

PESTICIDE MANAGEMENT

Crucial for farmers and storage managers

Several non-EU countries are big net exporters of oilseeds, especially of soyabeans, sunflower seeds and to a lesser extent rapeseeds. Significant volumes of these oilseeds are destined for the European Union (EU) countries, in particular Austria, Belgium, Germany, the Netherlands and Spain.

It is vital that oilseeds are not contaminated with pesticides at levels that are not compliant with EU Regulation.

Maximum EU limits for pesticides* (MRLs - Non-exhaustive list)

*) EU regulation may be subject to changes. For most up-to-date information see: <https://ec.europa.eu/food/plant/pesticides/eu-pesticides-database>

| ON RAPESEEDS | mg/kg | ON SUNFLOWER SEEDS | mg/kg | ON SOYABEANS | mg/kg | ON LINSEEDS | mg/kg |
|----------------------|-------|---------------------|-------|---------------------|-------|--------------------|-------|
| Biphenyl | 0.01 | Azoxystrobin | 0.5 | Anthraquinone | 0.02 | 2,4 D | 0.05 |
| Carbendazim | 0.1 | Captan | 0.07 | Chlorpyrifos | 0.1 | Chlorpyrifos | 0.01 |
| Chlormequat | 7.0 | Chlormequat | 0.01 | Chlorpyrifos-methyl | 0.05 | Cyhalothrin-lambda | 0.2 |
| Chlorpyrifos | 0.04 | Chlorpyrifos | 0.01 | Chlothianidin | 0.02 | Cypermethrin | 0.2 |
| Chlorpyrifos-methyl | 0.05 | Chlorpyrifos-methyl | 0.05 | Cyproconazole | 0.07 | Glyphosate | 10.0 |
| Cypermethrin | 0.2 | Cypermethrin | 0.2 | Diquat | 0.3 | Haloxifop | 0.01 |
| Cyproconazole | 0.4 | Deltamethrin | 0.05 | Fosetyl-Al | 2.0 | Imidacloprid | 0.05 |
| Dimethoate | 0.01 | Dichlorvos | 0.01 | Glufosinate | 2.0 | Malathion | 0.02 |
| Diquat | 1.5 | Diquat | 0.9 | Glyphosate | 20.0 | MCPA | 0.1 |
| Dithiocarbamates | 0.5 | Glyphosate | 20.0 | Haloxifop | 0.5 | Pirimiphos-methyl | 0.5 |
| Fluopyram | 1.0 | Imidacloprid | 0.1 | Heptachlor | 0.01 | | |
| Fluazifop-p | 9.0 | Lambda -cyhalothrin | 0.2 | Malathion | 0.02 | | |
| Flutriafol | 0.5 | Malathion | 0.02 | Paraquat | 0.02 | | |
| Fosetyl-Al | 2.0 | Mepiquat | 40.0 | Pirimiphos-methyl | 0.5 | | |
| Glyphosate | 10.0 | Pirimiphos-methyl | 0.5 | Procymidone | 0.02 | | |
| Glufosinate-ammonium | 1.5 | Tetramethrin | 0.01 | | | | |
| Haloxifop | 0.2 | | | | | | |
| Imidacloprid | 0.1 | | | | | | |
| Malathion | 0.02 | | | | | | |
| Mepiquat | 15.0 | | | | | | |
| Paraquat | 0.02 | | | | | | |
| Pirimiphos-methyl | 0.5 | | | | | | |
| Tebuconazole | 0.5 | | | | | | |
| Thiacloprid | 0.6 | | | | | | |

Inappropriate use of pesticides might affect consumers' health. It often prevents traders and processing industry from buying oilseeds and cereals, since the regulation restrict us from placing these products on the EU markets for food and/or feed applications.

EU Regulation No. 396/2005 establishes a high level of consumer protection and harmonised provisions within the EU on maximum residue levels (MRLs) in or on food and feed of plant and animal origin. It applies to fresh and processed food or feed produced or used in the EU in which pesticide residues may be present.

Existing MRLs for all approved active substances are regularly reviewed in the EU. To find out which MRL is applicable for which crop and which pesticide, a database can be consulted on the EU website. The MRLs can be viewed by crop, by crop group, by crop code or by pesticide in all EU languages.

See: <https://ec.europa.eu/food/plant/pesticides/eu-pesticides-database>

This brochure is the result of a concerted action of oilseed trading and processing companies along with storekeepers, co-ordinated by MVO – The Netherlands Oils and Fats Industry, FEDIOL – The EU vegetable oil and proteinmeal industry association, COCERAL – The EU association of cereals, rice, feedstuff, oilseeds, olive oil and fats and agrosupply trade, Het Comité – The Royal Dutch Grain and Feed Trade association, UNISTOCK – The EU association of professional portside storekeepers for agribulk commodities.



