

Pesticide Residue Control Results

“National summary report”

Country *Cyprus*

Year: *2018*

National competent authority/organisation:

Pesticides Residues Laboratory of the State General Laboratory of Ministry of Health

Web address where the national annual report is published:

www.moh.gov.cy/sgl

1. Objective and design of the National Control Programme

The Ministry of Health is the competent authority for the enforcement of the Pesticide Residues (PR) Legislation and the execution of the national monitoring and surveillance programs. The enforcement of Legislation and sampling is allocated to the Department of Medical and Public Health Services (MPHS). The Pesticide Residues Lab (PR-SGL) of the State General Laboratory, a department of the Ministry of Health, is the Official Laboratory for the Monitoring & Surveillance of PR in Food of Plant and Animal Origin. The PR-SGL Lab in cooperation with the MHPS design and implement the monitoring program for both the local market and imports. The sampling is focused at the key points of food chain: market, import, processing, primary storage producers, etc.

Organic products are controlled under a monitoring control plan designed by the PR-SGL Lab in cooperation with the Department of Agriculture (DA) of Ministry of Agriculture, Rural Development and Environment.

The sampling regime is based on a combination of “at random” sampling and target oriented sampling focusing towards problematic pesticides/food combination. This combination is, in a way, bias towards problematic products and might end up with higher violation rates. Nevertheless, it can provide higher degree of consumer protection and cost-effectiveness. Main criteria used in the sampling design are: EU coordinated program, violations from previous years, information from RASFF, consumption rate especially for children and the needs of imports control.

The increase in the number of compounds monitored is a continuous process. The increase in the pesticides included in the monitoring programme is mainly defined by the requirements of the EU coordinated programme. It should be noted though that the laboratory capacity and the costs of the analysis are the main factors which influence the inclusion of new pesticides in the national monitoring plan.

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

In **2018** a total of **601** food samples of plant and animal origin were analyzed in the framework of the official controls. Sampling rate was **70** samples /**100 000** inhabitants.

Plant Origin samples

The number of plant origin samples analyzed in 2018 was **577** out of which the number of samples fresh or dry excluding composite/processed samples such as wine, baby food, olive oil, raisins and juices were **516**. The number of fruits tested was **207**, vegetables **216** and cereals **39**. Samples of tea, herbal infusions, olives, spices and oil seeds were analyzed for both purposes, national monitoring and import control. The **21.3 %** of plant origin samples originated from third countries, were analyzed in the framework of the import control.

The **44.2 %** of the plant origin samples were found to be positive with pesticide residues while residues of more than one pesticides were found in the **34.7 %** of the samples.

The most frequently found pesticides within 2018 were **Cypermethrin in 11.9%**, **Acetamiprid in 8.3 %** and **Carbendazim in 7.8 %** of the samples analyzed for.

For statistical purposes, the legal violations rate over the years was calculated taking into account only samples fresh or dry excluding composite/processed samples. For the year 2018 the **4.8%** of the **516** samples were considered as legal violations.

The number of organic farming samples analyzed was **53**. Four samples were found to be positive with pesticide residues, the results are presented in table 1. The competent authority of the organic products was informed so that actions and appropriate measures to be taken.

In the framework of the National monitoring plan 9 samples of dried fruits (8 raisins and 1 dried plum) and 22 wine samples were analyzed.

The 66.7% of the dried fruit samples contained pesticide residues, all detected levels were below the MRLs. The 55.6% of the samples were positive with more than one pesticide, the number of pesticides ranged between 6 -18.

The percentage of the positive wine samples was 50% while the 36.4% of the samples contained more than one pesticide. All determined concentrations were below the MRLs. The most frequent pesticide found was Carbendazim.

Comparing the results of 2018 with that of 2017, the legal violation rate was found to be slightly decreased from 5.5% to 4.8%. The frequency of multiple residues in 2018 was higher (36.4%) compared with 2017 (28.7%). A possible reason for the increase might be the expansion of the analytical scope and also the analytical capabilities of the laboratory to report lower limits of quantitation (LOQ).

Table 1: Results of organic farming samples

Product	Pesticide	Found value mg/kg
Tomatoes	Spinosad (sum of spinosyn A and spinosyn D)	0.013
Cherries	Spinosad (sum of spinosyn A and spinosyn D)	0.11
Plums	Diphenylamine	<0,01
	Spinosad (sumof spynosynA and spynosyn D)	0.037
Mushroom	Boscalid	<0.005
	Imidacloprid	<0.005

Animal Origin Samples

Within 2018, 12 samples of bovine fat and 12 samples of chicken eggs have been analyzed for pesticide residues in the framework of the EU-coordinated control programme.

Six bovine fat samples were positive with DDT at concentrations ranged between 0.016 - 0.090 mg/kg. All chicken egg samples were found free of quantifiable residues.

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

In 2018, 8.7% of the samples of plant origin (45 samples in total out of 516 samples fresh or dry excluding composite/processed samples) were found non-compliant with the EU MRLs, whereas the 4.8% of the samples (25 samples in total) were considered as legal violations (meaning that they were found as non-compliant with the legal limits taking into account the measurement uncertainty). A RASFF notification has not been issued in any sample.

Estimation of the acute assessment exposure was carried out in all non-compliant samples using the Primo v3.0. Only in two strawberry samples the Predicted Short Term Intake (PSTI) was found to exceed the acute reference dose (ARfD) for the children. The highest estimated exposure was found to be 163 % of ARfD.

