EU fertilising products

Fertilising products are used to improve plant growth, mainly in agriculture, enabling higher crop yields. However, they are associated with some challenges as regards security of supply, the environment and health. Although the 2003 Fertilisers Regulation, which aimed at ensuring an internal market in fertilisers, has been effective, it mainly addresses mineral fertilisers and deters the introduction of new types of fertilisers.

In March 2016, the Commission put forward a legislative proposal on fertilising products, as announced in the circular economy action plan. The proposal modernises the conformity assessment and market surveillance in line with the ‘new legislative framework’ for product legislation, covers a wider range of fertilising products (including those manufactured from secondary raw materials), and sets limits for the presence of heavy metals and contaminants in fertilising products.

After completion of the legislative procedure, the final act was signed on 5 June 2019. The regulation will apply in full from 16 July 2022.


COM(2016) 157, 17.3.2016, procedure ref.: 2016/0084(COD), Ordinary legislative procedure

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Introduction

In its circular economy action plan presented in December 2015, the European Commission announced, among other measures, a revised regulation on fertilisers with a view to improving nutrient recycling. This concluded a review process ongoing since 2010 (see 'Preparation of the proposal' below for more details).

Context

**Fertilising products** are used to improve plant growth, mainly in agriculture. They can be grouped into two broad groups: fertilisers, which provide nutrients to plants, and other products, whose primary objective is to promote plant growth through other means. Each of these two groups can be further divided in specific categories (see Figure 1). According to European Commission estimates, inorganic fertilisers account for 80% of market value, organic and organo-mineral fertilisers together account for 6.5%, while growing media, soil improvers and liming materials represent about 10.5% of market value. Plant bio-stimulants and agronomic additives, although accounting for only 3% of market value, are seen as having a strong market development potential.

![Figure 1 – Categories of fertilising products](image)

**Data source:** adapted from European Commission [impact assessment](https://tinyurl.com/y4xxyy3z), 2016.
The main nutrients in fertilisers are **nitrogen**, **phosphorus** and **potassium**. In the EU, nitrogen fertilisers are most widely used, with some variations among Member States: while nitrogen inputs per utilised agricultural area are highest in North-Western Europe, Mediterranean countries tend to have higher phosphorus inputs (see Figure 2). A 2012 study carried out on behalf of the Commission estimates that nutrients supplied in European agriculture come from inorganic fertilisers and livestock manure in almost equal proportion.

**Figure 2 – Nutrient inputs and balance in the EU (2011)**

(kg of nutrient per hectare of utilised agricultural area)


The Food and Agriculture Organization (FAO) estimated in 2015 that world demand for inorganic fertiliser nutrients would grow at a rate of 1.8 % annually until 2018. In the EU however, the overall use of mineral fertilisers has declined in recent decades. A 2015 study by the European Parliament’s Policy Department B, Structural and Cohesion Policies, indicates that mineral fertiliser use declined by 20 % from 1995 to 2012, mainly as a result of a decrease in the use of phosphorus and potassium-based products.
According to Commission estimates, the fertilising products sector has an annual turnover ranging from €20 to €25 billion and accounts for about 100 000 jobs; SMEs represent 90 % of companies. The EP study mentioned above indicates that about 82 % of mineral fertilisers sold in the EU in 2012 are manufactured in 10 Member States. It also notes that EU sales of fertilisers have nearly doubled from €13.8 billion in 2003 to €23.3 billion in 2012, in contrast to the decrease in quantities used, suggesting an increase in unitary value of the products on the market. In 2012, about 1 200 companies were active in the mineral fertilisers sector in the EU. The study highlights that in most EU Member States, fertilisers account for about 10 % of farmers' costs, although the figure can be as high as 20 % in Ireland and as low as 3.6 % in Malta.

