
PESTICIDE RESIDUE CONTROL RESULTS

NATIONAL SUMMARY REPORT

Country: HELLAS

Year: 2018

Table of contents

1.	Country: Hellas.....	3
1.1.	Name of the national competent authority/organisation	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
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. It is also responsible for the planning and the coordination of the official controls for plant origin food. The authority responsible for the planning and the coordination of the monitoring of processed foods is EFET (Hellenic Food Authority).

The competent authorities responsible of the sampling are the Regional Centres of Plant Protection, Quality and Phytosanitary Control (RCPPQ&PC) of the Ministry of Rural Development and Food and the Directorates General of Regional Rural Economy and Veterinary Medicine.

The official laboratories which analyzed the samples taken in 2018 were the Laboratory of Pesticides Residues of Benaki Phytopathological Institute (BPI), the Laboratory of Pesticide Residues of the Regional Centre of Plant Protection, Quality and Phytosanitary Control of Thessaloniki (RCPP&Q&PC) and the Laboratory of Pesticide Residues of the General Chemical State.

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

<http://www.minagric.gr/index.php/el/for-farmer-2/crop-production/fytoprostasiamenu/ypoleimatafyto>

2. Objective and design of the national control programme

National control program of 2018 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 analysed and the areas of sampling were defined. The responsible for the EU co-ordinated program laboratories were clearly stated. 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 specificities 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, analysing 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

3571 samples were analysed in total. 2937 samples were domestic (82%), 139 samples originated from EU (4%), 462 originated from third countries (13%) while the origin of 33 samples was unknown (1%).

47.63% of samples were free of quantifiable residues, 44.92% of samples contained quantifiable residues at or below Mrl, 7.39% of samples contained residues exceeding EU Mrls and 4.42% of samples were non compliant (contained residues exceeding EU Mrls taking into account the measurement uncertainty).

The percentage of samples containing quantifiable residues at or below Mrl remains constant for the third consecutive year.

The percentage of samples exceeding the Mrls and the percentage of non compliant samples is higher compared to last year. This trend has been expected as a result of a deliberately and extensively higher selective/targeted sampling considering that the percentage of selective samples increased from 4,5% to 26,8%.

Excluding from the calculations the results of these selective samples, the percentage of non compliant samples was 3.3% which is similar compared to 2017.

For random sampling, the percentage of non compliant samples was 2,36%.

The percentage of samples which exceeded numerically the Mrl was 6.3% for the domestic samples, 13.6% for EU samples and 13% for third countries while the percentage of non compliant samples was 3.6% for domestic, 10% for EU and 9,7% for third countries.

Among the domestic samples analysed, tomatoes and potatoes were the most frequently non compliant products. From third countries the most frequently non compliant products were peppers, pomegranates and rice (a.s. tricyclazole, thiamethoxam). Regarding tricyclazole and thiamethoxam, it is noted that the Mrl was set to LOQ which explained the non compliances.

Chlorpyrifos was the most frequently found pesticide in non compliant samples (as in 2017) with chlorfenapyr following. Chlorfenapyr is a not approved active substance. However, it was approved as a biocide (insecticide) and it was illegally used in tomatoes to control the leaf miner *Tuta absoluta*. This major pest causes serious damages in tomatoes. It has 12 generations in a year and each female has a high reproductive potential. The findings of chlorfenapyr in tomato reveal that in practice it is extremely difficult to control this pest with the current agricultural practices and available plant protection products. Despite the illegal uses and non compliances, no consumer health was identified.

193 samples were organic out of which 4 samples were of animal origin, 19 samples were cereals, 4 samples were baby food, 152 samples were fruits, vegetables and nuts and 14 samples were other products.

79.8% of the organic samples contained no detectable residues, 18.1% of organic samples contained residues below Mrl and 2.1% of the organic samples were detected with residues over Mrl (numerical exceedances).

Table 1: Summary results 2014-2018

Category	Year 2014	%	Year 2015	%	Year 2016	%	Year 2017	%	Year 2018	%
Total number of samples	2376	100	2425	100	2287	100	2623	100	3571	100
Number of samples without detectable	1544	64.98	1545	63.71	1180	51.60	1307	49.83	1701	47.63
Number of samples with detectable residues at or below EU MRL	755	31.78	789	32.54	1016	44.42	1160	44.22	1606	44.97
Number of samples with residues exceeding EU Mrls	77	3.24	91	3.75	91	3.98	156	5.95	264	7.39
Non compliant samples	43	1.81	58	2.39	53	2.32	90	3.43	158	4.42

Non compliant samples by sampling strategy

Sampling Strategy	Samples	Non Compliant	%
Objective	2417	57	2.36
Selective	959	71	7.4
Suspect	195	30	15.4

Table 2: Summary results 2018 per type of product (surveillance and enforcement)

