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EBA's comments on the essential requirements of the Fertiliser Regulation

The European Biogas Association (EBA) appreciates the opportunity to comment the proposed essential requirements for fertilisers presented at the expert meeting on 2 June 2014.

EBA supports DG Enterprise's proposal for fertiliser categories (inorganic fertiliser, organic fertiliser, organo-mineral fertiliser, soil improver, growing media) and strongly calls for EU-wide End of Waste (EoW) criteria for biodegradable waste that should be introduced either, and preferably, as a separate piece of legislation under the Waste Framework Directive (WFD) or integrated in the new Fertiliser Regulation. Separate legislation on EoW would certainly be the best option.

EBA defines digestate as follows: *Digestate means solid and liquid material from a fermentation process under controlled anaerobic conditions of biogenic materials. It can be presented as whole digestate or separated in a liquid phase and a (semi-) solid phase.*

New fertiliser types derived from digestate are quickly developing and entering the market of fertilisers. To our understanding, digestate is an organic fertiliser once it fulfils the essential criteria for organic fertiliser of the upcoming Fertiliser Regulation. If digestate fulfils the requirements for soil improvers, it can also be traded as a soil improver. When digestate is upgraded, it is possible that derived products will fall under the category 'inorganic fertiliser'. Therefore, it would not make much sense to create an own fertiliser category called "digestate" as this would rather hinder the ongoing development than accelerate.

Digestate that shall qualify EU-wide as a fertiliser, can be produced from agricultural residues (manure, straw etc.), energy crops or source-separated organic waste streams. Inclusion of non-separated organic waste and sewage sludge would cause an unreasonably high administrative burden due to additional analyses required. Depending on the feedstock, digestate falls under the scope and the requirements of other EU legislation too: in the case of digesting bio-waste, the rules of the Waste Framework Directive (WFD) apply whereas in the case of animal by-products like manure and slaughterhouse waste, digestate is subject to the Animal By-Products Regulation (ABPR).

It is indeed essential for the evaluation of organic fertiliser to make a clear difference between the used feedstock and its origin, e.g. digestate produced from agricultural sources like energy crops and harvesting by-products are no wastes in terms of WFD and no animal by-products in terms of ABPR. Energy crops, manure, harvesting residues etc. are clean input materials which as well can be used

directly as farm fertiliser without waste character (so called “Wirtschaftsdünger” in German legislation). In order not to establish additional economic burden in comparison to non-digested farm fertiliser without ecological improvement, the requirement on analysing physical impurities, pathogens, microbial and organic contaminants should not apply to these products.

EBA also calls for clarification on how manure will be included in the upcoming Fertiliser Regulation; will it be included and will it need to fulfil the requirements of the upcoming Fertiliser Regulation? Will there be a difference between the use merely on national level and trading over national borders? In order to avoid any discrimination between digested manure and raw manure (destined only for the use on national level), it is important to set the same requirements for both manure types. To EBA it is in any case of high importance that EU-wide legislation on fertilisers will soon be introduced to facilitate the international trade of digestate as a fertiliser and to overcome any trade barriers related to differing and less stringent national regulations. Member States shall further on have the possibility to develop national regulations for fertilisers that are not included in the EU regulation, e.g. sewage sludge. As a result, these fertilisers can be traded and applied only on national level.

The use of digestate and composts as organic fertilisers or soil improvers promotes the EU’s efforts to move towards circular economy and higher recycling rates. The EU should thus not set too stringent thresholds and limit values for these products to avoid any administrative burdens. However, the requirements to be fulfilled and the categorisation of fertiliser have to be generally based on dry matter, to have a clear view on the content of nutrients, heavy metals etc. and to ensure coherent classification with other fertilisers and to prevent dilution with water.

Quality requirements proposed for organic fertilisers and organic soil improvers

As already mentioned above, the best option is that the requirements that need to be fulfilled are based on dry matter basis. Only for labelling matters, the nutrients can also be expressed on fresh matter basis which can help consumers to calculate the correct application load.