As the world population keeps increasing, fertilisers deliver key benefits thanks in particular to increased crop yields. The European Commission notes that fertilisers accounted for about 60 % of the registered yield increase in the last 50 years. However, some challenges are associated with fertiliser use. First, nutrients are lost in the environment, with adverse impacts on the climate, human health, biodiversity as well as air, water and soil quality. This generates costs as a result of nutrient loss and damage restoration. Second, security of supply is an issue for phosphorus, which is extracted from phosphate rock, a critical raw material whose main deposits are located outside Europe. As a result, over 90 % of phosphate fertilisers used in the EU are imported, mainly from Morocco, Tunisia and Russia. Third, fertilisers may contain harmful chemicals. The Commission highlights as a concern the presence of cadmium in phosphate fertilisers in particular, as it can accumulate in soils, transfer to foodstuffs and potentially lead to adverse effects on health, soil biodiversity and groundwater quality in the longer term. Cadmium content in phosphate rock may vary from under 10 mg cadmium/kg phosphorus to 200 mg/kg, depending on where it is mined.

Existing situation

The 2003 Fertilisers Regulation aims to ensure an internal market in fertilisers. It defines types of fertilisers which have been approved as 'EC fertilisers', based on three main requirements: 1) absence of adverse effects on environment and health under normal use; 2) effectiveness; and 3) existence of sampling and analysis methods. EC fertilisers can circulate freely on the EU market, although a safeguard clause allows Member States to restrict the sale of a specific fertiliser if it poses a risk to safety, health or the environment. Non-EC fertilisers (also known as 'national fertilisers') may be placed on national markets provided they meet national requirements and can circulate in the EU market under the 2008 Mutual Recognition Regulation.

The Fertilisers Regulation establishes a series of specific requirements related to EC fertiliser types listed in the annex to the regulation, such as production method and minimum content of primary, secondary and/or micro-nutrients, as well as provisions concerning identification, traceability, markings, labelling and packaging where relevant. Some additional provisions apply to specific fertilisers. Member States

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1 However, the predominance of SMEs varies among market segments: SMEs account for 25 % of companies in the mineral fertilisers sector while they represent 98 % of companies in other sections of the market.
2 A 2014 study estimates for instance that more than half of the nitrogen added to cropland is lost to the environment.
3 The regulation defines 'primary nutrients' as nitrogen, phosphorus or potassium; 'secondary nutrients' as calcium, magnesium, sodium and sulphur; and ‘micro-nutrients’ as boron, cobalt, copper, iron, manganese, molybdenum and zinc.
4 For instance, specific requirements apply to ammonium nitrate fertilisers of high nitrogen content to make sure they undergo a test of resistance to detonation, as these products are particularly explosive.
may subject EC fertilisers to a conformity assessment by approved laboratories notified to the European Commission. Manufacturers may propose new types of EC fertilisers for approval by submitting a detailed technical file to the Commission; if the requirements are met, the Commission then updates the list of EC fertiliser types annexed to the regulation under the regulatory procedure with scrutiny. Three Member States (Austria, Finland and Sweden) have been granted a derogation allowing them to prohibit the placing on the market of EC fertilisers exceeding certain limits of cadmium in relation to their phosphorous content.5

An evaluation of the Fertilisers Regulation carried out in 2010 on behalf of the European Commission concluded that the regulation succeeded in harmonising the EU mineral fertilisers market and has been implemented without significant issues. However, it also noted several weaknesses, in particular: it only covers a share of the fertilisers market;6 a majority of Member States criticise the lack of maximum limits on heavy metals in fertilisers; and it deters innovation because of complex and lengthy procedures to introduce new EC fertiliser types. The evaluation also noted that companies and Member States are generally sceptical or opposed to the use of mutual recognition.

Parliament’s starting position

In its resolution of 19 January 2012 on the ‘Farm input supply chain: structure and implications’, Parliament urged the Commission and the Member States to encourage the recycling of nutrients (especially phosphorus and nitrogen) from waste streams. It also called for improved agricultural resource management, with the aim of reducing input costs and nutrient wastage, and increasing innovation, resource efficiency, effectiveness and sustainability within farming systems. In its resolution of 9 July 2015 on ‘Resource efficiency: moving towards a circular economy’, Parliament urged the Commission to develop a policy framework on nutrients in order to enhance recycling, foster innovation, improve market conditions and mainstream their sustainable use in EU legislation on fertilisers.

