**COMMENTS**

**OF**

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**ON**

**COM(2016)157/F1**

**“PROPOSAL FOR A REGULATION LAYING DOWN RULES ON THE MAKING AVAILABLE ON THE MARKET OF CE MARKED FERTILISING PRODUCTS AND AMENDING REGULATIONS (EC) No 1069/2009 AND (EC) No 1107/2009”**

1. This Proposal would impose limits on cadmium in CE marked fertilizing products for both organic and inorganic fertilizers with more than 5% P2O5 (phosphate) content of 60 mg/kg P2O5 on entry into force, reducing to 40 mg/kg P2O5 after three years and to 20 mg/kg P2O5 after twelve years.
2. This paper addresses the Commission’s arguments for imposing these limits under four headings:

a) What limit on cadmium is required to protect human health?

b) When/is decadmiation likely to be viable on an industrial scale?

c) What will be the impact on supplier countries?

d) What will be the impact on EU fertilizer producers, farmers and food security?

**A) What limit on cadmium is required to protect human health?**

1. The Commission’s central argument is that the limit must be set ultimately at 20mg since any higher level would result in cadmium accumulating in the soil, entering the food chain in increasing concentrations and threatening health. But this is based on outdated scientific evidence. The latest studies have clearly established that cadmium levels in the soil are already falling and will not increase with a limit set at 80mg. Non-EU developed countries have set considerably higher limits and reported no increase in their soils or health risks.

**Dietary exposure**

1. The Commission argues that the European Food Safety Agency (EFSA) in 2009 found that EU average weekly dietary exposure was 2.3 μg cadmium/kg body weight, close to its recommended tolerable intake of 2.5 μg, and that this was exceeded by some 2-fold in certain groups (e.g. vegetarians, children and pregnant women). EFSA concluded that, based on the precautionary principle, levels of cadmium in the diet should be as low as possible.
2. Counter-arguments:
   1. the Commission’s data is out of date. An EFSA study[[1]](#endnote-2) in 2012 found a lower level of average intake of 2.04 μg per week, significantly within EFSA’s recommended maximum of 2.5 μg;
   2. although the EFSA 2012 study found that the intake of some vulnerable groups continued to exceed 2.5 μg, it should be noted that EFSA has set that level at less than half the 5.8 μg level established by the FAO and WHO, which stated in 2010 that ‘exposure to cadmium through the diet for all age groups, including consumers with high exposure and subgroups with special dietary habits, is below the Provisional Tolerable Monthly Intake;’[[2]](#endnote-3)
   3. the only known case of cadmium toxicity occurred in the 1950s in Japan, caused by farming on land heavily-contaminated by industrial wastes.

**Cadmium in soil**

1. The Commission argues that, on the basis of the 2002[[3]](#endnote-4) findings by the predecessor of the Scientific Committee on Health and Environmental Risks (SCHER) that cadmium accumulates in EU soils if fertilisers contain more than 20mg, therefore a 20mg limit is necessary to protect human health.
2. Counter-arguments:
   1. the Commission’s data is again out of date, based on evidence from the 1990s using a ‘zero accumulation’ rather than a risk-based approach. It disregards more recent findings in 2013 based on updated soil data and more advanced modelling techniques. This took into account the significant decrease in atmospheric deposition of cadmium since the 1990s due to reduced emissions; the substantially lower quantities of phosphate fertilizers being used by farmers; and improved scientific understanding of the higher rate of leaching of cadmium from the top soil. It concluded that cadmium is not expected to accumulate in average EU soils if fertilisers do not contain more than 80 mg. The SCHER, in its formal Opinion of November 2015[[4]](#endnote-5), concluded that the study was of appropriate scientific quality for the 2002 forecasts to be revised accordingly;
   2. the 2002 study by the SCHER’s predecessor included a recommendation that since ‘a derivation of a limit of cadmium in fertilisers which is exclusively based on soil accumulation does not take into account the level of risk for human health and the environment … a limit should be derived based on a risk assessment approach ... taking all cadmium sources into consideration.’[[5]](#endnote-6) The EU Panel on Contaminants in the Food Chain reinforced the same point in its 2009 study[[6]](#endnote-7), finding that fertilisers are only one of many complex factors contributing to cadmium in the soil, its uptake by crops and its levels in humans. But the recommended risk-based assessment has not been conducted.

