Dear Mr Hermann,

Thank you for your letter of 12 July (Ares(2022)5427864) concerning struvites and calcined phosphates to be used in organics.

You refer to the final report on fertilisers by the Expert Group for Technical advice on Organic Production (EGTOP). This report is now finished and can be found on the AGRI-ORGANIC public website 1.

The recommendations concerning these products and the amendments suggested in EGTOP’s report will be discussed in the Organic Production Committee with a view to a possible modification of Commission Implementing Regulation (EU) 2021/1165 2.

Thank you for sending suggestions for related inputs concerning recycled phosphorus products that may be part of future discussions concerning recycling of nutrients in EGTOP. However, the normal way toward authorisation of inputs in organics is via a Member State, who submits a request to the Commission in accordance with Article 24(7) of Regulation (EU) 2018/848 3. The Commission then requests EGTOP for an advice before a possible modification of the list of authorised inputs in above-mentioned Regulation (EU) 2021/1165. If you believe that some of the products mentioned in your letter are not yet covered by the EGTOP opinion, please contact a Member State to discuss the possible submission of a new request.

Yours faithfully,

Pierre BASCOU

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2 EUR-Lex - 32021R1165 - EN - EUR-Lex (europa.eu)
To Elena Panichi, Head of Unit, Organic Farming, DG AGRI B4
Copy: Bas Drukker, Organic Farming Policy and Regulation, DG AGRI B4

12th July 2022

Dear Ms Panichi,

On 17th June 2020 (attached), ESPP and IFOAM-Europe, wrote to DG AGRI asking that preparation be engaged for the inclusion of struvite and calcined phosphates recovered from municipal waste water into the EU Organic Farming Regulation, following the positive recommendation of EGTOP in 2015. These two materials are now integrated into the EU Fertilising Products Regulation (FPR), under CMC12 and CMC13 respectively (published in the Official Journal here).

We note the answer of the European Commission to the European Parliamentary written question E-001995/2022. In this answer, you refer to “EGTOP’s final report on fertilisers to be published soon”.

1) Please can you clarify to what this refers?

The Commission answer E-001995/2022 refers only directly to struvite. We request that not only struvite be considered, but also calcined phosphates (positive opinion from EGTOP already in 2015, now included in the EU Fertilising Products Regulation CMC13).

We attach proposed amendments to Annex II of Regulation 2021/1165 to include struvite and calcined phosphates, taking into account the EGTOP opinion and the criteria of the FPR.

2) Please can you let us know your position on the content of these proposed amendments, and if you consider them feasible to move forward towards implementation, after appropriate consultation of EGTOP.

We note that EGTOP minutes of 8-10 June indicate that “Recycling of nutrients (struvites, stripped nitrogen: requests from MSS)” are on the EGTOP work plan for later in 2022. We attach amendment text proposals or regulatory approaches to include already the following recycled nutrient products (which are on the market and for which information is available) into Annex II of Regulation 2021/1165:

- Recovered elemental sulphur
- Bio-sourced adsorbents used to treat wastewaters
- Phosphorus-rich pyrolysis and gasification materials (inc. biochars)
- Algae and algae products grown to treat wastewater.
- Vivianite
- Recovered nitrogen from off-gases

3) Please can you let us know your position on the content of these proposals, for each of these materials, and if appropriate submit them to consultation of EGTOP.

We would look forward to your response to these three questions and thank you for your attention.

Yours sincerely

Ludwig Hermann, President of ESPP

Attachments:
- IFOAM – ESPP letter of 17th June 2020
- proposed amendments to integrate struvite and calcined phosphates into Annex II of 2021/1165
- proposals to integrate other recycled nutrient materials into Annex II of 2021/1165
**Proposed addition of struvite and calcined phosphates to Annex II of EU Regulation 2021/1126**

**References:**
- EGTOP Opinion of 2/2/2016 on recovered struvite and calcined phosphates
- EU Organic Farming inputs list Regulation 2021/1126
- EU Fertilising Products Regulation 2019/1009 (FPR)
- FPR CMC12 (STRUBIAS criteria for “Precipitated phosphates and derivates”)
- Joint IFOAM – ESPP letter to DG AGRI on struvite and calcined phosphates, 17th June 2020