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5 The limit is set at 75 mg cadmium/kg phosphorus in Austria, 50 mg/kg in Finland and 100 mg/kg in Sweden.
6 The 2010 evaluation estimated that 60-70% of the EU fertilisers market was covered by the Regulation. In 2016, the Commission estimated this share at ‘around 50%.’
Preparation of the proposal

The Commission conducted a number of preliminary studies: an ex-post evaluation of the Fertilisers Regulation in 2010 (see above for details); a study on options to fully harmonise EU legislation in 2012, looking in particular at technical feasibility as well as environmental, economic and social impacts; a competitiveness proofing study in 2013; and a study on plant bio-stimulants and agronomic fertiliser additives in 2014. For more details on the content of these studies, see the implementation appraisal on the Fertilisers Regulation by the European Parliamentary Research Service (EPRS). Stakeholders and Member States were consulted in 2011, in particular in the context of the Fertilisers Working Group. A public consultation on the circular economy organised in 2015 included questions on fertilisers. The Commission carried out an impact assessment (executive summary) in two parts: the first on the general harmonisation framework, and the second on limits for cadmium in phosphate fertilisers. EPRS has issued an initial appraisal of the impact assessment.

The changes the proposal would bring

According to the Commission, the proposal has two objectives: (1) to incentivise large scale fertiliser production from domestic sources, transforming waste into nutrients for crops; and (2) to introduce harmonised cadmium limits for phosphate fertilisers. Although the proposal repeals the 2003 Regulation, its main overall principles remain unchanged as it provides rules for free movement of CE marked fertilising products, while producers who do not wish to have access to the whole EU market can choose to comply with national rules instead.
The proposal would apply to a *wider range of fertilising products* made up of certain component materials. For each of the fertilising products (and their subcategories) as well as for each of the component materials, the proposal introduces specific harmonised requirements regarding:

- **quality**, for instance on minimum nutrient content or organic matter content;
- **safety**, for instance maximum limits for heavy metals (such as cadmium, chromium, mercury, nickel, lead and arsenic), for organic contaminants (such as biuret in organic and inorganic fertiliser, or polycyclic aromatic hydrocarbons in compost and digestate), for microbial contaminants (such as salmonella or *E. coli*) and for impurities (such as glass, metal and plastics in compost or digestate). As regards cadmium in phosphate fertilisers, the proposal introduces an initial limit of 60 mg cadmium/kg phosphorus, to be tightened to 40 mg/kg after 3 years, and to 20 mg/kg after 12 years; and
- **labelling**, for instance on actual nutrient content and forms.

The proposal defines recovery rules for bio-waste transformed into compost and digestate (so-called ‘end-of-waste’ criteria for the manufacturing of fertilising products). It amends the 2009 Animal by-products Regulation to enable derived products no longer posing significant risks to animal health to move freely on the EU market as fertilising products. It also amends the 2009 Regulation on plant protection products to exclude plant bio-stimulants covered by the proposal from its scope.

The proposal introduces the use of the CE marking for fertilising products and streamlines the declaration of conformity and conformity assessment procedures with the ‘new legislative framework’ for product legislation. By placing the CE marking on a fertilising product made available on the market, manufacturers, their authorised representatives or importers declare that their product meets the requirements set out in the proposal (as outlined above). For some fertilising products (for instance those produced from secondary raw materials), a conformity assessment would need to be carried out by a ‘notified body’ (a third party meeting certain requirements in terms of skills, independence and impartiality, and notified to the Commission according to a specific procedure). In case of failures in the conformity assessment procedures, Member States authorities may suspend or withdraw the status granted to notified bodies, while the Commission may also investigate and request that a Member State take action.