**Limits in non-EU countries**

1. The Commission gives, as examples of similar levels of cadmium limits elsewhere, Switzerland (21 mg) and Norway (43 mg); it also refers to Japan (146 mg).
2. Counter-arguments:
   1. the Commission omits the considerably higher limits in all of the other main jurisdictions in which they have been set: in a number of US states - Washington (equivalent to 889mg), California (180mg) and Oregon (338mg) - in Canada (889mg), Australia (131mg) and in New Zealand (122mg)[[7]](#endnote-8). Several of these limits are founded on comprehensive risk-based assessments of the type which the Commission has failed to conduct;
   2. Canada[[8]](#endnote-9) and Washington State[[9]](#endnote-10) base their limits on a maximum acceptable annual metal addition to the soil per acre. This takes into account variations in fertiliser types and application rates. The Commission has not considered this option;
   3. New Zealand applies a ‘Tiered Fertiliser Management System.’ This places increasing degrees of restriction on the fertilizer types and application rates that can be used depending on the cadmium concentration in the soils in each locality. A 2016 study[[10]](#endnote-11) has found that this approach has ensured that, with a limit of 122mg, levels of cadmium in the soil are stable or in some cases declining, and levels in the diet are well within the FAO/WHO recommendation. Again, the Commission has not considered this option.

**World Trade Organisation (WTO) Principles**

1. The Commission notes that the EU, as a member of the WTO, is bound by its rules. Consequently, any measures adopted to protect human health or the environment must be the least trade-restrictive in order to achieve the intended objectives. All possible options therefore have to be assessed with regard to their compatibility with WTO obligations. The Commission states that the proposed Regulation will be notified to the WTO and will allow third countries to comment.
2. Counter-arguments:
   1. Under GATT Article XX(b), WTO members may adopt trade-related measures “*necessary to protect human, animal or plant life or health.”* But imposing limits not based on sufficiently substantiated scientific evidence, and which are disproportionate and more restrictive than necessary to fulfill the objectives pursued by the policy, would create a technical barrier to international trade.

**B) When/is decadmiation likely to be viable on an industrial scale?**

1. Having concluded that there is no alternative reliable source of phosphates within the limit of 40 mg, the Commission argues that the solution lies in setting a tight timetable to create a strong incentive for suppliers to develop and use decadmiation technology. But the 40 mg limit will come into force in January 2021, allowing less than 5 years for decadmiation research to be proven viable on an industrial scale and put into production processes. This is entirely unrealistic and disregards the recommendations in the Commission’s own Impact Assessment. It also disregards the scientific evidence that decadmiation of phosphate rock is not economically or environmentally viable, so that fertilizer products manufactured from phosphate rock cannot benefit from decadmiation.

**Incentives for Investment**

1. The Commission argues that the necessary investment in decadmiation research will only take place if there is a clear timetable for reducing the limits to low levels. The Commission states in its press release that it stands ready to ‘facilitate the transition by supporting investment in research and development in decadmiation technologies.’
2. Counter-arguments:
   1. In the absence of such incentives, a considerable volume of research into decadmiation has already been and is being conducted. For example, OCP in Morocco has been conducting substantial research into decadmiation for over 20 years and they obtained a patent in 1996 for the first co-crystallization process used for decadmiation. Since 2003, they have invested some €38m to develop the technology, including support from the EU prior to 2010. This has been undertaken without requiring the incentive of the time-bound cadmium limits that the Commission believes are now necessary to stimulate investment in research and industrial plant. OCP and others are continuing their research: in 2015, OCP filed for a patent regarding chemical precipitation of cadmium and it is currently working on a pilot project for decadmiation using activated carbon.

