This paper represents a consolidation of the common views of the listed European representative organisations. All of these organisations are strongly committed to promoting sustainable agriculture, and delivering wholesome and safe food to consumers.
Summary and Key Issues

EU food policy guarantees a high level of protection for human health. In addition, today’s consumers are used to the availability of a great variety of fresh and processed food products of sound quality at affordable prices. To satisfy these needs, crops have to be protected in many cases against diseases and pests by applying Plant Protection Products (PPPs, or pesticides) according to the principle of “as little as possible but as much as necessary”.

In order to have a set of standards for PPP residues on food and feed to enable trade in food commodities to take place, to check compliance with Good Agricultural Practice (GAP), and to ensure that human health is protected, legally applicable MRLs are set.

It is strongly in the interests of all food chain partners, be they farmers, traders, or food processors that MRLs are respected, and considerable efforts are made throughout the food and feed chain to ensure that all practicable steps and control measures are taken to achieve this requirement.

Nevertheless, despite all due diligence it is not always possible to avoid MRLs occasionally being exceeded, as evidenced by the annually published EU PPP residues monitoring report which shows that typically 2-4% of samples may exceed MRLs. This is for a variety of reasons which are explained elsewhere in this paper. It is the responsibility of all food chain partners to continue to strive to drive the exceedance figures downwards.

Therefore, without in any way implying that MRL exceedances are acceptable, it is useful to promote a deeper understanding among policy makers (and ultimately the consumer) of the real - as opposed to the perceived - risks associated with PPP residues.

As will be demonstrated in this paper, the setting of MRLs is a complex process which aims to strike an appropriate balance between different needs and requirements. This complexity (and potential for misunderstanding) results in particular from the three-fold nature of MRL setting:

(i) they are set on the basis of Good Agricultural Practice (GAP), by identifying what the lowest achievable residue levels are based on actual (good) agricultural practices by means of field trials; and they can subsequently be used to monitor and control whether GAP has been followed;

(ii) they must enable trade to take place between EU Member States and on a global level;

(iii) they must in all cases take account of appropriate toxicological benchmarks i.e. it must be ensured that the GAP-based MRLs result in consumer exposure which is lower than the relevant toxicological thresholds.

Key issues and messages which flow from this paper are as follows:
- The whole food and feed chain takes MRL exceedances seriously and is striving to eliminate them;
- The paper seeks to shed light on how MRLs are set, and how they are always based on use patterns that result in low consumer exposure without risk of acute or chronic toxicity. A variety of safety factors are applied, and in particular the food consumption patterns of children are specifically accounted for;

1 It is worth noting that to date, despite several hundred thousand residue samples being analysed under the EU monitoring programme since 1996, only a handful of cases were identified among those which exceeded the MRL where a preliminary, extremely conservative risk assessment identified a theoretical concern.
- Exceeding an MRL seldom implies a risk to human health, since MRLs are set far below safety limits (a simplified schematic diagramme to illustrate this point can be found at the end of this section).

How MRLs are set

The Maximum Residue Levels (MRLs) for PPPs are set by the authorities based on an actual assessment of residues found in field trials based on Good Agricultural Practice (GAP) and by applying the minimisation or so-called ALARA principle (As Low As Reasonably Achievable). Field trials are conducted in a variety of climatic zones for each specific crop over at least two growing seasons. This is in order to ensure that differing crop growing practices, probability of emerging pests and diseases, and variations in weather conditions etc. are taken into account.

In a further separate step the authorities (independent scientific experts from the EU and its Member States) assess the risks involved in both long and short-term exposure to the potential hazard of PPP residues on food. This is done by establishing benchmarks known as the Acceptable Daily Intake (ADI) for the long-term (chronic) exposure, and the Acute Reference Dose (ARfD) for short term (acute) exposure to PPPs. MRLs are always based on agricultural use patterns, and are set such that the resulting exposure is much lower than the ADI and the ARfD values in order to avoid any unacceptable risk of acute or chronic toxicity.

The ADI as a health based standard is defined as an “estimate of the amount of a substance in food, expressed on a body mass index, which can be ingested daily over a lifetime by humans without appreciable health risk.” The ARfD is the highest amount of a PPP which may be ingested by humans in one day without causing any harm. The ADI and the ARfD are derived from a complete toxicology database using all known facts. Since the risk from exposure also depends on the sensitivity to the chemical substances, several safety margins are applied in the calculation of the ADI and ARfD.

