

13 October 2016

## **EBA Position on the revision of the Fertilisers Regulation**

The European Biogas Association (EBA) strongly supports the current revision of the Fertilisers Regulation 2003/2003 with the aim to create an EU-wide market for organic fertilisers. Setting a harmonised legal framework for fertilisers from secondary raw materials is essential to boost Europe's transformation towards a Circular Economy based on resource efficiency and green jobs. This will support nutrient recycling and establish a level playing field for organic fertilisers vis-à-vis mineral fertilisers. In addition it will also set clear rules under which organic materials can cease to be waste and can safely become fertilising products, thereby removing legislative barriers.

The anaerobic digestion (AD) sector produces both renewable energy (biogas) and digestate. Europe is a world leader in technological development and deployment with over 70.000 fulltime jobs and 17.240 biogas plants in 2014. Most of these plants produce digestate, a valuable organic fertiliser, from a variety of organic materials including livestock manure, dedicated crops and plant residues, biowaste from municipalities and by-products from the food & beverage industry (e.g. spent grain from breweries). Digesting organic waste or agricultural material such as livestock manure significantly improves their agronomic value, compared to applying them to land in raw form. Anaerobic digestion is a gateway technology which can be combined with other enhancing techniques by subjecting digestate to further treatment such as post-composting or nutrient micro filtration, so as to maximise fertilising effects. You can find a short factsheet explaining the main agronomic features of digestate [here](#).

This position paper refers to the March 2016 Commission [proposal](#) 2016/0084 (COD) on fertilising products. As representative of the majority of European digestate producers in Europe, EBA would like to provide three concrete recommendations to strengthen the impact of this revision on Europe's Circular Economy:

- 1. Modify organic products' quality requirements from FM to DM- Annex I, PFC 1 A (I+II) and PFC 3 A**
- 2. Add manure as eligible input material for digestate from CMC4 - Annex II**
- 3. Ensure digestate processing requirements keep up with innovation - Annex II, CMC4 and CMC5**

**Our key aim is to integrate safe and reliable organic fertilisers into the European market.** While this is EBA's shortened position, you can find our **extended position with further explanations and additional technical recommendations** [here](#).

# 1 Quality requirements for organic products - Annex I, PFC 1 A (I+II) and PFC 3 A

Raw digestate is a rather bulky organic fertiliser which is usually applied with special slurry tankers to supply nutrients needed by plants. While its water content might seem high compared to conventional fertilisers, vast amounts of nutrients and organic carbon can be recovered from it (see table 1) at a very competitive price for customers.

Application of 25 m <sup>3</sup> raw digestate brings			
	10 % quantil	average	90 % quantil
[kg ha <sup>-1</sup> ]			
<b>C<sub>org</sub></b>	<b>152</b>	<b>384</b>	<b>740</b>
<b>N<sub>total</sub></b>	<b>33</b>	<b>72</b>	<b>123</b>
<b>NH<sub>4</sub> N</b>	<b>11</b>	<b>44</b>	<b>91</b>
<b>K<sub>2</sub>O</b>	<b>14</b>	<b>35</b>	<b>57</b>
<b>P<sub>2</sub>O<sub>5</sub></b>	<b>11</b>	<b>25</b>	<b>37</b>
[g ha <sup>-1</sup> ]			
<b>Cr</b>	<b>4</b>	<b>21</b>	<b>58</b>
<b>Cd</b>	<b>0.1</b>	<b>0.5</b>	<b>1</b>
<b>Pb</b>	<b>1</b>	<b>8</b>	<b>22</b>
<b>Hg</b>	<b>0</b>	<b>0.1</b>	<b>0.4</b>
<b>Ni</b>	<b>4</b>	<b>19</b>	<b>49</b>

**Table I:**  
The example shows the amounts of nutrients and heavy metals within 25 m<sup>3</sup> of raw digestate, compared to heavy metals application limits in Austria.  
Although higher total application amounts are needed for plant nutrition, the contaminants load is usually far below national limit values.

The table below shows:

- the values proposed as **quality requirements by the Commission** (in light blue) for nutrients and organic carbon in both organic fertilisers and organic soil improvers;
- the **average values of untreated digestate** (in light green) both expressed in fresh matter and dry matter – average values were derived from 2000 digestate samples of 12 EU countries.

Table 2 compares the Commission's proposed quality requirements for organic fertilisers and organic soil improvers with average values for digestate from lab measurements.

	A	B	C	D	E	F
		Requirements in fresh matter as is in the Commission proposal for the following:			Digestate average values (EBA study >2000 digestate samples)	
		Solid organic fertiliser based on Fresh Matter	Liquid organic fertiliser based on Fresh Matter	Organic soil improver based on Fresh Matter	Based on Fresh Matter	Based on Dry Matter
1	Dry Matter content	≥40%*	≤40%*	≥40%*	6%	-
2	Nitrogen (N)	2,5%	2%	-	0,3%	10%
3	Phosphorous (P <sub>2</sub> O <sub>5</sub> )	2%	1%	-	0,1%	3%
4	Potassium (K <sub>2</sub> O)	2%	2%	-	0,14%	5%
5	Organic Carbon (C <sub>org.</sub> )	≥15%	≥5%	≥7,5%	1,5%	25%

\*EBA proposes to change DM minimum requirements in cells 1B, 1C and 1D to: ≥20% for solid organic fertiliser; ≤20% liquid organic fertiliser; split soil improver into solid (≥20%) and liquid (≤20%) categories.

