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# **PROSPECTIVE EU CADMIUM REGULATION FOR FERTILIZERS**

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Ladies and Gentlemen

I would like to thank the organizers of the Technical Conference of IFA for inviting me here today and giving me the opportunity to speak at this important conference. Not only is this extremely rewarding professionally, but also, on a personal note, it is a great pleasure to be here in Beijing.

The subject of my presentation is "Prospective EU Cadmium Regulation for Fertilizers".

First I will address "Is there a need for a regulation"? Then I will deal with the Cadmium situation in the EU members States including present regulation in EU Member States and the rest of the world.

I will address the activities of the EU Commission so far, the possible scenarios and the Member States views. I will give a more detailed overview of the status of the most recent Commission proposal relating to Cadmium in fertilizers and critical analyses of the Commission proposals from the EFMA point of view.

## **NEED FOR A CADMIUM REGULATION**

Cadmium is a toxic heavy metal. Humans exposed to high levels over a number of years may develop chronic cadmium poisoning.

This first became manifest in workers in the smelting industry. But people living in the vicinity of smelters, for example in Belgium, or waste water discharges - as in the occurrence of the disease in Japan - have also been affected by exposure to cadmium from those industrial point sources.

The most recent concern is the possibility that a growing number of people are being exposed to cadmium through its uptake in their diet. This has now brought phosphate fertilizers to the centre of the debate. No link has been established between the intake of cadmium through the food chain and cancer. The major concern is that cadmium slowly accumulates in the kidney causing irreversible damage. The present status of the discussion about the health risk of exposure to cadmium (Scope workshops 2000/2003) that there are scientific uncertainties concerning important transfers of cadmium through the food chain which prevent accurate assessment of human health risks.

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The urgent need to address these uncertainties relates to the following three concerns:

1. Metals do not have an environmental half-life but persists indefinitely in the environment.
2. Cadmium is removed from the human body only slowly (half-life in the order of 20 years)
3. Some agree that the margin of safety between current levels of cadmium in the human body and the level known to cause irreversible damage to the target organ the kidney is not large and inadequate for controlling human health risk. However, at the SCOPE workshop (8) different views were prevailing.

It is not EFMA's position to exclude that health risks associated with cadmium may exist. As a result we agree in that, although there are very many uncertainties as to the imminence and magnitude of the risk, a precautionary approach to cadmium should be taken.

On the other hand, an adequate supply of food for mankind can only be safeguarded through crops which in turn need an adequate diet of phosphorus.

As a general rule, phosphate rock does not come without unwanted cadmium. What is therefore needed is well balanced precautionary approaches taking into account its potential costs and benefits.

In answering the question is there a need for a cadmium regulation the following aspects are worth mentioning:

1. Maximum levels of cadmium in foodstuffs are already set by the Commission's regulation EC 466/2001 of 8 March of 2001. This directive should be considered as an appropriate risk management tool. It is targeted directly at the risk by regulating the Cadmium intake by humans.
2. There is a decline in the administration of Cadmium to the soil, this due to lower application rate of phosphate fertilizers and the decrease in atmospheric deposition.
3. A risk to human health of Cadmium coming from fertilizers has not been demonstrated

Therefore, these factors should in EFMA's opinion be taken into account when deciding upon introducing a regulation for cadmium in fertilizers in the EU.

## **SITUATION IN EUROPEAN UNION**

As regard to the Cadmium issue the situation is not really different from the rest of the world. There are five major sources of Cadmium:

- The original and variable natural load of cadmium that is in all soils
- Atmospheric deposition mainly resulting from waste incineration, production of non-ferrous metals, iron and steel, as well as the burning of fossil fuels
- Farmyard manure as a result of animals being exposed to cadmium through their diets.
- The application of sewage sludge to agricultural land.
- In phosphate fertilizers

Cadmium concentrations in soils vary substantially from region to region this due to the specific soil conditions (pH, type of soil etc.). This can be seen from the following table. The soil cadmium concentrations range from e.g. Portugal 0.08 on the low end to 0.54

for Ireland at the high end. If one compares this cadmium load in soils with the reported average cadmium content in fertilizers as the first and second columns show you will see that there is no correlation.

Just look at Finland (soil concentration: 0.21/content in fertilizers: 1), Germany (0.26/40), The Netherlands (0.39/25) or Sweden (0.23/7).