Additionally, the food consumption patterns of various population groups including children are specifically accounted for. These measures ensure that vulnerable groups like infants are taken into account.

In view of the stringent authorisation procedure for PPPs and the conservative approach to MRL setting, it is clear that residues at or below the established MRLs do not cause any harm to human health.

What happens when MRLs are occasionally exceeded?

Residues exceeding the MRLs may occur for a number of reasons, for example:
- A crop may be correctly and responsibly produced according to the GAP/ MRL and PPP label instructions in one country, but be sold in a country which has a different GAP and MRL in place. Different climatic and pest pressure conditions may require different GAPs which result in different MRLs. Harmonisation of MRLs in the EU is now work in progress, and remains a challenge at the global level.
- Due to regular changes / adjustments in the legally applicable MRLs – the time of growing, through possible storage, packaging and processing, plus the quite long shelf-life of some foodstuffs means that where insufficient transitional (sell-out) periods are given some products may “become” out of compliance with MRLs at some point after production but before sale or placing on the market.
- For the so-called minor uses, often MRLs are not set.
• The occurrence of unusual crop conditions or climatic conditions that may lead to slightly higher levels of residues remaining regardless of compliance with GAP/label instructions.
• Crops may not have been treated according to GAP, i.e. the PPP is not used according to the instructions on the label, or some other inappropriate use has taken place (note: in many cases strict food chain quality assurance schemes would ensure that such practices would normally be identified, and steps be taken to rectify the situation, such as choosing not to purchase a particular consignment of produce, before the produce reaches the final consumer).
• False positives may be reported by monitoring bodies, especially in cases where MRLs are set at the “default low level” of 0.01mg/kg (see paragraphs below).

Notwithstanding the above, due to the way MRLs are set, exceeding an MRL does not necessarily imply a risk to human health, since the expected exposure may still be well below conservative toxicological benchmarks such as the ADI or ARfD\(^2\). It does however mean that the material contravenes the MRL legislation, and appropriate practical and legal measures need to be applied. A generalised and simplified schematic representation to help visualise the relationship between MRLs and the key toxicological ADI and ARfD benchmarks is attached herewith. In order to demonstrate the additional safety factor (of at least 100X) built into the ADIs and ARfDs themselves, the No Observable Adverse Effect Level (NOAEL), and Lowest Observable Adverse Effect Level (LOAEL) benchmarks are also included in the schematic.

For the reasons above, a case-by-case analysis should be conducted before any alert is sent to consumers. In the rare event that a real health concern is identified, the authorities must be informed if they are not already aware, and immediate steps to prevent the placing on the market of the crop/commodity should be taken. In the more common scenario where an MRL is exceeded but there is no health concern, appropriate steps in compliance with legal obligations must be taken, and measures should be put in place to ensure that no repetition occurs and that farmers are informed and educated to avoid future MRL exceedances. Food chain operators are committed to avoiding the placing on the market of products which exceed MRLs through due diligence and various control schemes. Further legal proceedings can be initiated if non-compliance persists.

It is important to be aware that the intended total harmonisation of MRLs under the new EU MRLs Regulation is itself warmly welcomed by the food chain partners. It is noted that in cases where no EU MRL is available a large number of MRLs will be set at a standardised so-called “default low level”, without taking into account the ADI/ARfD benchmarks. The consequence of this is that MRLs will typically be driven downwards, so widening the green “zone 2” in the attached schematic representation i.e. increasing numbers of MRL exceedances will be reported, but there will be no actual human health concern. This situation represents a considerable communications challenge for all partners in the food-chain and government authorities, and is highly susceptible to mis-interpretation, or even deliberate mis-representation. Appropriate proportionate actions and communication messages need to be developed and disseminated by the relevant authorities to avoid raising unjustified public concern, and adequate transitional periods need to be allowed to permit the necessary changes in PPP use to be made at farm level both in the EU and globally.