<table>
<thead>
<tr>
<th>Proposed text for Annex II of Regulation 2021/1165</th>
<th>Explanation</th>
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<tbody>
<tr>
<td><strong>Name</strong></td>
<td><strong>Description, specific conditions and limits</strong></td>
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<tr>
<td>Recovered struvite and recovered precipitated phosphates</td>
<td>Despite redundancy, propose to include both “struvite” (because this is the principal material concerned, and to refer to the EGTOP Opinion of 2/2/2016) and “precipitated phosphates” (because this is the term used in the FPR).</td>
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<tr>
<td>Precipitated phosphate product as defined in the EU Fertilising Products Regulation 2019/2009 Annex II CMC12, but excluding “derivates” as defined in points 4-5 of this CMC12</td>
<td>The FPR CMC12 definition “precipitated phosphates” is wider than only “struvite” as considered by EGTOP in 2016, however the overall principles considered by EGTOP are the same (recycling, phosphorus supply – subject to the comments below concerning PFC1, contaminants, etc). FPR CMC12 does not specify “recovered”. This is because the construction of the FPR means that an operator producing “precipitated phosphates” from virgin chemicals would never go via CMC12 (virgin chemicals can go via CMC1 which is much easier). For the Organic Farming Regulation, it could however be specified “RECOVERED” to avoid this ambiguity. In particular, CMC12 allows as inputs not only municipal sewage (as evaluated positively by EGTOP) but also CMC 12 1(b) food processing wastewaters (and similar), (c) biowaste, (e) biomass and in (d) processing residues from these inputs. These can be considered to be acceptable for Organic Farming because they are listed in Regulation 2021/1126. CMC12 also allows in (f) other non-waste-derived materials, which is necessary to cover additives and processing chemicals. CMC12 also allows in point 6 certain Animal By-Products, subject to End Point conditions, which is coherent with 2021/1126 listing of bones, animal manures and other animal by products (subject to the exclusion of “factory farming”, see below). The wider list of input materials (comparing CMC12 to the EGTOP Opinion) thus seems coherent with the Organic Farming Regulation texts and objectives.</td>
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</table>
“Derivates” in the FPR refers to chemically reprocessed struvite / precipitated phosphates. This opens to wide and undefined use of chemicals. It is not necessary in that the main route is recovered struvite used directly in agriculture (this is what was assessed by EGTOP). “Derivates” should therefore be excluded.

The FPR limits for contaminants and pathogens are considered adequate to ensure health and environmental safety in Organic Farming. However, the FPR specifies limits for different contaminants in different places, some in CMC12, some in PFC 1(C). It is therefore necessary to specify respect of both CMC12 and PFC 1(C). The FPR CMC12 allows any precipitated phosphate. Some such phosphates may have low plant P availability. EGTOP stated “Struvite is proposed as a slow-release P fertilizer with a higher solubility in the root zone than rock phosphate. This product can be used to satisfy plant needs for phosphorus”. The FPR Annex III Part II (4b), defining “Mineral fertiliser”, defines minimum plant availability of the product (>40% water or > 75% NAC) so ensuring respect of EGTOP's concern to satisfy plant needs for P. NOTE: high water solubility will not occur because water soluble phosphates will not precipitate.

Points (4a) and (4c) of PFR Annex III Part II are not relevant because: (4a) fixes a limit for organic carbon, whereas a limit is already fixed in CMC12, and two limits would be confusing and (4b) concerns N fertilisers.

Factory farming origin manure forbidden

Similar wording as for other entries of Regulation 2021/1165 Annex II. “Manure” is specified to clarify that for example struvite recovered from processing of animal by-products such as bones is acceptable, irrespective of whether the bones are from Organic or factory farming, which is coherent with the inclusion of “Products or by-products of animal origin” including “Bone meal or degelatinised bone meal” in 2021/1126 (this entry does not have the mention “not from factory farming”).

