

The EU Fertilisers Regulation - *update*

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European Sustainable Phosphorus Platform (ESPP)

Wide objectives: **phosphorus stewardship**

Not-for-profit association

- statutes are public <https://www.phosphorusplatform.eu/platform/about-espp> EU Transparency Register no. 260483415852-40

100% membership funded - 40+ paying members to date:

companies in different sectors

- water & waste industries,
- mineral and organic fertilisers, chemicals,
- P-recycling technology suppliers,
- national & regional governments,
- knowledge institutes / research projects

Actions:

- networking, dialogue, information dissemination
- policy and regulation



<http://www.phosphorusplatform.eu/members>

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Nutrient platforms and networks worldwide

Netherlands 2010 <http://www.nutrientplatform.org/>

Germany 2015 www.deutsche-phosphor-plattform.de

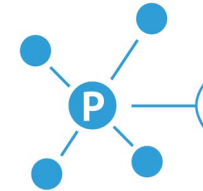
Baltic: ESPP works with Baltic Sea Action Group www.bsag.fi

ESPP European Sustainable Phosphorus Platform 2013

North America Sustainable Phosphorus Alliance (SPA) 2017
(launched as NAPPS in 2015) <https://phosphorusalliance.org/>

Japan PCPR 2011 (Phosphorus Recycling Promotion Council)

Global Partnership for Nutrient Management (UNEP)
<http://www.unep.org/gpa/what-we-do/global-partnership-nutrient-management>



Sustainable
Phosphorus
Alliance



*Without mineral phosphate fertilisers
we could feed
maybe 1/5th
of the current
world population*

Adapted from Dawson et al., Food Policy 2011:
<http://www.sciencedirect.com/science/journal/03069192>

*Mineral nitrogen fertilisers
support around 1/2
of world food production*

Fertilizers Europe 2018, based on Erisman, Sutton et al.,
Nature Geoscience 2008 DOI: 10.1038/ngeo325
https://www.researchgate.net/publication/248828433_How_a_century_of_ammonia_synthesis_changed_the_world



<https://phosphorusalliance.org>

EU Fertilisers Regulation

Flagship of Commission 'Circular Economy Package'

Ambitious:

- *Current EU Fertilisers Regulation (2003/2003) = mineral fertilisers only*
- *New Regulation: mineral & organic fertilisers, plant materials, composts & digestates, soil amendments, growing media, biostimulants, liming materials, etc.*

Precedent: first EU Product Legislation to confer "End-of-Waste" status

Commission proposal March 2016 <http://ec.europa.eu/DocsRoom/documents/15949>

Parliament position October 2017 <http://data.consilium.europa.eu/doc/document/ST-13610-2017-INIT/en/pdf>

Council position December 2017 <http://data.consilium.europa.eu/doc/document/ST-14010-2017-REV-1/en/pdf>

EU Fertilisers Regulation

- *Future markets will have both “National” and CE-mark fertilising products
(plus materials used under “waste” legislation or similar
e.g. sewage biosolids, manures ...)*
- *Food & beverage companies & supermarkets may specify use only of EU-label fertilisers and soil amendments in crop purchasing or sustainability criteria ?*
- *EU Regulation will open the European market for recycling technologies*



EU Fertilisers Regulation - status

20/11/2018: political agreement in
"trilogue" (Council – Parliament – Commission)

12/12/2018- validated by Council (Member States Ambassadors)
<http://data.consilium.europa.eu/doc/document/ST-15103-2018-INIT/en/pdf>

Next steps

- Parliament IMCO Committee
- Parliament Plenary (expected March 2019)
- Member States Ministers

... 2019? publication

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FVPK German Biochar Association (Fachverband Pflanzenkohle)
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ELIQUO WATER GROUP



Joint letter for the proposed EU Regulation on Fertilising Products. Signatory organisations. Page 5 of 9

November 2018: Joint letter coordinated by ESPP, signed by over 100 companies and other stakeholders, asking for Regulation adoption www.phosphorusplatform.eu/regulatory

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EU Fertilisers Regulation – next steps

Three year implementation period
(after publication)

COM proposed mandate to CEN:
- over 200 EU standards to develop or adapt
(COM proposed list available on www.phosphorusplatform.eu/regulatory)

Guidance documents ?