**Viability of Decadmiation**

1. The Commission asserts that decadmiation for fertilisers can be made viable on an industrial scale.
2. Counter-arguments:
   1. The Commission’s only evidence that decadmiation can be viable on an industrial scale is a process in use for small volume, high-quality phosphates for human and animal consumption in Tunisia. This appears to be the only instance, worldwide, of a functioning decadmiation process, albeit for a small-scale and high-cost product very different from fertilisers. The Commission quotes[[11]](#endnote-12) the Tunisian producer as stating in 2012 that ‘the existing decadmiation process could be applied to the production of fertilisers at reasonable costs.’ But the Commission also notes that ‘this statement was unfortunately not confirmed later on.’ There has been no subsequent evidence that Tunisia has made any progress in further developing decadmiation on an industrial scale;
   2. The Commission states that ‘Moroccan industry is developing similar technologies.’ But this remains at an early stage and progress is limited. Given the current state of research, it is not possible to predict whether the technology will be proven to be viable on an industrial scale and, if so, the time required for it to be developed, proven and put into industrial practice. The transition periods in the proposal have no grounding in reality;
   3. The Commission itself, in its Impact Assessment, proposes a significantly longer transition period than it has in fact adopted, with two options:
      * reviewing progress on decadmiation 5 - 10 years after the application of the 60mg limit, before a decision to move to lower limits; or
      * setting a timetable to move to 40mg 5 - 10 years after the application of the 60mg limit, and to 20mg after 15 – 20 years. In this case, the Commission states that it ‘would, nevertheless, need to monitor the actual development at industrial scale of a decadmiation process, the evolution of phosphate imports into the EU, and the availability of alternative phosphate sources through recycling to avoid shortages of supply of phosphates in the EU and/or disproportionate effects on phosphates exporting countries.’[[12]](#endnote-13)

The limits and timetable in the Commission’s proposal were not amongst the options that were considered in the Impact Assessment and disregard its own clear findings.

**Decadmiation of Phosphate Rock**

1. The Commission acknowledges that no viable process to decadmiate phosphate rock (as opposed to phosphoric acid) has been or is likely to be found.
2. Arguments:
   1. No company or country has succeeded in proving decadmiation of rock to be technically or financially viable. The only method of achieving reductions in cadmium in rock is by burning it but this causes a range of problems, not least the release of atmospheric pollutants and greenhouse gases. Consequently, fertilisers manufactured by processes that use phosphate rock as an input - SSP, TSP, NP and NPK - will never be in a position to benefit from decadmiation. In order to meet the EU limits, these products will have to be made using low cadmium rock. The Commission does not analyse the impact of the proposed limits on these products and their producers, which is likely to be substantial.

**Environmental Impact of Decadmiation**

1. The Commission recognizes that, as worldwide demand for cadmium metal is decreasing due to growing restrictions on its use, it will most likely not be possible to sell the cadmium produced as a result of decadmiation and that it will have to be disposed of.
2. Counter-Arguments:
   1. The issues are more fundamental than the Commission acknowledges. The process of decadmiation, if it can be proven to be viable on an industrial scale, will pose significant environmental challenges not only in terms of the need to dispose safely of the extracted concentrated cadmium, but also of increased greenhouse gas emissions and the risk of the release of cadmium into the atmosphere, which would increase atmospheric deposition on the soil.

**Price Impact of Decadmiation**

1. The Commission estimates that the impact of the costs of decadmiation on the price of fertilisers would be relatively modest. It quotes estimates that the ELICAD process would increase prices by between 9-16% and the Cerphos process by between 14-20%.[[13]](#endnote-14)
2. Counter-arguments:
   1. The Commission admits that ‘the feasibility of both processes has not yet been demonstrated at an industrial scale and the environmental and economic aspects will have to be carefully investigated when they will be available’ and that ‘the current state of development of the various technologies does not allow any certain prediction as to the future decadmiation costs.’[[14]](#endnote-15) The estimates given above are highly uncertain, particularly since neither process has been proven to be technically or economically viable;
   2. if decadmiation were eventually to be proven viable, an industrial restructuring on the scale required would require substantial investment by producers, and the costs of the chemical additives involved in the process would be driven up by the increased demand. Together, both factors would substantially add to the costs that would have to be passed on to EU producers, farmers and consumers. For OCP’s own decadmiation techniques, the costs depend on the initial cadmium level in the product to be decadmiated and the price of the additive used. The price of such additives is likely to increase if demand for their use in decadmiation increases, thereby raising the overall cost of the process. On the basis of tests at only a pilot level in 2015 the additional costs ranged from $11-22 per ton.

