DRAFT DECREE OF THE MINISTRY OF AGRICULTURE AND FORESTRY AMENDING SECTION 3 OF THE MINISTRY OF AGRICULTURE AND FORESTRY DECREE ON FERTILISER PRODUCTS AND TEMPORARILY AMENDING ANNEX 1

The Regulation proposes a temporary increase of the cadmium limit value for inorganic phosphorus fertilisers to 100 mg/kg of phosphorus for a period of two years to safeguard the availability of fertilisers in exceptional circumstances. Fertilisers acquired during the derogation period may continue to be used after the expiry of the derogation. The amendment is based on the powers to issue decrees laid down in the Fertiliser Act. It is estimated that the short-term derogation will not significantly increase environmental or health risks. The decree is intended to enter into force in August 2026.

1. Background and powers to issue decrees

Provisions on the quality requirements for fertiliser products are laid down in the Ministry of Agriculture and Forestry Decree on Fertiliser Products (964/2023). The Decree would amend Annex 1 to the Decree by setting the cadmium limit value for inorganic phosphorus fertilisers at 100 milligrams per kilogram of phosphorus for a fixed period of two years from the entry into force of the Decree. According to section 3 of the proposed Decree, the use of fertilisers would also be permitted after the expiry of that period if the fertiliser was acquired during the said period. The power to issue decrees is laid down in section 7(3) of the Fertiliser Act (711/2022).

2. Preparatory work

The Decree has been prepared as part of the official duties of the Ministry of Agriculture and Forestry.

Opinions on the proposal were requested from the following bodies: the Ministry of the Environment, the Ministry of Social Affairs and Health, the Government of Åland, the Finnish Licensing and Supervisory Authority, the Finnish Food Authority, the Finnish Institute for Health and Welfare, the Natural Resources Institute Finland (Luke), the Finnish Environment Institute (Syke), the Chemical Industry Federation of Finland, the Central Union of Agricultural Producers and Forest Owners (MTK), Natur och Miljö, ProAgria Centres Association, the Finnish Biocycle and Biogas Association, Finnish Circular Economy Association (KIVO), the Finnish Association for Nature Conservation, and the Central Union of Swedish-speaking Agricultural Producers in Finland (SLC). The request for opinions was also available via the consultation service lausuntopalvelu.fi.

3. Current situation and key proposals

In Finland, the maximum permitted concentration of inorganic phosphorus fertilisers is 50 mg Cd/kg of phosphorus (P). Phosphorous fertilisers refer to fertilisers with a phosphorus content of at least 2.2%. The average actual cadmium content in Finnish fertilisers has been approximately 2.5 mg Cd/kg P. The draft regulation proposes raising the cadmium limit value temporarily, for a period of two years, to 100 mg Cd/kg P.

The maximum average cadmium load resulting from the use of fertilising products in agriculture and horticulture may be 7.5 grams of cadmium per hectare applied over a period of five years, and in forestry a maximum of 100 grams per hectare applied over a period of 60 years.

4. Principal impacts

4.1 Economic impact

The geopolitical situation has increased uncertainty in the fertiliser market, which has been reflected in rapid price fluctuations and reduced availability. Global demand remains high, and the significant rise in the price of natural gas in particular has driven up the production costs of nitrogen fertilisers, which has been directly reflected in market prices. The situation is further exacerbated by the instability in the Strait of Hormuz. According to various estimates, 30–50% of global nitrogen fertilisers and their key raw materials (urea 49%, ammonia 30%) are transported through the Strait of Hormuz. Disruptions to maritime transport and damage to production facilities have significant impacts on supply, thereby increasing upward pressure on prices.

