

EOCC TF Residues Data collection 2018: Report

1. General information

In total, data of 11 EOCC members were used for this overview: ABCERT, Finish Competent Authority, CAAE, CUC, Ecocert, Intereco, KIWA/BCS, OCS, Sativa, SKAL and TUV Nord Integra.

Samples were taken in 11 different countries: Germany, Finland, Spain, Peru, India, Korea, France, Portugal, Netherlands, Serbia and Belgium.

Samples were divided as follows:

EOCC member	1	2	3	4	5	6	7	8	9	10	11
# samples	717	290	1120	1126	1762	1128	288	72	165	382	503
% of total #	9,5	3,8	14,8	15,0	23,3	14,9	3,8	1,0	2,2	5,1	6,7
countries	DE	FI	ES, PE	IN, KR, other	FR	ES	DE	SB	PT	NL	BE

The data collection was organised by sending out a template in excell which had to be filled out by the members. Detailed explanations about the expected data were given during a webinar and a physical meeting. However, the data always have to be extracted from the members own database. EOCC members do not have common database structure which means that all available data have to be processed as requested (in the xl table) before reporting. This implies that human mistakes can be made, some elements can be misunderstood. Therefore, these data are rough data. In what follows, differences of less than 10% are considered as identical.

In this data collection, only samples taken by EOCC members are taken into account. Samples taken by operators are not taken into account.

Data are processed by Tom Nizet, former EOCC TF Residues coordinator. However, this report could not be written without the tremendous support of all EOCC members and their staff who contributed to this project. All questions/remarks can be sent to tom.nizet@gmx.fr

2. Simple analysis by comparing data related to one aspect

2.1 Methodology

The data are considered to be part of a statistical « population ». This concerns the overall data but also the data of each member separately. All calculations done are simple and straightforward. Results are given in % and are completed as much as possible by the absolute figures in between brackets after each %.

2.2 Results

2.2.1 Context of sample taking

Mandatory sampling.

In order to have a thorough understanding of these results, it is important to know that (i) there are different requirements for control bodies in terms of minimum amount of samples in each country (which vary between 5% and 60% of the number of operators under control) and (ii) also that there are important differences in economical practices among operators (preshipment sampling, sampling after storage, sampling by the client, ...).

The EU Regulation 889/2008 imposes a minimum amount of samples to be taken of 5% of the operators under control (art 65.2). The selection of those operators shall be based on an analysis of risk. At member state and at the level of individual EOCC members, there are differences in the implementation of such analysis of risk.

The Commission's Guidelines which impose mandatory sampling of organic products imported from Ukraine, Kazakhstan, Russian Federation and Moldavia. In total, these 130 samples represent 1,7% of all samples taken by all members. Member 2 is the only one to report high number (30,4%) of its own samples taken in the context. Two other member report this as context of sample taking: Member 11 at 1,8% (9 samples) and a member active in Spain as well but reports about only 1 sample.

Another situation where sampling is mandatory is related to suspicion of use (art 65.2§2 of Reg 889/2008). Suspicion of use is reported by all EOCC members except those active in FI, IN, KR and PE. In total, these 238 samples represent 3,2% of the cases where samples are taken. This is much higher in the data of a member active in Spain 132 samples or 5,9% of the samples taken there.

Not mandatory sampling.

In the event of substantiated suspicion (art 91.2 of Reg 889/2008), sample taking is not mandatory, but may be part of the investigation. In total, these 189 samples represent 2,5% of all the samples. However, the member active in other countries reports 133 samples in this context, representing 11,2% of their samples. Members active in BE, DE, FI, IN, KR, PE and PT did not report sampling in this context.

Most of the samples taken, are samples taken in the context of risk assessment. In total, these 3656 samples represent 48,4% of all samples taken by all members. Members taking samples in Spain and in the Netherlands exceed this by respectively 78,4% and 63,0%. Members active in FI, IN and KR did not report sampling in this context.

The last part of samples taken in the context described as routine. In total, these 3227 samples represent 42,7% of all samples taken by all members. Members active in FI and IN take all their samples in this context, closely followed by reporting from BE and PE with respectively 93,4% and 80,0%. Routine sampling is much less reported by members active in the Netherlands (0,5%) and Spain (13,9%).

2.2.2 Activities sampled

In average, 63,7% of the samples are taken in relation to the agricultural production activity. Member 4 deviates from that by taking either much more (93,7%) or much less (16,7%) of it's samples in relation to agricultural production. Member 7 shows a different pattern than all other members by taking the majority of samples elsewhere than in relation to organic production: less than 1 out of 3 samples (32,6%) in relation to agricultural production.

There was only one member who reported sample taking in relation to aquaculture production.

In average, 26,2% of the samples are taken in relation to preparation activities. Member 7 and 11 take a lot more samples there with respectively 58,0 and 47,1%. Member 4 took only 2,7%, and member 10 only 1,0% of its samples in relation to preparation.

In general, the samples taken during storage & transport is very low with an average of 2,3% of all the samples taken. Member 2 is the exception with 23,4% of its samples taken there.

Member 10 is with 56,8% of its samples taken in relation to import almost nine times more active than the average (6,4%).

2.2.3 Product categories sampled

In average, almost one out of three products sampled belongs to the group of fruits&vegetables (32,5%). Members 4, 8 and 9 sample fruits&vegetables much more: at respectively 71,1%; 55,6% and 53,3%. With a little over one out of eight samples (12,8%), member 1 is not exceptionally low.

In average, almost one out of five products sampled are leaves (18,9%) and processed products (18,7%). Exceptions in sampling much less leaves are Member 1 (6,1%), member 8 (2,8%), member 9 (6,1%) and member 11(2,8%) and much more: member 3 (32,1%) and member 6 (31,9%). There are no exceptions for processed products.

In average, almost one out of 10 products sampled are cereals (9,8%). Member 2 and member 10 take exceptionally more samples of cereals than the other members with respectively 49,7% and 31,9%.

In average, 2,3% of all samples taken are soil & substrate. Member 3 and 5 exceed this amount with respectively 8,0% and 7,5%.