The same is true if you combine the concentrations of soil cadmium with the existing cadmium control measures of the various member states in the European Union, which the last column shows.

There you will recognise in the existing cadmium control measures a set of limits which do not correspond convincingly, either to the cadmium loads in the soils in the different member states, or to the average cadmium content in fertilizers applied in those countries. For example, Austria has a limit of 75 mg per kg P<sub>2</sub>O<sub>5</sub>, while the average content in fertilizers is only 25; these figures are 47/15 in Denmark; 21.5/1 in Finland, and 43/7 in Sweden.

Countries	Existing Soil Cadmium Concentrations (mg Cd/kg dry matter)		Existing Average Cadmium Concentrations in Fertilizers (mg Cd/kg P2O5)	Existing Legislative Limits in the Member States (mg Cd/kg P2O5)
	Country Average	Range (Min-Max)		
Austria	0.24	0.15-0.5	25	75
Belgium	-	0.22-0.35	32	90
Denmark	0.18	0.162-0.249	15	47
Finland	0.21	0.12-0.38	1	21.5
France	0.42	0.02-6.99		
Germany	0.26		40	40-90
Greece	-	0.29-0.41	18	
Iceland	-	-		
Italy	0.40			
Ireland	0.54	0-3.24	58	
Netherlands	0.39		25	
Norway	0.24	0.11-0.19		
Sweden	0.23	0.02-2.83	7	43
Portugal	0.08			40-70
Spain	0.11			
UK	0.32		30 (15)	

Source: European Resources Management (ERM) April 2001. (Soil Cadmium concentrations used in the Assessments, page 4; Cadmium Content in Fertilizers reported by Member States, page 23; Limit Values for Cadmium in Fertilizers and Soil in the Member States, page 9).

As I will show you later one of the goals of a EU Harmonized legislation is to ensure free movement of fertilizers. This may be sound in principle, but to extend to the whole EU, the restrictive standards of three Member States totaling only 4.5% of the Fertilizer market is questionable.

## PRESENT Cd REGULATION IN EU MEMBERS STATES AND IN THE REST OF THE WORLD

An overview of the present Cd regulation in EU member states and the rest of the world can be seen in the following slide:

Regulated Maximum Content of Cadmium in Phosphatic Fertilizers

Country	mg Cd per kg P <sub>2</sub> O <sub>5</sub>	mg Cd per kg P
Australia	130	300
Austria	<b>75 (60)<sup>1</sup></b>	170
Belgium	90	207
Denmark	47	110
Canada	20 ppm in fertilizers <sup>2</sup>	
China	8 ppm in fertilizer <sup>3</sup>	8 mg / kg Fertilizer
Czech Republic	504	116
Finland	<b>21.5</b>	50
Germany	40-905	93-207
	506	116
Hungary	3 mg/ kg Fertilizer	3 mg/ kg Fertilizer <sup>7</sup>
Japan	146	340
New Zealand	1238	280
Norway	43	100
Portugal	40-709	93-207
Sweden	<b>4310</b>	100
Switzerland	21	50
USA		
California	4 ppm / % P <sub>2</sub> O <sub>5</sub> <sup>11</sup>	
Oregon	Proposal to monitor soil <sup>12</sup>	
Texas	39 ppm <sup>13</sup>	
Washington	0.079 lbs/acre/year default	

Source MFG( 1996 ); (Oosterhuis et al. 2000)

1 Personal communication

2 Canadian Food Inspection Agency under the authority of the Fertilizers Act.

3 Proposal to WTO, July,2002

4 Mineral fertilizers containing more than 5% P<sub>2</sub>O<sub>5</sub> - limit value (LV) is

50 mg Cd / kg P<sub>2</sub>O<sub>5</sub>; Mineral fertilizers containing less than 5 % P<sub>2</sub>O<sub>5</sub> and other mineral

fertilizers without phosphorus - LV is 1 mg Cd / kg P<sub>2</sub>O<sub>5</sub>

5 Based on a voluntary agreement; 4 kg/ha Max. Acceptable Cumulative Additions to Soil over 45 years

6 As from 20 mg/kg P<sub>2</sub>O<sub>5</sub> labeling . Proposal stopped by the EU Commission. July 2003.

7 Personal communication

8 Voluntary Compliance with this voluntary limit is through the *Fertmark* Scheme , which is a fertiliser quality assurance programme administered by our national farmers organization (Federated Farmers).