Sources: thresholds in columns B, C and D taken from Annex I of the EC's Fertilisers Regulation proposal 2016/0084; average values for digestate in columns E and F were calculated by EBA from over 2000 digestate samples from across Europe provided by digestate producers.

From the table it can be seen that the current minimum quality requirements based on fresh matter (light blue) are much higher than those of common digestate (light green), effectively excluding it from all three relevant product function categories. Not only unprocessed digestate falls out, also when separated (a common in-farm practice) both digestate's liquid and solid fractions also fall out of these categories; note that also a large share of composts are excluded based on their average nutrient and dry matter composition. In our view, this goes against the primary objective of the revision to include organic fertilisers and more generally against the Circular Economy priority to recover secondary raw materials.

To remedy this we suggest **keeping the quality requirement values for organic fertilisers and soil improvers as already proposed by the Commission in former working documents: change from "by mass" to "in dry matter", divide organic soil improver in two categories.** The requested thresholds would then be set again in dry matter as follows:

- **Solid organic fertilizers**
  - **DM**  $\geq 20\%$ ;
  - N:  $\geq 1,5 \%$
  - P<sub>2</sub>O<sub>5</sub>:  $\geq 0,5 \%$
  - K<sub>2</sub>O:  $\geq 0,75 \%$
  - One of the main nutrient criteria has to be fulfilled
- **Liquid organic fertilisers**
  - **DM**  $\leq 20\%$ ;
  - N:  $\geq 1,5 \%$
  - P<sub>2</sub>O<sub>5</sub>:  $\geq 0,5 \%$
  - K<sub>2</sub>O:  $\geq 0,75 \%$
  - One of the main nutrient criteria has to be fulfilled
- **Split organic soil improvers into two categories** based on their dry matter content:
  - **Solid organic soil improvers at 20% and over;**
  - **Liquid organic soil improvers below 20%.**

These modifications would bring back in a significant share of digestate with higher agronomic properties within the scope of the revision. This is more coherent with the proposal's safety requirements (e.g. limits on heavy metal contaminants or impurities), where values are set in dry matter as is consistent with standard measurements and existing national legislation. Moreover, this would have no impact on the thorough labelling requirements in annex III that were proposed by the Commission (in fresh mass) to ensure that farmers make informed decisions. Subdividing the organic soil improver category at 20% dry matter content would allow more digestate to be included, and in addition this threshold would be a better indication for farmers for the type of spreading machinery and storage facilities which they should use for different products (e.g. products below 20% are usually liquid enough to be pumped).

## 2. Eligible input materials for digestate - Annex II, CMC4

Under the current Commission proposal there are 2 component material categories (CMCs) which are relevant for the produce of anaerobic digestion: CMC4 for "Energy crop digestate" and CMC5 for "Other digestate than energy crop digestate". Both have very similar safety requirements (retention time, temperature profiles, etc) but the key difference is that CMC4 has less administrative burden for producers than CMC5. We believe that this fast track is a good way to facilitate in-farm digestate production from safe and homogeneous agricultural feedstock, which contrasts with urban feedstock streams such as biowaste that may have more variations and commonly need further steps for filtering

impurities and quality control. EBA's concern with CMC4 is that out of the over 12.000 rural biogas plants in Europe, only a small fraction of them (just a few hundred facilities) carry out mono digestion of energy crops which would qualify as CMC4 digestate. Most rural biogas plants co-digest manure and/or agricultural residues (i.e. straw) with or without energy crops, meaning that their digestate would fall under CMC5 and be subject to the same administrative burden as plants using non-agricultural feedstock (e.g. biowaste from municipalities). We see it as disproportionate to require farmers to have to apply conformity assessment procedure D1 (Annex IV), which is the strictest in the Fertilisers Regulation, to digest low risk substances such as manure and straw which are commonly spread on fields in their raw form by farmers and without external assessment. Therefore, we strongly recommend the **inclusion of straw and manure to CMC4, both to the title of the CMC and to the list of eligible input materials.**

### **3. Processing requirements for digestate - Annex II, CMC4 and CMC5**

EBA supports the general ambition for robust safety requirements for digestate, such as the proposed limit values on heavy metals and impurities, as well as stability criteria. Nonetheless, while the end product should be subject to these values, the process itself for digesting material anaerobically should not be subject to rigid parameters which would hinder technological development and favour certain technologies over others. Point 3 within CMC4 and CMC5 proposes very specific retention times and temperature profiles which should not be generalised to all biogas plants. Currently there are big technological advances taking place in digestion (retention time, temperature, pre-treatment). In order to allow scientific advancement to go unhindered without compromises on safety, EBA proposes to **include under point 3 (e) within CMC 4 and CMC 5 an additional point f: "a validated process recognised by notified bodies."** This would also be in line with requirements in ABP regulation.