In average, only 0,4% of all products sampled are classified as superfoods. However, for member 7 and 11, respectively 2,1% and 2,4% of their products sampled were superfoods.

2.2.4 Detection of residues

In average, 85,6% of all samples taken is free of residues. This is much higher in reporting of member 2 (99,0%) and much lower for member 5 (71,1%).

The remaining 14,4% of samples contain residues.

In average, in this group, 8,1% of the 14,4% (58,1%) of products containing residues maintain their organic label. However, there are important differences in the reporting of such products: Members 2, 3 report that such products can not bear the organic label, members 4 and 9 report very low number of cases where such products maintain their organic label (respectively 0,1% and 1,8%) while

member 5 allows 20,9% out of the total of 28,9% of samples containing residues to maintain the organic label.

In the group of the 14,4% of samples containing residues, an average of 0,5% products contain pesticides which exceeded the MRL level (provided there is an applicable MRL value). Positive exceptions to that are reported by members 2, 8, 10 and 11 (all 0,0%).

2.2.5 Conclusion of the investigation

EOCC members could chose between three groups of conclusions :

The first category of conclusions is related to the absence of an investigation and also those cases where there is no clear conclusion to explain the presence of pesticides. By consequence, there is no liable party to bear the cost of the removal of the organic label.

In average, 86,3% products sampled is not followed by an investigation. This is substantially higher for member 2 (99,0%) and lower for member 5 where only 74,9% of the cases is not followed by an investigation.

Members report that in average, 15,9% of all investigations due, it is not (yet) possible to come to a conclusion about the origin of the residue detected. This is higher for member 11 who reported that 38,5% of the investigations (25 out of 65) and for member 9 who reported that 30,4% (7 out of 23 investigations) could not be closed with a clear conclusion. On the other hand, member 1 reported that all investigations could be closed with a clear conclusion (0 unclear/unknown).

- “Unclear” means that the decision maker is unable to identify a requirement of the organic production or labelling rules which was violated ;
- « No investigation » can be indicated because no pesticides have been detected or when it is presumed that the pesticides are due to the « authorised use » (see further down)

The second category is the group of explanations which can be related to a non respect of the precautionary measures for organic production. For those cases where the investigation did come to such a conclusion, members report that most pesticide residue cases are due to contamination (18,8%) followed by unauthorised use (15,5%).

As regards contamination, member 10 reports that 40% of all their investigations results in this conclusion (6 cases out of 15) which is much higher than average.

There is only members reporting about commingling: member 5: 1,1% (5 cases).

- « Contamination » means presence of pesticides which is avoidable provided application of proper precautionary measures (e.g. proper cleaning of storage facilities, use of crates for organic fruit & vegetables exclusively, ...)
- « Commingling » means presence of pesticides which is avoidable due to mixing of organic and non organic products of the same kind which is avoidable provided application of proper precautionary measures (e.g. proper separation of storage facilities for bulk products like cereals, potatoes, ..., proper identification/labeling of crates ...)

The third category is the group of explanations which can not be directly related to a non respect of precautionary measures for organic production. By consequence, there is no liable party to bear the

cost of the removal of the organic label. For those cases where the investigation did come to this type of conclusion, members report that most pesticide residue cases are due to drift (average of 22,8% of all investigations), followed by pollution (11,4%).

As regards drift, member 5 reports 30 cases (out of 443) representing 28,9% of all their investigations which is much higher than the average.

As regards pollution, member 5 reports that 15,1% of all their investigations results in this conclusion (67 cases out of 443), member 9 reports 34,8% (8 cases out of 23) and member 3 reports 20% (3 cases out of 15) which are all much higher than average.

- “Pollution” means that the detected substance could not be prevented for historical reasons (the conversion did not result in decay of the pesticide applied before organic farming started), or for environmental reasons (e.g. the presence of industrial chemical activity nearby or the presence of pesticides in water pumped from own well or from the nearby river);
- « Drift » means that the substance is due to the use of pesticides outside of the influence sphere of the organic farmer and can not be prevented by installing buffer zones, planting hedges (e.g. in dry summers pesticides can be carried over by dust, some pesticides are highly volatile and condensate in colder areas, in some areas pesticides are sprayed by use of airplanes, ...);

In the fourth category of “acceptable” presence of non authorised substances, in average the presence of pesticides was explained by « authorised use » in 7,4% of all detections, the presence of residues due to « natural presence » in 5,3% of all detections and detections due to the presence of non organic ingredients in the sampled product account for 2,4% of all detections.

However, as regards the use of authorised pesticides, member 6 reports 14,9% (30 cases out of 201). As regards detection of pesticides due to natural presence in the plant itself, member 5 reports 8,9% (39 cases out of 443) and member 8 reports 13,3% (2 out of 15 investigations). Finally, member 11 reports that 23,1% of all detections is due to the use of non organic ingredients in the sampled products.

- « Natural presence » means that the substance can be both produced by the plant and be pesticide residue (e.g. bromide, dithiocarbamates, phosphonic acid, ...);
- « Authorised use » of pesticides (e.g use of Cu, spinosad, ... in circumstances where there is evidence of present of the pest) or of non organic ingredients/raw materials » (e.g. feed for non herbivores, food containing ingredients listed in Ann IX of Reg 889/2008, ...)

2.2.6 Downgrading

In total, in 5,7% of all samples (431 cases out of 7553 samples), something was downgraded to non organic. In average, out of everything that was downgraded, almost half (47,6% or 205) were products sampled out of farm environment, in 26,7% of the cases (115), it concerned the harvest. In another 24,1% (104) it was the harvest and the land.

2.2.7 Suspension of the certification of the operators

In total, in 2,2% of all samples (168 cases), the certificate of the operator was suspended. In 68,5% of those decisions, it concerned the whole certificate where in the other 31,5%, the certificate was partly suspended for a specific product or activity. Members 4 and 10 reported that they did not suspend any certificate.

3. Discussion

In this part, the aim is to identify and explain those cases where pesticides are detected in organic products for which EOCC members maintained the organic quality of those products (the ANA+). From there on, there will be recommendations to achieve a higher degree of harmonisation in decision making.

