Pesticide Residue Control Results

“National summary report”

Country: BULGARIA

Year: 2013

National competent authority/organisation:

BULGARIAN FOOD SAFETY AGENCY

Web address where the national annual report is published:

http://www.babh.government.bg/en/
1. **Objective and design of the national control programme**

The Bulgarian Food Safety Agency (BFSA) within the Ministry of Agriculture and Food (MAF) is the competent authority for the enforcement of pesticide residues monitoring in Bulgaria and is responsible for drawing up the National monitoring programme for pesticide residues in and on products of animal and plant origin. Therefore the BFSA is responsible for implementation of coordinated multiannual control programme of the Union and taking samples in terms of Commission Regulation (EC) No 788/2012.

A coordinated multi-Community monitoring program is included in the National programme on pesticide residues monitoring.

The sampling plan for pesticide residues monitoring is always drawn up for one calendar year. The plan is elaborated by the Headquarter of BFSA and it is distributed to the Regional Food Safety Directorates /RFSD/ which are responsible for its implementation.

The following criteria have been used for the selection of commodities being listed in the national programme on pesticide residues monitoring:

- the overall food consumption of the Bulgarian population /relative share in average Bulgarian’s diet;
- the consumption food basket;
- the results of official controls and monitoring of pesticide residues in previous years;
- the foodstuffs intended for risk groups of population (namely infant formula and foods for young children);
- local production/imports of commodities;
- agricultural production in Bulgaria;
- the reports in RASFF system;
- Risk assessment based on the results in 2012 – prepared by Risk assessment center which includes Bulgarian focal point to EFSA;
- Commission Implementing Regulation (EU) № 788/2012 of 31 August 2012 concerning a coordinated multiannual control programme of the Union for 2013, 2014 and 2015 to ensure compliance with maximum residue levels of pesticides and to assess the consumer exposure to pesticide residues in and on food of plant and animal origin.

In addition to the samples provided by the Community programme samples determined on the basis of the above criteria were included, i.e. the multiannual Community programme laid down in the Regulation (EC) No 788/2012 forms a part of this control programme.

The following factors have been considered in the selection of pesticide residues to be analysed:

- the most frequently used pesticides;
- the results of official controls and monitoring of pesticide residues in previous years;
- information in RASFF system;
- Commission Implementing Regulation (EU) № 788/2012 of 31 August 2012 concerning a coordinated multiannual control programme of the Union for 2013, 2014 and 2015 to ensure compliance with maximum residue levels of pesticides and to assess the consumer exposure to pesticide residues in and on food of plant and animal origin;
- the consumer food basket;
- risk assessment (Risk assessment center in Bulgaria);
- the laboratory capacity.

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

In 2013, a total number of 3237 samples were analysed: 3160 of fruits and nuts, vegetables and other plant products; 28 processed products; 14 cereals, 20 baby foods and 15 animal products – products of domestic and non-domestic origin in the national and co-ordinated monitoring programs. 166 samples were with residues below MRL (5.1%). 64 samples were exceeding MRL (2.0%).

As a comparison, in 2012, a total number of 3174 samples were analysed: 198 samples were with residues below MRL (6.2%) and 60 samples were exceeding MRL (1.9%).

As a comparison, in 2011, a total number of 4516 samples were analysed: 245 samples were with residues below MRL (5.4%) and 108 samples were exceeding MRL (2.4%).

**The percentage of samples with residues below MRL has decreased in 2013 (5.1%) as compared to 2012 (6.2%), and 2011 (5.4%).**

**The percentage of samples with residues above MRL slightly increased in 2013 (2.0%), as compared to 2012 (1.9%) and has decreased as compared to 2011 (2.4%).**

Of the total number of analysed samples in 2013:

- 2975 samples were taken as enforcement samples (in line with Regulation (EC) № 669/2009), of which 45 samples contained pesticide residues above the MRL (1.5%). Of all 45 samples: 44 were of TC origin and 1 sample was of domestic production;

- 262 samples were taken as surveillance samples (in line with Regulation (EC) № 788/2012), of which 19 samples contained pesticide residues above the MRL (7.25%). Of all 19 samples: 17 samples were of domestic production, 1 sample was of EU production and 1 sample was of TC origin.

In comparison to 2012, from 2878 samples taken as enforcement samples, 55 samples contained pesticide residues above the MRL (1.9%). All 55 samples were of TC origin.

In comparison to 2011, from 4055 samples taken as enforcement samples, 97 samples
contained pesticide residues above the MRL (2.4%); all 97 were of TC origin.