9 Mentioned in OECD (1994) Probably not a legal limit

10 A voluntary limit of 21.5 mmg/kg P<sub>2</sub>O<sub>5</sub> has been introduced by SLR

11 6/5/4/ ppm per 1 % P<sub>2</sub>O<sub>5</sub> in fertilizers in 2003/2003/2004 (ref. 13.)

12 Wide variation in estimates in K<sub>d</sub>, proposal to monitor soil.

13 when conforming to Sec. 65.17(d)(2) of TX Admin Code Assume 120 lb/acre/yr)

As can be seen from the data Cadmium limits per kg P<sub>2</sub>O<sub>5</sub> vary substantially. Most of the figures relate to voluntary agreements but a few are regulations (e.g. for Europe 15 only Austria, Sweden and Finland).

## **ACTIVITIES OF THE EU COMMISSION**

### **Starting point**

In 1995 when Austria, Finland and Sweden joined the European Union they came with mandatory limits for cadmium. Since the existing member states did not have any regulation, and since both sides were unwilling to take over each other's regulations, the new member states asked for a derogation meaning that until the end of 2001 they would be allowed to continue their individual cadmium limits. By then, the European Union was confident that they would have found a solution acceptable to all the member states. As it turned out, this optimism proved to be unrealistic. As a first approach, the Commission discussed extensively with the fertilizer manufacturers, represented by EFMA, whether the issue could be resolved by way of voluntary agreement. This led in 1996 to a proposal, supported by EFMA members, to fix the maximum cadmium load in phosphate fertilizers at 135 mg per kg P<sub>2</sub>O<sub>5</sub> by the end of 1996, 100 mg by the end of 2001 and 60 mg by 2006.

### **Member States' Risk Assessment**

However, this EFMA offer was conditional upon the Commission also finding a solution for imported products. In the end, no voluntary agreement was reached. In order to have a basis for the by the Commission preferred EU harmonized regulation the Commission outsourced three studies to ERM. The first two studies formed the basis for the Member States to perform a risk assessment regarding Cadmium in Fertilizers. In this respect it is remarkable that only 7 out of the 15 Member States were able to do some kind of risk assessment the major ones (such as Spain, Germany etc.) missing and that the quality of the risk assessments varied considerably.

The third study was meant to provide the definitive "Analysis and conclusions from Member States Assessment of the Risk to Health and the Environment from Cadmium in Fertilizers" (ERM Report October, 2001).

This report contains two elements worth mentioning:

1. Possible options for risk reduction measures
2. Member States views page on the proposed reduction measures

### **Possible options for reduction measures**

In developing the options for risk reduction measures ERM for each option took into account the following criteria:

1. effectiveness
2. practicability
3. economic impact
4. monitor ability

### **Option A. Limits on cadmium concentration in fertilizers**

Limit of Cd in fertilizers of 60 mg Cd/kg P<sub>2</sub>O<sub>5</sub> by 2006

Limit of Cd in fertilizers of 40 mg Cd/kg P<sub>2</sub>O<sub>5</sub> by 2010

Limit of Cd in fertilizers of 20 mg Cd/kg P<sub>2</sub>O<sub>5</sub> by 2015

### **Option B. Cadmium charges**

### **Option C. Management of the Cadmium content of soils**

### **Option D: Regionalization and identification of cadmium vulnerable zones or Cadmium Risk Zones**

The benefits and drawback of each option were presented and a rating of each option against the above mentioned criteria was provided.

ERM considered the least effective measure to reduce the risk cadmium charges whilst the three other options rate equally in terms of effectiveness. The measure that scores best in term of monitor ability, according to ERM is that of cadmium limits in fertilizers,

## **Member States View**

To complete this review, let us now go through the next table (taken from ERM Report October 2001) in more detail. This shows wide variations on how the member states approach the cadmium issue. I have highlighted what I see as the major points of interest.