This discussion is based on the comparison of combinations of the factors mentioned under part 2.

In this chapter, there are four parts:

Part 1: Context of sample taking: Can we deduct important differences in decision making by looking at the context in which samples are taken?

Part 2 Activities sampled: Can we deduct important differences in decision making by looking at the activity in which samples are taken?

Part 3 Product categories sampled : Are there important differences between the categories of product sampled (selection of product categories) ?

Part 4 Period of sample taking: Is there a relationship between the detection of residues and the period of sampling? Is there another relationship?

Part 5: Detection of residues but no investigation

Part 1: Context of sample taking: Can we deduce important differences in decision making by looking at the context in which samples are taken?

Part 1.1 mandatory sampling: the Commission's guidelines

From the data received, it appears that only two out of the 11 EOCC members are concerned by the application of the Commission's guidelines for import of organic products from Ukraine, Moldova, Russian Federation, Kazakhstan and China which represents 1,7% of all samples taken. A more detailed comparison of the analytical results of samples taken in the context of the Commission's guidelines for import gives the following results:

Quantity	Samples	ANA ⁻¹	ANA ⁺²	ANA ⁺⁺³	ANA ⁺⁺⁺⁴	In progress
#	130	127	3	0	0	0
%	100	97,7	0,3	0	0	0

These numbers show that there has been no single downgrading of products subject to this measure. Moreover, there has been only 2,3% (3 out of 130 cases) of detections of pesticides.

Those 3 cases are reported as follows:

Date of sampling	Product category	Product	Pesticide type	Pesticide "X"	Concentration of "X" ([X]) (mg/kg)	Scope of analysis	Multiple residue case?	Conclusion of the investigation
31/01	Cereals	corn	Insecticide	malathion	0,021	GC+LC+gly	no	Unclear
19/02	Cereals	wheat	Herbicide	glyphosate	0,016	GC+LC+gly	no	Pollution
31/08	Oils	rapeseed oil	Insecticide	Pirimifos-methyl	0,037	GC+LC	no	Unclear

The decision not to downgrade can be explained by the conclusion of the investigation: unclear and pollution.

Part 1.2 mandatory sampling: suspicion of use

Sampling in the context of **suspicion of use** is reported at an average rate of 3,2% of all samples taken (238 cases). A more detailed comparison of the analytical results of samples taken in this context gives the following results:

Quantity	Samples	ANA ⁻	ANA ⁺	ANA ⁺⁺	ANA ⁺⁺⁺	In progress
#	238	173	21	37	2	5
%	100	72,7	8,9%	15,5	0,8	2,1

These numbers show that in 27,3% (21+37+2+5=65 out of 238) of these samples, residues have been detected. For 60 cases, the investigation has been finalised.

In 65,0% (39 out of 60 cases) where residues were detected and investigation finalised, something has been downgraded. 16,4% (39 out of 238) of such sampling results in downgrading.

There are 21 cases where samples were taken because of suspicion of use, residues were detected and products were not downgraded to non organic. These cases are reported as follows:

¹ : no residues detected

² : residues detected and product maintains organic quality

³ : residues detected and product does not maintain organic quality

⁴ : residues detected in a concentration exceeding MRL value(s) and product does not maintain organic quality

Date of sampling	Product category	Product	Pesticide type	Pesticide "X"	Concentration of "X" ([X]) (mg/kg)	Scope of analysis	Multiple residue case?	Conclusion of the investigation
14/02	Cereals	Barley (Winter)		Pirimifos-methyl				Contamination
13/12	Other	Honey		Amitraz	0,02		Yes (3)	Unclear
29/11	Other	Royal jelly		Streptomycin	7 µg/kg			Unclear
24/05	Processed	Pomelo		Piri-methanil	0,01		No	Unclear
30/08	Other	Honey		?				Contamination
19/11	Other	Mushrooms		Anthraquinone				Natural presence
18/04	"Seeds" ⁵	Strawberry plants	Fungicide	Procymidon	0,012	GC+LC	Yes (2)	Unclear
15/03	"Seeds"	Strawberry plants	Fungicide	Fuopyram	0,016	GC+LC	Yes (>3)	Unclear
15/03	"Seeds"	Strawberry plants	Insecticide	Aldrin + Dieldrin	0,049	GC+LC	Yes (2)	Unclear
04/07	Leaves	Cabbage	Insecticide	Spinosad	0,042	GC+LC	Yes (>3)	Authorised use
04/07	Leaves	Cauliflower	Insecticide	Spinosad	3,8	GC+LC	Yes (>3)	Authorised use
31/05	Fruit&veg	Orange		Fosetyl-Al / phosphonic acid	1,7 / 1,3		No	Unclear
10/12	P Feed H ⁶			Piperonyl-butoxyde	0,009		No	No investigation
08/03	"Seeds"	Leaks		Spinosad			No	Authorised use
05/07	Leaves	Grapes		Spinosad	0,59		Yes (3)	Drift
29/06	Leaves	Grapes		cyazofamid	0,039		Yes (3)	Contamination
20/07	Leaves	Grapes		Fosetyl-Al / phosphonic acid	2,8 / 2,6		No	Contamination
16/04	"Soil" ⁷			acetochlor	0,006		Yes (2)	Pollution
27/04	"Soil"			acetochlor	0,006		No	Pollution
04/01	Processed	Wine		Fosetyl-Al / phosphonic acid	0,4 / 0,28		Yes (2)	Unclear
05/03	Processed	Wine		Fosetyl-Al / phosphonic acid	0,51 / 0,38		Yes (2)	Drift

The decision not to downgrade can be explained by the conclusion of the investigation:

- "Unclear" : 8 cases
- « Pollution » : 2 cases
- « Contamination » : 4 cases
- « Natural presence » : 1 case
- « Authorised use » : 3 cases
- « No investigation » : 1 case
- « Drift » : 2 cases

