Pesticides residues testing in organic production

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Pesticides residues testing in organic production

- 1. Background;
- 2. Questionnaire sent to Member States;
- 3. Audits in 5 Member States in 2015 and 2016;
1. Background on FVO project

- Pesticide residue testing is only one aspect of controls in Organic Production;
- Legal requirement to sample 5% of organic operators since 2014;
- FVO project to help Member States implementing effective controls for pesticide residue testing in organic production;
- FVO project in co-operation with EURAL Almería;
Background – legislation

- NRLs and EURLs are established under Regulation (EC) No 882/2004;
- Control of Organic Production also falls under Regulation (EC) No 882/2004;
Background – Pesticide residue results from Food Safety Controls EFSA report for 2013

• **Organic samples:**
  - Fruits: < MRL: 15.1 % > MRL: 0.5 %
  - Vegetables: < MRL: 15.1 % > MRL: 1.0 %
  - Baby food: < MRL: 7.5 % > MRL: 1.0 %

• **Conventional samples:**
  - Fruits: < MRL: 67.9 % > MRL: 2.3 %
  - Vegetables: < MRL: 36.8 % > MRL: 3.5 %
  - Baby food: < MRL: 4.8 % > MRL: 0.6 %
2. Questionnaire sent to all MSs

- Two parts:
  - Competent authorities
  - Laboratories
- Sent in December 2014;
- Replies received from 25 Member States;
Questions Competent authorities

- Germany and Spain sent separate replies for regions;
- 41 replies received;
- Data covering period from 2012-2014
Sampling includes:

- **Food:**
  - Regular control: 83 %
  - In case of suspicion: 78 %

- **Feed:**
  - Regular control: 80 %
  - In case of suspicion: 76 %
Sampling includes....

- **Leaves:**
  - Regular control: 73 %
  - In case of suspicion: 78 %

- **Soil/water:**
  - Regular control: 44%
  - In case of suspicion: 73 %
Sampling at stage of....

• Production:
  • Regular control: 85 %
  • In case of suspicion: 80 %

• Processing:
  • Regular control: 85 %
  • In case of suspicion: 76 %
Sampling at stage of....

- Retail:
  - Regular control: 61%
  - In case of suspicion: 56%

- Import:
  - Regular control: 71%
  - In case of suspicion: 63%
Number of samples per year

- Taken by Competent authority: 2,064
- Taken by Control Body/Authority: 20,820
- Number of operators sampled: 16,188
- Percentage of non-compliant operators: 5.8 %
- Pesticide detections:
  - Non-authorised use: 2.9 %
  - Spray drift: 2.9 %
  - Other reasons: 2.7 %
Laboratories....

- Designation of laboratories by CA:
  - Yes: 39 %
  - No: 61 %

- Scope of analysis defined by:
  - Competent Authority: 32 %
  - Control Body/Authority: 83 %
  - Laboratory staff: 24 %
Thresholds to decide on compliance

- Yes: 44%
- No: 56%

Thresholds range from 0 to 10 ppm:

- 0; 0.01 ppm, 0.02 ppm; 0.05 ppm, 0.1 ppm, 1 ppm, "10 ppm"
- Possibly unit "ppm" not understood;
Questions Laboratories

• A total of 115 replies;
• Italy: 28 laboratories; Spain: 30 laboratories;
• A few laboratories used by several MSs;
• Results for 2012 – 2014
Results laboratories

- Average number of pesticides offered in test: 375
- Same methods as for conventional: 88 %
- Single residue methods offered: 60 %
- Lower reporting limits offered: 21 % (0.01 ppm, in cases 0.001 or 0.003 ppm)
- Part of reference laboratory network: 34 %
- Participation in EU Proficiency tests: 57 %
Participation of laboratory in NRL activity

- Training: 22 %
- Meetings: 40 %
- Circulation of info: 39 %
- Proficiency tests: 36 %
- None of these: 40 %
3. FVO Audits in five Member States

- UK (1/2015), Poland (6/2015), Germany (9/2015), Finland and Spain: 2016;
- Report for UK published:
  - [http://ec.europa.eu/food/fvo/audit_reports/](http://ec.europa.eu/food/fvo/audit_reports/)


Audits – initial results

- National Guidance on procedures for testing organic produce, including sampling;
- Minor weaknesses with sampling, which may affect representativeness of results;
- No explicit decision tree for investigating pesticide detections – different approaches exist;
Audits – initial results (2)

- On-site investigation for each pesticide detection not workable;
- Laboratories not part of official reference laboratory network EURL/NRL;
- Laboratories visited had sufficient resources and a range of methods in place, but...;
Audits – initial results (3)

• Official criteria for analysis are not established and communicated;

• Consequently, there are limitations of analytical methods applied regarding...
  • **Range of pesticides in method**: e.g. GC scan only;
  • **Sensitivity of method**: 0.01 mg/kg?
  • **Quality Control Procedures applied**: e.g. validation for one commodity only, one point validation at 0.1 ppm, insufficient confirmation;
Initial conclusions

• Sampling for pesticide residues implemented in Member States, procedures in process of development;

• Lack of designation and clear delegation of tasks for laboratories (which scope?, sensitivity?, Quality Control?): reduces effectiveness of controls;

• Laboratories not included in network of Reference laboratories: lack of co-ordination affects controls;
Initial conclusions (2)

- Different procedures exist in Member States on investigating pesticide detections: clarity is needed;
- "Case-by-case investigation" means intransparent procedures.
Next steps

- Findings presented at Brussels Regulatory Committee on Organic Production in July 2015;
- Competent authorities asked to designate laboratories and inform NRLs;
Thank you!