<table>
<thead>
<tr>
<th>Name</th>
<th>Description, specific conditions and limits</th>
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<tbody>
<tr>
<td>Renewable calcined phosphates</td>
<td>The term used in the EGTOP Opinion is “calcined phosphates”, but this is not legally defined. It is proposed instead to use the terminology of the FPR Annex II CMC 13 (STRUBIAS) + “Thermal oxidation materials and derivates”</td>
</tr>
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| Renewable phosphates from thermal oxidation | Produced by thermal treatment of ash produced during the combustion/incineration of municipal sewage sludge or similar. Products respecting the FPR CMC13 criteria with inputs other than 1e, 1f, 1h and 1j and 2. This is the description used in the EGTOP Opinion, adapted to limit to ONLY “sewage sludge or similar”, in order to respect the spirit of the EGTOP Opinion (page 17, 3rd paragraph). The input materials included are:
- CMC 13 - 1e = sewage sludge, as per the EGTOP Opinion
- 1f = wastewater from food processing etc, which is comparable to sewage sludge but with less concerns about contaminants
- 1h and 1j = necessary processing chemicals and auxiliary fuels needed to effective incineration/combustion operation.
- 2 = animal by-products. This is coherent in that 2021/1165 already lists ‘bone meal’ and ‘degelatinised bone meal’ |
| ChromiumVI should be below 0.5 mgP/kg | The FPR fixes a limit of 2 mgCrVI/kg (PFC 1(C)). EGTOP suggested “non detectable”, but this is undefined and will vary with technological progress. We suggest a feasible limit which is an order of magnitude lower than the FPR limit. |

ESPP 14/4/22 - Page 2 of 3
| **The product shall respect the following criteria of the EU Fertilising Products Regulation 2019/2009:** |  |
| --- | --- |  |
| • Annex II CMC13 (Thermal oxidation materials or derivates, subject to the remarks above) |  |  |
| • Annex I PFC 1(C) Inorganic fertiliser |  |  |
| • Specifically, Annex I PFC 1(C)(I)(a)(i)-2(b) |  |  |
| • Annex III Part II (PFC 1 Fertiliser) (4b) |  |  |
|  |  |  |
| As for recovered struvite above, reference to both CMC13 and PFC 1(C) is necessary to ensure respect of FPR contaminant limits and reference to Annex III Part I (4b) is necessary to ensure plant availability. Additionally reference to Annex I PFC 1(C)(I)(a)(i)-2(b) ensures simply that the product contains at least 12% $P_2O_5$. This is necessary to ensure that the “Thermal oxidation material” is indeed a “phosphate”, in that the FPR category “Thermal oxidation materials” can cover products with near zero phosphorus content, such as liming materials. |  |  |
|  |  |  |
| **Product with < 25% water P solubility.** |  |  |
| Including “derivates” (as defined in the FPR Annex II CMC 13 STRUBIAS) opens to products such as calcium phosphate recovered from sewage sludge incineration or gasification ash or from meat and bone meal ash (e.g. EasyMining Ash2Phos PCP, Kopf Syngas recovered calcium-X-phosphate). These are comparable for sustainability and safety to the specific “calcined phosphates” product considered in the EGTOP Opinion. However, “derivates” (as defined in the FPR Annex II STRUBIAS) can include water soluble products. Conform to the Organic Farming legislation requirement for “low solubility”, a maximum 25% water solubility as per the FiBL reflections paper 2021. |  |  |
| **Factory farming origin manure forbidden** |  |  |
| Similar wording as for other entries of Regulation 2021/1165 Annex II. “Manure” is specified to clarify that for example struvite recovered from processing of animal by-products such as bones is acceptable, irrespective of whether the bones are from Organic or factory farming, which is coherent with the inclusion of “Products or by-products of animal origin” including “Bone meal or degelatinised bone meal” in 2021/1126 (this entry does not have the mention “not from factory farming”). |  |  |
### Proposed list of “new” recycled nutrient materials for consideration for addition to Annex II of EU Regulation 2021/1126

