European Food Safety Authority

Challenges on pesticide monitoring data reported to EFSA

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4th Joint Workshop of the EURLs on pesticide residues
Almería, Spain, 23rd – 25th October2013

Overview

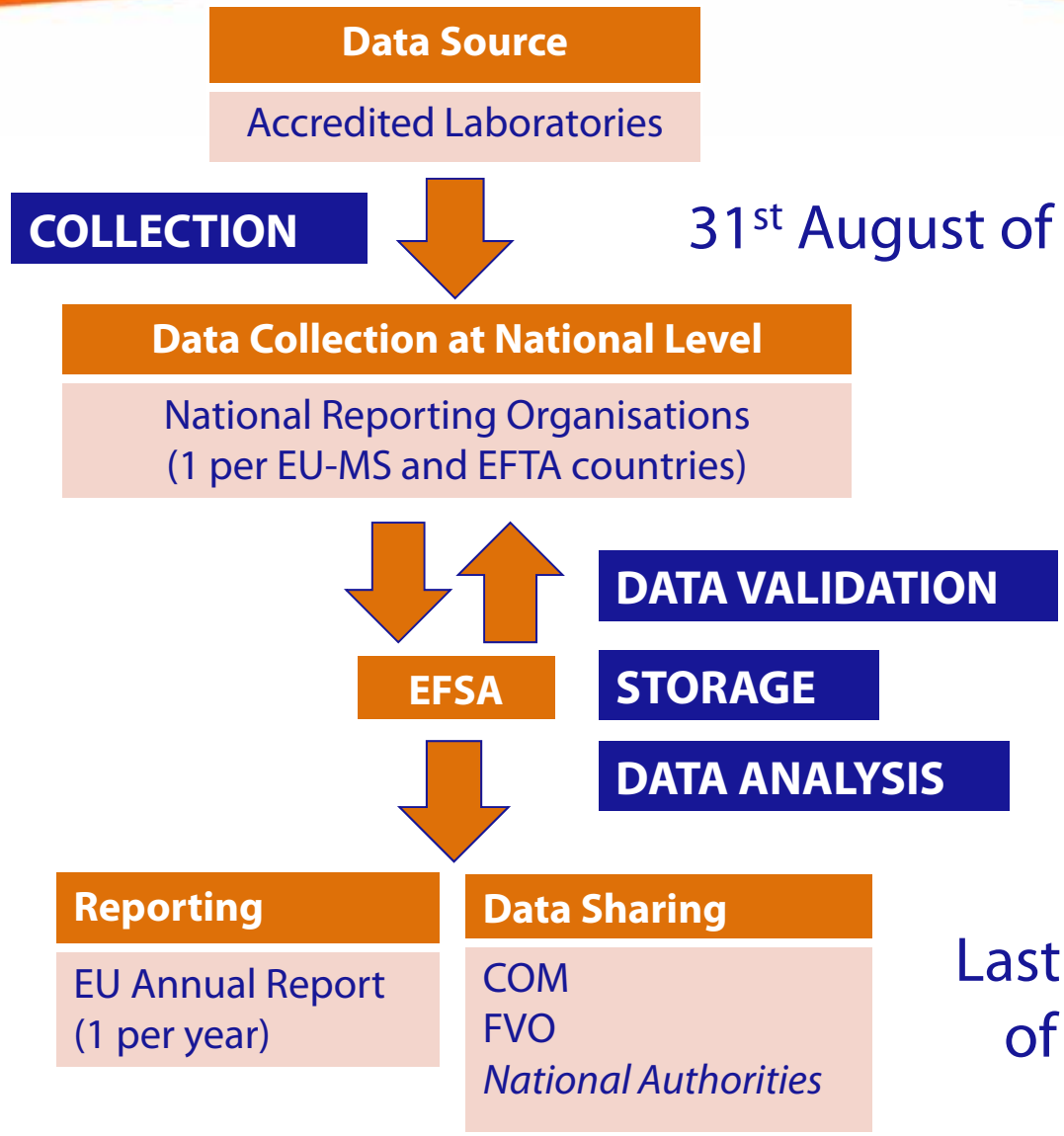
- The Pesticide Unit
- Monitoring Data Collection
- Monitoring Results Analysis
- Overall Conclusion

The Pesticide Unit

- **Pesticide risk assessment under Regulation (EC) No 1107/2009**
  - conclusions on the peer review (with the view on authorising a pesticide in EU)
  - complete pesticide risk assessment
  - representative uses only
- **MRL application under Articles 10 & 11 of Regulation (EC) No 396/2005**
  - reasoned opinions on the modification or setting of an MRL
  - pesticide residues risk assessment only
  - pesticide/crop combination authorised at MS level or import tolerance
- **MRL review under Articles 12 of Regulation (EC) No 396/2005**
  - reasoned opinions on the review of all existing EU MRLs
  - pesticide residues risk assessment only
  - all existing import tolerances and pesticide uses authorised within Europe
- **EU Annual Report on pesticide residues under Article 31 & 32 of Regulation (EC) No 396/2005**

Monitoring Data Collection

How and when is data collected?



Networking Group

Pesticide Monitoring

- Since 2009
- Representatives:
  - COM (DG SANCO)
  - MSs and EFTA countries appointed by the national competent authorities defined in accordance with Regulation 396/2005
  - EFSA.
- These representatives are experts on issues which involved the control/monitoring of pesticide residues in food.
- Aimed to strengthen the collaboration
- Aimed to exchange information on issues concerning the monitoring and consumer's exposure to pesticide residues in food

Networking Group main tasks

- ✓ Review of the Annual Report on Pesticide Residues.
- ✓ Review of the standardised data model (Standard Sample Description – SSD) and controlled terminologies used to collect data on the pesticide residue monitoring.
- ✓ Contribution to the development of EFSA Guidance and documents on pesticide residue data collection and exposure assessment.
- ✓ Discussion on different aspects in pesticide monitoring data collection, analysis and presentation.