⁵ In full it means: Seeds/vegetative reproduction material

⁶ In full it means: Processed feed for herbivores

⁷ In full it means: Soil/substrate

On the other hand: in case of suspicion of use, in 39 cases, there has been downgrading. A comparison of both groups gives the following:

Conclusion of the investigation:	Suspicion of use, presence of pesticide and no downgrading (ANA+) (# of cases)	Suspicion of use, presence of pesticide and downgrading (ANA++ and ANA+++) (# of cases)
Unauthorised use	0	16
Contamination	4	6
Unclear	8	7
Natural presence	1	0
Authorised use	3	0
No investigation	1	0
Drift	2	6
Pollution	2	4
Total	21	39

Part 1.3 not mandatory sampling: substantiated suspicion

Sampling in the context of **substantiated suspicion** is not mandatory. It is reported at an average of 2,5% with outliers of 11,4 and 8,3%. A more detailed comparison of the analytical results of samples taken in this context gives the following results:

Quantity	Samples	ANA-	ANA+	ANA++	ANA+++	In progress
#	189	152	4	28	4	1
%	100	80,4	2,1	14,8	2,1	0,5

These numbers show that in 19,6% (4+28+4+1=37 out of 189) of these samples, residues have been detected. In 88,9% (32 out of 36 cases) where residues were detected and the investigation closed, something has been downgraded. 16,9% (32 out of 189) of such sampling results in downgrading.

There have been 11,1% (4 out of 36 cases) where pesticides were detected but nothing was downgraded. Those cases are reported as follows:

Date of sampling	Product category	Product	Pesticide type	Pesticide "X"	Concentration of "X" ([X]) (mg/kg)	Scope of analysis	Multiple residue case?	Conclusion of the investigation
29/05	Fruit&veg	onions	Fungicide	azoxystrobine	0,019	GC+LC	no	Unclear
05/06	Oils	Pumpkin seed oil	Herbicide	metolachlor	< 0,03	GC+LC	yes	Unclear
16/10	Processed	Wine (red)		Fosetyl-Al / Phosphonic acid	0,32 / 0,24			Drift
07/11	Processed	Wine (red)		Fosetyl-Al / Phosphonic acid	0,19 / 0,14			Drift

The decision not to downgrade can be explained by the conclusion of the investigation:

- Unclear : 2 cases
- Drift : 2 cases.

The decision maker is unable to identify a requirement of the organic production or labelling rules which was violated. By consequence, there is no liable party to bear the cost of the removal of the organic label.

On the other hand: in case of substantiated suspicion, in 32 cases, there has been downgrading. A comparison of both groups gives the following:

Conclusion of the investigation:	Substantiated suspicion, presence of pesticide and no downgrading (ANA+) (# of cases)	Substantiated suspicion, presence of pesticide and downgrading (ANA++ and ANA+++) (# of cases)
Unauthorised use	0	18
Contamination	0	6
<i>Unclear</i>	2	5
<i>Drift</i>	2	1
Pollution	0	2
Total	4	33

Part 1.4 not mandatory sampling: risk assessment

Sampling in the context of **risk assessment** is reported at an average of 48,4% of all samples taken. A more detailed comparison of the analytical results of samples taken in this context gives the following results:

Quantity	Samples	ANA-	ANA+	ANA++	ANA+++	In progress
#	3656	3091	323	205	22	13+2*
%	100	84,5	8,8	5,6	0,6	0,4

* operator stopped organic production during the investigation

These numbers show that in 15,5% (323+202+22+13+2=565 out of 3656) of these samples, residues have been detected. In 15 cases, the investigation was not finalised. In 41,3% (227 out of 550 cases) where residues were detected and investigation has been closed, something has been downgraded. 6,2% (227 out of 3656) of such sampling results in downgrading.

There have been 58,7% (323 out of 550 cases) where residues were detected but but nothing was downgraded. The table below gives the overview of the outcomes of the investigations in relation to the decisions about downgrading :

Conclusion of the investigation:	Risk assessment, presence of pesticide and no downgrading (ANA+) (# of cases)	Risk assessment, presence of pesticide and downgrading (ANA++ and ANA+++) (# of cases)
Unauthorised use	0	69
Contamination	32	81
<i>Unclear</i>	34	33
Natural presence	35	0

Authorised use	20	0
No investigation	58	2
Drift	94	26
Pollution	50	15
Presence of non organic ingredient	0	1
Total	323	227

Part 1.5 not mandatory sampling: routine

Sampling in the context of **routine** is reported at an average of 42,7% of all samples taken. A more detailed comparison of the analytical results of samples taken in this context gives the following results:

Quantity	Samples	ANA-	ANA+	ANA++	ANA+++	In progress
#	3222	2810	251	127	11	23
%	100	87,2	7,8	3,9	0,3	0,7

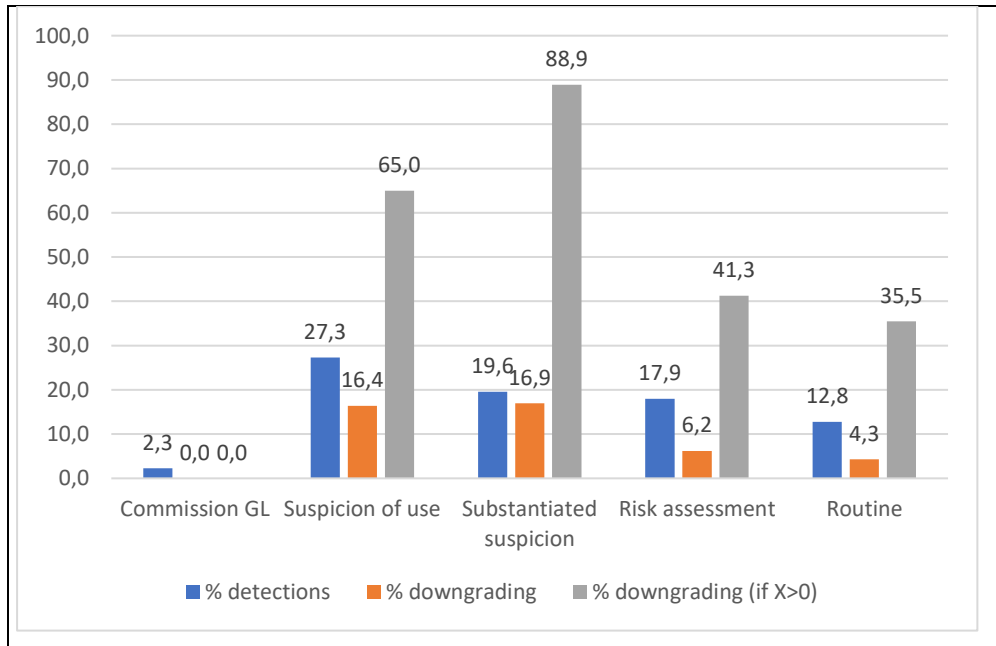
* operator stopped organic production during the investigation