In general, EBA does not see a need to separate organic fertilisers in a solid and liquid category. Creating more categories than necessary only confuses consumers and does not bring any additional advantages. Therefore, we are strongly against setting an additional requirement on “minimum dry matter content” for organic fertilisers and the separation of organic fertilisers into two, not needed, categories.

Furthermore, we do not see a need for organic soil improvers to fulfil the requirement “minimum dry matter content”. The only important requirement should be the organic matter content based on dry matter. The soil improving effect of 1 t organic matter does not depend on its application consistency, whether it is solid or liquid. Only for labelling matters, it can also be based on fresh matter basis.

So far organic fertilisers and organic soil improvers had to fulfil the requirement “minimum organic matter content” but not “C_{org}”. In existing national regulations only the organic matter content is as a requirement in force. Hence, organic matter content has so far been analysed but not C_{org}. Thus, we believe that organic matter content is the right criterion measuring the soil improving quality also in

the future. A change from organic matter content to C_{org} would also cause a change of the expressed minimum content which has to be fulfilled.

For the minimum organic matter content European Biogas Association proposes a limit value of 15%, based on dry matter basis.

Minimum nutrient content on dry matter for organic fertilisers: It should be enough for a product to be regarded as an organic fertiliser when only one of these three nutrients (nitrogen: 1.5%, phosphorus, P_2O_5 : 0.5% or potassium K_2O : 0.75% **based on dry matter**) exceeds the minimum limit. Only for the sake of calculating the correct application load, the nutrient content based on fresh matter can also be labelled.

Technical characteristics: It makes no sense to determine ureic nitrogen in organic fertiliser as due to the technique, no ureic is formed and therefore, it should be deleted as a requirement. Moreover, it makes no sense to set a minimum limit on organic nitrogen. The classification as an organic fertiliser says that the product is produced from organic materials and therefore nitrogen comes originally from organic sources. It does not predicate that N has to stay in organic form and therefore, this figure does not bring any necessary information for consumers. For the right determination and calculation of the nitrogen availability for plant nutrition, the best option is to determine and label N total and ammonium N as it has been done so far. Thirdly, contained K_2O in organic fertiliser is usually nearly 100% water soluble. Due to these facts, it is sufficient to declare K_2O total. 'P soluble in mineral acid' should be changed into 'P total', since even though approximately 50% of P_2O_5 is usually linked to organic matter, the whole content of P_2O_5 is available to plants within one year after application. Thus, 100 % of P_2O_5 is regarded as plant available and it is therefore sufficient to declare only P_2O_5 total. Magnesium and other micronutrients are usually applied after leaf diagnosis in liquid form as foliar fertiliser. Organic fertilisers are used as soil fertiliser with very low amounts of micronutrients and therefore there is no need for declaration.

C/N ratio is important information for farmers to avoid nitrogen (N) fixation during the straw rotting process. If the amount of carbon (C) would be too high, soil bacteria could fix nitrogen to degrade the carbon to humus, thus creating an N deficit for plant growth. During anaerobic digestion usually about 75% of carbon from the used feedstock will be converted to biogas by microbiological activity. The remaining carbon is very stable as ligneous cellulosic and humic compounds which bacteria cannot degrade during the digestion process. The degradation of long chain humic substances takes several years. Therefore the bulk of the remaining carbon will not cause nitrogen fixation after application, it will more contribute producing constantly humus which is a very slow process, and therefore there is no need to determine and declare the C/N ration for digestate.