### **Some Member states' view on possible options**

<b>Member State</b>	<b>Issues raised/suggestions</b>
<b>Austria</b>	<p><b>Legislative limits on Cd concentrations in fertilizers is the most effective measure to reduce Cd accumulation</b></p> <p><b>Changing the current limit would have serious consequences particularly with regards to the reaction of farmers, consumers and environmental groups</b></p> <p>EU-wide limits on Cd concentrations in fertilizers</p> <p>Member States which have a limit can maintain it and the EU limit should decrease set by step in a fixed timeframe.</p> <p>Labeling – declaration of maximum Cd values or range</p>
<b>Denmark</b>	<p>Make sure Cd concentration in fertilizer do not increase from the present Danish average (15 mg/kg P<sub>2</sub>O<sub>5</sub>)</p> <p>Need to ensure a progressive reduction fertilizer and soil concentrations</p> <p><b>EU-wide limit value or if not possible regional limit values</b></p> <p>Labeling of Cd content in fertilizers</p> <p><b>Use of economic instruments and voluntary agreements</b></p>

<b>Member State</b>	<b>Issues raised/suggestions</b>
<b>Finland</b>	<p>Economic instruments require adoption by <b>consensus which could hardly be achieved in this case on an EU-wide basis</b></p> <p>Voluntary agreements should cover EU products as well as imported products</p> <p>Special emphasis should be given to the precautionary principle.</p> <p>Marketing and labeling requirements;</p> <p><b>Divide the EU into 2-3 regions (based on environmental conditions) and design region-specific measures</b></p>
<b>France</b>	<p><b>Consultation with raw material and intermediate products providers is of utmost importance</b></p> <p><b>Variations (i.e. regionalization) and derogations should not constitute barrier to trade.</b></p>
<b>Portugal</b>	<p><b>Limit value for Cd in fertilizers: 40 mg Cd/kg P<sub>2</sub>O<sub>5</sub>.</b> Above this level and up to 60 mg/kg, a tax should apply;</p> <ul style="list-style-type: none"> <li>• <b>For regions with higher soil contamination, a limit level more restraining than 40 mg Cd/kg P<sub>2</sub>O<sub>5</sub> could be set;</b></li> <li>• Reference to Cd contents should be compulsory for products labeling;</li> <li>• Implementation period: 5 years.</li> </ul>
<b>Spain</b>	<p>A limit on the cadmium content in the fertilizers could be fixed, maybe as an agreement, like in other specific cases (CFC, etc.). <b>This limit should be technically possible, taking in count the current state of the art of the European fertilizer industry (60 mg Cd/kg P<sub>2</sub>O).</b></p> <p>A politic of incentive to the decadmiation techniques is needed to promote the development of new processes.</p> <p>A system based in the fixation of taxes has a lot of problems at an administrative level (co-ordination, problems of competence, etc.), and the final objective is not assured.</p>
<b>Sweden</b>	<p>Take four criteria into account: effectiveness, practicality, economic impact and monitor ability;</p> <p><b>Estimate cost and benefits for farmer and food industry;</b></p> <p>Stakeholder consultation;</p> <p>Need to keep Cd levels in food and soil as low as possible;</p> <p>Measures should protect consumer at the EU level, independently of their nationality;</p> <p>Labeling should be taken as a possible additional measure;</p> <p>Options should be compared to the alternative of not taking any measures.</p>



<b>Member State</b>	<b>Issues raised/suggestions</b>
<b>UK</b>	<p><b>Need to consider all sources of cadmium;</b></p> <p><b>Restrictions to 50-60 mg Cd/kg P<sub>2</sub>O<sub>5</sub> would impact businesses with undetectable benefit to food supply;</b></p> <p>Limits for Cd in soil: soils with history will exceed this limit and it is therefore not an economically viable option;</p> <p>Imposing soil Cd limits to individual farmers would require level of control that is contrary to UK policy;</p> <p>Restriction on application of P-fertilizers: would result in limited benefits at the expense of bureaucratic procedures;</p> <p>Tax: should aim to encourage industry to remove Cd during the processing</p> <p><b>Recent modeling from MSs does not support the case for restrictive measures across the board;</b></p> <p><b>Action programme needed in Individual Member States to identify and limit the risks of sensitive soils;</b></p> <p>Discussion should be held with industry to introduce labeling;</p> <p>Introduction of legal limits on fertilizers in the short term will produce little benefits in the UK.</p>

### **Opinion of the Scientific Committee on Toxicity, Ecotoxicity and the Environment (CSTEE)**

It became clear that the EU Commission favored a EU Harmonized approach (i.e. limits of Cadmium in fertilizers) and requested the Scientific Committee on Toxicity, Ecotoxicity and the Environment (CSTEE) to review the Member States' risk assessment in order to make a sound scientific basis for decision making. However, the Commission has only put forward the following two narrow questions:

"is it scientifically justified to conclude that the modeling of cadmium accumulation in agricultural soils in the various assessments suggest the following trends"?