These numbers show that in 12,8% (251+127+11+23=412 out of 3222) of these samples, residues have been detected. In 23 cases, the investigation was not finalised. In 35,5% (138 out of 389 cases) where residues were detected and investigation has been closed, something has been downgraded. 4,3% (138 out of 3222) of such sampling results in downgrading.

There have been 64,5% (251 out of 389 cases) where residues were detected but but nothing was downgraded. The table below gives the overview of the outcomes of the investigations in relation to the decisions about downgrading :

Conclusion of the investigation:	Risk assessment, presence of pesticide and no downgrading (ANA+) (# of cases)	Risk assessment, presence of pesticide and downgrading (ANA++ and ANA+++) (# of cases)
Unauthorised use	1 (PBO)	50
Contamination	31	20
Unclear	26	37
Natural presence	13	1
Authorised use	23	0
No investigation	26	7
Drift	79	13
Pollution	35	3
Presence of non organic ingredient	17	2
commingling	0	5
Total	251	138

Overview:



Samples taken in the context of suspicion of use result in the highest detection rate (27,4%).

There is a gap between downgrading of products taken in the context of suspicion of use or substantiated suspicion (resp 16,4 and 16,9%) compared to samples taken in the context of risk assessment and routine (resp 6,2 and 4,3%).

Products which are sampled in the context of substantiated suspicion and which contain pesticides are downgraded into non organic products in 88,9% of all cases.

Part 2 Activities sampled: Can we deduct important differences in decision making by looking at the activity in which samples are taken?

Part 2.1 agricultural production

Sampling in the context of agricultural production is reported at an average rate of 63,7% of all samples taken (4807 out of 7548 cases). A more detailed comparison of the analytical results of samples taken in this context gives the following results:

Quantity	Samples	ANA-	ANA+	ANA++	ANA+++	In progress
#	4807	4121	364	270	26	23+3*
%	100	85,7	7,6	5,6	0,5	0,5

* operator stopped organic production during the investigation

These numbers show that in 14,3% (686 out of 4807) of these samples, residues have been detected. In 660 cases, the investigation was finalised. In 44,8% (296 out of 660 cases) where residues were detected, something has been downgraded. This is not very different from the 42,9% in average.

On the other hand, in 55,2% (364 out of 660), the product was not downgraded. A comparison of the outcomes of the investigations of both groups gives the following:

Conclusion of the investigation:	Sampling in farms, presence of pesticide and no downgrading (ANA+) (# of cases)	Sampling in farms, presence of pesticide and downgrading (ANA++ and ANA+++) (# of cases)
Unauthorised use	0	132
Contamination	33	63
Unclear	28	28
Natural presence	30	1
Authorised use	26	0
No investigation	30	5
Drift	126	39
Pollution	76	24
Presence of non organic ingredient	15	0
Commingling	0	4
Total	364	296

Part 2.2 preparation

Sampling in the context of preparation is reported at an average rate of 26,2% of all samples taken (1981 out of 7548 cases). A more detailed comparison of the analytical results of samples taken in this context gives the following results:

Quantity	Samples	ANA-	ANA+	ANA++	ANA+++	In progress
#	1981	1684	194	79	8	14+2*
%	100	85,0	9,8	4,0	0,4	0,8

* operator stopped organic production during the investigation

These numbers show that in 15,0% (297 out of 1981) of these samples, residues have been detected. In 281 cases, the investigation was finalised. In 31,0% (87 out of 281 cases) where residues were detected, something has been downgraded. This is lower than the average of 42,9%.

On the other hand, in 69,0% (194 out of 281), the product was not downgraded. A comparison of the outcomes of the investigations of both groups gives the following:

Conclusion of the investigation:	Sampling in preparation units, presence of pesticide and no downgrading (ANA+) (# of cases)	Sampling in preparation units, presence of pesticide and downgrading (ANA++ and ANA+++) (# of cases)
Unauthorised use	1 ⁸	1
Contamination	28	46
Unclear	28	32
Natural presence	18	0
Authorised use	16 ⁸	0
No investigation	44	1
Drift	48	3
Pollution	9	0
Presence of non organic ingredient	2	3
Commingling	0	1
Total	194	87

These data show that there is a need for harmonisation when the investigation results in “contamination” and “drift”. There is also a need to harmonise decision making when the investigation did not result in the identification of clear reasons for presence of pesticide residues. The table also shows the issue about PBO which is organised differently in different Member States: FR downgrades products in case of unauthorised post harvest use where other Member States do not seem to apply the same rule.

Part 2.3 storage

Sampling in the context of storage is reported at an average rate of 2,25% of all samples taken (170 out of 7548 cases). Compared to the potential risks of commingling and contamination during storage, this is a very low amount of samples.