**The percentage of samples exceeding MRL (taken as enforcement samples) decreased in 2013 (1.5%), as compared to 2012 (1.9%), and 2011 (2.4%).**

In comparison to 2012, from 296 samples taken as surveillance samples, 5 samples contained pesticide residues above the MRL (2.3%). All 5 samples were of domestic production.

In comparison to 2011, from 461 samples taken as surveillance samples (in line with Regulation (EC) № 915/2010), 11 samples contained pesticide residues above the MRL (5.9%); from them 9 were domestic production and 2 were TC origin.

**The percentage of samples exceeding MRL (taken as surveillance samples) increased in 2013 (7.25%), as compared to 2012 (2.3%) and 2011 (5.9%).**

3. **Non-compliant samples: possible reasons and actions taken**

In 2013, from a total number of 3237 samples, 64 samples were exceeding MRL (2.0%).

*Table 1: Actions taken on the non-compliant samples*

<table>
<thead>
<tr>
<th>Number of non-compliant samples</th>
<th>Action taken</th>
<th>Note</th>
</tr>
</thead>
</table>
| 45 non-compliant samples (were taken according to Regulation (EC) № 669/2009) | RASFF notification | Sample code: Z-26994  
RASFF ref: 2013.AAH  
Not released on the market |
|  |  | Sample code: Z-27038  
RASFF ref: 2013. AAJ  
Not released on the market |

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<table>
<thead>
<tr>
<th>Code</th>
<th>RASFF ref</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Z-103</td>
<td>2013.AAT</td>
<td>Not released on the market</td>
</tr>
<tr>
<td>Sample code:</td>
<td>Z-735</td>
<td>2013.ACN</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not released on the market</td>
</tr>
<tr>
<td>Sample code:</td>
<td>Z-1482</td>
<td>2013.AEW</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not released on the market</td>
</tr>
<tr>
<td>Sample code:</td>
<td>Z-2030</td>
<td>2013.AGF</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not released on the market</td>
</tr>
<tr>
<td>Sample code:</td>
<td>Z-2019</td>
<td>2013.AGJ</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Not released on the market</td>
</tr>
<tr>
<td>Sample code:</td>
<td>Z-2220</td>
<td></td>
</tr>
</tbody>
</table>
RASFF ref: 2013.AGW
Not released on the market
Sample code:
Z-2531

RASFF ref: 2013.AID
Not released on the market
Sample code:
Z-2510

RASFF ref: 2013.AIC
Not released on the market
Sample code:
Z-2785

RASFF ref: 2013.AJD
Not released on the market
Sample code:
Z-3244

RASFF ref: 2013.AKP
Not released on the market
Sample code:
IP_61

RASFF ref: 2013.ALQ
Not released on the market

Sample code: Z-3860
RASFF ref: 2013.AMP

Not released on the market

Sample code: Z-5482
RASFF ref: 2013.APT

Not released on the market

Sample code: Z-5378
RASFF ref: 2013.APS

Not released on the market

Sample code: Z-8012
RASFF ref: 2013.ATO

Not released on the market

Sample code: Z-11026
RASFF ref: 2013.AYC

Not released on the market
Sample code: Z-12970
RASFF ref: 2013.BAJ
Not released on the market

Sample code: Z-13336
RASFF ref: 2013.BBA
Not released on the market

Sample code: Z-14057
RASFF ref: 2013.BCN
Not released on the market

Sample code: 2013/171
RASFF ref: 2013.BCV
Not released on the market

Sample code: Z-14901
RASFF ref: 2013.BEB
Not released on the market
Sample code: Z-15134
RASFF ref: 2013.BES
Not released on the market

Sample code: Z-16559
RASFF ref: 2013.BHX
Not released on the market

Sample code: Z-18724
RASFF ref: 2013.BOC
Not released on the market

Sample code: Z-20646
RASFF ref: 2013.BTS
Not released on the market

Sample code: Z-20907
RASFF ref: 2013.BUB
Not released on the market

Sample code:
Z-21115
RASFF ref: 2013.BVQ
Not released on the market

Sample code:
Z-21778
RASFF ref: 2013.BWS
Not released on the market

Sample code:
Z-21623
RASFF ref: 2013.BWR
Not released on the market

Sample code:
Z-21579
RASFF ref: 2013.BWQ
Not released on the market

Sample code:
Z-22284
RASFF ref: 2013.BXP
Not released on the market

Sample code:
Z-22400
No action taken

RASFF ref: 2013.BXW
Not released on the market

Sample code:
Z-22981

RASFF ref: 2013.BZB
Not released on the market

Sample code:
Z-22998

RASFF ref: 2013.BZD
Not released on the market

Sample code:
Z-25912

RASFF ref: 2013.CEM
Not released on the market

Sample code:
Z-26044

RASFF ref: 2014.AAG
Sample codes:
Released on the market, because the result does not exceed the MRL after calculating the measurement
19 non-compliant samples (were taken according to Regulation (EC) № 788/2012)