As regards market surveillance, the proposal gives Member States the responsibility to ensure CE marked fertilising products available on the market comply with the rules and to require corrective action from economic operators if needed. In case of non-compliance and/or of unacceptable risk to health, safety or the environment, the proposal requires national authorities to inform both the Commission and other Member States, unless the problem is limited to the national level; it also gives the Commission the right

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7 The proposal defines the following ‘product function categories’ (annex 1): organic, organo-mineral and inorganic fertilisers, liming materials, soil improvers, growing media, agronomic additives, plant bio-stimulants and fertilising product blends.

8 The proposal defines the following ‘component material categories’ (annex 2): virgin material substances and mixtures; non-processed or mechanically processed plants, plant parts or plant extracts; compost; energy crop digestate; other digestate than energy crop digestate; food industry by-products; micro-organisms; agronomic additives; nutrient polymers; other polymers than nutrient polymers; certain animal by-products.

9 As defined in the 2008 Regulation on accreditation and market surveillance.

10 Under the 2008 Regulation on accreditation and market surveillance.
to examine the situation, together with Member States and economic operators, and to decide whether measures taken against CE marked fertilising products are justified.

The proposal confers on the Commission the power to adopt **delegated acts** supplementing or amending annexes 1 to 4 for a period of five years.\(^{11}\) Delegated acts may be vetoed by Parliament or Council, which also have the right to withdraw these delegated powers at any time. In addition, the proposal confers on the Commission the power to adopt **implementing acts** on other elements contained in the proposal.\(^{12}\)

As a rule, implementing acts would be adopted by the Commission after input from the Committee on Fertilising Products, made up of Member State representatives.

According to the Commission, the proposal would deliver a range of **benefits**, including: creation of about 120 000 jobs thanks to bio-waste recycling in organic fertilisers; reduced dependency on non-domestic raw materials (for instance phosphate); reduction in greenhouse gas emissions during inorganic fertilisers manufacturing as well as pollution caused by excess nutrients; increased resource efficiency; decrease in costs for public authorities from €17 million down to €10 million annually; overall reduction in compliance costs for economic operators; and a 65 % reduction in costs for industry to place new products on the market.

As regards **costs**, the Commission indicates that they are ‘proportionate to the expected benefits for businesses and the society’ and that the proposal would have no implications on the EU budget. However, as regards costs for businesses, a 2013 **competitiveness proofing** study indicates that for some companies, for instance SMEs producing compost, new compliance costs could amount to 10 % of production costs, and notes that SME competitiveness may be particularly affected.

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\(^{11}\) Annex 1 lays out requirements regarding product function categories; annex 2 lays out requirements related to component material categories; annex 3 lays out labelling requirements; and annex 4 lays out conformity assessment procedures.

\(^{12}\) The Commission proposes that implementing acts may be adopted under three different procedures: 1) under the ‘examination procedure’ a) regarding common specifications to ensure conformity with requirements set out in annexes 1 to 3; and b) to determine whether a national measure is justified or not in case a compliant CE marked fertilising product presents a risk to health, safety or environment; 2) under the ‘advisory procedure’ in order to require a Member State to take corrective measures should a notified body not meet the requirements for its notification; 3) under the procedure for ‘immediately applicable implementing acts’ if there is duly justified urgency in the case of a compliant CE marked fertilising product presenting a risk to health, safety or environment.
Views

Advisory committees

In its opinion on the proposal, adopted in July 2016, the European Economic and Social Committee welcomes the creation of a level playing field, recommends a reliable labelling system, emphasises the differences between soils in EU countries, and endorses the proposed limits on cadmium in fertilisers, provided farmers receive adequate support.