Products	Samples	Residues below LOQ	%	Residues between LOQ and MRL	%	Exceeding MRL	%	Non Compliant	%
Animal products	37	37	100	0	0	0	0	0	0
Baby food	34	34	100	0	0	0	0	0	0
Cereals	67	45	67.1	18	26.9	4	6	3	4.5
Processed products	235	166	70.6	52	22.1	17	7.2	9	3.8
Sum of fruits and nuts, vegetables, other plant products	3198	1420	44.4	1534	48	244	7.6	146	4.6
Total	3571	1702	47.7	1604	44.9	265	7.4	158	4.4

Table 3: Summary results 2017 (surveillance and enforcement)

Products	Samples	Residues below LOQ	%	Residues between LOQ and MRL	%	Exceeding MRL	%	Non Compliant	%
Animal products	32	32	100	0	0	0	0	0	0
Baby food	14	14	100	0	0	0	0	0	0
Cereals	62	39	62.9	21	33.9	2	3.2	1	1.6
Processed products	156	108	69.2	46	29.5	2	1.3	1	0.6
Sum of fruits and nuts, vegetables, other plant products	2359	1114	47.2	1093	46.3	152	6.5	88	3.7
Total	2623	1307	49.8	1160	44.2	156	5.9	90	3.4

Table 4: Summary results 2018 for random and selective sampling

Products	Samples	Residues below LOQ	%	Residues between LOQ and MRL	%	Exceeding MRL	%	Non Compliant	%
Animal products	37	37	100	0	0	0	0	0	0
Baby food	34	34	100	0	0	0	0	0	0
Cereals	128	76	59.4	38	29.7	14	10.9	8	6.3
Fruits and nuts	1118	337	30.1	738	66	43	3.8	22	2
Other plant products	164	146	89	13	7.9	5	3	1	0.6
Vegetables	1895	1002	52.9	733	38.7	160	8.3	97	5.1
Total	3376	1632	48.3	1522	45.1	222	6.6	128	3.8

Table 5: Summary results 2017 for random and selective sampling

Products	Samples	Residues below LOQ	%	Residues between LOQ and MRL	%	Exceeding MRL	%	Non Compliant	%
Animal products	32	32	100	0	0	0	0	0	0
Baby food	14	14	100	0	0	0	0	0	0
Cereals	76	56	73.7	19	25	1	1.3	0	0
Fruits and nuts	978	313	32.1	619	63.2	46	4.7	19	1.9
Other plant products	96	70	72.9	19	19.8	7	7.3	4	4.2
Vegetables	1299	780	60	444	34.2	75	5.8	47	3.6
Total	2495	1265	50.8	1101	44	129	5.2	70	2.8

Table 6: Summary results 2018 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	5	4	80	1	20	0	0	0	0
Fruits and nuts	46	4	8.7	30	65.2	12	26.1	9	19.6
Other plant products	16	7	43.8	7	43.8	2	12.5	1	6.3
Vegetables	128	55	43	44	34.4	29	22.7	20	15.6
Total	195	70	35.9	82	42.1	43	22.1	30	15.4

Table 7: Summary results 2017 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	11	4	36.4	6	54.5	1	9	1	9
Fruits and nuts	78	17	21.8	39	50	22	28.2	16	20.5
Other plant products	5	2	40	3	60	0	0	0	0
Vegetables	34	15	44.1	15	44.1	4	11.8	3	8.8
Total	128	38	29.7	63	49.2	27	21.1	20	15.6

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)			
	chlorfenapyr/tomato (cherries)	9	4 from Italy,
	chlorfenapyr/tomato	15	3 from Italy
	clothianidin/spinach	3	
	diphenylamine/apple	1	
	fenitrothion/lemon	1	
	propargite/apple	1	
	tetramethrin/peppers (sweet)	1	
	thiamethoxam/spinach	1	
GAP not respected: use of an approved pesticide not authorised on the specific crop ^(c)			
	acrinathrin/tomato	1	
	boscalid/pomegranate	1	
	chlorpyrifos/pomegranate	4	
	chlorpyrifos/lettuce	1	
	chlorpyrifos/table olives	1	
	chlorphospham/carrot	1	
	cypermethrin/tea	1	
	dimethomorph/beans	1	
	dimethoate & omethoate /table grapes	1	
	dimethomorph/grape leaves	1	
	dimethoate/pear	1	
	forchlorfenuron/kiwi	2	
	flutriafol/figs	1	
	fluopyram/grape leaves	1	
	fluopyram/figs	1	
	mepanipyrim/parsley	2	
	methomyl/cucumber	1	
	methiocarb/globe artichoke	1	
	myclobutanil/grape leaves	2	
	omethoate/spinach	1	
	oxamyl/strawberries	1	
	phosmet/apricot	2	
	pirimiphos methyl/tomato	4	3 from Poland
	phosmet/pomegranates	1	
	pyriproxyfen /beans	1	
	pymetrozine/peas without pods	1	
	spiroxamine/tomato	8	2 from Poland
	spiroxamine/grape leaves	1	
	tau-fluvalinate/grape leaves	1	
	tebuconazole/grape leaves	1	
thiophanate methyl/pepper	1		
thidiazuron /cotton seeds	1		