**C) What will be the impact on supplier countries?**

**Impact of a 60mg limit**

1. The Commission assesses that a limit of 60mg would have a minimal effect on the EU’s main current suppliers since, for those suppliers whose phosphate sources in some cases exceed 60mg (mainly in North Africa), selective mining of low cadmium sources would enable them to observe the limit.
2. Counter-Arguments:
3. the Commission’s analysis is based on a study in 2007 and seriously underestimates the proportion of current EU phosphate rock and fertilizers imports that would be excluded by a 60mg limit. In 2015 the EU imported phosphate rock from Morocco (34%), Russia (22%), Algeria (13%), Syria (8%) and Senegal and Togo (5%). While phosphate rock in Russia and Syria are naturally low in cadmium, deposits in the other exporting countries have a wide range of cadmium levels. Our data shows that a 60mg limit is likely to exclude some 20% of current total EU imports of phosphate rock and fertilizer products:
   * Moroccan exports would be cut by at least 25%;
   * supplies from other North African countries would be similarly impacted;
   * supplies from Senegal and Togo (5% of EU imports – a Commission statement that these countries have not exported to the EU for over ten years is factually incorrect[[15]](#endnote-16)) would be almost entirely excluded;
   * the Commission fails to note that some of the EU’s other fertilizers suppliers (e.g. Belarus, Turkey, Lebanon and Mexico) import their phosphate rock from North Africa, Senegal and Togo; as a result, some of these supplies would also be excluded.
4. the Commission argues that selective mining is already in place in some mines and could readily be extended to others. But this fails to take account of the wide range of different cadmium levels that typically occur within a single phosphate deposit, making it difficult to ensure a consistent level of cadmium in phosphate products. For example, in two of the main Moroccan mines, cadmium levels vary widely:
   * 1. Khouribga/Jorf: 28-78mg for rock, 19-83mg for MAP and DAP;
     2. Benguerir/Safi: 14-88mg for rock, 10-72mg for TSP.

We estimate that establishing selective mining at Khouribga would reduce the productivity of the mine by 10% and require an investment of some $31 million;

1. A limit of 60mg would render some 40% of globally-traded phosphate in all its forms unavailable to the EU. As a result, the EU would struggle to find adequate, secure alternative sources from low-cadmium suppliers – primarily based in Russia, Finland, Jordan, South Africa and Syria – to meet its food production needs. Moreover, since they, like the EU, treat phosphate as a product of strategic importance, they prioritise their domestic requirements and their existing export markets. As the Commission itself recognizes[[16]](#endnote-17), they have inadequate capacity to increase or redirect their output.

**Impact of 40mg and 20mg limits**

1. The Commission concludes that the imposition of such limits would inevitably result in highly damaging consequences unless phosphates from current suppliers can be decadmiated.
2. Arguments: we agree with the Commission:
3. *For supplier countries*: for Morocco alone, a limit of 40mg would exclude 90% of phosphate rock exports (most of which is used for the production of NPK via nitrophosphate, a process for which decadmiation is not technically feasible) and 70% of fertilizers products. The impact on other North and West African exporters would be similar or more extreme. Phosphate exports to the EU represent a significant proportion of the economies and the foreign exchange earnings of these suppliers. To illustrate:
   * 1. In Morocco, OCP employs over 23,000 staff and makes up 5% of the GDP and 19% of total exports;
     2. In Tunisia, the phosphate industry employs some 27,000 staff, and contributes 4% of GDP and 10% of exports;
     3. Similarly, in Togo and Senegal, significant proportions of their economies and populations depend directly or indirectly on phosphate exports to the EU.

Some of these countries would be severely impacted, fomenting wider economic disruption and potential social instability. This is not a theoretical threat: in Tunisia for example, disruption in phosphate production in 2011/2012 led to strikes and protests, which in turn led to further loss of production whose consequences were felt across the country’s economy. Today, social unrest continues in the phosphate-producing regions, which would be exacerbated by this proposal. The Commission acknowledges that causing significant reductions of their phosphates exports to the EU would be contrary to the EU’s own European Neighbourhood Policy.