Monitoring Results Analysis

Annual Report - EUCP

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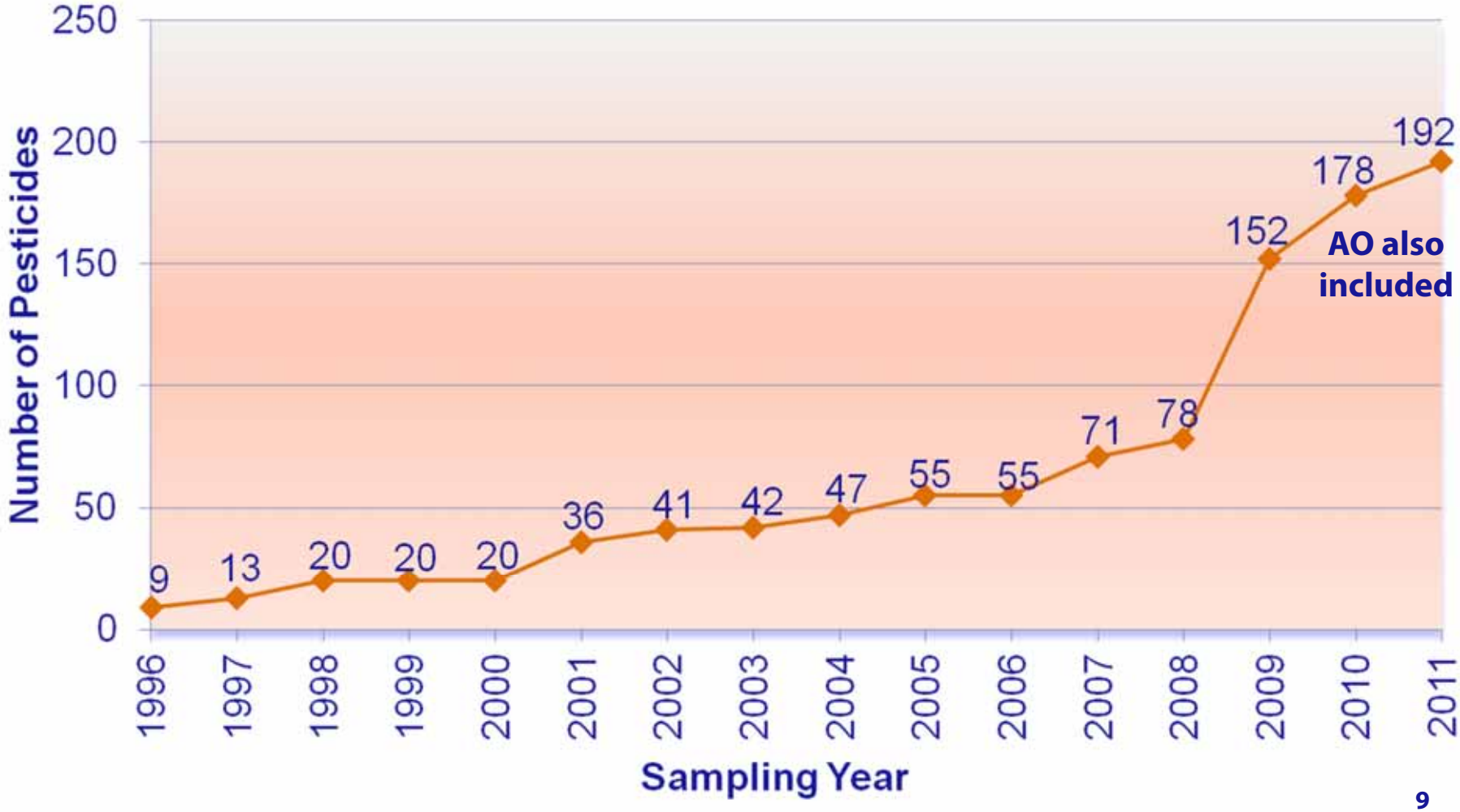
History on the number of pesticides collected



Pesticides Monitoring

Data collected under the EU-coordinated programmes:

