European Commission economic impact study on proposed changes to EU pesticide MRL rules

Published by AGRINFO on 20 Aug 2026

European Commission publishes economic impact study on lowering import tolerance MRLs on hazardous pesticides

JRC (2026) Assessing the economic impacts of stronger alignment of production standards applied to imported products on the EU's agricultural sector. European Commission Joint Research Centre.

Update

This study by the European Commission's Joint Research Centre (JRC) assesses the potential economic impacts of proposed changes to the European Union (EU) rules on pesticide maximum residue levels (MRLs). It focuses on 18 pesticides identified as being particularly affected, and models 235 commodities from 86 exporting countries, while noting that there is insufficient evidence to predict the full effects.

In December 2025, the Commission proposed changes to MRL rules to align requirements for imported products with those applying to EU production. The proposal allows for the reduction of existing MRLs to 0.01 mg/kg (the limit of quantification, LOQ) on pesticides not approved in the EU where they are categorised as particularly hazardous for public health or the environment (see Background). This could reduce the pesticide options currently available to non-EU suppliers to the EU market.

The study estimates that lower MRLs on these substances could reduce imports, increase EU production and raise EU consumer prices. It notes that impact could be limited or very significant depending on the extent exporting countries are able to adjust production practices. The researchers indicate that further assessment is needed for a more precise understanding of the implications.

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What is changing?

In December 2025, the European Commission proposed to align the rules on pesticide MRLs that apply to imported products with those that apply to EU production. The proposed changes create the possibility to reduce existing MRLs to 0.01 mg/kg (the limit of quantification, LOQ) on pesticides not approved in the EU where they are categorised as hazardous for public health or the environment (see Simplification of rules on pesticide MRLs and approvals).

This study by the Commission's Joint Research Centre (JRC) analyses the potential economic impacts of this proposal. The study only looks at the economic implications of the proposal (not the environmental or social implications), and sets out a range of possible outcomes. Importantly, it notes that that insufficient evidence is available to predict the implications with confidence and that further assessment is needed.

The study identifies the most relevant pesticides, focusing on substances that are:

- not approved in the EU
- identified as "highly hazardous" (see Background)
- authorised for use in non-EU countries
- detected during residue monitoring.

Eighteen substances are identified as particularly significant in terms of economic impact (see Table 1). The study combines this information with data on trade flows, modelling 235 commodities from 86 exporting countries.

The study predicts that lowering MRLs will lead to a decline in imports of food products, an increase in EU production, and a rise in consumer prices. It models future impacts – if non-EU countries can adapt their production methods to continue complying with EU rules and exporting to the EU, the projected decline in imports is just 0.4%; however, this rises to 41% if countries are not able to adapt. The study also includes an in-depth analysis of cyproconazole, which finds that using alternatives to this substance could raise production costs by 20–40%.

Why?

The JRC was requested to undertake a preliminary study to scope the potential impacts of the European Commission's proposed policy changes. This is the first step in an impact assessment that was launched by the Commission in November 2025. The full impact assessment aims to "assess notably potential impacts on trade flows for the EU, the competitiveness of European producers and the potential impact on consumers" (European Commission 2025).

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Timeline

In November 2025 the European Commission indicated that the next steps in the impact assessment would follow the publication of the JRC study in summer of 2026 (European Commission 2025).

Recommended Actions

The JRC has indicated that further data is needed on the substances listed in Table 1 to fully understand the potential economic impacts of lowering the MRLs. Export sectors in non-EU countries that are currently using these substances should gather information that can be submitted to the upcoming impact assessment announced by the European Commission.

In particular, the JRC identifies the need for information on:

- the actual use and economic importance of specific substances in exporting countries
- situations where MRLs have been reduced to the LOQ in the past, and where associated data is available on the impact this had on yield, production costs, and trade.

Background

In December 2025, the European Commission proposed to align rules for EU production and imports by setting MRLs for hazardous pesticides not approved in the EU at the default level of 0.01 mg/kg. This level is the limit of quantification (LOQ), the lowest concentration of a substance that can be measured with certainty using standard tests. Such MRLs are either specific import tolerances requested by pesticide manufacturers, or MRLs based on Codex Alimentarius international standards. See Pesticide residue import tolerance MRLs explained.

Which pesticide characteristics are considered “hazardous”?

Regulation 1107/2009 (Annex II) sets out criteria for the approval of pesticides. Under the Commission’s proposal, existing MRLs can be revoked when a pesticide has been assessed to be one of the following:

- mutagen category 1A or 1B (Annex II, 3.6.2)
- carcinogen category 1A or 1B (Annex II, 3.6.3)
- toxic for reproduction category 1A or 1B (3.6.4)
- having endocrine-disrupting properties that may cause adverse effects in humans (3.6.5)
- a persistent organic pollutant (POP) (3.7.1)
- a persistent, bioaccumulative, and toxic (PBT) substance (3.7.2)

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- a very persistent and very bioaccumulative substance (vPvB) (3.7.3)
- having endocrine-disrupting properties that may cause adverse effects in non-target organisms (3.9.2).

The categorisation of many chemicals that are used as pesticides can be found in the European Chemicals Agency (ECHA) database. When no categorisation is available, the European Commission can ask for a specific evaluation by the European Food Safety Authority (EFSA).

Resources

European Commission (2025) Commission launches an impact assessment on hazardous pesticides entering EU through imported products. Press release, 25 November.

Proposal for a Regulation of the European Parliament and of the Council amending Regulationsas regards the simplification and strengthening of food and feed safety requirements

Regulation (EC) No 396/2005 on maximum residue levels of pesticides in or on food and feed of plant and animal origin

Sources

JRC (2026) Assessing the economic impacts of stronger alignment of production standards applied to imported products on the EU's agricultural sector. European Commission Joint Research Centre.

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Tables & Figures

Table 1: Eighteen active substances that are the focus of the JRC's 2026 economic impact study

	Recent regulatory developments	
Substances identified as economically impacted by proposed changes to MRL rules*	MRLs lowered to the LOQ, applies from:	Proposal to lower MRLs to the LOQ:
Benomyl	29 January 2027	
Benthiavalicarb	12 August 2026	
Carbendazim	29 January 2027	
Chlordecone		
Clofentezine		
Cyproconazole		
Dicofol		Notified to World Trade Organization June 2026
Dimethomorph		
Flufenacet (formerly fluthiamide)		
Glufosinate		
Isopyrazam		
Mancozeb		
Mepanipyrim		
Metiram		
Metribuzin	6 January 2027	
Quinoxyfen		
Spirodiclofen		
Thiophanate-methyl	29 January 2027	

*Substances identified as highly hazardous, with at least one MRL above the limit of quantification (LOQ), at least one residue detection reported in the EU, the substance authorised in at least one country.
For certain substances listed in this table the EU has already approved, or has proposed, lowering the MRL to the LOQ.

Source: based on JRC (2026).

For up-to-date information see the AGRINFO Pesticide MRL Tracker; also see AGRINFO reports on benomyl, benthiavalicarb, carbendazim, dicofol, metribuzin, and thiophanate-methyl.

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