<table>
<thead>
<tr>
<th>Administrative sanctions</th>
<th>Sample code: M lettuce01, M lettuce07, M lettuce10, M rye oats09, M straw01,</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A report was prepared within an administrative procedure and it was found that no available quantities of the lot are present.</td>
</tr>
<tr>
<td>Warnings</td>
<td>Sample code: Mlettuce02, Mlettuce03, Mcuc07, Mcuc08, Mcarr10, M grape table03, Mstraw06, 130036382</td>
</tr>
<tr>
<td></td>
<td>A warning was issued. The lot was withdrawn from the market. It was found that no available quantities of the lot are present.</td>
</tr>
<tr>
<td>Lot recalled from the market</td>
<td>Sample code: Mapp05, Mpears01, Mpears03, Mrice05,</td>
</tr>
<tr>
<td></td>
<td>The lot was recalled from the market.</td>
</tr>
<tr>
<td>Lot not released on the market</td>
<td>Sample code: 130027971, 130033471 – baby food</td>
</tr>
<tr>
<td></td>
<td>The lot was recalled from the market and was destroyed.</td>
</tr>
<tr>
<td>Lot not released on the market</td>
<td>Sample code: M tom05</td>
</tr>
<tr>
<td></td>
<td>Lot not released on the market</td>
</tr>
</tbody>
</table>
### Table 2: Possible reasons for MRL non compliance

<table>
<thead>
<tr>
<th>Product</th>
<th>Residue</th>
<th>Reason for MRL non compliance</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apples</td>
<td>Dimethoate</td>
<td>Contamination: not known</td>
<td>----</td>
</tr>
<tr>
<td>Cucumbers</td>
<td>Dimethoate</td>
<td>Contamination: not known</td>
<td>----</td>
</tr>
<tr>
<td>(2 samples)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carrots</td>
<td>Ethoprophos (2 samples)</td>
<td>Contamination: not known</td>
<td>----</td>
</tr>
<tr>
<td>Grapes</td>
<td>Thiophanate-methyl</td>
<td>Contamination: not known</td>
<td>----</td>
</tr>
<tr>
<td>Lettuce</td>
<td>Carbendazim and benomyl (sum of benomyl and</td>
<td>Contamination: not known</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>chlorpyrifos</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thiophanate-methyl</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dithiocarbamates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lettuce</td>
<td>Carbendazim and benomyl (sum of benomyl and</td>
<td>Contamination: not known</td>
<td>----</td>
</tr>
<tr>
<td></td>
<td>chlorpyrifos</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thiophanate-methyl</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dithiocarbamates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lettuce</td>
<td>Carbendazim and benomyl (sum of benomyl and</td>
<td>Contamination: not known</td>
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<tr>
<td></td>
<td>chlorpyrifos</td>
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<td></td>
</tr>
<tr>
<td></td>
<td>Dithiocarbamates</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lettuce</td>
<td>Chlorpyrifos</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Thiophanate-methyl</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dithiocarbamates</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
(2 samples) | Carbendazim expressed as carbendazim | Thiophanate-methyl |
---|---|---|
Pears | Phosmet | Contamination: not known |
Pears | Dimethoate | Contamination: not known |
(2 samples) | Ethoxazole | Ethoxazole is not approved for use in pears |
Rice | Dithiocarbamates | Contamination: not known |
Oats | Chlorpyrifos | Contamination: not known |
Strawberries | Carbendazim and benomyl (sum of benomyl and carbendazim expressed as carbendazim) | Contamination: not known |
Strawberries | Procymidone | Contamination: not known |
Tomatoes | Bromide ion | Contamination: not known |
Tea | Buprofezin | Contamination: not known |
Peppers | Procymidone | Contamination: not known |
| Chlorfenapyr | |
Baby food for infants and young children (2 samples) | Chlorpropham | Contamination: not known |
Tomatoes (2 samples) | Formetanate | Contamination: not known |
| Malathion (sum of malathion and malaoxon expressed as malathion) | Contamination: not known |
Peppers (32 samples) | Malathion (sum of malathion and malaoxon expressed as malathion) | Contamination: not known |
Formetanate
Methomyl and thiodicarb (sum of methomyl and thiocarb expressed as methomyl)
Clofentezine
Procymidone
Tetradifon
Carbendazim and benomyl

4. Quality assurance

Table 3: Laboratories participating in the control programme

Four laboratories have taken part in the national control programme in 2013. They are: Central Laboratory for Chemical Testing and Control (CLCTC), Central Laboratory of Veterinary Control and Ecology (CLVCE), Fytolab Bulgaria Ltd. and Euro Lab.