<table>
<thead>
<tr>
<th>Name</th>
<th>Description, specific conditions and limits</th>
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<tr>
<td>(Recovered) elemental sulphur</td>
<td>Elemental sulphur and salts of sulphate recovered from gas purification or gas control processes, as defined in the EU Fertilising Products Regulation 2019/2009 Annex II CMC15. The product shall also respect the criteria of the EU Fertilising Products Regulation 2019/2009 Annex I PFC 1(C) Inorganic fertiliser.</td>
<td>“Elemental sulphur” is already listed in 2021/1126, but recovered sulphur products may be a mixture of elemental sulphur and sulphur salts. The FPR limits for contaminants and pathogens are considered adequate to ensure health and environmental safety in Organic Farming. However, the FPR specifies limits for different contaminants in different places, some in CMC15, some in PFC 1(C). It is therefore necessary to specify respect of both CMC15 and PFC 1(C). It is probably not necessary to modify the Regulation Annexes 2021/1126, if COM can confirm that recovered elemental sulphur is included under the existing line “Elemental sulphur” with appropriate tolerance for presence of low levels of other sulphur compounds. For example, see ESPP Fact Sheet “Fertipaq Sulphur” 7/2021</td>
</tr>
<tr>
<td>Bio-sourced adsorbents used to treat wastewaters</td>
<td>Material generated by adsorption of nutrients from wastewaters onto bio-sourced materials. The bio-sourced material shall be listed for use in Organic Farming in 2021/1126 Annex II. The product shall respect EU Fertilising Products Regulation 2019/2009 Annex I PFC 1(A) Organic fertiliser or I(C) Inorganic fertiliser. The product shall also respect EU Fertilising Products Regulation 2019/2009 Annex II CMCWW.</td>
<td>Reference to PFC 1(A) or 1(C) ensures that the material has fertiliser value. The FPR limits for contaminants and pathogens are considered adequate to ensure health and environmental safety in Organic Farming. However, the FPR specifies limits for different contaminants in different places, some in CMCs, some in PFC 1. It is proposed to respect both CMCWW (which has a comprehensive and demanding list of contaminant limits) and PFC 1. For example, see ESPP Fact Sheet “Phos4You crabshell adsorbent” 6/2021. However, this example would currently be excluded, because 2021/1126 includes “Mollusc waste. Only from organic aquaculture or from sustainable fisheries” but NOT crab waste.</td>
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</table>
Phosphorus-rich pyrolysis and gasification materials (inc. biochars), applied as a fertiliser.

The product shall respect the criteria of the EU Fertilising Products Regulation 2019/2009 Annex II CMC14 “Pyrolysis and gasification materials”.
The product shall also respect EU Fertilising Products Regulation 2019/2009 Annex I PFC 1(A) Organic fertiliser.
Factory farming origin manure forbidden

2021/1126 already lists biochar as a soil conditioner “Biochar – pyrolysis product made from a wide variety of organic materials of plant origin and applied as a soil conditioner. Only from plant materials, when treated after harvest only with products included in Annex I”.

Phosphorus-rich biochar, e.g. from municipal sewage, would provide a renewable phosphorus source for Organic Farming, and would be coherent with the EGTOP Opinion of 2/2/2016 which considers acceptable all products from municipal sewage if the production process ensures pathogen safety and minimises contaminants. However, the EU FPR STRUBIAS CM14 criteria (“Pyrolysis and gasification materials”, which includes biochars) currently exclude sewage sludge as an input for biochar, whereas EGTOP specifically stated (in the same Opinion) that struvite and calcined phosphates should be admitted for Organic Farming only after inclusion into EU fertilisers regulation. The FPR CMC14 allows as inputs for biochar production: food processing wastes, biomass, biowastes and certain animal by-products, which can be considered to be acceptable for Organic Farming because they are listed in Regulation 2021/1126. It is therefore proposed to refer to the FPR CMC 14 criteria as appropriate to define input materials and ensure contaminant and pathogen safety.

The FPR limits for contaminants and pathogens are considered adequate to ensure health and environmental safety in Organic Farming. However, the FPR specifies limits for different contaminants in different places, some in CMC14, some in PFC 1. It is therefore necessary to specify respect of both CMC14 and PFC 1.

Reference to PFC1(A) ensures that the biochar is indeed a fertiliser (not a “soil conditioner”, as already included in 2021/1126), because the PFC 1(A) criteria specify minimum nutrient contents.

