Essential safety and quality requirements for fertilising materials

Fertilisers Working Group meeting

2 June 2014

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Essential safety requirements: summary of received comments

- Try to harmonise as far as possible the limit values across the fertilising materials categories. Ex: no limit value for As in GM products?
- Fears that the current list would not be sufficiently addressing unknown risks for products deriving from waste. Large support for EU EoW for various products
- National derogation for non-complying products
- Treat Cu and Zn differently: only labelling (industry request)
- Establish maximum limits according to application rates per ha and per year depending on different product categories (industry request).

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Inorganic primary and secondary nutrient fertilisers and mixtures thereof (red=old proposal; green=new proposal)

Substance	Max. Content (mg/kg dry matter)
Cd (for products containing less than 5% P2O5)	3 -> 1,5
Cd for products > 5% P2O5	Level to be fixed by COM
Cr VI	2
Hg	2
Ni	120
Pb	150
As	60

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Micronutrient fertilisers and mixtures thereof

Heavy metal	Upper limit for heavy metal (mg heavy metal/kg micronutrients) for straight or mixtures of B, Co, Cu, Fe, Mn, Mo or Zn fertilisers
As	1000
Cd	200
Pb	600
Hg	100
Ni	2000

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Organic fertilisers (red=old proposal; green=new proposal)

Substance	Max. conc. (mg/kg dry matter)
As	Limit requested (not in EU EoW)
Cd	1,5 ->1,8 (FR risk assessment)
Cr VI	0,5 -> 2
Hg	1 -> 1,3
Ni	50
Pb	120 -> 150
Cu	Above 200: labelling
Zn	Above 600: labelling
PAHs (16 congeners)	6

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Organic fertilisers – Max. limit values for microorganisms – MS request

Pathogens	**Maximum limit values**
Salmonella spp	No Salmonella species in 25 g sample
Escherischia coli	1000 CFU/g product

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Organic fertilisers –Macroscopic impurities – MS request (green=new proposal)

- 0,5% on dry matter weight for glass, metal and plastics above 2 mm to be determined by dry sieving method.
- Stone exceeding 5 mm : max content of 2% (Member State proposal)

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Organo-mineral fertilisers-(ECOFI proposal)

Substance	Max. conc. (mg/kg dry matter)
Cd for OM containing less than 5% P2O5	1,5 -> 3
Cd for OM containing more than 5% P2O5	Same as for inorganic fertilisers
As	Limit requested (one MS)
Cr VI	0,5 -> 2
Hg	1 -> 2
Ni	50
Pb	120
Cu	200 (if > 200 : labelling)
Zn	600 (if > 600 : labelling)
PAHs (16 congeners)	6

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Organo-mineral fertilisers – MS request

Same limit values as for organic fertilisers should apply

Pathogens	Maximum limit values
Salmonella spp	No Salmonella species in 25 g sample
Escherischia coli	1000 CFU/g product

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Organo-mineral fertilisers –Macroscopic impurities – MS request

- 0,5% on dry matter weight for glass, metal and plastics above 2 mm to be determined by dry sieving method.
- Stone exceeding 5 mm : max content of 2% (Member State proposal)

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Liming materials – Max. limit values for contaminants

Substance	Max. conc. (mg/kg dry matter)
Cd	3
Cr VI	Standard in development
Hg	2
Ni	90
Pb	200 -> 150 (request MS)
As	120 -> 60 (request MS)

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Organic soil improvers – EU EoW

Substance	Max. conc. (mg/kg dry matter)
As	Limit requested (not in EU EoW)
Cd	1,5 -> 3
Cr VI	0,5 -> 2
Hg	1 - > 1,3 (FR risk assessment)
Ni	50
Pb	120 ->150
Cu	200 (if > 200 : labelling)
Zn	600 (if > 600 : labelling)
PAHs (16 congeners)	6

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Organic soil improver – EU EoW

Same limit values as for organic fertilisers should apply

Pathogens	Maximum limit values
Salmonella spp	No Salmonella species in 25 g sample
Escherischia coli	1000 CFU/g product

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Organic soil improvers - Macroscopic impurities – EU EoW

- 0,5% on dry matter weight for glass, metal and plastics above 2 mm to be determined by dry sieving method.
- Stone exceeding 5 mm : max content of 2% (Member State proposal)

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Other soil improvers – (e.g.clay) Max. limit values for contaminants

Substance	Max. conc. (mg/kg dry matter)
Cd	3
Cr VI	Standard in development
Hg	2
Ni	90
Pb	200 -> 150 (request MS)
As	120 -> 60 (request MS)

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Growing media – Safety criteria

Maximum limit values for contaminants in GM (mg/kg dry matter) – CAT extraction method for mineral GM

Contaminant	Mg/kg dry matter
As	Introduce a limit ?
Cd	1.5
Cr VI	Propose new limit for Cr 6+
Cr total	(150) Replaced by Cr VI
Cu	230 -> (if > 200 : labelling)
Hg	1
Ni	90
Pb	150
Zn	500 -> (if > 600 : labelling)

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Growing media – MS request

Same limit values as for organic fertilisers should apply

Pathogens	Maximum limit values
Salmonella spp	No Salmonella species in 25 g sample
Escherischia coli	1000 CFU/g product

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Growing media – Viable weed seeds – MS request

- Max 2 viable weed seeds per liter for products deriving from plants

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Growing media - Macroscopic impurities – MS request

- 0,5% on dry matter weight for glass, metal and plastics above 2 mm to be determined by dry sieving method.
- Stone exceeding 5 mm : max content of 2% (Member State proposal)

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Essential Quality requirements

- One MS mentioned that accepting low nutrient products would lead to increased levels of contaminants in soils as the amount of fertilising materials required would increase

-Other Member States insisted that the minimum nutrient content of inorganic fertilisers is set low enough so as not to exclude niche products. Farmers will be able to differentiate products for the professional market from products intended for consumer market.