- for low fertilizer cadmium concentrations (between 1 to 20 mg per kg P<sub>2</sub>O<sub>5</sub>) cadmium in soil tends to accumulate slowly or decreases after 100 years of application due to net removal rates (leaching, crop uptake) exceeding inputs;
- for fertilizers with cadmium concentrations of 60 mg per kg P<sub>2</sub>O<sub>5</sub> and above accumulation in soils over 100 years is relatively high."

The CSTEE concluded that both statements are true, but only as a general trend.

The committee stressed that even for the same cadmium concentration in fertilizers there is a significant variability - sometimes leading to opposing trends in the predicted long-term soil accumulation. In some cases this is due to soil characteristics, climate conditions and agricultural practices. In other cases it is caused by the type of algorithm

and parameters used in the assessment. Laegreid (Yara)- confirmed by Mr. McBride, the author of the algorithm most widely used-shows that the algorithms used in the various risk assessments might overstate the present input of cadmium into agriculture soils. Thus, it confirms the concerns the Scientific Committee already raised in their opinion.

The CSTEE expressly regretted that the Commission's request had been restricted to the issue of a likelihood of accumulation of cadmium in soils, given two specific fertilizer cadmium concentrations, below 20 mg and above 60 mg respectively. The committee concluded that "a derivation of a limit of cadmium in fertilizers which is exclusively based on soil accumulation, does not take into account the level of risk for human health and environments associated to the current situation and that expected after the implementation of the limit". The CSTEE is of the opinion that "a limit for cadmium in phosphate fertilizers should be derived based on a risk assessment approach (i.e. comparison of exposure and effects profiles) and taken all cadmium sources into account".

However, there is also another more fundamental contradiction between the opinion of the CSTEE and the proposal the Commission had in mind. The CSTEE talks about average cadmium contents in phosphoric fertilizers, whereas the proposal is based on maximum limit values. If, for example, the 60 mg maximum limit takes out the high cadmium material, then we might already be much closer to the 20 mg average, which, according to the CSTEE, will clearly lead to downward trends. Even if this 60 mg maximum would just lead to a 30 mg average, the situation could still stabilize. Thus, the objective the proposal aims at addressing (namely, stabilization and reduction of cadmium load in the environment) would be achieved.

***Draft proposal made by the EU Commission for an EU wide regulation on Cadmium in Fertilizers, including the Extended Impact Assessment published by the EU Commission on 1 August 2003***

In August, 2003 the EU Commission launched a draft proposal for an EU wide regulation on Cadmium.

- 5 years after entry into force of this draft proposal the upper limit will be 60 mg of Cd/kg P<sub>2</sub>O<sub>5</sub>
- 10 years after entry into force of this draft proposal the upper limit will be 40 mg of Cd/kg P<sub>2</sub>O<sub>5</sub>
- 15 years after entry into force of this draft proposal the upper limit will be 20 mg of Cd/kg P<sub>2</sub>O<sub>5</sub>

This proposal together with an extended impact assessment was put on the internet for public consultation (1<sup>st</sup> August-26<sup>th</sup> September, 2003). There were 65 replies with almost 300 pages of response mainly by National authorities and Industry as can be seen from the following slide.

## Result of the internet consultation

	Total answers	For	Against	Neutral
Industry and Trade	43	2	41	0
Public authorities	11	5	3	3
Miscellaneous sources	8	1	6	1
Distributors and agricultural co-operative	6	0	6	0
Trade Unions	1	0	1	0
Total:	65	8	53	4

Remarkable is the absence of response by Green Movement parties showing that the risk aspects related to Cadmium in Fertilizers is not perceived as an issue of public concern but is merely driven by politics at least in a few member states. There is no evidence that cadmium from fertilizers would be available for ingestion by humans through foodstuffs or water and It is interesting to see that the Commission (DG Environment) allows (Ref. 14) a cadmium content in air leading to a deposition between 2.5 and 5  $\mu\text{g}/\text{m}^2/\text{day}$ , i.e. 9.1 to 18.2 g Cd/ha/year. A fertilizer containing 90 mg Cd/kg  $\text{P}_2\text{O}_5$  spread at a rate of 25 kg  $\text{P}_2\text{O}_5/$  ha/year (usual fertilizer rate in EU) will contribute 2.25 Cd/ha/year (4-8 times less than the atmospheric contribution).