FPR CMC14 authorises biochars from manures, which is a potentially significant route for recycling phosphorus and other nutrients, so the exclusion of “factory farming” should be indicated. It is specified that this exclusion applies only to “Manure”, to clarify that for biochars from processing of animal by-products such as bones is acceptable, irrespective of whether the bones are from Organic or factory farming, which is coherent with the inclusion of “Products or by-products of animal origin” including “Bone meal or degelatinised bone meal” in 2021/1126 (this entry does not have the mention “not from factory farming”).

For example, see ESPP Fact Sheets “Pyreg biochar” 6/2021
ESPP Fact Sheet “TerraNova” is not covered, in that this is not a biochar but a derivate, produced by chemical processing of a (sewage sludge) biochar.
| **Algae and algae products grown to treat wastewater.** | As far as directly obtained by the processes specified for “Algae and algae products” in 2021/1126. Algae grown as part of a system to treat municipal sewage or wastewaters from processing of foods, beverages, pet foods, animal feeds or dairy products. The product shall respect EU Fertilising Products Regulation 2019/2009 Annex I PFC 1(A) Organic fertiliser. The product shall also respect EU Fertilising Products Regulation 2019/2009 Annex II CMCWW. “Algae and algae products” are already included in 2021/1126 but only for “from organic or collected in a sustainable way” (that is, harvested in nature). Growth of algae to treat wastewaters enables sustainable algae production, by recycling secondary nutrients to the algae biomass, and the algae systems are also effective in reducing pathogens and decomposing organic contaminants. The acceptance of algae grown in sewage treatment would be coherent with the EGTOP Opinion of 2/2/2016 which considers acceptable all products from municipal sewage if the production process ensures pathogen safety and minimises contaminants. Pathogen and contaminant safety is ensured by respect of the EU FPR criteria. Reference to PFC 1(A) ensures that the biochar is indeed a fertiliser (not a “soil conditioner”, as already included in 2021/1126), because the PFC 1(A) criteria specify minimum nutrient contents. The FPR limits for contaminants and pathogens are considered adequate to ensure health and environmental safety in Organic Farming. However, the FPR specifies limits for different contaminants in different places, some in CMCs, some in PFC 1. It is proposed to respect both CMCWW (which has a comprehensive and demanding list of contaminant limits) and PFC 1. For example, see ESPP Fact Sheet “Sabana microalgae” 12/7/2021 |
| **Vivianite** | No action needed because “Inorganic micronutrient fertilisers” are already listed in 2021/1165 (e.g. iron) |
| **Recovered nitrogen from off-gases** | As defined in CMC15 of the EU Fertilising Products Regulation. Factory farming origin manure forbidden | EGTOP 6-8 June 2018: “Novel fertilisers obtained by stripping of ammonia” recommended not to include in Annex 1. Although the application concerned use for nutrition of algae, the opinion seems to be general. An updated Opinion could be requested from EGTOP taking into account other uses and different possible recovered products. |
To:  
- DG AGRI, Nicolas Verlet, Head of Unit Organic Farming, European Commission DG Agriculture  
- DG GROW, Louise Prista, Head of Unit Chemicals, European Commission DG GROW  

Object: inclusion of recovered struvite and calcined phosphate in Organic Farming Regulation annexes  
17th June 2020

Dear Ms Prista, dear Mr Verlet,

We would like to draw your attention to the opportunity to include recovered struvite and calcined phosphate in the revision of the Annex listing “authorized fertilisers and soil improvers” of the EU Organic Farming Regulation 2018/848 (OFR) in coherence with the inclusion of these products in the “STRUBIAS” annexes of the EU Fertilising Products Regulation 2019/1009 (FPR).

The authorisation of phosphate fertilisers from secondary sources (under appropriate conditions) is coherent with the overall sustainability objectives of Organic Farming and corresponds to a need in Organic Farming for phosphorus inputs to maintain crop productivity and an insufficiency of renewable phosphorus sources.