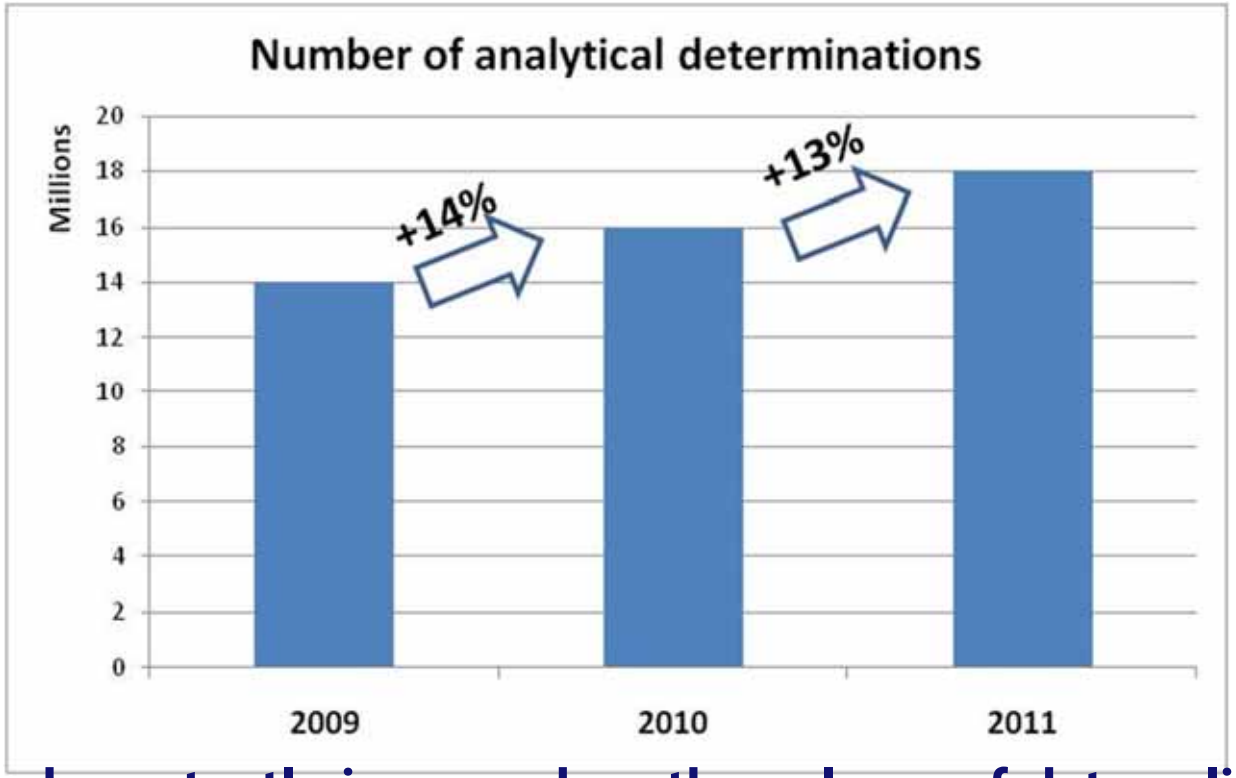
- 2009: 10 commodities 139 Residues
- 2010: 12 commodities 180 Residues
- 2011: 13 commodities 192 Residues
- **2012: 12 commodities 217 Residues**

Plus national programme results

Provisional summary for 2012

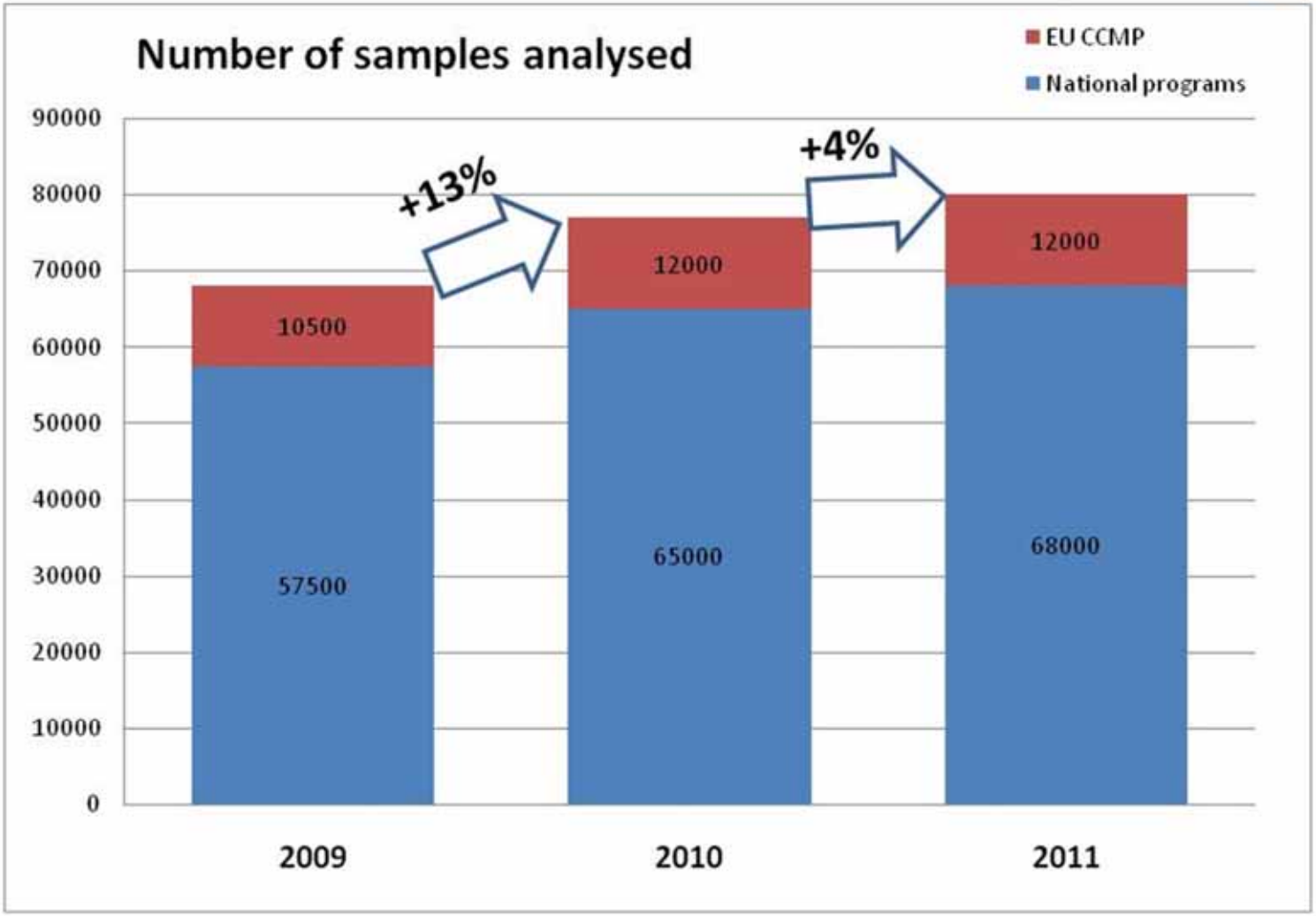
Analysis of Results

- 2009 ≈ 14 millions of analytical determinations
- 2010 ≈ 16 millions of analytical determinations
- 2011 ≈ 18 millions of analytical determinations