GAP not respected: use of an approved pesticide. but application rate. number of treatments. application method or PHI not respected			
	chlorpyrifos/apple	3	
	chlorpyrifos/peaches	1	
	chlorpyrifos/potato	18	
	chlorpyrifos/carrot	3	
	chlorpyrifos/spinach	1	
	chlorantraniliprole/potato	1	
	chlorpyrifos/table grapes	1	
	chlorpyrifos/tomato	11	
	deltamethrin/spinach	3	
	deltamethrin/tomato	1	
	dimethoate/plum	1	
	fenamiphos/tomato	1	
	formetanate/lettuce	1	
	fosthiazate/potato	2	
	methomyl/spinach	1	
	omethoate/tomato	1	
	thiophanate methyl/table grapes	1	
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)	chlorfenapyr		
Naturally occurrence (e.g. dithiocarbamates in turnips)			
Changes of the MRL	tricyclazole, thiamethoxam (see below)		
Use of a pesticide on food imported from third countries for which no import tolerance was set ^(d)			

Unknown	acetamiprid/pomegranate RASFF NC.18.2720	2	From Turkey, border rejections
	amitraz/gojiberry RASFF NC19.0573	1	from China, border rejection
	boscalid/pomegranate	2	
	captan/hexaconazole peppers (chilli) RASFF NC19.0231	1	from Pakistan, border rejection
	carbendazim and benomyl /rice	1	from India
	carbofuran/gojiberry	1	from China, border rejection
	chlorothalonil/peppers (chilli)	1	from Pakistan
	chlorpyrifos /table olives	1	from Albania
	chlorpyrifos/apple	1	from Albania
	chlorpyrifos/peppers (sweet)	2	1 from Albania and 1 from Turkey
	chlorpyrifos/tomatoes	4	from Albania
	chlorpyrifos/hexaconazole/gojiberry RASFF NC 18.2719	2	from China, border rejections,
	chlorfenapyr/tomatoes	4	from Albania
	chlorfenapyr/peppers (chilli)	1	from Pakistan
	omethoate/tomatoes	1	from Turkey
	pirimiphos methyl/peas dry	1	from Mexico
	propargite/gojiberry	1	from China
	cyprodinil/pomegranate	1	from Turkey
	imazalil/pomegranate	1	from Turkey
	propargite/melon	1	from Egypt
	thiamethoxam/rice	4	from India
	thiacloprid/pomegranate RASFF NC 18.2720 , NC 18.2892, NC18.3605	3	from Turkey, border rejections
tricyclazole /rice RASFF 2018.3442, 2018.3383, 2018.3502, 2018.3345	7	from India	
Other (Use of a pesticide on food imported from third country with exceedance of the ARfD)	dimethoate/omethoate/apples RASFF 2018.3699	1	from Albania
	chlorpyrifos/peppers (sweet) RASFF 2018.3259	1	from Albania
	chlorpyrifos/tomatoes RASFF 2018.3067	1	from Albania

4.2. ARfD exceedances

Table 8: RASFF issued in 2018 for food products showing a risk for consumers

Food products	Pesticide residue	Number	Origin	Context
apples	dimethoate/omethoate	1	Albania	RASFF: 2018.3699
peppers	chlorpyrifos	1	Albania	RASFF: 2018.3259
tomatoes	chlorpyrifos	1	Albania	RASFF: 2018.3067

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). The batches of products with MRL exceedances were set under official detention and were destroyed or redispached to the country of origin (tricyclazole in rice from India). 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 (such as Regulation (EC) 669/2009), a border rejection decision was taken for non compliant samples.

RASFF notifications were issued according to RASFF WI 2.2 guidelines and according to Regulation 2018/941 (amending Regulation 669/2009).

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-20, EUPT- AO-12, EUPT-SMR-13, EUPT-CF12, EUPT-SM- 20, COIPT-18
Hellas	Regional Centre of Plant Protection, Quality and Phytosanitary Control of Thessaloniki, Pesticides Residues Laboratory	08/09/2009	ESYD	EUPT-FV 20, EUPT-CF 12
Hellas	General Chemical State	ACCREDITED, ISO 17025, 2009-2018 ACCREDITED, ISO 17025, 1998-2009	ESYD UKAS	2018: EUPT-FV 20, EUPT-CF 11, EUPT- SRM 13, EUPT-AO 13, COI-PT 18.

6. Processing factors

The processing factors applied are according to the EU multiannual control programme for pesticide residues.