As you are aware, the (EU Expert Group for Technical Advice on Organic Production) Opinion adopted 14-15 December 2015 recommends the inclusion of recovered struvite, related to struvite obtained from municipal waste water treatment plants, and of calcined phosphates, produced by thermal treatment of ash, “without further consultation of the Group (EGTOP) and without the submission of another dossier”, under certain specified conditions, and subject to these materials being included in EU fertilisers regulation.

The expected inclusion of “Precipitated phosphate salts and derivates” and of “Thermal oxidation materials and derivates” in the FPR (draft annexes CMC 12 and 13) will resolve the latter above EGTOP condition.

To our understanding, it is anticipated that the final texts of these FPR annexes could be validated at the next EU Fertilisers Experts Group 26th June 2020, so enabling publication in 2020. We also understand that the finalisation of the new OFR Annex 2 listing “authorized fertilisers and soil improvers” is underway. We would suggest therefore that it should be possible to include recovered struvite and calcined phosphates in this new OFR Annex 1.

We would propose that the other conditions specified by EGTOP be addressed as follows in the OFR annex 1:

- **For recovered struvite:**
  - **Definition:** we propose to specify that the material must show sameness to struvite, using the same wording as in REACH art 2(7)d(i) “the substance that results from the recovery process is the same as the substance that has been registered ….”. Note: we propose to not specify that the substance must be “REACH registered as struvite”, because many struvite producers will use Art. 2(7)d of REACH (exemption from registration of producers of “recovered” substances, on condition that the substance has been registered by one producer, which has indeed been done for struvite). Also, the REACH registration obligation is indicated in FPR CMC12 so duplicating this could lead to contradiction or confusion.
EGTOP indicates that there should be **requirements for hygiene and pollutant limits**, but without specific indications. We propose to rely on the pathogen and contaminant limits specified in the FPR (CMC12, PFCs), see following point.

**The substrates for struvite** were discussed at length in the JRC expert group STRUBIAS in order to ensure safety and consumer confidence, and the conclusions are transposed into the FPR annex 12, see below. EGTOP recommends that “the production process should preferably be based on the use of municipal waste water”. According to IFOAM EU, the authorisation for organic farming should be explicitly limited to struvite recovered from municipal wastewater treatment, to avoid the use of another source of fertility from non-organic agriculture or food processing.

EGTOP implicitly indicates that the struvite should **conform to EU fertilisers regulations.** However, a producer may wish to sell struvite under national not EU (CE-Mark) fertiliser status. We propose specify in the OFR Annex1 that struvite must respect EU fertiliser PFC* and CMC* criteria, but NOT include an obligation of CE-fertiliser status. This means that the respect of the EU criteria could be verified by the producer themselves using self-certification (as applicable for other OFR Annex I requirements) and NOT necessarily by Module D1 (external certification). This offers more flexibility and lower costs for small, local producers, conform to the overall objectives of Organic Farming

* PFC and CMC as defined in the Fertilising Products Regulation: Product Function Category and Component Material Category

- **For calcined phosphates:**
  - **Definition:** we propose to specify in the OFR Annex 1 only “calcined phosphates produced by thermal treatment of ash” (see comment below), as considered by EGTOP. The definition of “thermal oxidation materials and derivates” in the FPR is much wider than this. Calcined phosphates should fit into this FPR definition (CMC annex 13, as specified below) but this is not a sufficient definition.
  - **For contaminant limits,** we propose (as for struvite above) to rely on the FPR limits (CMC13 and PFCs) but also to specify in the OFR Annex 1. However, EGTOP proposed also “CrIV not detectable”: this is not workable and we propose to replace by a low but specified limit.
  - **For substrates:** the EGTOP Opinion on calcined phosphates explicitly specifies the substrate municipal sewage, we therefore propose to define calcined phosphates in the OFR Annex 1 as: “calcined phosphates produced by thermal treatment of sewage sludge incineration ash”.
  - As for struvite above, we propose to specify in the OFR Annex2 that calcined phosphates must **respect CE fertiliser PFC and CMC criteria**, but NOT include an obligation of CE-fertiliser status.

We hope that it will be possible to meet your services in coming weeks to discuss these proposals and look forward to hearing from you.

Yours faithfully,

Eduardo Cuoco, Director, IFOAM EU

Ludwig Hermann, President, ESPP