



CADMIUM AND HEALTH

Putting things into perspectives

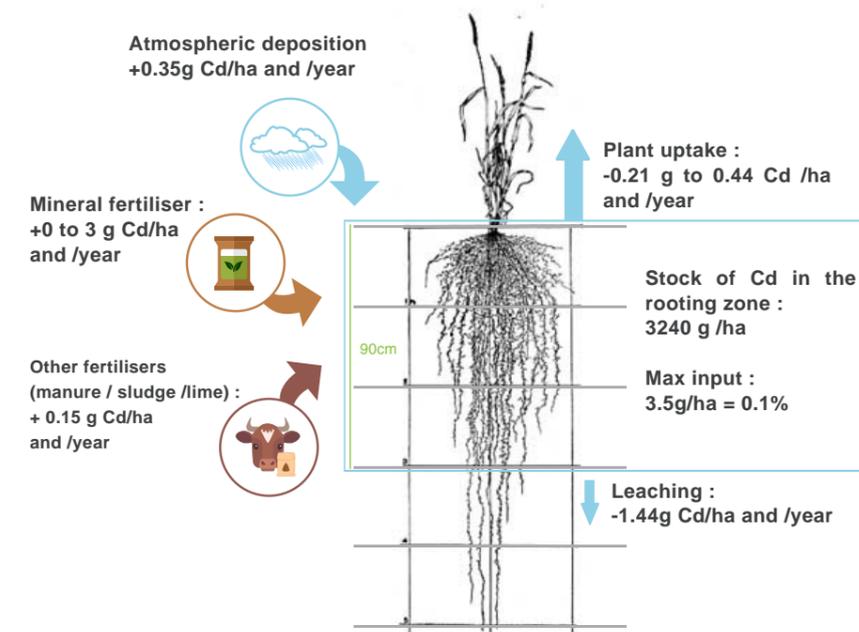


“Cadmium concentration in the environment and food in the European Union shows a declining trend.”

(Wesseler et al., 2017¹)



WHAT HAPPENS TODAY IN THE FIELD AND ON OUR PLATE ?



Cadmium in food: Health risk is low

The findings of two scientific assessments (ECB, 2007³ and EFSA, 2009⁴) illustrate that the risk of being exposed to cadmium is today considered small at population level. This was confirmed by two other biomonitoring studies undertaken in 2011 in France and in 2015 in Europe towards mothers and their children. In these studies, less than 0.1% of the participants exceeded the threshold above which there is an increased risk. This is just a good indication, even if the European Union has never conducted a comprehensive risk assessment.

“Cadmium limits for P fertilisers are only expected to have a small impact on Cadmium levels in soils on time scales between 20 to 50 years. Considering the even smaller response in crop uptake to such limited changes in Cadmium levels in soil, it is therefore likely that a reduction of Cadmium levels in fertilisers will only marginally lower the Cadmium dietary exposure in Europe.”

(Rietra et al., 2017²)

Today the maximum inputs of Cadmium (Cd) to agricultural soils represents 0.1% of the Cadmium stock present in the volume of soil explored by the roots. Even with 0 input of Cadmium, it will require a very long timescale to achieve a quantifiable reduction in soil content.

“(…) limits on Cd in fertilisers, as a measure for addressing current health concerns, will only achieve minor results over a very long timescale. Therefore, other more immediate policy measures would appear to be more appropriate.”

(Rietra et al., 2017²)



DID YOU KNOW THAT A DIFFERENCE SHOULD BE MADE BETWEEN «AVERAGE» AND «MAXIMUM»?

The only science-based report, also peer-reviewed by the Scientific Committee for Health and Environmental Risks (SCHER), which is today available, was prepared by Professor Erik Smolders at Leuven University (Smolders, 2013⁵).

Prof. Smolders stated in his latest study that an **average of 73mg Cd/kg P₂O₅** would not lead to accumulation in soils. The European Commission on the other side proposes **maximum limits**. If an average of 73 mg ensures no accumulation of cadmium in soils, it means that a maximum limit could be set around 146 mg/kg P₂O₅ (assuming a normal distribution without harming the environment). Thus a maximum limit of 60 mg/Kg P₂O₅ as proposed by the EU Commission is much more restrictive: it not only ensures no accumulation, but also a **decrease in soil Cd by around 16% after 100 years.**

DISPROPORTIONATE CADMIUM LIMITS WOULD LEAD TO DISPROPORTIONATE IMPACTS :

■ On the farming sector

Phosphorus (P) is an essential nutrient for plants, which farmers need to feed their roots properly. Disproportionate cadmium limits will consequently decrease the quantity of P fertilizers available for farmers to use (and increase the prices). It will therefore affect their capacity to maintain yield and quality of their crops as well as their competitiveness.

■ On the fertilizer industry

Current EU legislation does not set a limit for contaminants like cadmium. From this background, the Commission proposal is very challenging. However, the automatic reduction of the maximum allowed content of cadmium in phosphate fertilizers would threaten the capacity of EU producers to process phosphate rock in Europe. This is because access to phosphate rock is key to the competitiveness of phosphate production in Europe. As Europe is almost completely dependent on imports, it would increase our dependency on third countries, and mainly Russia. There are reserves of phosphate rock all over the world, but those reserves have different characteristics. Producers of mineral fertilizers need to have access to several sources in order to stay in business and deliver a competitive product that farmers can use to increase their yields and the quality of their crops.



“*The European Parliament can improve the environmental situation, minimize potential concerns in terms of food safety and ensure a competitive future for farmers in Europe by voting during the plenary vote in October 2017 for a realistic cadmium limit, and thus rejecting the position adopted by the Environment Committee.*”

Pekka Pesonen (Secretary-General, COPA-COGECA)

“*It is well established that the regulation will affect the market, e.g. > 50% of the current phosphate fertilisers on the EU market exceed the more stringent limit that would be adopted after 12 years. The so-called decadmiation of the fertiliser is not economically feasible at this stage.*”

(Smolders, 2017⁶)



FINDING A BALANCE BETWEEN COSTS AND BENEFITS

“ We do not observe that the change in regulation will have an impact on the health and environmental concerns related to cadmium exposure to humans and the environment. Imposing voluntary minimum standards for cadmium in inorganic fertilizer will *increase costs at fertilizer industry* as well as administrative level among the EU Member States *without generating additional benefits*. Such kind of policy should not be followed. ”

(Wesseler et al. 2017, prepared for the Policy Department A of the European Parliament in the framework of the workshop on fertilizing products organised at the request of the Committee on Internal Market and Consumer Protection¹)

Decreasing the cadmium level in fertilizers will only have a very limited effect on the exposure. On the other hand, the impacts on agriculture, farmers and the fertilizer sector will be numerous and significant. Fertilizers Europe calls on the Members of the European Parliament to *strike the right balance* between the access to raw materials sources purchased by European manufacturers in third countries, the price and availability of finished fertilizers for EU farmers, the performance of the finished fertilizers and their environmental impacts, as well as the benefits of limits on Cd in fertilizers, as a measure for addressing current health concerns.



“ We promote healthy food in Europe, and want our industry to be able to continue producing mineral fertilizers in Europe. There is no scientific basis for the position of the Environment Committee nor the proposal of the European Commission regarding limits on cadmium content in fertilizers. ”

Jacob Hansen (Director-General, Fertilizers Europe)



Fertilizers Europe represents the majority of nitrogen fertilizer producers in Europe and is recognized as the dedicated industry source of information on mineral fertilizers.

The association communicates with a wide variety of institutions, legislators, stakeholders and members of the public who seek information on fertilizer technology and topics relating to today's agricultural, environmental and economic challenges.

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