**Optional harmonization**

1. The Commission argues that the option for fertilisers to be made available within Member States in accordance with national laws will allow the continued importation of phosphates with higher levels of cadmium, depending on the laws of individual Member States.
2. Counter-arguments:
   1. the Commission provides no analysis of the likely impact of this option. The Impact Assessment includes a table[[17]](#endnote-18) purporting to show national limits on cadmium in force in 20 Member States, contains a number of inaccuracies. There is no information on how many Member States intend to introduce or to reduce existing national limits to align with those proposed by the Commission;
   2. similarly, there is no analysis of what proportion of their fertilizer products EU importers and producers will wish to have CE marked in order to smooth their operations in the internal market as well as their exports outside the EU (CE marked fertilisers are accepted by a number of third countries without additional tests or documentation). Currently, some 60-70% of fertilizer products are CE marked. It seems likely that the major fertiliser producers will continue to want to CE mark most of their products, given the far larger market and reduced administrative burden this enables ;
   3. It is inconsistent for the Commission to propose EU limits based on health and environmental concerns but to permit individual Member States to exceed these limits. The Commission itself recognizes that this creates a risk of higher cadmium fertilisers being diverted to those Member States where they are permitted and thereby increasing the health risks.

**D) What will be the impact on EU fertilizer producers, farmers and food security?**

1. Phosphate rock is included in the EU’s Critical Raw Material list since phosphatefertilisers are key to preserving soil quality and crop productivity, and therefore to EU food security. The EU is dependent on imports for 85% of its supplies. The Commission assesses that the proposed initial limit of 60 mg will have only a minor impact but the subsequent limits of 40 mg and 20 mg would result in the exclusion of a significant proportion of current EU imports, and there is no reliable alternative source of supply. Our data indicate that even the 60 mg limit would exclude some 20% of current imports, causing a severe and immediate shortfall in supply.

**Increased use of organic fertilisers**

1. The Commission argues that a central objective of the proposal is to encourage the recycling of phosphates. It states that organic fertilisers can replace 30% of current EU demand for imported phosphates. This will be essential both because reserves of mineral phosphorous will ‘last little more than one hundred years’ and because prices for phosphate fertilisers are set to rise as a result of growing global demand, increasing at 3% annually, driven by the world’s population growth.
2. Counter-arguments:
   1. the Commission itself recognises that ‘whilst recycling of phosphates from organic waste will increase, it is not certain that within the foreseeable future the available quantities will be sufficient to replace imports of mineral phosphates with high cadmium content…In France, where fertilising patterns have been recorded for more than 20 years, the amounts of phosphorous coming from the recovery of manure and other organic inputs covered about 55 % of the French farmers' needs in 2008.’[[18]](#endnote-19)
   2. the Commission also identifies a range of serious limitations in the use of organic fertilisers: they are low in nutrient content, making transport over long distances impractical; it is virtually impossible to time the release of the nutrients to match the needs of the growing crop and minimize residual amounts that can impact the environment; their relative fixed nutrient ratios can result in excessive phosphorous loading because crops require much less phosphorous relative to the nitrogen contained in the manure; their phosphorus content is variable by country and over time; their higher levels of application can result in the cadmium input to the soil exceeding that resulting from the use of mineral fertilisers; indiscriminate use of animal manures and urban sludge can create human health hazards from pathogens and organic compounds; their prices are considerably higher - recycled phosphate fertilisers are currently sold at €0.85-0.90/kg P2O5 while TSP is €0.55-0.60[[19]](#endnote-20);
   3. the Commission’s proposal would apply the same cadmium limits to organic fertilisers as to inorganic fertilisers. The Commission acknowledges that, as a result, ‘a great deal of compost and digestate would have to be discarded as waste in landfills or incinerators with the related environmental consequences;’[[20]](#endnote-21)
   4. the agronomic needs and uses of organic fertilizers vary significantly within the EU. Mediterranean countries generally use these products more than the Nordic countries as climate and soil conditions favor the mineralization of the organic forms of nutrients. In some countries, (Denmark, France, Ireland, Spain and the UK), more than half of all sludge production is already used in agriculture;
   5. The Commission’s data on phosphorus reserves[[21]](#endnote-22) is inaccurate. Currently-exploited global phosphorous reserves are estimated by the US Geological Survey to be sufficient to meet predicted global demand for around 360 years. This reflects the resources that are known to be economically feasible for extraction under current market conditions; if global prices rise, as the Commission itself predicts, the extent of exploitable reserves will increase.