Stakeholders’ views

Reactions to the proposal have been mixed. Fertilizers Europe, representing mineral fertiliser manufacturers, welcomed some aspects of the proposal, such as improved labelling requirements and the circular economy approach. European farmers’ association Copa-Cogeca welcomed the extension of the scope to organic fertilisers, giving farmers a wider choice. However, both organisations criticised the proposal for tightening the limit for cadmium in phosphate fertilisers below 60 mg/kg, as this could increase production costs and therefore costs for farmers. The European organic fertiliser industry association ECOFI welcomed the proposal, in particular as it would encourage more research and development in organic fertilisers to provide more diversified products that better meet farmers’ needs. The European peat and growing media association EPAGMA (now Growing Media Europe) welcomed the proposal, but regretted that it did not take into account the unique nature of growing media and soil improvers. The European biostimulants industry council EBIC welcomed the proposal but called for creating a more level playing field between product functional categories and for opening up the list of allowed microorganisms in order to foster innovation.

National parliaments

Several national parliaments submitted comments on the proposal. The Italian Senate endorsed it with some reservations; the Polish Senate issued comments on cadmium limits and the broader issue of contaminants; the Portuguese Parliament adopted an opinion on the proposal; and the Romanian Senate expressed concerns about possible contamination from organic fertilisers. No reasoned opinions on subsidiarity were received.

13 This section aims to provide a flavour of the debate and is not intended to be an exhaustive account of all different views on the proposal. Additional information can be found in related publications listed under ‘EP supporting analysis’.
Legislative process

In the European Parliament, the proposal was considered by the Internal Market and Consumer Protection (IMCO) Committee. However, two further committees were associated under Article 54 of the Rules of Procedure: Environment, Public Health and Food Safety (ENVI), and Agriculture and Rural Development (AGRI). The Committee on International Trade (INTA) also adopted an opinion on the proposal. The report adopted by the IMCO committee on 13 July 2017 proposed a number of changes, including some put forward by the ENVI committee in areas of exclusive competence (provisions on contaminants) and by the AGRI committee in areas of shared competence (provisions other than market regulation and contaminants).

On 24 October 2017, the European Parliament adopted its position on the proposal in plenary. The amendments voted include:

- reducing the administrative burden and liability for economic operators;
- raising requirements related to nutrient content in fertilising products, with a view to ensuring quality;
- modifying contaminant limits for fertilisers, in particular tightening the limits for lead and biuret;
- as regards limits on cadmium in phosphate fertilisers, extending the time for implementing limits below 60 mg/kg (6 years after the date of application for the 40 mg/kg limit and 16 years for the 20 mg/kg limit, instead of the respective 3 and 12 years proposed by the Commission) and empowering the Commission to delay the entry into force of the 20 mg/kg limit if the supply of fertilising products would be seriously jeopardised;
- creating new product and material categories, for instance a ‘low-carbon fertiliser’ product category and an ‘other industry by-products’ material category;
- modifying requirements related to the use of plastics in fertilising products (in particular requiring them to biodegrade in 48 months, compared with 24 months proposed by the Commission);
- requiring the Commission to report, three and a half years after the regulation’s date of application, on the functioning of the internal market for fertilising products, on the implications of limits for contaminants, on the state of decadmiation technologies and on the impacts on trade; and to consider criteria, one year after entry into force, related to the use of processed livestock manure in fertilising products.

The Council adopted its position on the proposal on 20 December 2017. This position was not published.

On 20 November 2018, the Parliament and Council reached a compromise agreement in interinstitutional trilogue negotiations. The co-legislators agreed that the limit for cadmium content in phosphate fertilisers, set at 60 mg/kg phosphorous pentoxide, would apply as from the date of application of the regulation.

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14 IMCO has exclusive competence over market regulation, ENVI has exclusive competence over the issue of contaminants, and the three committees have shared competences over other provisions.
with the European Commission to review this limit value four years after the date of application, in order to assess the feasibility of reducing it to a lower appropriate level. The deal further provides for a voluntary ‘low cadmium’ label for fertilisers with a cadmium content equal to or lower than 20 mg/kg phosphorus pentoxide. Another important aspect of the agreement concerns the inclusion, in the scope of the regulation, of industry by-products as fertiliser input.

References

EP supporting analysis


Other sources

Making available on the market of CE marked fertilising products, European Parliament, Legislative Observatory (OEIL).

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