### EFMA's contribution to the internet consultation.

EFMA's contribution to the internet consultation was EFMA Position paper dd 12 September, 2003 on the draft proposal made by the EU Commission for an EU wide regulation on Cadmium in Fertilizers, including the Extended Impact Assessment published by the EU Commission on 1 August 2003. I will not go into detail but will highlight the major points of concern as addressed in this position paper.

#### (a) The Proposal is not based on an appropriate risk assessment

"Any precautionary approach has to start with a proper characterization and assessment of the risk"

"The Proposal strikingly lacks such risk characterization or evaluation"

"The connection to a risk for human health and to the environment is extremely vague and speculative"

This aspect is confirmed by the outcome of the SCOPE workshop: "Risk

Assessment and Management that was organized in Ghent, Belgium from 3-6

September, 2003: "it is believed that the scientific evidence provided during the workshop regarding the possible negative health and safety effects of cadmium through the food chain and people' dietary intakes is not convincing" this questioning the need for a Cadmium regulation for fertilizers.

"EFMA fails to see any need to "complement" the existing EU regulation on cadmium in foodstuff with the Proposal"

**(b) The Proposal is based on wrong assumptions on the current situation of cadmium input into agricultural soils and the environment, as well as future trends.**

"The Proposal is based on an estimated 192 annual tons of cadmium in phosphoric fertilizers"

"The Industry defines this same input to be of 116 annual tons of cadmium"

"Phosphate fertilizer consumption in the EU 15 will decrease to 2.7 million tons annually whereas the Proposal is based on an annual amount of 3.5 million tons"

"Reality is much more positive than what the Proposal assumes"

**(c) The Proposal is not in line with the findings of the CSTEE, nor does it follow the approach proposed by the committee**

"The CSTEE's statements for fertilizer cadmium concentrations are only describing general trends"

"For the same cadmium concentration in fertilizers there is a significant variability – sometimes leading to opposing trends"

"EFMA agrees with the CSTEE that a limit for cadmium in phosphate fertilizers should be based on a risk assessment approach and should take all cadmium sources into account"

In this respect the EU Risk Assessment Cadmium Oxide and Cadmium metal by the Belgium Rapporteur issued on 3<sup>rd</sup> July, 2003 not considered by the Commission when they drafted their first proposal, is of much better quality. It addresses in addition to Cd in Fertilizers all other sources of Cd such as Atmospheric Deposition, manure etc. Nevertheless they concluded that "it is difficult to judge if the Cd balance in European soils is at steady state or not" and "it can be concluded that the current Cd input in European agricultural soils is reduced from historical input" and "predicting future trends in crop Cd is even more difficult than predicting future trends in soil Cd"

**"There is a fundamental contradiction:** The CSTEE talks about average cadmium contents in phosphate fertilizers, whereas the Proposal is based on maximum limit values"

"EFMA believes that further research should also explore the consequences of 60 mg and 40 mg maximum limits on average values"

**d) The Proposal makes wrong assumptions on the technical and economic feasibility of a future decadmiation technology**

"The technology the Commission refers to is not at the stage of a pilot plant, but rather at laboratory scale"

"EFMA considers the stated cost of decadmiation, at 8 euros per ton, totally speculative; 110 euros per ton would be a more realistic figure"

"There will never be any reassurance that a prescriptive approach to force technology development will achieve results"

"The order of magnitude of the cost data used in the Proposal bears no relation to the costs incurred using today's cheapest available process technology"

**(e) The Proposal makes wrong assumptions on the impact of the Proposal on the European fertilizer industry, the European farmer and the phosphate supply countries**

"The impact of the Proposal could be disastrous"

"Russia would enjoy a monopoly which goes totally unchecked since competing rock would simply not be available, and prices would increase dramatically"

"The resulting shut-down of the European NPK production would lead to a loss of over twothousand jobs"

"With 110 euros as cadmium removal costs, the farmer's business could become unprofitable"

"EFMA believes that the impact assessment relies on totally unrealistic cadmium removal costs"

**Industry Proposal**

"Cadmium is of concern for human health and the environment"

"The Industry will accept a maximum limit of cadmium in phosphate fertilizer of 60 mg per kg P<sub>2</sub>O<sub>5</sub>"

"The Industry proposes to form a consortium to do further research for an economically and technically feasible decadmiation technology. "

**Latest proposal of the Commission**

Taken into account the contribution of many stakeholders in the internet consultation, the EU Commission on the 9<sup>th</sup> of October, 2003 issued the

Draft proposal relating to cadmium in fertilizers presented by the Chemicals Unit of DG Enterprise. 9-10-2003.

