Key messages from the ESNI community of European research projects on the implementation of RENURE

- Closer dialogue between policy makers and EU-projects on nutrient recycling
- Implementation of the criteria of the EC-JRC SAFEMANURE evaluation
- Harmonise the view on legal status of ammonium salts from off-gasses between DG ENV and DG-GROW+ DG SANTE. Ammonium salts from purification or emission control processes of off-gasses are emissions which are not ABP or manure under the ABP-regulation (EC)2009/1069 or the FPR (EU 2019/1009) and hence should not fall within definition of 'processed manure' under the Nitrate Directive.

In order to maximise impact towards stakeholders, research projects funded by EU Framework Programme and Interreg programmes have united in the free and Open Access platform of the European Sustainable Nutrient Initiative (ESNI[1]).

More than 20 projects involved nutrient recycling research meet annually in Brussels at the ESNI General Assembly, also interacting closely with relevant policy makers from various Directorate General (DGs) of the European Commission (RTD, GROW, ENVI, AGRI, SANTE). Additionally, throughout the year, multiple online and physical events are jointly organised amongst participating projects to treat and discuss about key topics and challenges related to sustainable nutrient management.

We respectfully urge the national authorities and their representatives in the Nitrates Committee to take this position into account in view of the upcoming vote scheduled for June. The ESNI community, representing a broad coalition of the European research & innovation sector, remains fully committed to supporting the Commission in shaping a resilient and sustainable agriculture. We welcome the opportunity for further dialogue and stand ready to contribute constructively to the next stages of this important process.

Call for dialogue between policy makers and ESNI community

In recent recommendations to the EC, the EU projects members of the ESNI community have reached out for a closer bidirectional dialogue with EC policy makers. In essence, EU project consortia are contracted by the EC to investigate relevant research questions in terms of environmental, socio-economic and agronomic performance of processes and products related to the nutrient flows in modern European agro-food chain. Substantial amounts of in-depth scientific evidence have been amassed across the wider EU-27, towards the comparison of recycling-derived biobased fertilizers to replace synthetic chemical fertilizers from fossil and (generally imported) finite resources. Such investigations are performed at relevant operational scale and focus on : **Environmental effects** (nutrient cycles and losses, soil health, fresh water & marine health, carbon footprint, full LCA…), **Agronomic effects** (yield, crop quality, animal welfare,…), **Socio-economic effects** (food security, resource self-sufficiency, cost-benefit for farmers, effects on livestock size, transition to circularity…). We remain open to share all and any such investigation as well as amend or adjust research questions in ongoing projects.

[1] https://www.biorefine.eu/esni-community/

The projects therefore remain open and motivated to have closer interaction with the EC officials related to pertinent topics such as RENURE. This remains an open hand to have a closer structural relationship between the various branches and DGs of the EC and the projects funded by the EC.

Call for implementation of RENURE criteria form EC-JRC evaluation

Pertaining to the EC proposal related to RENURE, the EU projects have individually and jointly (via ESNI) responded to numerous public consultations of the EC and has also drafted dedicated joint positions and memorandums.

The projects are unanimous in their view that RENURE type products such as defined by the EC-JRC in conclusion to the SAFEMANURE evaluation, can offer clear environmental, economic and agricultural benefits in terms of energy and fertilizer independence from Russia and Belarus, combined with a more sustainable and resilient European agriculture.

In frame of other suitable replacement products (e.g. mineral concentrates) for synthetic nitrogen fertilisers the projects propose to follow the EC-JRC SAFEMANURE evaluation and draft a framework for other RENURE type products to be scrutinized in this perspective.