Sampling in the context of import is reported at an average rate of 6,3% (481 out of 7548 samples). A more detailed comparison of the analytical results of contexts together gives the following results:

Quantity	Samples	ANA-	ANA+	ANA++	ANA+++	In progress
#	651	560	40	44	5	2
%	100	86,0	6,1	6,8	0,8	0,3

⁸ Piperonylbutoxyde (PBO) is reported as linked to unauthorised use in FR while it is reported as authorised use in DE, ES and FR (as well)

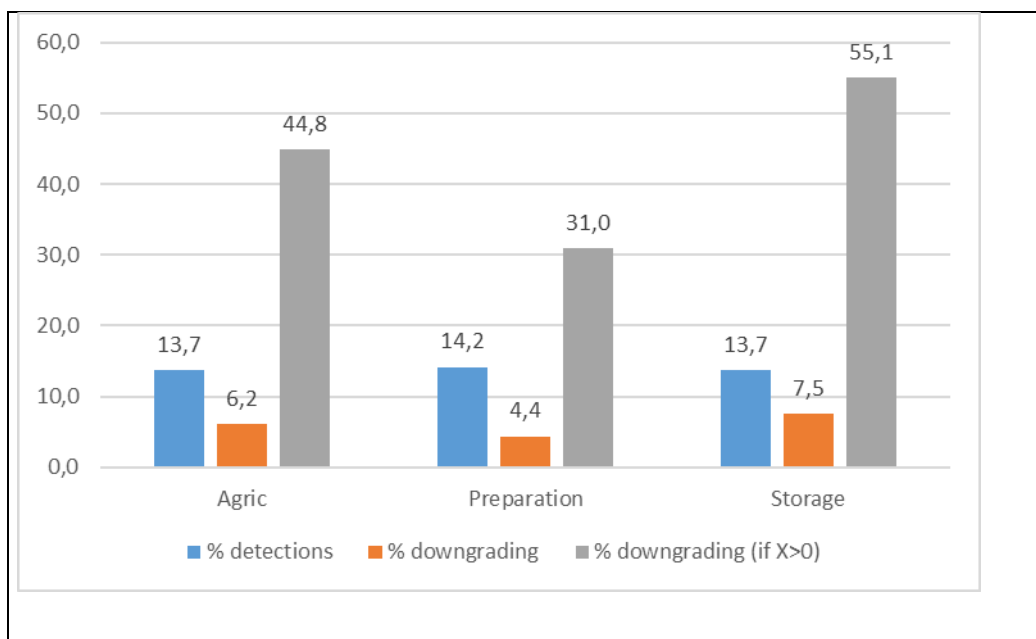
These numbers show that in 14,0% (91 out of 651) of these samples, residues have been detected. In 89 cases, the investigation was finalised. In 55,0% (49 out of 89 cases) where residues were detected, something has been downgraded. This is higher than the average of 42,9%.

On the other hand, in 45,0% (40 out of 89), the product was not downgraded. A comparison of the outcomes of the investigations of both groups gives the following:

Conclusion of the investigation:	Sampling in preparation units, presence of pesticide and no downgrading (ANA+) (# of cases)	Sampling in preparation units, presence of pesticide and downgrading (ANA++ and ANA+++) (# of cases)
Unauthorised use	3	17
Contamination	7	2
Unclear	14	21
No investigation	10	5
Drift	3	4
Pollution	3	0
Total	40	49

These data show that there is a need for harmonisation when the investigation results in “contamination” and “drift”. There is also a need to harmonise decision making when the investigation did not result in the identification of clear reasons for presence of pesticide residues.

Overview



Part 3 Product categories sampled : Are there important differences between the categories of product sampled (selection of product categories) ?

Part 3.1 fruit & vegetables

Sampling of fruit & vegetable is reported at an average rate of 32,5% of all samples taken (2450 out of 7548 cases).

A more detailed comparison of the analytical results gives the following results:

Quantity	Samples	ANA-	ANA+	ANA++	ANA+++	In progress
#	2450	2272	67	90	10	10+1*
%	100	92,7	2,7	3,6	0,4	0,5

* operator stopped organic production during the investigation

These numbers show that in 7,2% (178 out of 2450) of these samples, residues have been detected. In 167 cases, the investigation was finalised. In 59,9% (100 out of 167 cases) where residues were detected, something has been downgraded. This is higher than the average of 42,9%.

On the other hand, in 40,1% (67 out of 167), the product was not downgraded. A comparison of the outcomes of the investigations of both groups gives the following:

Conclusion of the investigation:	Sampling in preparation units, presence of pesticide and no downgrading (ANA+) (# of cases)	Sampling in preparation units, presence of pesticide and downgrading (ANA++ and ANA+++) (# of cases)
Unauthorised use	0	45
Contamination	4	18
Unclear	12	20
Natural presence	8	1
Authorised use	6	0
No investigation	15	1
Drift	17	12
Pollution	5	3
Total	67	100

Part 3.2 leaves

Sampling of leaves is reported at an average rate of 18,9% of all samples taken (1427 out of 7548 cases).

A more detailed comparison of the analytical results gives the following results:

Quantity	Samples	ANA-	ANA+	ANA++	ANA+++	In progress
#	1427	1151	123	133	15	3+2*
%	100	80,7	8,6	9,3	1,1	0,3

* operator stopped organic production during the investigation

These numbers show that in 19,3% (276 out of 1427) of these samples, residues have been detected. In 271 cases, the investigation was finalised. In 54,6% (148 out of 271 cases) where residues were detected, something has been downgraded. This is higher than the average of 42,9%

On the other hand, in 45,4% (123 out of 271), the product was not downgraded. A comparison of the outcomes of the investigations of both groups gives the following:

Conclusion of the investigation:	Sampling in preparation units, presence of pesticide and no downgrading (ANA+) (# of cases)	Sampling in preparation units, presence of pesticide and downgrading (ANA++ and ANA+++) (# of cases)
Unauthorised use	0	73
Contamination	7	29
Unclear	6	11
Authorised use	11	0
No investigation	7	4
Drift	75	25
Pollution	17	6
Total	123	148

These data show that there is a need for harmonisation when the investigation results in “contamination”, “pollution” and “drift”. There is also a need to harmonise decision making when the investigation did not result in the identification of clear reasons for presence of pesticide residues.

Part 3.3 soil & substrates

Sampling of soils & Substrates is reported at an average rate of 2,3% of all samples taken (175 out of 7548 cases).