Table 2: Possible reasons for MRL non-compliance and actions taken

Reason for MRL non-compliance	Pesticide/food product	Frequency	Action taken
GAP not respected: use of an approved pesticide, but application rate, number of treatments, application method or PHI not respected	Propamocarb / Beans with pods	1	Administrative sanctions
GAP not respected: use of a pesticide not approved in the EU	Chlorfenapyr/ Strawberries	2	Administrative sanctions
GAP not respected: use of a pesticide not approved in the EU	Chlorfenapyr/ Strawberries	1	Follow-up (suspect) sampling of similar products/ Administrative sanctions
Use of a pesticide on food imported from third countries for which no import tolerance was set	Acetamiprid, Carbentazim, Chlorpyrifos, Cypermethrin, Flusilazole, L-Cyhalothrin/ Vine leaves salted	1	Rejection of a non-compliant lot at the border/ Destruction of non-compliant lot
Use of a pesticide on food imported from third countries for which no import tolerance was set	Propamocarb/ Frozen Strawberries	1	Rejection of a non-compliant lot at the border/ Destruction of non-compliant lot

Table 2: Continued

GAP not respected: use of a pesticide not approved in the EU	Chlorfenapyr/ Tomatoes	1	Administrative sanctions
GAP not respected: use of an approved pesticide not authorized on the specific crop	Pirimiphos methyl /Tomatoes	1	Administrative sanctions
Information not available	Chlorpyrifos/ Mint Dried	1	Lot recalled from the market/ Destruction of non-compliant lot
Information not available	Propamocarb/ Strawberries	1	Follow-up (suspect) sampling of similar products/ Administrative sanctions
Use of a pesticide on food imported from third countries for which no import tolerance was set	Carbendazim/ Mix Spices	1	Rejection of a non-compliant lot at the border/ Destruction of non-compliant lot
GAP not respected: use of an approved pesticide, but application rate, number of treatments, application method or PHI not respected	Chlorpyrifos/ Tomatoes	2	Administrative sanctions
GAP not respected: use of an approved pesticide not authorized on the specific crop	Kresoxim methyl/ Apricot	1	Administrative sanctions
GAP not respected: use of an approved pesticide not authorized on the specific crop	Chlorpyrifos, Triadimenol/ Parsley	1	Administrative sanctions
GAP not respected: use of a pesticide not approved in the EU/GAP not respected: use of an approved pesticide not authorized on the specific crop	Carbendazim, Triadimenol/ Parsley	1	Administrative sanctions
Use of a pesticide on food imported from third countries for which no import tolerance was set	Diazinon/ Lemons	1	Destruction of part of non – compliant lot.

Table 2: Continued

GAP not respected: use of an approved pesticide not authorized on the specific crop	Chlorpyrifos,/ Parsley	1	Administrative sanctions
Use of a pesticide on food imported from third countries for which no import tolerance was set	Chlorpyrifos, Triadimenol/ Mint Dried	1	Rejection of a non-compliant lot at the border
GAP not respected: use of an approved pesticide not authorized on the specific crop	Triadimenol/ Plums	1	Administrative sanctions
GAP not respected: use of an approved pesticide not authorized on the specific crop	Triadimenol/ Pears	1	Administrative sanctions
GAP not respected: use of an approved pesticide not authorized on the specific crop	Spinosad/ Figs	1	Administrative sanctions
GAP not respected: use of an approved pesticide not authorized on the specific crop	Spinosad/ Pomegranates	1	Administrative sanctions
GAP not respected: use of an approved pesticide, but application rate, number of treatments, application method or PHI not respected	Propamocarb / Beans with pods	1	Administrative sanctions
Use of a pesticide on food imported from third countries for which no import tolerance was set	Thiamethoxam/ Pomegranates	1	Rejection of a non-compliant lot at the border/ Destruction of non-compliant lot

3. Quality assurance

The PR Lab of the SGL is accredited since 2002 according to EN ISO/IEC 17025:2005. The PR-Lab applies Quality Control procedures, which are in line with provisions of "Analytical Quality Control and Method Validation Procedures for Pesticide Residues Analysis in Food and Feed".

Country code	Laboratory Name	Laboratory Code	Accreditation Date	Accreditation Body	Participation in proficiency tests or interlaboratory tests
CY	State General Laboratory of Ministry of Health	SGL_CYPRUS_FP	2002	Cyprus Accreditation Body(CYS-CYSAB)	PTs 2018: EUPT-SRM-13, EUPT-AO-13, EUPT-FV-20, FV-SC02.

4. Processing Factors (PF)

Processing factors were applied to verify the compliance with EU MRLs of the processed food. Table 3 presents the PFs applied for different food.

Table 3: Processing factors

Pesticide(report name)	Unprocessed product (RAC)	Processed product	Processing factor
Acetamiprid Azoxystrobin Boscalid Carbendazim Chlorantraniliprole Cypermethrin Cyprodinil Deltamethrin Dimethomorph Famoxadone Fenvalerate Fludioxonil Fluopyram Fluxapyroxad Hexythiazox Imidacloprid Indoxacarb Iprodione Lambda-Cyhalothrin Metalaxyl Methoxyfenozide Metrafenone Myclobutanil Penconazole Pyrimethanil Quinoxyfen Tebuconazole Tebufenpyrad Thiamethoxam Triadimenol Trifloxystrobin	Table grapes	Raisins	1
Ethion	Table grapes	Raisins	2
Chlorpyrifos Cypermethrin Iprodione	Olives	Olive oil	5
Carbendazim Chlorpyrifos Malathion Methomyl Profenofos	Mint	Dry Mint	5.18

Table 3: Continued

Acetamiprid Azoxystrobin Boscalid Carbendazim Chlorantraniliprole Cyprodinil Dimethomorph Fenhexamid Fluopyram Iprodione Metalaxyl Pyrimethanil Tebuconazole Thiophanate methyl Triadimenol	Wine grapes	Wine	1
Bromide ion Chlorpyrifos methyl Cypermethrin Deltamethrin Pirimiphos methyl	Wheat	Wheat Flour	1