Modification of annexes, STRUBIAS

Table 8 - requested harmonised standards on specific CMCs requirements

Reference information	Reference to legal provisions	Deadline for adoption
8.1 Stability of chelating agents To be developed	Annex I, Part II, PFC 5(B), point 3	24 months after notification of this Decision to CEN
8.2 Stability of complexing agents To be developed	Annex I, Part II, PFC 5(C), point 3	24 months after notification of this Decision to CEN
8.3 Demonstration of the efficacy of nitrification inhibitors To be developed	Annex I, Part II, PFC 5(A)(T), point 2	24 months after notification of this Decision to CEN
8.4 Demonstration of the efficacy of urease inhibitors To be developed	Annex I, Part II, PFC 5(A)(II), point 2	24 months after notification of this Decision to CEN
8.5 Determination of the PAH content in compost and digestate Adaptation of technical specification CEN TS/16181	Annex II, Part 2, CMC 3, point 1(e), second bullet Annex II, Part 2, CMC 5, point 4	24 months after notification of this Decision to CEN
8.6 Determination of the macroscopic impurities content Adaptation of technical specifications CEN TS/16202	Annex II, Part 2, CMC3, point 4 Annex II, Part 2, CMC5, point 5	24 months after notification of this Decision to CEN
8.7 Determination of the maximum plastic content above 2mm To be developed	Annex II, Part 2, CMC3, point 4 and 5 Annex II, Part 2, CMC5, point 5 and 6	24 months after notification of this Decision to CEN

EN

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8.8 Temperature and time profile determination during composting and digestion To be developed	Annex II, Part 2, CMCs 3, 4 and 5, points 3	24 months after notification of this Decision to CEN
8.9 Oxygen uptake rate Adaptation of standard: EN 16087-1	Annex II, Part 2, CMCs 3, 4 and 5, point 6, 4 and 7, point (a) respectively	24 months after notification of this Decision to CEN
8.10 Self heating factor Adaptation of standard: EN 16087-2	Annex II, Part 2, CMC 3, point 6, point (b)	24 months after notification of this Decision to CEN
8.11 Residual biogas potential Adaptation of British standard: OFW004-004	Annex II, Part 2, CMC 4 and 5, point 4 and 7, point (b) respectively	24 months after notification of this Decision to CEN
8.12 Solubility in hot water of UF condensates To be developed	Annex II, part 2, CMC 9	24 months after notification of this Decision to CEN
8.13 Determination of formaldehyde in UF condensates	Annex II, Part 2, CMC 9	24 months after notification of this Decision to CEN

EU Fertilisers Regulation

- how it works ...

A CE-mark product must respect **all four** of:

- Annex I PFCs
= Product Function Categories
- Annex II CMCs
= Component Material Categories
- Annex III = Labelling Requirements
- Annex IV = Conformity Assessment Procedures

Article 6 Obligations of manufacturers

When placing CE marked fertilising products on the market, manufacturers shall ensure that they have been designed and manufactured in accordance with the requirements set out in Annex I for the relevant product function category and the requirements set out in Annex II for the relevant component material category or

ANNEX II Component Material Categories

A CE marked fertilising product shall consist solely of component materials complying with the requirements for one or more of the Component Material Categories ('CMC') listed below.

If you thought 'CMC's were
input materials and 'PFC's
were **finished products** ...
then you've maybe got it partly
right ... maybe ...
but it's not that simple.