\(^2\) It is widely accepted that MRLs are not toxicological limits, and exceedances are not necessarily a health concern. See Commission Press Release on the Annual Monitoring Report dated 22/4/03, which states “…It (MRL) is not a toxicological limit and a violation is not necessarily a cause of concern for public health”. See: http://europa.eu.int/comm/food/fs/inspections/fnaio/reports/annual_eu/exp_summary2001_en.pdf
Operators in the food chain are aware of consumer concerns regarding residues of PPPs on food. Consequently, more and more public and private initiatives are being established which put in place quality schemes for inspection and control regarding adherence to good practice throughout the food chain. The measures include among others: on-farm documentation and record-keeping, residue testing at various points along the supply chain, farm certification, and traceability tools in order to be able to identify the origin of an MRL exceedance.

It is also worth mentioning that the monitoring and control schemes for PPP residues established in the European Union are often targeted on food products and cargoes where residue-related problems have been identified (so-called “hot spots”). Therefore the results can be expected to show a higher proportion of products with residues than is actually the case in the food supply taken as a whole.

The key points which all participating food-chain partners would like to stress are as follows:

- MRLs are set on the basis of what is achievable using Good Agricultural Practices.
- ADIs and ARfDs are used as conservative toxicological benchmarks to ensure that all MRLs are safe from a human health point of view.
- There is a considerable margin between the toxicologically safe levels, and the legally required MRLs, with MRLs set such as to ensure that exposure is significantly lower than would be the case if they were based purely on protecting human health.
- Therefore, although an MRL may on occasion be exceeded and trigger the required measures being taken to comply with legal requirements and to ensure that the exceedances are not repeated, there is no immediate concern for human health. It follows that in cases where MRLs may be exceeded, case-by-case assessments should be taken to ensure that any remedial measures, or possible dissemination of information to the public, are appropriate and proportionate to any actual safety risk.
- Although MRLs are unfortunately occasionally exceeded, all partners in the food-chain are fully committed to ensuring that all possible steps be taken to avoid this.
A factor of at least 100 is applied between NOAEL and ADI/ARfD.

Increasing exposure/risk associated with different benchmarks.

**Zone 1**: MRL compliance, legal for trade, safe for human health. The vast majority of measured samples fall in this zone.

**Zone 2**: MRL exceedance, not legal for trade but safe for human health. Case-by-case analysis and appropriate steps to ensure future compliance with MRLs should be undertaken.

**Zone 3**: ADI and/or ARfD are significantly exceeded, meaning there may be a human health concern. Given the safety margins incorporated into the ADI and ARfD, case-by-case assessment is appropriate, and if necessary steps to prevent the sale of the crop/commodity should be taken.

**Zone 4**: NOAEL is exceeded, meaning there is a human health concern. Immediate steps to prevent the sale of the crop/commodity have to be taken.

**Explanations:**

- **MRL**: Maximum Residue Level (Maximum contents of a pesticide residue to be legally permitted in or on food commodities)
- **ADI**: Acceptable Daily Intake (Estimate of the amount of a substance in food, which can be ingested daily over a lifetime by humans without appreciable health risk)
- **ARfD**: Acute Reference Dose (Estimate of the amount of a substance in food, which can be ingested in a single meal by humans without appreciable health risk)
- **NOAEL**: No Observable Adverse Effect Level (The greatest concentration of an agent, that causes no detectable adverse alteration of morphology, functional capacity, growth, development or lifespan of the target)
- **LOAEL**: Lowest Observable Adverse Effect Level (similar to NOAEL, but where an effect is seen)
APPENDIX: MRLs and MRL Exceedances

- A more detailed look at the issue, and a hypothetical example of the procedures that are carried out by the food chain partners and the relevant authorities.

This Appendix is intended for those readers who may wish to learn more about the detail of the procedures used for setting and assessing MRLs.

PPP safety assessment

To determine risk to human health, due consideration must be given to both the toxicity (potential hazard), of the PPP and the likelihood of exposure. All PPPs undergo full assessment and control ensuring that they can be used safely, with respect to the environment, animal, and human health in terms of residues in the food chain, before being authorised for use. This scientific assessment is performed by independent national experts chosen for their expertise and impartiality. Moreover, effects of long, medium and short term PPP ingestion are studied to identify possible effects of PPPs on human health.

Once PPPs have undergone intense assessment and are scientifically shown to be safe to the satisfaction of independent experts, Maximum Residue Levels for foodstuffs can be set.