**Impact on EU Fertiliser Manufacturers**

1. The Commission recognizes that a competitive EU industry is essential to ensure the reliable supply of fertilisers to EU agriculture at competitive prices. It estimates the EU fertilizer sector has an annual turnover of €20-25 billion and some 100,000 jobs. It argues that its proposals will reduce the barriers to trade in fertilisers within the EU internal market and their associated administrative burden, caused by differences in national limits. It asserts that a limit of 60mg would have a negligible impact but it identifies severe negative consequences, including for prices and availability of supplies, if lower limits are imposed without decadmiation processes in place.
2. Counter-arguments:
   1. by increasing demand for scarce low-cadmium phosphates, even a 60mg limit would inevitably drive up the price. This would be accentuated by the likelihood that other countries would follow the EU’s lead in setting low limits. Indeed, logically, the EU should require the same cadmium limits to be applied in countries from which it imports food;
   2. if decadmiation were to be proven viable, it too would result in a significant increase in costs, as noted above;
   3. the Commission acknowledges that one consequence of an increase in dependence on Russian low cadmium phosphate rock is that it would require EU fertiliser producers to bear significant technological adjustment costs to be able to use different raw materials (Russian rock is harder, with higher acidity and moisture, so requires different processing machinery);
   4. any increase in raw materials prices or processing costs would severely impact the competitivity of EU producers, which have suffered over the last 20 years: almost one third of fertiliser plants have closed between 1994 and 2013, leading to significant job losses;
   5. the closure of some EU producers would further concentrate the market, increasing the barriers to entry and reducing competition within the EU. The imposition of the limits would grant the two EU producers that already use low cadmium phosphates from Russia a substantial unfair competitive advantage.

**Impact on EU Farmers**

1. The Commission assumes that the proposed cadmium limits would have a negligible impact on farmers.
2. Counter-Arguments:
   1. EU farmers already pay higher prices for phosphate fertilisers than the rest of the world. This is due to a combination of factors: higher logistical costs, demand fragmentation (many countries, many buyers, small ports and complicated logistics) and onerous regulatory requirements (including specific granulometry and coating) under the REACH regulations. An inevitable increase in the price of fertilizers resulting from higher production costs, as noted above, would have a severe impact. EU Farmers would suffer lower margins and lower yields if, given their increased cost, phosphate fertiliser application was reduced. Ultimately, EU farmers would become less competitive with food imports, unless subsidies were increased, and consumers would face higher food prices.

**Impact on food security**

1. The Commission assumes that the initial cadmium limit of 60mg would have a negligible impact on imports while the lower limits would reduce imports through the greater use of recycling. The Commission assumes the limits would have no impact on EU food security but are predicated on the successful implementation of decadmiation on an industrial scale in a short timescale.
2. Counter-Arguments:
   1. *for EU food imports*: phosphates with high cadmium content that could no longer be sold to the EU would instead be exported to third countries, in particular to developing countries. This would cause the cadmium content of their crops to increase, posing threats to the health of their populations and also of those to whom such crops are exported, including the EU, thereby defeating the object of the limits within the EU;
3. *for the security of future EU supplies*: the Commission states that replacement of imports by organic fertilisers has limitations (as noted above) and that there are insufficient available supplies from most producers of low cadmium phosphates. It concludes that the EU would become dependent on the only low cadmium reserves available near the EU, in Russia, although it notes that Russia prefers to export products like DAP and MAP, and there are serious doubts whether Russia would be able to increase its capacity, as its current operations are inefficient and would require large investments to increase production[[22]](#endnote-23). The Commission’s own Impact Assessment recognizes these risks and its ‘Preferred Policy Options’ are both based on reviewing the actual development of industrial scale decadmiation, developments in the supply situation of phosphates with low cadmium content and the availability of recycled phosphates.[[23]](#endnote-24) These caveats, vital to ensure reliable future supplies of phosphate products for EU agriculture, are ignored in the Proposal.