A more detailed comparison of the analytical results gives the following results:

Quantity	Samples	ANA-	ANA+	ANA++	ANA+++	In progress
#	175	111	48	14	1	1
%	100	63,5	27,4	8	0,5	0,5

These numbers show that in 36,6% (64 out of 175) of these samples, residues have been detected. In 63 cases, the investigation was finalised. In 23,8% (15 out of 63 cases) where residues were detected, the soil or substrate could not be used for organic production. This is less than the average of 42,9%

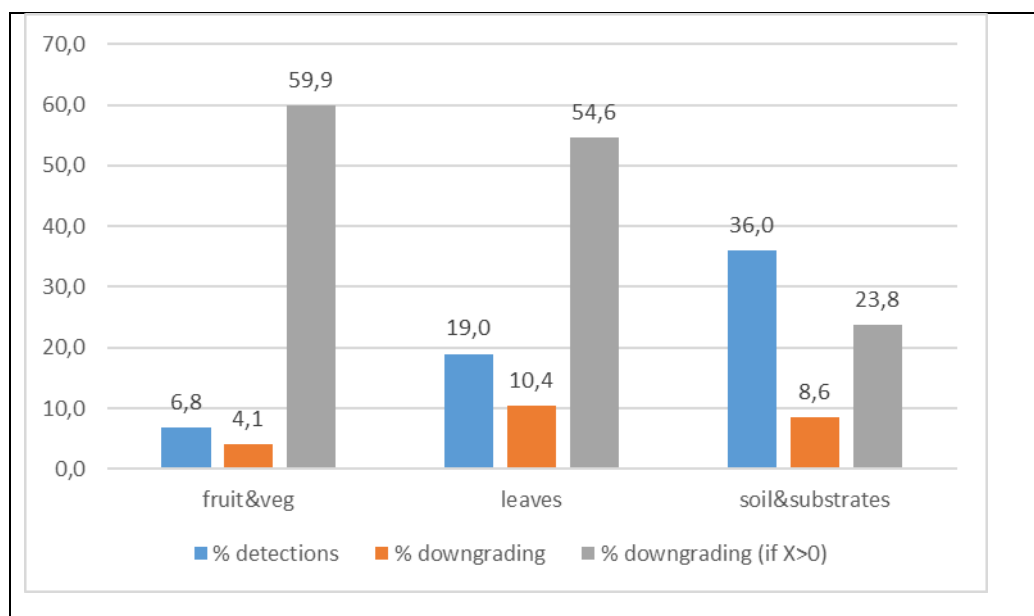
On the other hand, in 76,2% (48 out of 63), the soil or substrate could be used for organic production. A comparison of the outcomes of the investigations of both groups gives the following:

Conclusion of the investigation:	Sampling in preparation units, presence of pesticide and no downgrading (ANA+)	Sampling in preparation units, presence of pesticide
----------------------------------	--	--

	(# of cases)	and downgrading (ANA++ and ANA+++) (# of cases)
Unauthorised use	0	11
Contamination	0	2
<i>Unclear</i>	1	1
Authorised use	2	0
Drift	3	1
Pollution	42	0
Total	48	15

These data show that there is a need for harmonisation when the investigation results in case of “drift”. There is also a need to harmonise decision making when the investigation did not result in the identification of clear reasons for presence of pesticide residues.

Overview



Part 4 Period of sample taking: Is there a relationship between the detection of residues and the period of sampling? Is there another relationship?

By looking at the month of sampling and the presence/absence of residues, the data allow to identify a peak of detections of residues in the months Mai, June and July.

	ANA-	ANA+	ANA++	ANA+++	% detections
January	188	16	17	2	15,7
February	294	20	14	3	11,1
March	358	30	25	1	13,5
April	416	36	37	0	14,9
Mai	472	53	42	5	17,4
June	605	74	47	8	17,5
July	747	105	55	4	17,9
August	637	57	34	2	12,6
September	705	61	20	3	10,5
October	734	56	39	6	11,9
November	794	67	38	2	11,7
December	580	32	31	3	11,2

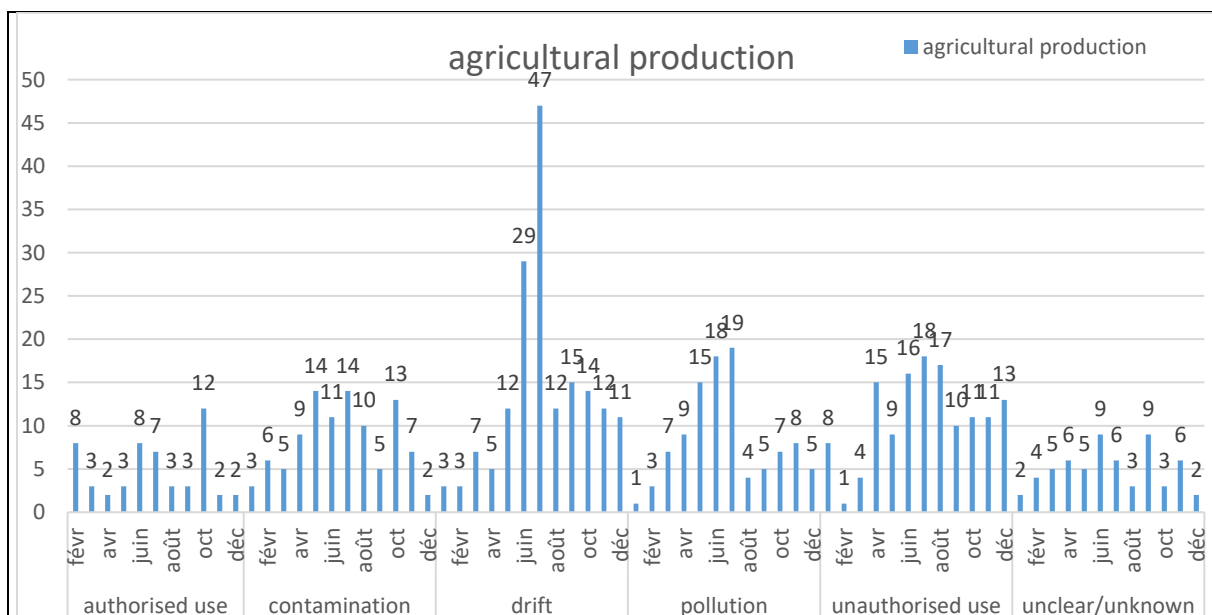
By looking at sampling in farms only, the data show the following:

The use of authorised pesticides is detected 12 times by sampling in October.