EU Fertilisers Regulation

PFCs (Product Function Category)

1. Fertiliser

Organic / Organo-mineral /

Low-carbon (<1% C_{org}) / Inorganic

2. Liming material

3. Soil improvers (organic / inorganic)

4. Growing medium

5. Agronomic additive

6. Plant biostimulants

7. Blends

CMCs (Component Material Category)

1. Virgin materials

2. Mechanically processed plants

3. Compost

4-5. Digestates

6. Food industry by-products

7. Micro-organisms

8. Agronomic additives

9-10. Nutrient & other polymers

[11. Animal by-products]

Plus underway (STRUBIAS):

- recovered phosphate salts

- ashes

- biochars / pyrolysis / HTC materials

EU Fertilisers Regulation - issues

ESPP-led industry Joint Statement 20th November 2017 www.phosphorusplatform.eu/regulatory
- 19 outstanding issues

Resolved in 'trilogue':

- cadmium: 60 mgCD/kgP₂O₅ on entry into force, then review after 7 years
- industrial by-products (more or less?)
- "mineral" fertilisers (<1% organic carbon)
- Commission delegation to modify annexes is maintained

Not resolved:

- growing media: conformity assessment procedure, absence quality criteria
<https://www.growing-media.eu/single-post/2018/11/21/NEW-FERTILIZERS-REGULATION---Missed-opportunity-for-the-growing-media-industry>
- definition of "lots", modification of organic materials in storage
- animal by-products (CMC11) – still an empty box

CMC2 – mechanically processed plant parts ...

- remain applicable: EU legislation on invasive species, plant health legislation
see www.phosphorusplatform.eu/SCOPE126



Joint statement on the EU Fertilising Products Regulation

20th November 2017

Our organisations jointly underline the importance of addressing a number of **important outstanding issues** in the **proposed EU Fertilising Products Regulation**, including those indicated below. Not all of our organisations are directly concerned by all of the points listed, but we consider that they require attention to achieve a final regulatory text which is workable in implementation, which will facilitate innovation and development of the nutrient circular economy and nutrient stewardship, whilst ensuring the protection of farmers, consumers and the environment.

The signatories call the co-legislators to **conclude this important dossier rapidly**, because implementation is strongly awaited by industry and stakeholders to develop the Circular Economy, whilst **ensuring dialogue** with industry and operators to **ensure that the final text is functional**.

In this context, the European Parliament report adopted 24/10/17 and the Council discussions provide in many respects a good starting point for trilogue discussions.

We particularly underline the following issues:

Positive from the European Parliament as adopted

- Confirm the proposed "Mineral" (<1% organic carbon) and "Low-carbon" fertilisers definitions¹ both in Annex I (PFCs) and Annex III (labelling).
- Need to **resolve the exclusion of industry by-products**, which are not waste, as highlighted by the European Parliament².
- Importance of developing **implementation guidance** and of ensuring **assessment of Regulation implementation**³.
- Favour the **co-existence of production lines** for CE-marked and National fertilisers on the same production sites by validating the production site if lines for the processing of input materials authorised are clearly separated from production lines for the processing of other input materials⁴.
- Confirm the objective to **accelerate and support the "STRUBIAS" process**⁵.
- Polymers**, for controlled release fertilisers and for improving stability⁶: ensure that biodegradability criteria are feasible and agronomically appropriate.

Positive from both Parliament and Council

- Animal By Products (ABPs)**: in order to enable access to EU fertiliser status of ABP-based products already used as fertilisers today, fix a short deadline (6months) for finalizing CMC11 and for engaging appropriate modification of the ABP Regulation and its delegated acts to ensure coherence for fertiliser uses⁷.
- Respect normal REACH requirements** (tonnage bands, exempted materials) for relevant CMCs⁸.
- Widen** (with appropriate limitations to clean and safe materials):
 - **CMC4** (Energy Crop Digestate) to admit other plant materials;
 - **CMC3** (Compost) and **CMC5** (Other digestates) to admit secondary materials from the food industry⁹;
 - **CMC6** (Food Industry By-Products) to add specified additional materials¹⁰;
 - **CMC2** (Processed Plant Materials) to extend the specified list of processes¹¹.