- **Large and constantly increased on the volume of data validated and accepted.**
- **Very good result due to the continued collaboration.**

Analysis of Results



68.000 77.000 80.000

Analysis of Results – country of origin

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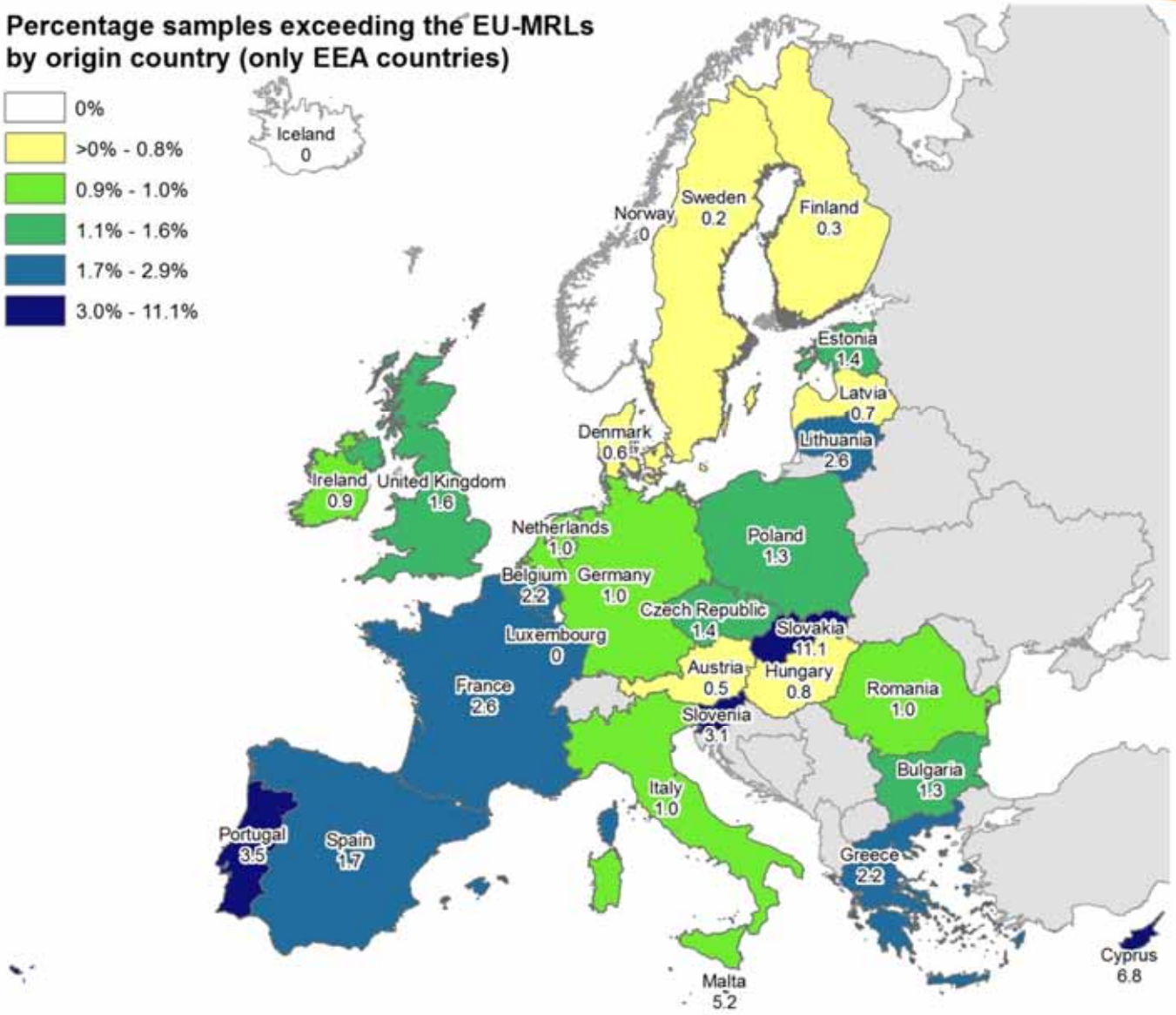