Residues of PPPs

Currently at EU level, PPP residues are evaluated in/on foodstuffs against a Maximum Residue Level (MRL) set by the EU, National Governments and/or International bodies e.g. Codex Alimentarius. This concept is defined as:

An MRL is “the maximum concentration of a PPP residue (expressed in mg/kg) legally permitted in or on food commodities and animal feed. MRLs are set for individual crop/PPP combinations. MRLs are primarily standards that have been set by responsible authorities to enable free trade around the globe and within the EU, taking into account what is achievable in terms of minimising residues by applying Good Agricultural Practice. MRLs must always be set within limits that are safe for humans.”

Background to setting an MRL

The setting of MRLs is based on three overriding concepts: crop production practices under Good Agricultural Practice (GAP); consumer intake (exposure); and toxicity of the PPP (hazard).

Realistic assessments and measurements of residues are provided by field trials performed using “critical GAP” (there may be more than one GAP for a PPP, due e.g. to use in different zones of the EU which may have different pest-pressures – “critical GAP” is the approved use pattern which gives rise to the highest possible PPP residue). Field trials are conducted throughout every climatic zone for each specific crop using established scientific methods.

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3 - Directive 91/414/EEC concerning the placing of plant protection products on the market
- For residue control (MRLs): Directives: 76/895/EEC (some crops by customs code), 86/362/EEC (cereals), 86/363/EEC (products of animal origin), 90/642/EEC (products of plant origin other than cereals). These Directives are to be consolidated, improved and repealed by Regulation (EC) NO 396/2005 of 23/2/05 on maximum residue levels of pesticides in or on food and feed of plant and animal origin and amending Council Directive 91/414/EEC – OJ L70/1 16/3/05

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Brussels
Trials are replicated at different times with various methods of crop husbandry, to account for differing probabilities of emerging pests and diseases as these vary depending on the climate, weather conditions and the crop type. These trials ensure that MRLs are set in accordance with levels of residues that one would normally expect to exist under all extremes of crop production.

The potential amount of a particular PPP ingested is just as important as the toxicity of the chemical. To reflect this and to complement agronomic studies, consumer intake models are used to estimate, assuming a worst case scenario, the quantity of PPP residue that a range of consumers, from infants to adults, would be expected to ingest. This specifically accounts for higher food consumption by children than adults, in relation to their bodyweight. Therefore, MRLs incorporate the necessary safety margin to take account of the vulnerability of children and infants.

Scientific assessments evaluate toxicity-associated risks from long- and short-term exposure to PPP residues on food based on two benchmarks: the Acceptable Daily Intake (ADI); and the Acute Reference Dose (ARfD). The former is the estimate of the amount of a substance in food, expressed on a body mass index (mg of substance consumed per day/ kg of bodyweight), which can be ingested daily over a lifetime by humans without appreciable health risk. The latter, ARfD, is the amount of a particular chemical, also in mg/kg bodyweight per day, that can be ingested in one day without a risk to health. MRLs are always based on agricultural use patterns that result in exposure lower than the ADI and ARfD values in order to avoid any risk of chronic or acute toxicity.

The ADI is established from a complete toxicology database which includes exposure to the PPP for pregnant females and to offspring from birth to puberty. It therefore ensures that consumers who may in some instances be more susceptible, most notably infants or pregnant women, are included in the risk assessment (note: depending on the substance concerned, infants may also be less susceptible than adults). As the exposure to a hazard depends on the sensitivity to the chemical substances, several safety margins are applied in the calculation of the ADI and the ARfD (indeed, the attached simplified schematic also demonstrates the margins which exist between the ADI/ ARfD benchmarks and the NOAEL and LOAEL). This adds further protection for the general population as well as for vulnerable populations, which can include infants.

It is worth mentioning that MRLs are expressed in a different way as compared to ADIs and ARfDs. While ADIs and ARfDs are expressed as a specific exposure for a person in terms of mg/kg bodyweight per day, MRLs are expressed as an amount of PPP residue on produce, i.e. as mg PPP/ kg of food produce. The reason for this is to make the MRL relevant for the purposes of checking compliance. It follows from this that, for the reasons given above, the safety assessment of MRLs has to be based on data regarding the amount of food actually eaten in relation to consumer bodyweight. As a matter of fact, in the dietary risk assessment, the quantities of food eaten including certain culturally specific diets are given special consideration where particular minority products may constitute the bulk of a consumer’s diet.