On many field parcels, the current soil phosphorus status does not limit yields, and phosphorus fertilisation does not increase yields. On parcels where the soil phosphorus level is low, yield losses are approximately 20%. In the absence of nitrogen, yield losses are in the range of 30–90%. At the currently estimated level of phosphorus use, the additional fertiliser requirement is approximately 6.3 million kilograms of phosphorus, of which two-thirds could be covered by efficient utilisation of phosphorus contained in all biomass streams. The value of mineral phosphorus sales is significant; at spring 2022 fertiliser prices (phosphorus approximately EUR 3.5/kg), it amounts to tens of millions of euros. If the phosphorus contained in all nutrient-rich biomass were utilised in fertilisation on agricultural land in the regions where it is generated, the resulting side streams would be sufficient to fully meet the phosphorus requirements of crops in the regions of Uusimaa, Southwest Finland, Satakunta, South Ostrobothnia, Ostrobothnia and Lapland. The greatest phosphorus deficit would remain in the regions of Häme, Pirkanmaa, Southeast Finland, North Karelia and Central Finland, at approximately 4–6 kg/ha in supplementary requirement, even if all biomass generated in these regions were utilised in fertilisation.

The temporary amendment to the cadmium derogation aims to promote the functioning of the market in an exceptional situation by affecting both the price level and the availability of inorganic phosphorus-containing mixed and compound fertilisers. The amendment aims to broaden the range of acceptable import sources, which is expected to improve the ability to ensure sufficient product availability and to partially mitigate upward pressure on prices.

4.2 Environmental Impact

According to studies, both the current Finnish and the EU Fertilising Products Regulation cadmium limit values would increase cadmium loading in soil. With the limit values under the EU Fertilising Products Regulation, cadmium loading in agricultural soils and cadmium concentrations in crops would increase by approximately 17–44% compared to the current situation, depending on the crop rotation. The studies compare three levels: a typical cadmium concentration (2.5

mg/kg P), the current Finnish maximum limit (50 mg/kg P), and the EU limit value (138 mg/kg P).

If the cadmium concentration were to increase to the current Finnish maximum level (50 mg/kg P), soil and soil water cadmium concentrations would increase over a period of one hundred years by an estimated 10–50%, and concentrations in crops by 20–40%. The impacts vary by crop species: the largest increase would be in wheat and the smallest in sugar beet. The use of the EU maximum limit (138 mg/kg P) would increase concentrations significantly more—for example, by approximately 55% in wheat fields, 82% in sugar beet, and up to 147% in potatoes.

The phosphorus application rates used in the assessments correspond to the fertilisation levels permitted under the current fertiliser regulation for phosphorus classes 3–5. As the proposed derogation is of short duration, it is not considered to significantly increase cadmium concentrations in soil or crops.

4.3 Health impacts

The majority of cadmium exposure among children and the working-age population is obtained from plant-based food products, particularly cereal products. Cadmium exposure among Finnish children exceeds the EFSA-established tolerable weekly intake (TWI), based on cadmium accumulation in the kidneys over time and eventual kidney damage. If the cadmium limit value were permanently raised to the EU level, total dietary exposure among three-year-old children at the median level would increase by approximately 12–13% for cadmium. In postmenopausal women, cadmium exposure increases the risk of osteoporotic fractures even at levels below the EFSA TWI, which is currently exceeded in more than one fifth of Finnish women over 45 years of age. Cadmium has also been associated with an increased risk of pancreatic cancer. Due to the short duration of the derogation, it is nevertheless not expected to increase adverse health effects related to cadmium exposure.

5. Feedback

The draft regulation was out for consultation…

6. Provision-specific explanatory notes

Section 3. Product categories of fertilising products. The amendment would clarify the situation so that, from the user’s perspective, it would be sufficient for the product to comply with the requirements at the time of purchase.

Annex 1. A cadmium limit value of 100 mg/kg P would be set for inorganic phosphorus fertilisers. The amendment would be valid for two years from the entry into force of the Decree. During this period, inorganic phosphorus fertilisers with a cadmium content of no more than 100 mg/kg P may be made available on the market. ‘Making available on the market’ means the supply of fertilisers for distribution, consumption or use on the market in the course of a commercial activity, whether in return for payment or free of charge.

7. Entry into force

The Decree is proposed to come into effect on XX August 2026.