Analysis of Results – country of origin

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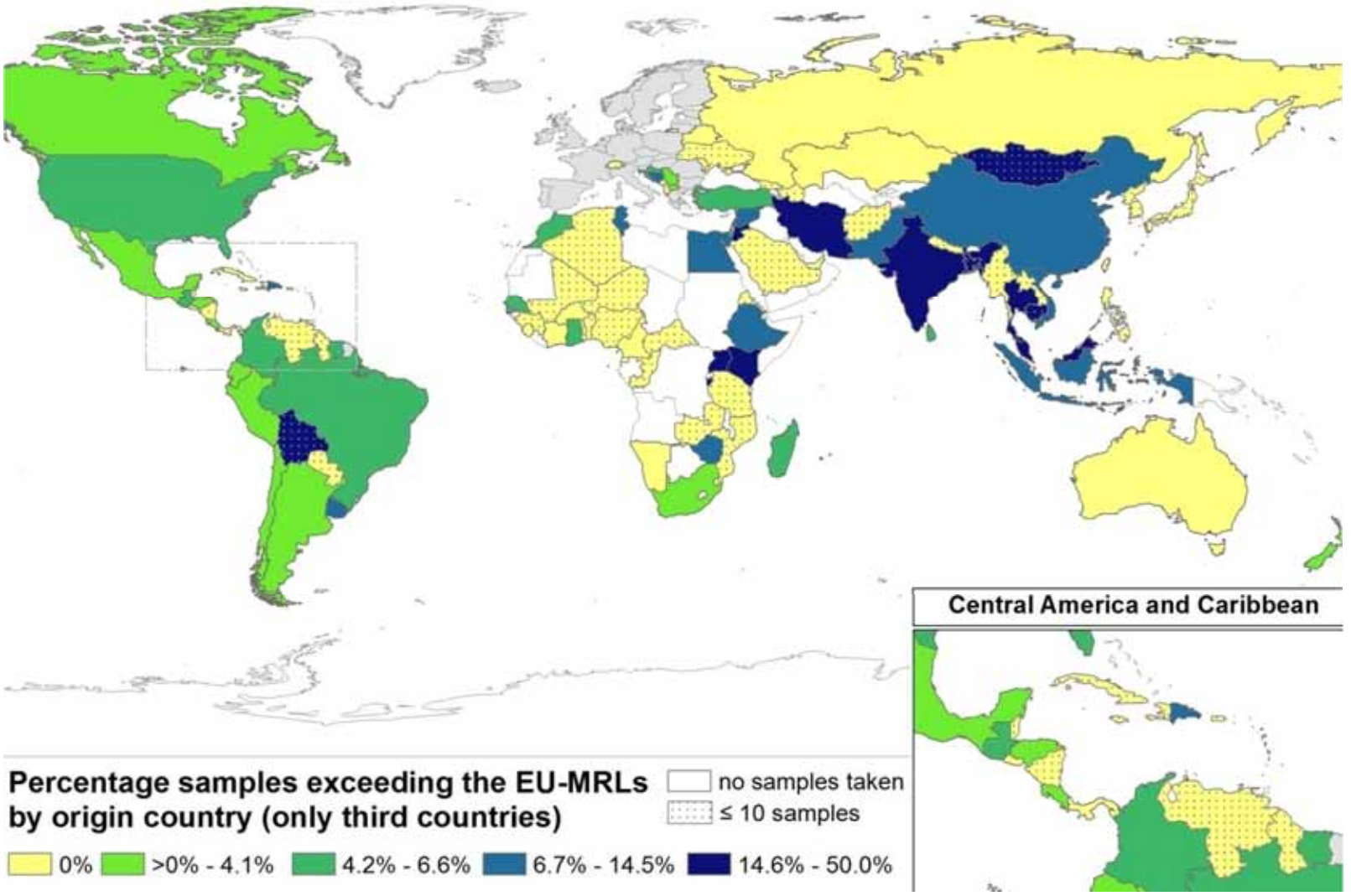

Analysis of Results

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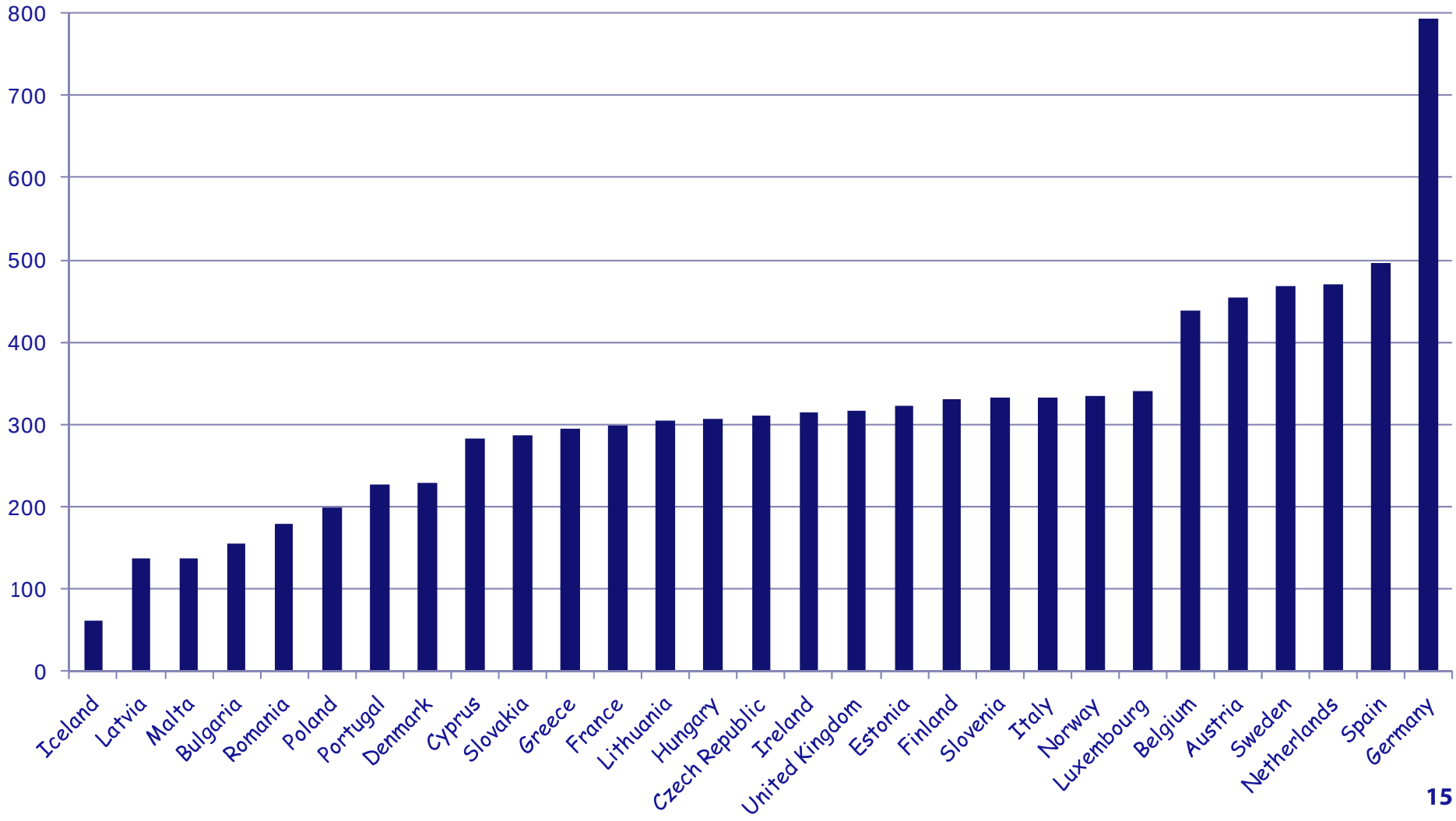
Total number of pesticides sought by reporting countries - 2010