When a residue exceeds an MRL

The General Food Law of the European Union\(^4\) provides for a modern, integrated approach to food safety ensuring that EU food policy guarantees a high level of protection for human health. This legislation states that any food which is unsafe, i.e. that it is considered injurious or harmful to health, shall not be placed on the market. It is important that a common

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\(^4\) Regulation (EC) No 178/2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety
approach is taken on this in all Member States. With the knowledge of the safety margins included in an MRL in mind, considerable confusion exists within the industry and public administrations regarding action to be taken where an MRL is exceeded.

When an MRL is exceeded it is inappropriate to classify the foodstuff in question as ‘injurious to health or unfit for human consumption’, without first verifying that there is an actual safety risk. Given the very large safety margin factored into the setting of MRLs, exceedances will in most cases not constitute any food safety risk. Therefore, a thorough assessment is needed to demonstrate whether a foodstuff is safe or not, by comparing the possible exposure with the toxicity of the PPP.

The examples below demonstrate the relationship between consumption (exposure) and toxicity levels (hazard). The first example assesses the chronic dietary risk caused by an MRL exceedance, and the second assesses how acute dietary risk is assessed.

1. The following numerical example compares potential chronic exposure to a residue with values from toxicological tests:

<table>
<thead>
<tr>
<th>Exposure</th>
<th>kg food consumed/day x residue found on a product in mg/kg kg bodyweight of consumer</th>
</tr>
</thead>
</table>

example MRL: 0.5 mg/kg  
example ADI: 0.01 mg/kg bodyweight/day

If a 2 to 5 year old child (bodyweight = 16.15 kg) eats 16.6 grams of carrots per day (standard new German consumption figure which includes raw and processed carrots as well as carrot juice) with a residue of 0.7 mg/kg (i.e. exceeding the MRL), the exposure in the worst case scenario is:

\[
\frac{0.0166 \text{ kg/day of carrots} \times 0.7 \text{ mg/kg}}{16.15 \text{ kg}} = 0.00072 \text{ mg/kg-bodyweight/day}
\]

The above example calculation shows that a residue of 0.7 mg/kg on carrots gives rise to an exposure of 0.00072 mg/kg-bodyweight per day, which is well below (7% of) the example ADI of 0.01 mg/kg bodyweight per day. The above calculation also includes several extreme “worst-case assumptions”:
- All of the produce consumed over a lifetime is assumed to have residues of 0.7 mg/kg (i.e. exceeding the MRL).
- The amount of PPP present in the produce consumed is assumed not to be decreased by storage, transport, processing, cooking, washing and/or peeling the produce before eating it. This is especially unrealistic in the case of carrot juice, where a dilution of residues almost always occurs.

It is common practice to sum up exposure to a given PPP from all crops for which an MRL is established (i.e. for all the crops for which use of that particular PPP is authorised). Further calculations across all crops will typically show that the long-term exposure to the PPP, even with the residues in carrots exceeding the MRL, is considerably lower than the ADI, and that therefore no food safety risk exists. This clearly demonstrates the need to assess marginal exceedances on a case-by-case basis, rather than automatically withdrawing the whole lot/batch from the market.
2. The following numerical example compares potential short term exposure to a residue, this being the amount of food consumed within a day, with values from toxicological tests. It must be noted that as compared to the potential chronic exposure described in example 1, assessments related to short term exposure are frequently more critical, i.e. the apparent margin between a residue which exceeds an MRL, and that residue which could lead to exceeding the ARfD is typically not as wide as is the case for chronic assessments and their associated ADIs. This is due, primarily, to the extreme worst-case assumptions which are routinely used for deriving ARfDs. For these reasons, the example outlined below has been specifically selected to represent a relatively critical case, i.e. the MRL exceedance results in a residue which is close to 100% of the ARfD. Example:

\[
\text{Exposure} = U \times HR \times v + (LP - U) \times HR
\]

\[
\frac{\text{kg bodyweight of consumer}}{0.0493 \text{ mg/kg-bw/day}}
\]

U: Unit weight (182 g of apple)
LP: Large portion size (234.8 g of apple)
v: Variability factor (7 in cases where the unit weight is between 25 and 250 g, e.g. apple)
HR: highest residue determined: 0.60 mg/kg
MRL: 0.5 mg/kg
example ARfD (Acute Reference Dose): 0.05 mg/kg bodyweight/day

