EU legislation on contaminants - maximum levels explained

Published by AGRINFO on 29 Nov 2022

Summary of the EU's legal framework, rationale and basic principles for maximum limits for contaminants in food

Commission Regulation (EU) 2023/915 of 25 April 2023 on maximum levels for certain contaminants in food and repealing Regulation (EC) No 1881/2006

Update

Background information summarising the EU's legal framework, rationale and basic principles for setting maximum limits for contaminants in food.

Background

Certain contaminants are naturally present in water, air or soil, and are carried over to food (e.g. aflatoxins, heavy metals and nitrates). The EU constantly monitors consumer exposure to contaminants in food. For the contaminants of greatest concern to EU consumers, due to either toxicity or prevalence, the EU sets maximum levels.

The legal framework for these maximum levels is established by Council Regulation (EEC) No 315/93 (basic principles) and Commission Regulation (EU) 2023/915 (maximum levels).

The levels are set "at a strict level which is reasonably achievable by following good agricultural, fishery and manufacturing practices and taking into account the risk related to consumption of the food". Where contaminants are genotoxic carcinogens, or where current exposure is close to or exceeds the tolerable intake, "maximum levels should be set at a level which is as low as reasonably achievable (ALARA)". For infants and young children, the EU aims to establish "the lowest maximum levels, which are achievable through a strict selection of the raw materials used" [recital (2) of Regulation 2023/915 .

Levels are set on the basis of scientific advice provided by EFSA, taking into account data on the occurrence of contaminants in foodstuffs from various origins. In practice, the maximum level will be typically set at around the 95th percentile of the collected occurrence data "in order to ensure a rejection rate of 5% or lower"; as a result of this approach, the effect on trade is anticipated by the EU to be limited (WTO G/SPS/R/105).

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Member State authorities are responsible for sampling food products and verifying compliance.

Regulation 1881/2006 establishes maximum levels for the following contaminants:

- nitrates
- mycotoxins (aflatoxins ochratoxin A, patulin, deoxynivalenol, zearalenone, fumonisins, T-2 and HT-2 toxin, citrinin, ergot sclerotia and ergot alkaloids)
- heavy metals (lead, cadmium, mercury, tin)
- 3-MCPD
- dioxins and PCBs
- polycyclic aromatic hydrocarbons
- melamine
- plant toxins (erucic acid, tropane alkaloids, hydrocyanic acid, pyrrolizidine alkaloids, opium alkaloids)
- perchlorate.

The maximum levels for individual foodstuffs are set out in the Annex to Commission Regulation (EU) **2023/915** .

- Foods that are not compliant with the maximum limits may not be mixed with compliant foods in order to bring these foods into compliance (Art. 3).
- Different maximum levels may be set for raw materials that are due to be further processed (with an expected reduction in the level of contaminant) as opposed to those intended for direct human consumption or for use as an ingredient in the food (Art. 3).
- Specific labelling rules in relation to aflatoxin limits apply to groundnut, other oilseeds, tree nuts, dried fruit, rice, maize and other cereals to indicate that they are due to be subjected to further processing (Arts. 4 and 5).

Timeline

The maximum levels included in the Annex to Regulation 2023/915 are reviewed and updated on a regular basis.

What are the major implications for exporting countries?

- Many AGRINFO partners have signalled concerns about the impacts on trade of new EU contaminant levels. For example, Colombia, Côte d'Ivoire and Peru have criticised the EU cadmium maximum level for chocolate and cocoa products (WTO G/SPS/R/93). Colombia has also raised concerns around maximum levels of three contaminants in foods or food

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ingredients: glycidyl fatty acid esters (expressed as glycol); 3-monochloropropanediol (3-MCPD); and 3-MCPD fatty acid esters (WTO G/SPS/GEN/1708).

- Where compliance issues have arisen, the EU may provide technical assistance to support trading partners to adjust to new levels. For example, in response to Peru's concerns about cadmium levels, the EU-funded Clima-LoCa programme aims to "foster the development, implementation and scaling of low cadmium production practices and innovations".
- A challenge for EFSA and the European Commission is having adequate and representative data for all foodstuffs and all origins. The evident risk for some AGRINFO partners is that certain contaminants may be naturally prevalent, but this may not be captured in the data available to EFSA. There are frequent opportunities for stakeholders to submit contaminants data to EFSA, although this process is recognised to be complicated (EFSA 2022).

Recommended Actions

To mitigate the risks of potential non-compliance with maximum levels on contaminants, AGRINFO partners should:

- develop sampling and testing capacity for those contaminants listed in Regulation 2023/915 , where necessary and available, with the support of EU technical assistance or EU training for competent authorities, for example through the European Commission's Better Training for Safer Food (BTSF) Academy;
- ensure that, where feasible, established strategies for reducing contamination are systematically disseminated and implemented in relevant agricultural value chains;
- contribute data to EFSA's annual data collection process to ensure that risk assessment undertaken by the Authority has as complete a picture as possible about the current prevalence of contaminants in third countries.

Resources

EFSA (2022) Call for continuous collection of chemical contaminants occurrence data in food and feed.

European Commission (2008) Factsheet: Food contaminants.

The EU has issued a series of Guidance Documents related to the measurement and control of contaminants.

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Sources

Commission Regulation (EU) 2023/915

Council Regulation (EEC) No 315/93

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