In all cases:

¹ as defined in Annex I of Directive 2008/68/EC, as materials susceptible to contain

EU Fertilisers Regulation

Animal by-products

<https://tenor.com/view/waiting-skeleton-gif-6159814>



<http://ec.europa.eu/DocsRoom/documents/15949>

EUROPEAN COMMISSION

European Commission > DocsRoom > Document detail

Proposal for a Regulation on the making available on the market of CE marked fertilising products and amending Regulations (EC) No 1069/2009 and (EC) No 1107/2009

Document date: 17/03/2016 - Created by GROW.A.5.DIR - Publication date: 17/03/2016

CMC 11: CERTAIN ANIMAL BY-PRODUCTS

A CE marked fertilising product may contain animal by-products within the meaning of Regulation (EC) No 1069/2009 having reached the end point in the manufacturing chain as determined in accordance with that Regulation, which are listed in the table below and as specified therein:

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Adopted text states Commission must initiate within six months (of publication) an assessment to define a fertiliser End-Point for ABPs referred in art. 32 of 1069/2009

Underway: STRUBIAS

- **Struvite** = widened to “precipitated phosphate salts”
- **Biochars** = widened to pyrolysis and gasification materials
- **Ash-based materials**

Not included in Fertilisers Regulation (FR) annexes

ESPP suggest definition work be started in 2016

Pre-final JRC report validated September 2018

JRC final report → end 2018?

Then Commission must write FR annex II text (CMCs)

- will probably be based very closely on Pre-Final Report “Recovery Rules”

pages 9-14, see www.phosphorusplatform.eu/regulatory - note some modifications agreed 9/2018 not included in this version

Important: STRUBIAS covers both:

- ash used directly on land as a fertiliser – see conditions
- ash used as an ingredient in chemical processes to manufacture other fertiliser products (“derivates”)
- and similarly for precipitated phosphate salts



Issue not agreed in STRUBIAS

Exclusion of Cat1 Animal By-Product Ash

- from use directly as a fertiliser
- for use in chemical fertiliser production

ESPP meeting with DG SANTE 19/6/18:

- DG SANTE claim that Cat1 cannot be used “legally” in fertiliser, but contradictorily ...
- refer to art. 36 of 1069/2009 = can be authorised by MS on land not accessible to grazing animals

SARIA UK (Remondis Group): <http://www.kalfos.co.uk/>

- Cat1 ABP ash successful P-K fertiliser
- 12 000 tonnes/year
- on arable and grazing land

BMC Moerdijk, Netherlands; Fibrophos, UK; ...

- combustion of poultry litter (ABP Cat2) for renewable energy
- best LCA disposal route www.bmcmoerdijk.nl/en/impact.htm
- but ... also Cat1 ABP, such as Fipronil eggs, African swine fever ...



Food safety

Egg contamination scandal widens as 15 EU states, Switzerland and Hong Kong affected

Brussels spokeswoman says situation is evolving as two men remain arrested following raids in Belgium and the Netherlands



EU Fertilisers Regulation:

To the best of our understanding,
as expected at 15/12/18



<i>in? or out?</i>	Sewage	Manure + Cat 2 & 3 ABPs	Cat1 ABPs	Plant materials	Food waste / biowaste	Food industry
CMC2: plant materials	✗	✗	✗	✓	✗	✗
CMC3: compost	✗	✓	✗	✓	✓	?
CMC4: "energy crop" digestate	✗	✗	✗	(✓)	✗	✗
CMC5: other digestate	✗	✓	✗	✓	✓	?
CMC6: food-industry by-products	✗	✗	✗	✗	✗	✗ (only lime, molasses, vinasse)
CMC11: animal by-products	Undefined empty box (but already included in CMC3, CMC5, STRUBIAS ...)					
STRUBIAS P-salts	✓	✓ (sterilised ?)	✗	✓	✓	✓
STRUBIAS ashes (inc. used as fertiliser process ingredient)	✓	✓	✗	✓	✓	✓
STRUBIAS biochars etc	✗	✓	✗	✓	✓	?