Three laboratories have an Accreditation Certificate as per EN ISO/IEC 17025 by the Executive Agency “Bulgarian Accreditation Service” (EA BAS) and one laboratory - Fytolab Bulgaria Ltd has an Accreditation Certificate as per EN ISO/IEC 17025 by the BELAC-Brussels, Belgium.

Analytical uncertainty

The analytical uncertainty of the results is calculated based on relative standard deviation of recovery rates and results of proficiency testing if available. If the analytical results, without a correction were mathematically above the MRL, the sample was defined as an exceeding. However, before any enforcement actions were taken the analytical uncertainty was subtracted from the measured value. If the corrected analytical results still exceed the MRL enforcement actions could be taken.

For each laboratory participating in the control programme complete the table below. Ensure that the laboratory code corresponds with the values submitted in the <labCode> element of the control results transmitted in XML files.
<table>
<thead>
<tr>
<th>Country Code</th>
<th>Laboratory Name</th>
<th>Laboratory Code</th>
<th>Accreditation Date</th>
<th>Accreditation Body</th>
<th>Participation in proficiency tests or interlaboratory tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>BG</td>
<td>Central Laboratory for Chemical Testing and Control</td>
<td>CLCTC</td>
<td>29/06/2012 valid to:30.06.2016</td>
<td>Executive Agency “Bulgarian Accreditation Service”</td>
<td>1. EUPT-FV-15- European Union Proficiency Test in Fruit and Vegetables Pesticide Residues; Pesticide Residues in potatoes; 2. EUPT-SRM8- European Union Proficiency Test on Pesticide Residues Requiring Single Methods; Pesticide Residues in potatoes; 3. IMEP-37 Proficiency Test, organized by IRMM, JRC; Pesticide Residues in grape.</td>
</tr>
<tr>
<td>BG</td>
<td>Central Laboratory of Veterinary Control and Ecology</td>
<td>CLVCE</td>
<td>The last accreditation 02.04.2012, valid to:30.04.2016</td>
<td>Executive Agency “Bulgarian Accreditation Service”</td>
<td>EUPT AO 08, organized by EURL Freiburg, Germany; Pesticides in raw poultry meat.</td>
</tr>
<tr>
<td>BG</td>
<td>Fytolab Bulgaria Ltd.</td>
<td>FYTBG</td>
<td>26/04/2011; valid to: 2016-05-06</td>
<td>BELAC-Brussels, Belgium</td>
<td>FAPAS 19151, Pesticides Residues in lemon; EUPT-CF7, organized by EURL, Pesticides residues in Feed for laying hens; FAPAS 985, Pesticides Residues in brown rice; FAPAS 19159, Pesticides Residues in cucumbers</td>
</tr>
<tr>
<td>BG</td>
<td>Euro Lab</td>
<td>EuroLab</td>
<td>27/11/2012</td>
<td>Executive Agency &quot;Bulgarian Accreditation Service&quot; (BAS)</td>
<td>1. EURL-PROFICIENCY TEST-FV-15, 2013; Pesticide Residues in Potato Homogenate- 175 pesticides; Z score ≤ 1.2; AZ²= 0.4; classification- Good 2. IMEP-37: Determination of pesticides in grapes-20 pesticides; Institute for Reference Materials and Measurements, Geel, Belgium</td>
</tr>
</tbody>
</table>
1. Additional Information

The laboratories used the multi-residue methods of analysis for pesticide residues in fruits, vegetables, cereals, processed products and baby food:

- BSS EN 15662 Foods of plant origin – Determination of pesticide residues using GC-MS and/or LC-MS/MS following acetonitrile extraction/partitioning and clean-up by dispersive SPE- QuEChERS – method.
- Determination of residues organochlorine compounds in samples of animal origin, waters and forage by GC/ECD
- Determination of residues organophosphorus compounds in samples of animal origin by GC/NPD
- Determination of residues polychlorinated biphenyls (PCBs) in biological samples by GC/ECD

The methodology used in the analysis includes:

- sample homogenization;
- pesticide extraction using a suitable organic solvent;
- purification of the extract by means of chromatographic techniques; the stage of extract purification / concentration involves the application of solid phase extraction, in some cases also gel permeation chromatography;
- instrumental analysis of the purified extract by means of capillary gas chromatography /GC/MSD and GC-ECD/ or high performance liquid chromatography /LC/MS-MS/.

More information regarding pesticide residues in Bulgaria and their control can be found on http://www.babh.government.bg