	
	spiroxamine / tomatoes	1	origin: Italy – not authorised on the specific crop <i>or</i> authorised but application rate, number of treatments, application method or PHI not respected
Use of pesticide according to authorised GAP: unexpected slow degradation of residues			
Cross contamination: spray drift or other accidental contamination			
Contamination from previous use of a pesticide: uptake of residues from the soil (e.g. persistent pesticides used in the past)			
Residues resulting from other sources than plant protection product (e.g. biocides, veterinary, drugs, bio fuel)			
Natural occurrence (e.g. dithiocarbamates in turnips)			
Changes of the MRL			
Use of a pesticide on food imported from third countries for which no import tolerance was set ^(d)			
Unknown			
	diphenylamine / apples	4	Chile
	chlorpyrifos / apples	2	Albania
	chlorpyrifos / apples	2	Republic of North Macedonia
	chlorpyrifos / beans dry	1	Madagascar
	hexaconazole / grape leaves	1	China

	isoprothiolane / grape leaves	1	China
	profenofos / grape leaves	1	China
	chlorpropham / grape leaves	1	Turkey
	propargite / lemons	1	Egypt
	thiametoxam / rice grain brown	1	India
	tricyclazole / rice grain brown	1	India
	imazalil / bananas	1	Ecuador
	imazalil / pomegranates	1	Turkey
	acetamiprid / pomegranates	1	Turkey
	azoxystrobin / grape leaves	1	China
	buprofezin / grape leaves	1	China
	fluopyram / grape leaves	1	Turkey
	buprofezin / lemons	2	Turkey
	metalaxyl / courgettes	2	Turkey
	deltamethrin / spinaches	1	Turkey
	formetanate / sweet peppers/bell peppers	1	Albania
	tebufenpyrad / sweet peppers/bell peppers	2	Albania
	chlorfenapyr / sweet peppers/bell peppers	1	Albania
	chlorpyrifos / sweet peppers/bell peppers	1	Albania
	buprofezin / sweet peppers/bell peppers	1	Turkey
	lambda-cyhalothrin / teas	1	Unknown
	chlorfenapyr / tomatoes	8	Albania
	diflubenzuron / tomatoes	1	Albania
	buprofezin / tomatoes	1	Albania
	chlorpyrifos / tomatoes	2	Albania
Other (Use of a pesticide on food imported from third country with exceedance of the ARfD)			
	ethylene oxide / 2-chlorethanol sesame seeds	3	India
	RASFF: 2021.0032		

- (a): Report name as specified in the MatrixTool
(b): Number of cases
(c): Applicable only for food products produced in the EU
(d): For imported food only

4.2. ARfD exceedances

Table 8: RASFF issued in 2020 for food products showing a risk for consumers

Food products	Pesticide residue	Number	Origin	Context
sesame seeds	ethylene oxide / 2-chlorethanol	1 RASFF (3 samples)	India	RASFF 2021.0032

4.3. Actions taken

In a case of an MRL exceedance, before any administrative and punitive enforcement action is taken, a default analytical uncertainty of 50% is subtracted from the measured value. If this figure still exceeds the MRL, this sample is non compliant and enforcement action relevant to the case is taken. Risk assessment on non compliant samples is carried out by the Directorate of Plant Production Protection (Department of Plant Protection Products). RASFF notifications were sent according EU Regulations taking into account the results of the risk assessment and the instructions of the RASFF WI 2.2. Guidelines.

The batches of products with MRL exceedance were set under official detention and were destroyed or re-dispatched to the country of origin. Next placement in the market of other batches of same origin was not

allowed unless, prior to marketing, a second laboratory analysis was conducted and the results showed conformity with the respected MRLs.

Sanctions were imposed to producers of non compliant samples according to national laws. If the producer (or farmer) of the lot of the product was unknown, the control authority called the distributor/s (traders, wholesaler, retailer etc) to provide elements (evidence) about the origin of the products. If traceability was lost, sanctions were imposed to the traders.

For imported products sanctions were imposed to importers.

For samples taken according to Import Control Regulations (Regulation (EU) 1793/2019), a border rejection decision was taken for non compliant samples. RASFF notification was issued for samples when a risk to consumers was identified.

5. Quality assurance

Table 9: Laboratories participation in the control program

Country	Laboratory		Accreditation	Participation in proficiency tests or inter-laboratory tests
	Name	Date	Body	
Hellas	Benaki Phytopathological Institute, Pesticides Residues Laboratory	09/07/2002	ESYD (Hellenic Accreditation System S.A.)	EUPT-FV-22 EUPT-AO-15 EUPT-SRM-15 EUPT-CF-14 EUPT-SC-04 COI-PT20 Test Qual 133 (Dithiocarbamates)
Hellas	Regional Centre of Plant Protection, Quality and Phyosanitary Control of Thessaloniki	08/09/2009	ESYD	EUPT-FV 22, EUPT-CF 14
Hellas	General Chemical State	ACCREDITED, ISO 17025, 2009-2018	ESYD	EUPT-FV-22, EUPT- AO-15, EUPT-CF-14, EUPT-SRM-15, COI- PT20, EUPT-FV-SC04, LGC-FC296
		ACCREDITED, ISO 17025, 1998-2009	UKAS	

6. Processing factors

The processing factors applied were based on the former EU multiannual control programme for pesticide residues.