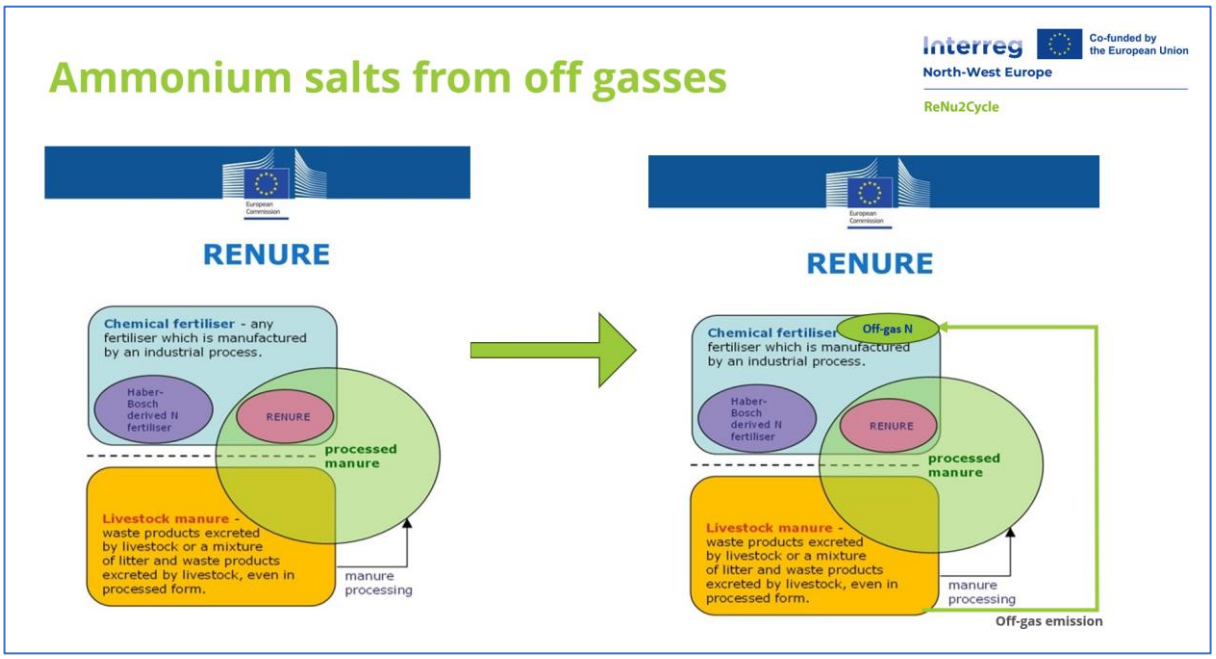
Call to harmonise legal status of ammonium salts derived from emissions

In accordance with the Joint Policy Recommendation (***Attachment 1***), the projects specifically propose that the various EC DGs align their views on the status of off-gas derived ammonium salts. Communication by DG SANTE (***Attachment 2***) clearly stipulates their view that such ammonium salts derived from air scrubbing is not considered an animal byproduct (ABPR). This includes ammonium recovered from the stables, driers, evaporators, composting, stripping/scrubbing, etc. In precise terms, the communication by the EC is stated as follows "As regards your last question on nitrogen recovery from off-gases from manure treatment, manure storage, or livestock stables I confirm that off-gases from manure are not subject to Regulation (EU) No 1069/2009 *(Ed.: i.e. Animal Byproduct Regulation)*, since emissions are not within the scope of that Regulation.", thereby excluding off-gas (and their further processing) from being an animal byproduct (hence also not manure).

Communication by DG GROW[2] clearly stipulates that it does not consider ammonium salts generated from a gas purification or emission control process designed to remove nutrients from off gasses as being animal by-products frame of the Fertilising Product Regulation (FPR). The European Commission

[2] **Official communication by** European Commission Directorate-General for Internal Market, Industry, Entrepreneurship and SMEs, FAQ document V10 associated to the Fertilising Product Regulation (FPR) :
8.39 Are high purity materials out of off-gases generated by manure derived products within the scope of the Animal by-products Regulation? No. Off-gases from manure are not animal by-products or derived products within the scope of the Animal by-products Regulation, as defined in Article 2 of that Regulation. Therefore, the recovered high purity materials out of such off-gases are not within the scope of the said Regulation either and no end-point in the manufacturing chain has to be determined under the animal by-products rules for the use of such materials in EU fertilising products.
https://ec.europa.eu/docsroom/documents/63434

can easily and clearly resolve the legislative ambiguity of the status of such ammonium salts by aligning the views of DG ENVI in frame of the Nitrates Directive with those of the other DGs in frame of



abovementioned legislations, where recovered emissions are not considered as processed manure (illustrated in the figure below). This would forego any need for legal revision of the Nitrates Directive itself and also exclude the need for uncertain derogations. At the same time it respects and maintains the strong actions and mandates of DG ENVI in its role to negotiate the conditions in terms of fertiliser management and application in the respective member states without constraint.