Room for improvements

1) No. of samples

EC sent a mandate to EFSA (SAS Unit) to evaluate the Data Representativeness under the EUCP for the two purpose established:

- Check the rate of MRL compliance
- Have representative data to conduct risk assessment

In collaboration with the University of Hasselt in Belgium, a project has started.

universiteit hasselt | I-BioStat | KU LEUVEN

Interuniversity Institute for Biostatistics and statistical Bioinformatics

1) No. of samples

Objective 1: Quality assessment of main data sources most commonly used for EFSA risk assessments.

Expected: January 2014

Objective 2: Assessment of impact of design, sample size used and population characteristics.

Expected: June 2014

Objective 3: Investigation of methods to deal with bias and other identified issues.

Expected: March 2015

2) Residue definition

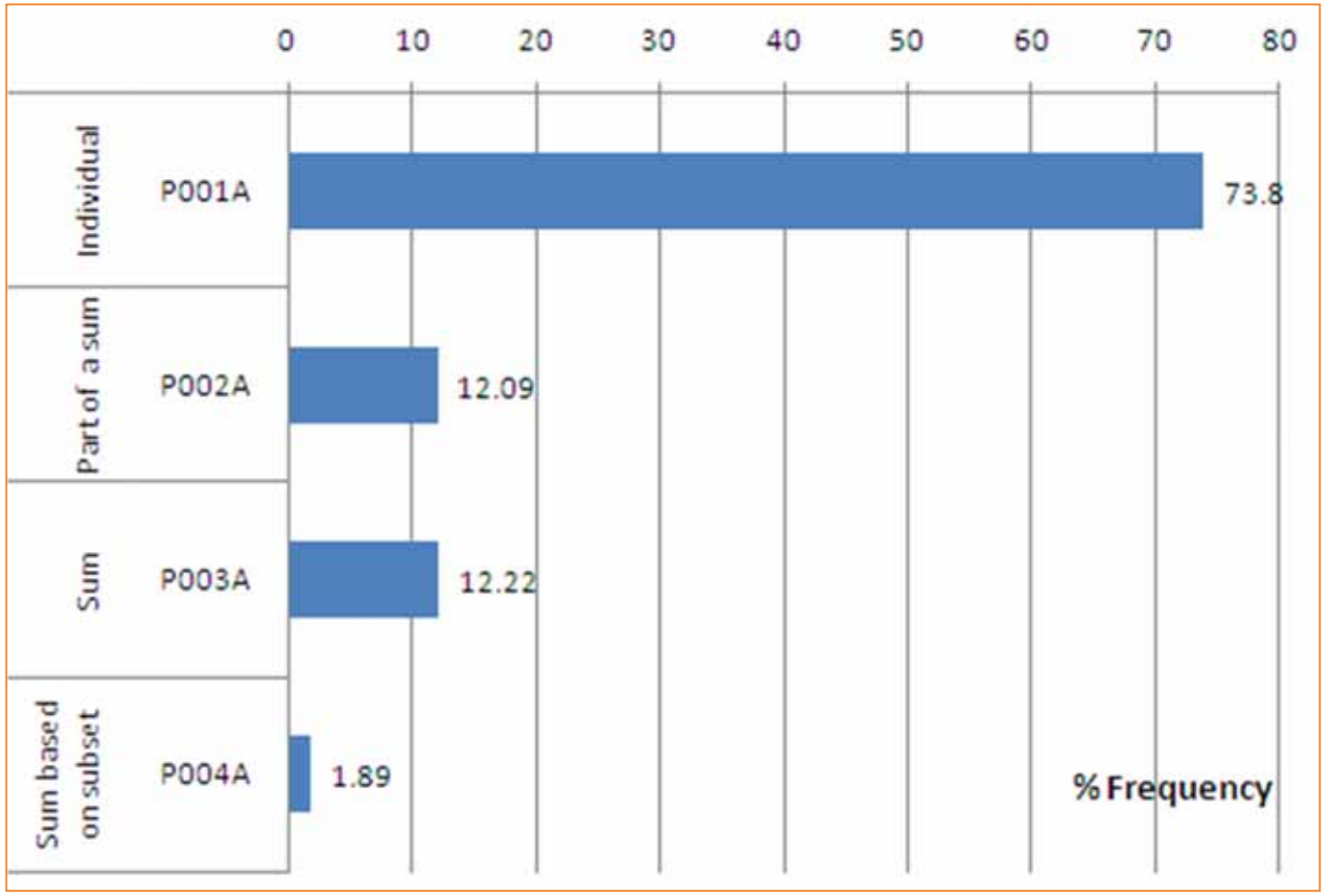
Residue definition: how far the definition is followed?

