Maximum residue levels for clothianidin

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EU reduces MRLs for clothianidin with impacts on fruits, vegetables, cereals, teas and coffees, sugar and animal products

Commission Regulation (EU) 2023/334 of 2 February 2023 amending Annexes II and V to Regulation (EC) No 396/2005 of the European Parliament and of the Council as regards maximum residue levels for clothianidin and thiamethoxam in or on certain products.

Update

On 15 February 2023, the European Commission published Regulation 2023/334 reducing the maximum residue levels (MRLs) for clothianidin to 0.01–0.05 mg/kg. There are implications for fruits, vegetables, cereals, teas and coffees, sugar and animal products.

Impacted products

grapefruits, oranges, lemons, limes, mandarins, apples, cherries, table grapes, wine grapes, table olives, avocados, bananas, mangoes, potatoes, carrots, tomatoes, sweet peppers, bell peppers, aubergines, eggplants, Chinese cabbages, pe-tsai, kales, lettuces, escaroles, broad-leaved endives, chervil, chives, celery leaves, parsley, sage, rosemary, thyme, basil and edible flowers, laurel leaves, bay leaves, tarragon, beans (with pods), peas (with pods), celeries, globe artichokes, beans, lentils, peas, lupins, Lupini beans, olives for oil production, barley, rice, teas, coffee beans, sugar canes, animal products

What is changing?

The EU has amended MRLs as set out in Table 1.

In addition, for other fruits, vegetables (except herbs), pulses and oilseeds not included in Table 1, the MRLs are reduced from 0.02 to 0.01 mg/kg.

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Why?

In 2016, a report on pollinators, pollination and food production by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES 2016) concluded that neonicotinoids (including clothianidin) have adverse effects on bees and other pollinators. EFSA (2018) found that the use of clothianidin outdoors poses significant risks to bees, and the Commission therefore restricted its use to greenhouses. Following these restrictions, applications for the renewal of clothianidin were withdrawn.

Where a substance is not reapproved, the EU typically reduces MRLs to default levels, but will take into account established Codex MRLs (CXLs). In this case, the Commission argues that CXLs based on good agricultural practices (GAP) for outdoor use are not acceptable due to their effects on bees. The EU wishes to avoid contributing to this global environmental problem. The Regulation ensures that all products are imported "free from clothianidin and thiamethoxam" [recital (12)].

Timeline

The Regulation enters into force on 25 February 2023. The new MRLs will apply from 7 March 2026.

What are the major implications for exporting countries?

Clothianidin is widely used worldwide on food and non-food crops including maize, soybeans, leafy greens and fruit, to control insects such as aphids, thrips and beetles.

Since restrictions on neonicotinoid pesticides were introduced in 2013, several EU Member States have granted emergency authorisations for use of clothianidin as no alternative products or methods (chemical or non-chemical) were available, or because there was a risk of pest resistance developing to available alternative products. However, in January 2023, the European Court of Justice (ECJ) ruled that emergency authorisations for clothianidin are no longer permitted (C-162/21).

Producer experience in the EU suggests that the reduction of MRLs on clothianidin may be a major challenge for AGRINFO stakeholders.

Exporters to the EU must find alternative products or methods to control pests in the next 3 years. The Commission considers that "adaptation of agricultural practices can be reasonably expected to be achieved after two growing seasons" [recital (19)].

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Recommended Actions

Suppliers to the EU market of fruits, vegetables, cereals, teas and coffees, sugar and animal products should review current use of clothianidin with a view to seeking alternative solutions in anticipation of the reduction in MRLs in 2026.

Background

MRLs are set in accordance with the rules set out in Regulation 396/2005. For information on current MRLs for other substances, please consult the EU Pesticide Residues database.

Resources

EFSA (2018) Peer review of the pesticide risk assessment for bees for the active substance clothianidin considering the uses as seed treatments and granules.

EFSA (2021) Evaluation of the emergency authorisations granted by Member State Poland for plant protection products containing imidacloprid, thiacloprid or thiamethoxam.

IPBES (2016) Assessment Report on Pollinators, Pollination and Food Production. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

Sources

Commission Regulation (EU) 2023/334

Visit the AGRINFO website to view the latest AGRINFO Update newsletters and search the database.

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Tables & Figures

Table 1
Maximum residue levels for clothianidin

Food category	Products	Clothianidin (mg/kg)	
		Old MRL	New MRL
Citrus fruits	Grapefruits, oranges, lemons, limes, mandarins	0.06	0.01*
Pome fruits	Apples, pears, quinces, medlars, loquats/ Japanese medlars	0.4	0.01*
Stone fruits	Apricots, peaches	0.15	0.01*
	Cherries	0.03	0.01*
Berries and small fruits	Table grapes, wine grapes	0.7	0.01*
Miscellaneous fruits	Table olives	0.09	0.01*
	Avocados	0.03	0.01*
	Bananas	0.02	0.01*
	Mangoes	0.04	0.01*
Root and tuber vegetables	Potatoes	0.03	0.01*
	Carrots	0.06	0.01*
Fruiting vegetables	Tomatoes, sweet peppers/ bell peppers, aubergines/ eggplants	0.04	0.01*
Brassica vegetables	Chinese cabbages/ pe-tsai, kales	0.3	0.01*
Leaf vegetables	lettuces, escaroles/ broad-leaved endives	0.1	0.01*
Herbs and edible flowers	chervil, chives, celery leaves, parsley, sage, rosemary, thyme, basil and edible flowers, laurel/ bay leaves, tarragon	1.5	0.02*
Legume vegetables	Beans (with pods), peas (with pods)	0.2	0.01*
Stem vegetables	Celeries	0.04	0.01*
	Globe artichokes	0.05	0.01*
Pulses	Beans, lentils, peas, lupins/Lupini beans	0.02	0.01*
Oil fruits	Olives for oil production	0.09	0.01*
Cereals	Barley	0.04	0.01*
	Rice	0.5	0.01*
Teas, coffee, herbal infusions, cocoa and carobs	Teas	0.7	0.05*
	Coffee beans	0.05	0.05*
Hops		0.07	0.05*
Sugar plants	Sugar canes	0.4	0.01*
Commodities from swine/ bovine/ sheep /goat /equine	Liver, edible offals	0.2	0.02*
Commodities from bovine/ sheep/ goat/ equine/ other farmed terrestrial animals	Edible offals	0.2	0.02*
Commodities from poultry	Liver, edible offals	0.1	0.02*
Milk	Cattle, sheep, goat, horse	0.02	0.01*

* Limit of determination.
Source: based on SANTE/11226/2021 [Annex V]

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