Safety requirements proposed for organic fertilisers and soil improvers

EBA supports the comment in favour of harmonising as far as possible the limit values across the fertilising materials categories. Limit values for organic fertilisers should be the same as for soil improvers and growing media, i.e.: Cd: 1.5; Hg: 1; Ni: 50; and Pb: 120 (based on mg/kg dry matter

EBA also fully agrees on the labelling requirement when thresholds for the **micronutrients copper (Cu) and zinc (Zn)** are exceeded. As Copper and Zinc are also necessary micronutrients for different crops, EBA is in favour of setting a threshold at 200 mg/kg DM for Cu and 600 mg/kg DM for Zn. If Digestate contains higher amounts of Cu and Zn, the exact value has to be labelled on dry matter and fresh matter basis.

The limit value for 'Chromium IV' should be replaced with 'Chromium total' as organic fertilisers do not contain Chromium VI because it is not stable in organic substances. Therefore, the total content of Chromium is the right criterion - 100 mg/kg dry matter -, the same as for growing media.

The limit value for Arsenic (As) should be deleted as there is no reason to include it in organic fertilisers' requirements. Limit values for arsenic were not included in end of waste criteria either as there are no abnormalities in digestate or composts.

There is no proportionality to require analyses on **PAHs** in digestate. All analyses (e.g. for the EoW criteria) have shown that the content of PAHs in digestate is very low and no environmental risk exists. On the other hand analyses on PAHs would highly increase the economic burden for plant operators. The best option to avoid contamination with PAHs is to allow only feedstock streams from a positive list and/or exclude certain feedstock streams through a negative list (a possible Annex of upcoming Fertiliser Regulation).

With regard to **pathogens**, the ABP regulation (EU) No. 142/2011 of February 2011 requires analysis of Salmonella and E.Coli or Enterococcae for organic fertiliser from category 3 materials or processed manure. Digestate from manure and energy crops have the status of unprocessed manure and do not have to be analysed for E.Coli and Salmonella. This should remain unchanged to avoid disturbing the market particularly in case if raw manure can be placed on the market without analyses. Furthermore it exists one exception of 5000 CFU/g in 5 trials what is not included in the slide. There should be no different or additional requirements to ABP regulation in a new EU Fertiliser Regulation. Creating different requirements for the same purpose through different laws should be avoided. It should also be considered that a change of requirements in one regulation would cause a change in the upcoming Fertiliser Regulation and the End of Waste regulation for biodegradable waste. As the Animal By-Product Regulation is important for sanitation requirements, the upcoming Fertiliser Regulation and the End of Waste regulation for biodegradable waste should link to the ABP regulation for sanitation requirements and time temperature profiles. A possible wording could be:

Digestate coming from feedstock underlying Animal By-Product Regulation has to fulfil time temperature profiles and sanitation requirements of the current ABP regulation (1069/2009/EC in combination with 142/2011/EC).

Physical impurities in turn can only be a problem if digestate is (co-)produced from bio-waste material. Digestate produced from agricultural feedstock do not have contents of physical impurities and therefore neither has to be analysed nor controlled for this parameter. Digestate from waste should fulfil the draft End of Waste criteria (0.5% based on dry matter; for glass, metal and plastics above 2 mm).

The **stones content limit value**, 5 mm, is inapplicable for composts and (semi-) solid digestate co-produced from bio-waste material. This should be increased to 10 mm and to a limit value of 5% on

dry matter content to be in line with the current German legislation. Lesser amounts are technically difficult to detect. For liquid digestate and digestate from clean input sources the stones content is of no importance, because it does not contain larger particles.

Exemption from REACH Regulation

In order to facilitate and to give a push to the use and trade of digestate as a fertiliser, it is vital that digestate from all feedstock is exempted from the REACH Regulation. EBA has raised the question already within the Commission and among the Member State representatives involved in the CARACAL advisory group receiving support from many country delegates. **We call for an official statement from the European Commission confirming that digestate is not subject to REACH, or, where applicable, that in cases digestate is subject to REACH, there is no obligation for registration. We also suggest the Commission to consider launching a revision process regarding Annex V entry 12 of REACH Regulation, to unambiguously clarify remaining uncertainties regarding digestate.**

Kind regards,



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