Aldicarb (sum of Aldicarb, its sulfoxide and its sulfone, expressed as Aldicarb)

code	name
P001A	Individual
P002A	Part of a sum
P003A	Sum
P004A	Sum based on subset

2) Residue definition

Provisional summary for 2012



3) Conversion factors

2011	2012	2013
Beans without pods [a]	Aubergines	Apples
Carrots	Bananas	Cows milk
Cucumbers	Butter	Head cabbage
Poultry meat	Cauliflower	Leek
Liver [d]	Eggs	Lettuce
Oranges or Mandarins	Orange juice [b]	Peaches [c]
Pears	Peas without pods [a]	Rye or oats
Rice	Peppers (sweet)	Strawberries
Potatoes	Table grapes	Swine meat
Spinach [a]	Wheat	Tomatoes
Wheat flour	Olive oil	Wine grapes (red or white)

(a): Fresh or frozen
(b): For orange juice, reporting countries were requested to specify the source (concentrate or fresh fruits)
(c): Peaches including nectarines and similar hybrids
(d): Bovine and other ruminants, swine and poultry

4) Reporting of Animal Origin

Code number	Groups and examples of individual products to which the MRLs apply
1000000	10. PRODUCTS OF ANIMAL ORIGIN-TERRESTRIAL ANIMALS
1010000	(i) Tissue
1011000	(a) Swine
1011010	Muscle
1011020	Fat
1011030	Liver
1011040	Kidney
1011050	Edible offal
1011990	Others
1012000	(b) Bovine
1013000	(c) Sheep
1014000	(d) Goat
1015000	(e) Horses, asses, mules or hinnies
1016000	(f) Poultry -chicken, geese, duck, turkey and Guinea fowl-, ostrich, pigeon
1017000	(g) Other farm animals (Rabbit, kangaroo, deer)
1020000	(ii) Milk
1020010	Cattle
1020020	Sheep
1020030	Goat
1020040	Horse
1020990	Others
1030000	(iii) Bird eggs
1030010	Chicken
1030020	Duck
1030030	Goose
1030040	Quail
1030990	Others
1040000	(iv) Honey (Royal jelly, pollen, honey comb with honey (comb honey))
1050000	(v) Amphibians and reptiles (Frog legs, crocodiles)
1060000	(vi) Snails
1070000	(vii) Other terrestrial animal products (Wild game)

Under Annex I:
Commission Regulation (EU) No 212/2013, MRLs are in place for fat and for muscle. This change impact of EFSA data collection and on laboratories.

5) Accreditation

Regulation (EC) No 882/2004 on official controls performed to ensure the verification of compliance with feed and food law, animal health and animal welfare rules

Article 12

Official laboratories

1. The competent authority shall designate laboratories that may carry out the analysis of samples taken during official controls.

2. However, competent authorities may only designate laboratories that operate and are assessed and accredited in accordance with the following European standards:

(a) EN ISO/IEC 17025 on 'General requirements for the competence of testing and calibration laboratories';

5) Accreditation

Accreditation bodies in Europe are not harmonised on the criteria requested to different MS.

Differences are establish if a laboratory has a fixed or a flexible scope.

This fact makes EFSA to request information at determination level to understand the 'quality' of the data received.

5) Accreditation

EFSA Standard Sample Description for the reporting of data on the control of pesticide residues in food and feed according to Regulation (EC) No 396/2005

Revision 1 of 30 November 2012

24. Accreditation procedure for the analytical method

This data element refers to the status of validation/accreditation for each ***pesticide/matrix combination*** analysed for. For each pesticide/matrix combination the accreditation status is requested. The following codes shall be used under the different possible cases:

V001A – **Method** fully **validated** according to SANCO/12495/2011 document and **accredited** under ISO 17025 for pesticide residue analysis for all pesticide/matrix combinations included in the method. This will apply to laboratories with **flexible** scope and to those combinations included in the **fix** scope of the laboratory.

- *Case 1*: laboratory accredited with flexible scope: code to be selected for the analytical results concerning any commodity/pesticide combination analysed by the laboratory accredited in flexible scope;
- *Case 2*: laboratory with fix scope: code to be selected only for the analytical results concerning commodity/pesticide combinations included in the accredited fix scope.

V005A – **Method** fully **validated** according to SANCO/12495/2011 document but still **not accredited** under ISO 17025 for pesticide residue analysis.

- *Case 3: code to be returned in case the laboratory is waiting for the final accreditation body visit or certificate, but it is considered that the quality of the data is at the same level of data reported with code V001A;*
- *Case 4: code to be used in case the laboratory is not accredited because the accreditation body asks for more stringent requirements than ISO 17025 to be fulfilled, but fully validated according to SANCO doc;*
- *Case 5: code to be selected only for the analytical results concerning commodity/pesticide combinations fully validated according to SANCO doc but out of the accredited fix scope;*
- *Case 6: code to be used in case the laboratory is reporting negative results /analytical determinations below the LOQ) using screening methods fully validated according to SANCO doc.*

V999A – **Method not validated** and **not accredited.**

- *Case 7: code to be selected when the analytical results concerning a commodity/pesticide combination is not validated according to SANCO doc;*
- *Case 8: code to be chosen when the analytical results concerning a commodity/pesticide combination for which the validation has been tried but the validation was not successful according to SANCO doc;*
- *Case 9: code to be returned when the analytical results concerning a commodity/pesticide combination have only been partly validated according to SANCO doc – e.g. not enough replicates or matrices have been validated.*

5) Accreditation

As MS consultation…

$$A + B + C = D$$

Within a pesticide complex residue definition, if the individual contributions/metabolites are under the accredited scope, can it be assumed that the sum will also be accredited?