- Quality requirements should avoid for the same material to be find into several categories

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Essential Quality requirements

- Product categorisation for organic-based products should be based on productweight not dry matter to ensure coherent classification (See for example ECOFI contribution)
- Quality requirements should avoid for the same material to be find into several categories. A clear threshold should help the user understand the utility of the products.

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Inorganic fertiliser – Minimum nutrient content

A. Solid primary and secondary inorganic fertilisers

Minimum nutrient content on dry matter (individual value qualifies the product as an inorganic fertiliser) PS: obligation to declare secondary nutrients in primary nutrients (See art 17 + presentation on labelling)	N total: 2 % P2O5 total : 1% Min solubility levels for P forms? Water-soluble K2O: 1,5% Water soluble MgO: 1,5% Water soluble CaO:1,5% Water –soluble SO3: 1,5% Na to be considered?

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Inorganic fertiliser – Minimum nutrient content

B. Fluid primary and secondary inorganic fertilisers

Minimum nutrient content on commercialised products (individual value qualifies the product as an inorganic fertiliser) PS: obligation to declare secondary nutrients in primary nutrients (See art 17 + presentation on labelling)	N total: 1% P2O5 total :0,3% Min solubility levels for P forms? Water-soluble K2O : 0,5% Water soluble MgO:1,5% Water soluble CaO:1,5% Water –soluble SO3:1,5% Na to be considered?

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Fertilisers containing only one micro-nutrient

- **Minimum requirements for:**
  - I. Micronutrient salts
  - II. Micronutrient oxyde
  - III. Micronutrient chelate
  - IV. Micronutrient complex
  - V. Micronutrient suspension
  - VI. Micronutrient solution
- **Possible for Co, Cu, Fe, Mn, Zn for which harmonised rules have already been adopted. What about B and Mb?**
- **Can experts provide suggestions on possible generic quality criteria for fertilisers containing only one micro-nutrient?**

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Minimum micro-nutrient content in …(refer to the existing tables of Section E)

Table E.2.1. Solid or fluid mixtures of micro-nutrient fertilisers, percentage weight of fertiliser

Table E.2.2. Primary and/or secondary nutrient(s) with micro-nutrient(s) **applied to the soil**, percentage weight of fertiliser.

Table E.2.3. Primary and/or secondary nutrient(s) with micro-nutrient(s) **for leaf sprays**, percentage weight of fertiliser.

COM : can we simplify by proposing an unique minimum content for micronutrients in mixtures?

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Organic fertilisers – Quality requirements

Minimum organic matter content (expressed on dry matter)	No mimimum organic matter content
Minimum nutrient content on dry matter for solid fertilisers(individual values qualifies the product as organic fertiliser Minimum nutrient content on commercialised products for fluid fertilisers (individual values qualifies the product as organic fertiliser (MS request)	N total: 1,5% N org: 0,5%? P2O5 total: 0,5% Water-soluble K2O: 0,75% N total: 1% N org:0,3%? P2O5 total :0,3% Water-soluble K2O : 0,5%

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Solid Organic fertilisers – Quality requirements. Expressed as % of the total packaged weight

Min dry matter content	40%
Min Corg	15%
Min Norg	2%
Min N total	2,5%
Min P2O5 total	2%
Min K2O water-soluble	2%
Min Granulometry for powder form	At least 90% able to pass through a 10 mm sieve

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Liquid Organic fertilisers – Quality requirements - Expressed as % of the total packaged weight

Min dry matter content	No minimum
Min Corg	5%
Min Norg	1%
Min N total	2%
Min P2O5 total	1%
Min K2O water-soluble	2%
Min Granulometry for powder form	Not applicable

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Organo-mineral fertilisers – Quality criteria (ECOFI) (% on the weight of products)

Parameter	Solid OM	Liquid OM
Dry matter	> 60	No minimum
C org	7,5	3
N total	2,5	2
N org	1	0,5
P2O5 total	2	2
K2O water soluble	2	2

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Liming materials – minimum quality requirements

Minimum NV : 15 -> 25 (equivalent CaO)
9 -> 15 (equivalent OH)

Determined on dry matter to not exclude sugar factory lime

Minimum reactivity:10

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Organic soil improver – Quality criteria (EU EoW) – mulches covered

Industry proposal

Current

Minimum organic matter content (expressed on dry matter)	15%. Too low !
Stability index Figures proposed in the EU EoW are different for compost and digestate	?

Minimum dry matter	40%
Minimum Corg content (on dry matter)	10%
Maximum nutrient content (on dry matter)	< N tot:2,5% <P2O5tot: 2% K2O water-soluble: 2%
Min granulometry for powder form	At least 90% of the product should pass a 10 mm sieve

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Other soil improver

- Avoid catch all category
- Limited to products largely used in agriculture (e.g. water retention products)
- **Quality** requirements in development e.g; water retention capacity

Alternatively

- if such products are not largely marketed across Europe, leave MS the choice to regulate or not.

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Growing media

Not possible to describe quality requirements for the whole set of growing media products (conclusions of the FWG on 19 November 2012)

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Thank you for your attention

Please send us your remarks/comments by the end of June at the latest.

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