**Conclusion**

1. The Commission’s Better Regulation Guidelines published in May 2015 state that policies should be “*informed by the best available evidence*”. But as shown above, there are substantial weaknesses in the evidence on which it has based the proposal for cadmium limits. The Commission also claims that the consultations on these proposals have been extensive and that the proposals are broadly supported by stakeholders. But the accuracy of both statements is questionable. This was demonstrated by the many letters sent to the Commission since the start of 2016 by major fertilizer producers and trade associations who had not been consulted and who strongly opposed any limit under 80mg.
2. The Commission’s aims to promote greater use of organic fertilisers, to remove barriers within the single market and to protect public health could all be fully met, without significant risk of negative consequences, by setting a limit on cadmium of no lower than 80mg – the figure confirmed by the SCHER experts last November as the level at which cadmium will not accumulate in the soil. This limit could be regularly reviewed in the light of scientific evidence on cadmium in EU diets and soil, and of progress in developing decadmiation.

OCP

May 2016

1. ‘Cadmium dietary exposure in the European population,’ European Food Safety Authority, published in the EFSA Journal 2012;10(1):2551 [↑](#endnote-ref-2)
2. Page 162, ‘Evaluation of Certain Food Additives and Contaminants’, 75th Report of the Joint FAO/WHO Expert Committee on Food Additives, 2010 [↑](#endnote-ref-3)
3. Opinion of the CSTEE on Member States assessment of the risk to health and the environment from cadmium in fertilisers, 24 September 2002 [↑](#endnote-ref-4)
4. ‘Final Opinion on new conclusions regarding future trends of cadmium accumulation in EU arable soils,’ of the Scientific Committee on Health and Environmental Risks, published 27 November 2015 [↑](#endnote-ref-5)
5. Page 5, Opinion of the CSTEE on Member States assessment of the risk to health and the environment from cadmium in fertilisers, 24 September 2002 [↑](#endnote-ref-6)
6. Page 109, ‘Cadmium in Food’, Scientific Opinion of the Panel on Contaminants in the Food Chain, adopted on 30 January 2009 [↑](#endnote-ref-7)
7. Cadmium limits in a range of other countries are summarized in the article ‘Cadmium and Phosphorous Fertilisers: The Issues and the Science’ by Terry L Roberts, Director of the International Plant Nutrition Institute, Procedia Engineering 83(2014) 52-59. The article concludes that ‘Scientific assessments have been conducted that show that the use of P fertilizer containing current levels of cadmium is generally safe.’ [↑](#endnote-ref-8)
8. Canada Standards for Metals in Fertilzers and Supplements T-4-93 [↑](#endnote-ref-9)
9. Washington State Fertilizer Regulations WAC 16-200-7064 [↑](#endnote-ref-10)
10. ‘Cadmium in New Zealand’s Agriculture and Food Systems’ by Abraham, Cavanagh, Wood, Pearson and Mladenov in ‘Integrated nutrient and water management for sustainable farming.’ [↑](#endnote-ref-11)
11. Page 20, Impact Assessment (Part 2) [↑](#endnote-ref-12)
12. Page 51, Impact Assessment (Part 2) [↑](#endnote-ref-13)
13. Annex XII, Impact Assessment (Part 2) [↑](#endnote-ref-14)
14. Annex XII, Impact Assessment (Part 2) [↑](#endnote-ref-15)
15. Page 42, Impact Assessment (Part 2) [↑](#endnote-ref-16)
16. Annex XIII, Impact Assessment (Part 2) [↑](#endnote-ref-17)
17. Annex I, Impact Assessment (Part 2) [↑](#endnote-ref-18)
18. Page 24, Impact Assessment (Part 2) [↑](#endnote-ref-19)
19. Page 80, Impact Assessment (Part 2) [↑](#endnote-ref-20)
20. Page 43, Impact Assessment (Part 2) [↑](#endnote-ref-21)
21. Page 23, Impact Assessment (Part 2) [↑](#endnote-ref-22)
22. Page 18, Impact Assessment (Part 2) [↑](#endnote-ref-23)
23. Page 51, Impact Assessment (Part 2) [↑](#endnote-ref-24)