GUIDELINES FOR FARMERS

(Good Agricultural Practices)

- Make sure that the pesticide supplier is known. Avoid buying pesticides from unknown sources. The trade of counterfeit and illegal pesticides is growing. Such pesticides may contain banned substances and may be a danger for human health and/or the environment. As a result, treated crops may be unmarketable.
- Make sure that the pre-harvest intervals of all chemicals applied on the crop are respected. Otherwise, residues from those chemicals will remain in the seeds and it will not be possible to sell them, since these seeds will not be compliant with EU Regulation No. 396/2005.
- Make sure that when spraying pesticides on the crops, recommended doses are followed. Spraying higher doses than recommended will lead to high levels of residues in the harvested seeds and then to the non-compliance with EU Maximum Residue Limits (MRLs). Not respecting recommended doses may also endanger workers' health or safety.
- When planting different kinds of crops on neighbouring fields, make sure the spraying device is tuned correctly to minimise drift of the pesticide to neighbouring crops. Do not spray pesticides during strong wind.
- Make sure that transport vehicles are completely clean when transporting the oilseeds, so that these are not contaminated with chemicals or other toxic substances that might have been transported before in the same vehicle.
- Storage of chemicals on the farm should be separated from the grain and seed storage. Pesticides should be completely sealed to avoid leakage.
- Make sure that any kind of fertilisers, oils or electric fluids are separated from the grain and oilseed storage.
- Make sure that seeds aimed to be used for sowing, are separated from those aimed to be sold, avoiding any contamination with pesticides.
- Make sure that drying processes to dry oilseeds/nuts prior to oil extraction are under control. Drying processes may lead to the presence of e.g. biphenyl, anthraquinone, 2-phenyl-phenol. In vegetable oils which are also regulated under EU regulation No. 396/2005. In general, indirect drying results in lower contents of these substances compared to direct drying. Changes in the drying techniques/equipment/fuel/process lay-out may also help to reduce the formation of these substances during drying.
- Make sure that the use of fertilisers or biostimulants do not lead to non-compliance with the EU MRLs (e.g. use of phosphonate-containing products may lead to exceedance of the MRL for fosetyl-Al).

Prudent use of pesticides is an immediate need to avoid commercial problems that affect us all.

Let's jointly take care of our production and commerce by applying Good Agricultural Practices and proper pesticide handling.

GUIDELINES FOR STORAGE MANAGERS

- Make sure there is no leakage in the silos that could cause stored grains or seeds to be contaminated.
- Clean the internal walls of the silo each time a different seed or grain is going to be stored in order to avoid comingling. Cleaning of internal walls of a silo is crucial in case the last product stored has been grain or oilseed that has been treated with chemicals.
- Clean transport lines (redlers, belts etc.) whenever there is a change in the commodity, especially when potatoes, seeds or grains treated with a pesticide have passed through it.
- Storage pesticides are only allowed for cereal treatment and not for oilseeds, with the exemption of phosphine. Insects rarely target oilseeds, so preventive measures may be assessed case-by-case depending on the situation.
 - In case a pesticide treatment is necessary for stored cereals, there should be a register of treatments in place. This ensures that any possible problem during the operation can be traced throughout the supply chain, from farmer to consumer. This register should include:
 - date;
 - time of spraying;
 - type of active substances;
 - dosage rate;
 - redlers cleaning after treatment: signature of operator and explanation on type of cleaning.
- In the event of having spraying equipment for cereal protection in the storage facilities, please make sure that before oilseeds are transported through the redlers, the following items must be checked systematically:
 - previous grains have been removed from belts/redlers;
 - redlers/conveyor belts have been cleaned and any residue of pesticide has been removed;
 - the spraying equipment is switched off;
 - the nozzles do not leak over the belts/redlers.

Documented evidence of these checks should be present.

WHAT ELSE CAN BE DONE?

Only use phosphine during grain storage, a low-residual pesticide which is also approved for sunflower and other oilseeds.

| Phosphane and phosphide salts (sum of phosphane and phosphane generators (relevant phosphide salts), determined and expressed as phosphane) | MRL (mg/kg) |
|---|-------------|
| Linseeds | 0.05 |
| Maize | 0.7 |
| Rapeseeds | 0.05 |
| Soyabeans | 0.05 |
| Sunflower seeds | 0.05 |

Deletion of existing MRLs following non-renewal of active substances



The EU pesticide legislation for the authorisation of plant protection products (Regulation (EC) No 1107/2009) refers to a number of criteria, the so-called "cut-off" criteria. Active substances meeting these criteria cannot be approved, without any form of risk assessment, but only based on the health or environment hazard they pose.

As a consequence of the non-renewal of active substances meeting the human health cut-off criteria, authorisations of plant protection products containing these active substances are revoked and existing MRLs are deleted (i.e. set at 0,01 mg/kg or to the relevant limit of quantification). For these substances, transitional periods might not be granted for the application of the revised MRLs which may then take effect only 6 months after the date of the entry into force of the corresponding regulations, or even before.

If not anticipated, such changes of MRLs might be highly problematic and disrupt the trade of crops with the EU.

EU draft non-renewal decisions for active substances under Regulation (EC) No 1107/2009, which can later on lead to the lowering of MRLs, are notified at an early stage to the World Trade Organisation (WTO) under the Technical Barrier to Trade (TBT) agreement and are therefore publicly available. The lowering of the related MRLs are also notified at a draft stage to the WTO under the Sanitary and Phytosanitary measures (SPS) agreement. Authorities from non-EU countries may intervene in these processes¹. For active substances for which no renewal procedure is initiated by the interested economic operators or for which applications have been withdrawn, public information on when the approval of active substances will expire may be found on the website of the EU pesticides database.

1) G/SPS/GEN/1494/Rev.1 Committee on Sanitary and Phytosanitary Measures - On-going review of maximum residue levels of pesticides in the European Union - Communication from the European Union - Revision