Contamination was detected most often by sampling in Mai (14 times), July (14 times) and October (13 times)

Out of all conclusions at farm level, drift is the most common: 29 times in June and 47 times in July.

Unauthorised use is detected less often but in similar months : April (15 times), June (16 times), July (18 times) and August (17 times).

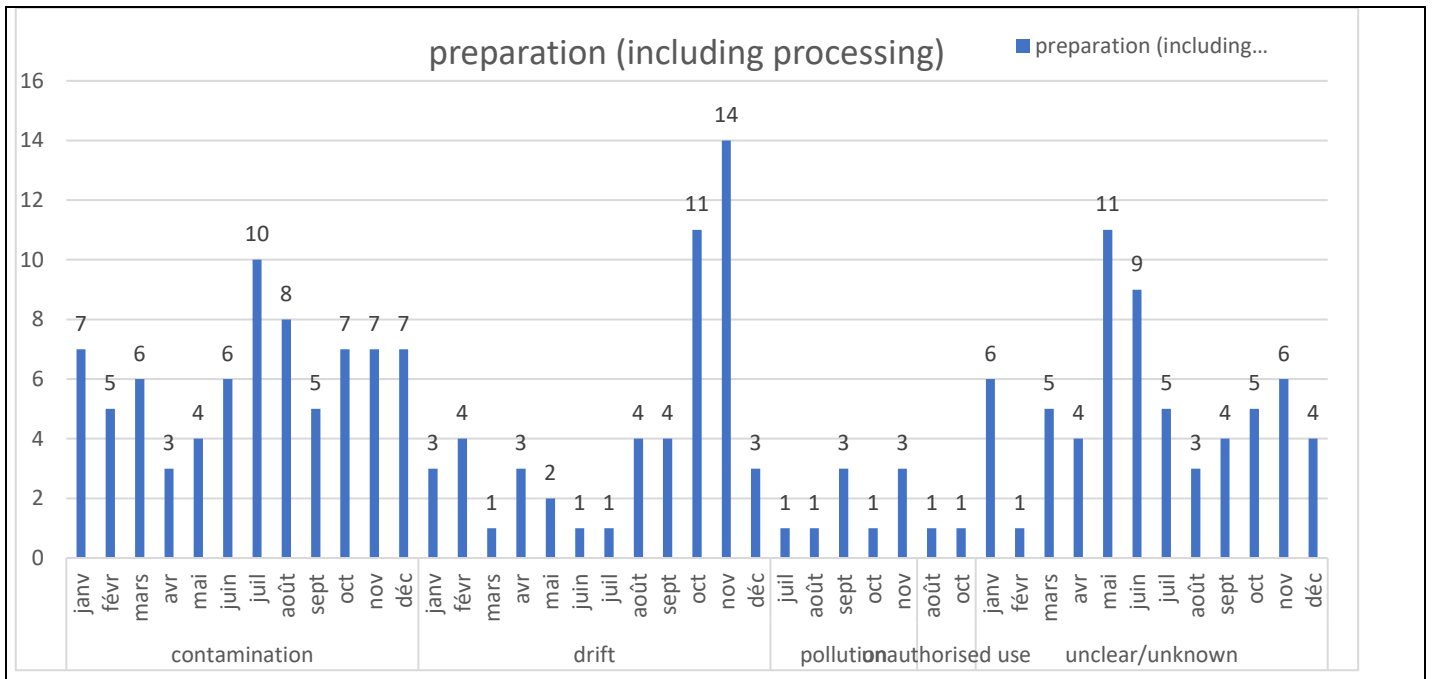


By looking at sampling in preparation units, the data show the following:

Contamination was detected 10 times in July.

Drift was also the concluded but later in the season: November (14 times)

Compared to samples taken at agricultural level, the % of unclear origins is higher : 28,7% (against 9,7%)



Part 5: Detection of residues but no investigation

In some cases (99 out of 1045), there has been no investigation. Detections of residues in organic products which were not investigated are not acceptable.

The following data show that there is no pattern of systematic non investigation of such cases.

- Sampling context: routine: 33; risk based : 60 ; import/export : 5 and suspicion of use : 1
- Activity : agricultural production : 35 ; import : 13 ; preparation : 45 and storage : 2
- Product categories : cereals : 8 ; fruit & vegetables : 16 ; leaves : 11 ; processed feed : 5 ; processed food : 36 and spices/tea/coffee : 14

4. Conclusions

The following conclusions apply to the analysis of more than 7500 samples taken by 11 EOCC members in 2018.

The quality of the data submitted is in line with the expectations although there is always room for further improvement for example in relation the understanding of the term “natural presence” which should be understood as “possibly produced by the plant itself” and not as “present in the natural environment of the plant”.

All EOCC members conducted investigations in case residues were detected. However, in some cases there was no investigation where there should have been one.

EOCC identifies a harmonised approach in relation to the certification status of organic products when the investigation shows that the residues are due to one of the following explanations:

Pesticides are due to	Certification status of the sampled batch
Natural presence	Organic
Commingling	Non organic
Unauthorised use	Non organic
Authorised use	Organic

EOCC identifies a **need for harmonisation** in relation to the certification status of organic products when the investigation shows that the residues are due to one of the following explanations:

Pesticides are due to	organic certification maintained
Contamination	31%
Drift	76%
Pollution	79%
Presence of non organic ingredients	89%
Unclear	46%

From the data it appears that there is big difference between samples taken in cases of suspicion (suspicion of use and substantiated suspicion) and other samples (risk based and routine). A thorough training of inspectors in recognising use of substances is recommended. Operators should be encouraged to keep records in such a way to avoid suspicion in relation to the application of the precautionary measures.