EU manure recycled nutrient products study

*European Commission (DG ENVI & JRC Ispra) study
on recycled nutrient products from manures
for the Nitrates Directive (“processed manures”)*

Priority materials:

- ammonium mineral products from stripping
- reverse osmosis products (“mineral concentrates”)
- precipitated phosphate salts (e.g. struvites)
- liquid fraction of solid/liquid separated manures and digestates
- products with high organic content

*Study will assess: agronomic efficiency, risk of N losses to water and air, environment & health risks
and will develop a standard protocol for testing nitrogen release*

Contacts: JRC Bernd.GAWLIK@ec.europa.eu EG ENVI Wim Debeuckelaere Wim.DEBEUCKELAERE@ec.europa.eu

EU-wide monitoring of manure supporting the development of safe processed manure criteria

In order to promote the sustainable recovery of nutrients from manure, a careful evaluation of agronomic benefit versus possible risks to the environment and health is of pivotal importance. Such an evaluation should be the basis for the development of harmonised criteria that better assess nitrogen fertilisers that are partially or entirely derived from manure.

Within this framework, the role of agricultural application of manure (processed or not) in the propagation of anti-microbial resistance (AMR), interspecies exchange and antibiotic resistant genes as well as the role of veterinary antimicrobial agents is a priority field of research of the European Commission. Indeed, there is a significant data gap on the detection of antibiotics from faeces that have been introduced with

Pressure to recycle phosphorus

Switzerland

- *2016 Decree makes phosphorus recovery obligatory by 2026 from sewage sludge incineration ash* and meat and bone meal ash*
 - * *Switzerland banned land use of sewage biosolids in 2006*
- *Still under discussion:*
 - *%P recovery to be required*
 - *recycled fertiliser criteria*

(Bundesrat decision expected 24/10/2018)

Scope Newsletter n°118 <http://www.phosphorusplatform.eu/scope118>

Scope Newsletter n°121 <http://www.phosphorusplatform.eu/scope121>



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Principales nouveautés dans l'ordonnance sur le traitement des déchets

L'ordonnance sur le traitement des déchets (OTD) est soumise à une révision totale. Voici en résumé les principales modifications :

- Des exigences sont formulées pour la valorisation de certains déchets, laquelle n'était pas encore réglementée dans le droit fédéral. Il s'agit notamment des biodéchets (y compris réglementation relative aux possibles installations de traitement) **et des déchets riches en phosphore.**
- Un plan d'élimination des déchets est exigé pour tout projet de construction. Le maître d'ouvrage est tenu de déterminer les déchets dangereux pour la santé et pour l'environnement (p. ex. amiante, déchets de chantier contenant des biobédons).

Pressure to recycle phosphorus

Germany

- *Legislation May 2017 makes phosphorus recovery obligatory*
 - within 12/15 years
 - for all wwtp > 50 000 p.e.
 - if sewage sludge P > 2% of dry matter
- *Interpretation under discussion:*
%P depends on organics: change with hydrolysis, digestion → will favour mono-incineration
- *Requires to either recover >50% of P or to reduce sludge P to <2%*
- *Land sewage biosolids use banned for larger sewage works, and lower contaminant limits will reduce spreading for smaller works*



Bundesministerium
für Umwelt, Naturschutz
und nukleare Sicherheit

National | Verordnungen | AbfKlärV

Verordnung zur Neuordnung der Klärschlammverwertung
Klärschlammverordnung



Verordnungstext beim Bundesanzeiger
04.10.2017

Neue Klärschlammverordnung in Kraft

Pressure to recycle phosphorus

Baltic

- *HELCOM:*
8 EU Member States, plus Russia and the EU
- *“Recommendation” March 2017 = obligation*
 - *maximise phosphorus and other useful substance recycling*
 - *regular State reporting on measures taken to implement this*
- *Ministerial Declaration March 2018:*
 - *define Nutrient Recycling Strategy by 2020*



Pressure to recycle phosphorus



Government Offices of Sweden

Sweden

- *13 July 2018: Government announces 'enquiry' into*
 - *ban on agricultural use of sewage sludge*
 - *phosphorus recycling regulation*

<http://www.government.se/press-releases/2018/07/inquiry-to-propose-ban-on-spreading-sewage-sludge-on-farmland-and-a-phosphorus-recycling-requirement>

- *Currently working on regulatory proposal*
- *Conclusions expected mid 2019?*



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