And if one of the contributions/metabolites is analysed but not under the accredited scope, will the sum be considered accredited?

6) Screening methods

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ANNEX II

Number of samples referred to in Article 1

(4) Member States using multi-residue methods may use qualitative screening methods on up to 15 % of the samples to be taken and analysed in accordance with the table in point (5). Where a Member State uses qualitative screening methods, it shall analyse the remaining number of samples by multi-residue methods.

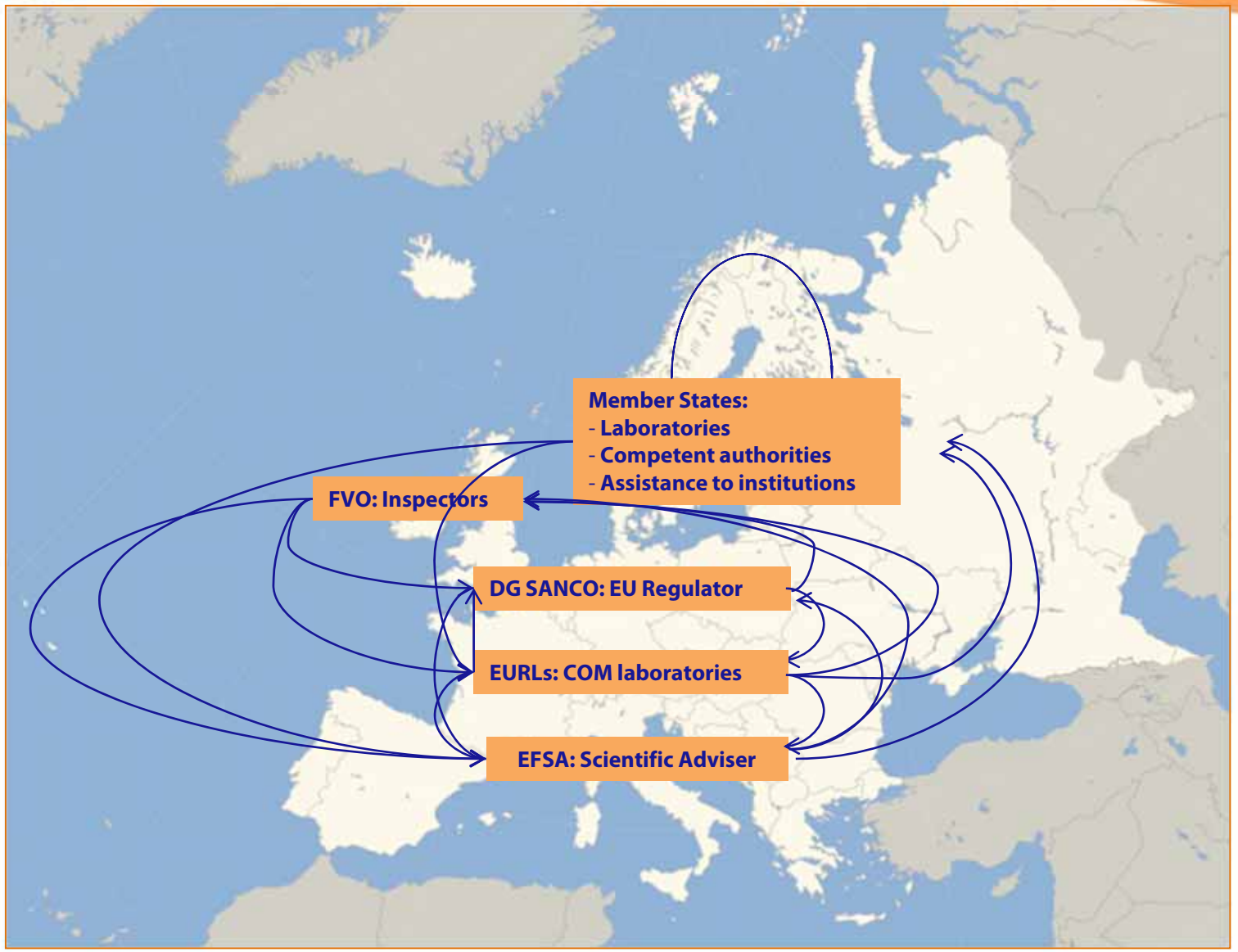
Where the results of qualitative screening are positive, Member States shall use a usual target method to quantify the findings.

6) Screening methods

- EFSA realised a need from MSs to report this type of methods
- Negative results coming from validated screening methods can be submitted to EFSA.

  SDL: Screening Detection Limit (SANCO/12495/2011)
  - SDL **must** be known (validated).
  - SDL reported to EFSA.
- Making LOQs and SDLs equivalent parameters.

Overall conclusion



Overall conclusion

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Laboratory analysis

Competent Authority

28MS

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European Commission

Directorate-General for Health & Consumers

Overall conclusion

Based on EU concept of windows and doors to symbolize the spirit of **openness** and **cooperation** in Europe…

…and bridges as a metaphor of the **union** of the European citizens among themselves and with the rest of the World.

Solid bridges of communication are needed

Thank you!

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