-5 years after entry into force of this draft proposal the upper limit will be 60 mg of Cd/kg P<sub>2</sub>O<sub>5</sub>

-5 years after entry into force of this draft proposal the upper limit for the annual average for each manufacturer will be 40 mg of Cd/kg P<sub>2</sub>O<sub>5</sub>

-From 1 January 2006 straight or compound phosphate fertilizers containing more than 5% P<sub>2</sub>O<sub>5</sub> will be labelled for cadmium content if the cadmium content exceeds 20 mg of Cd/kg P<sub>2</sub>O<sub>5</sub>.

They came up with a more realistic approach, that seems to be based on not changing the status quo (40 mg Cd/kg P<sub>2</sub>O<sub>5</sub> average) European wide.

EFMA in its position paper of 19 November, 2003 opposed again using the argumentation forwarded to the Commission in EFMA's first position paper and in addition the following arguments:

- Current input of cadmium into agricultural soils, as well as future trends, might abolish the need for any regulation, since there will be no accumulation (algorithms used in various risk assessments might overstate the present input of cadmium into agricultural soils).
- Rock phosphate resources with low cadmium content are much less available than expected in the past. Meaning that meeting an upper limit for the annual average for each manufacturer will be 40 mg of Cd/kg P<sub>2</sub>O<sub>5</sub> simply cannot be achieved.
- The issue of imports is still unsolved.
- As to labelling EFMA believes that labelling does not serve any purpose. First of all it is difficult to test each production charge on the actual cadmium content because this can vary significantly, secondly labelling could only raise unfounded concerns with customer.

In sum this latest proposal of the Commission does not fundamentally change EFMA's position to any cadmium regulation which goes further than the maximum limit of 60 mg of Cd/kg P<sub>2</sub>O<sub>5</sub> for phosphate fertilizers in Europe.

EFMA will continue to debate in a positive way the proposed Cd regulation of the Commission. A new proposal of the Commission is expected in the second quarter of this year.

### **EFMA'S POSITION THE WAY FORWARD**

The industry will accept a maximum limit of cadmium in phosphate fertilizer of 60 mg per kg P<sub>2</sub>O<sub>5</sub> leading to an average of 40 mg per kg P<sub>2</sub>O<sub>5</sub> (maintaining the status quo).

EFMA believes that additional research on the effects of Cadmium by the Commission and scientific community and a careful analysis of the SCOPE contributions is necessary. EFMA believes that additional research on decadmiation is necessary.

## REFERENCES

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- 8) "SCOPE Workshop Risk assessment and Management of environmental cadmium (Ghent Belgium 3-6 September 2003 (build on a previous workshop Environmental Cadmium in the Food Chain: Sources, Pathways, and Risk (13-16 September 2000).)"
- 9) "Draft proposal relating to cadmium in fertilizers presented by the Chemicals Unit of DG Enterprise. 9-10-2003".
- 10)"The Position of the European Fertilizer Manufacturer's Association dd 19 November, 2003 on the Draft Proposal for the EU Regulation on Cadmium in Fertilizers, presented by the chemicals unit of DG Enterprise on 9 October 2003".
- 11)MFG Environmental Research Group. 1996 Cadmium in Fertilizers. Consultants Report for the OECD Cadmium Workshop, 16-20 October, 1995, Sweden
- 12)Oosterhuis, F. H.et al. 2000. A possible EU wide charge on cadmium in phosphate fertilizers: Economic and Environmental implications. Report to the EU Commission.
- 13)Reference: California Code of Regulations, Title 3: Food and Agriculture, Division 4: Plant Industry, Chapter 1: Chemistry, Subchapter 1: Fertilizing Materials, Article 1: Standards and Labelling, §2302: Non-Nutritive Standards.
- 14)European Directive relating to the quality of ambient air [COM (2003) ,423 final, 16-07-2003].