If a 2 to 5 year old child (bodyweight = 16.15 kg) eats 234.8 grams of apple during a single meal (standard new German short-term consumption figure, 97.5th percentile) with a residue of 0.60 mg/kg (i.e. exceeding the MRL), the exposure in the worst case scenario is:

\[
0.182 \text{ kg/day of apples} \times 0.60 \frac{\text{mg/kg}}{0.2348 - 0.182} \times 0.60 = 0.0493 \text{ mg/kg-bw/day}
\]

The above example calculation shows that a residue of 0.60 mg/kg on apples gives rise to an exposure of 0.0493 mg/kg-bodyweight per day, which would be just below (98.6% of) the example ARfD of 0.05 mg/kg bodyweight per day. The above calculation also includes several extreme “worst-case assumptions”:

- The amount of PPP present in the produce consumed is assumed not to be decreased by storage, transport, processing, cooking, washing and/or peeling the produce before eating it.
- The so-called variability factor of seven assumes that the residue which is usually determined in a mixed sample of several apples can be up to 7 times higher in an individual apple.
- The equation further assumes that all apples eaten in a single sitting contain the same high residue.

It is clear that even though this particular example of an MRL exceedance brings the potential exposure close to the short term benchmark (the ARfD), due to the assumptions incorporated in the assessment, and the additional wide margin between the ARfD and actual effect benchmarks (normally a factor of 100), risk to the consumer remains negligible.

Notwithstanding the requirement to ensure correct application/use of PPPs according to official recommendations and food chain efforts to promote this goal, PPP residues on foodstuffs do occasionally exceed the MRLs and trigger measures being taken in compliance with legal requirements and to ensure that the exceedances are not repeated. In this case the application methods and potential misuse of the substance are evaluated. If the PPP has been used correctly, a change in the MRL may be necessary to allow the continued use of the PPP, while ensuring that the food is still safe for consumption. Such is the margin of
safety incorporated into MRLs that it is entirely possible and legitimate to alter MRLs in the light of what is or is not possible in terms of residue minimisation when GAP is followed.

Clearly residues exceeding the MRLs may also occur for a variety of reasons, including cases where the GAP has not been followed, e.g. a PPP may have been applied too close to crop harvest. In such instances farmers are informed and educated. The economic pressure of crop/processed commodity rejection, or even destruction, ensures future compliance with PPP usage guidelines. Legal proceedings can be initiated if recommended practices are not followed.

MRLs may also be exceeded when new legislation introduces new MRLs too quickly, without the necessary transition periods being allowed for changes to be made in the whole of the supply chain, and in particular with respect to PPP use at the farm level.

Operators in the food chain are aware of consumer concerns concerning residues of PPPs on food. Consequently, increasing numbers of public and private bodies are implementing quality schemes which inspect and control adherence to GAP, throughout the food chain. These schemes may be driven by retailers, food processors, food traders, or be farm gate schemes driven by farmers’ organisations. They are characterised by a common responsibility to continuously improve product safety.

The monitoring and control systems for PPP residues established by the European Union and Member State authorities are often targeted towards food products and cargoes where problems have been found in the past: a risk based approach. Consequently, the results cannot be taken as representative of the residues found in the food supply as a whole: due to the targeted nature of the monitoring the results will show a greater proportion of products which exceed MRLs than would be the case if the monitoring were truly random. Unfortunately, information generated by targeted monitoring is often used in a manner which is counterproductive to measures to educate consumers.

In conclusion, it is evident that a science-based robust approach to setting and monitoring MRLs is in place which, taken together with producer driven quality schemes ensures that food in Europe is of higher quality and safer than it has ever been before.

### Participating European Food-Chain Partners:

- CELCAA – European Liaison Body for the Agri-Food Trade
- CIAA – Confederation of the food and drink industries of the EU
- COLEACP-PIP – Liaison Committee Europe – Africa, Caribbean, Pacific (Pesticides Initiative Programme)
- ECPA – European Crop Protection Association
- FEDIOL – The EU Oil & Proteinmeal Industry
- FEFAC – European Feed Manufacturers Federation
- Freshfel Europe – European Fresh Produce Association
- OEITFL - Organisation of European Industries Transforming Fruit and Vegetables - L’organisation européenne des industries transformatrices de fruits et légumes