For communication or information reach out to the ESNI Working Group on Policy Advice coordinators:

- Prof. dr. Ir. E. Meers, University Ghent; Erik.Meers@ugent.be
- dr. ir. L. van Schöll, NMI, Laura.vanScholl@nmi-agro.nl

- **Attachment 1**
  Policy Recommendation issued by Joint European projects *"On the need for an unambiguous definition by the European Commission regarding the waste/manure status of ammonium salts derived from off-gas cleaning associated to treatment of manure or manure-derived products".*
- **Attachment 2**
  Communication by European Commission Directorate-General for Health and Food Safety (DG SANTE)
- **Attachment 3**
  Presentation ESNI 2023 with recommendations on policy measures to improve nutrient recovery in EU agriculture.

Joint Position of European Projects

On the need for an unambiguous definition by the European Commission regarding the waste/manure status of ammonium salts derived from off-gas cleaning associated to treatment of manure or manure-derived products

BACKGROUND

The EU has made huge progress in the implementation of circular economy solutions. With a new legal framework within the Circular Economy package (FPR, WFD, CAP-Farm to Fork) and a continued commitment to invest in research (H2020) and practical implementation (Interreg) the recovery and use of nutrients from wastes and residues is stimulated and facilitated.

The **EU is the front runner in technologies for recovery of nutrients from manure which will help close the nutrient cycle of agriculture**. This re-use of nutrients from manure has gained even more urgency, as outlined in recent communication of the Commission on Safeguarding food security and reinforcing the resilience of food systems[1].

The EU is also facing environmental challenges and combatting threats to water quality. The Nitrate Directive is targeting to reduce the contamination of our waters from the excess nitrates from agricultural sources. **The application of manure is limited as -due to its inherent nature- the timing of nitrogen mineralisation from manure cannot be completely aligned with the nitrogen uptake by plants, resulting in run-off and leaching**.

Manure treatment can be an effective way to combine the challenges of the circular economy, geographical independence of the EU while preserving our environment and waters. In the JRC-ReNure [2] research project it was investigated which manure-derived products can be safely used as equivalent to chemical derived fertilisers without posing a threat to water quality. Products adhering to **these ReNure criteria can be safely exempted from the restrictions on the soil application of manure in Nitrate Vulnerable zones (NVZ) as imposed in the Nitrate Directive and National Action Programmes**.

The EU is also taking care that animal by-products, including manure, can be used and recycled in such a way that **risks to public and animal health arising from those products are prevented and minimised**. If **manure-derived products are treated in such a way that they do not pose any risk for the safety of the food and feed chain, an 'end point in the manufacturing chain' can be declared**. The end point products from manure treatment can then be used as a fertiliser under the scope of the FPR and / or national fertiliser regulations. The end-point-products will then be outside the scope of the EG1069/2009 and can be handled without the restrictions and requirements that are imposed on handling, transport and use of animal by-products.

The actual implementation of all these efforts is however still hampered by some remaining issues that need to be solved.

POLICY ACTIONS FOR SOLVING REMAINING BARRIERS

1. Implementation of the ReNure criteria.

Manure-derived N-products that do not pose an increased risk for nitrate leaching or adverse environmental effects as compared to synthetic N fertilisers should be excluded from the 170 kg N ha^{-1} limit that is posed on manure application following the Nitrate Directive.

The JRC-EC has evaluated a number of manure-derived products within the SAFEMANURE/ReNure research project [2]. Major outcome was that, following a set of criteria, certain manure-derived products can be safely used as replacement of chemically produced nitrogen fertilisers without increasing risk for nitrate leaching. As the technologies are developed, installations ready to produce, and farmers are in need of nitrogen fertilisers, and the EU needs to decrease the energy need for fertiliser production [1], the implementation of the ReNure criteria should not be delayed anymore.

2. Unambiguous definition of legal status of ammonium salts from off-gases

One of the recovered end products of manure treatment are ammonium salts (ammonium nitrate or ammonium sulphates). DG GROW and DG SANTE (Health and Food Safety) are implementing legislation with the aim to include these waste-recovered products as components for fertilisers.

However, some member states consider these products as animal by-products (ABP) in a very strict interpretation of the manure definition of the Nitrates Directive, restricting their recycling in the circular economy. **Unambiguous definition of the legal status of ammonium salts recovered from air purification of the off-gases generated by manure or manure treatment processes by the DGs of the EC and the member states of the EU is urgently needed.**

Ammonium salts from off-gases are high quality products which are now in the process of being qualified as a component material for the production of EU fertiliser under the regulation EU/2019/1009. This proposed CMC 15 RECOVERED HIGH PURITY MATERIALS includes:

> *"**recovered high purity material, which is ammonium salt**, sulphate salt, phosphate salt, elemental sulphur, calcium carbonate or calcium oxide, or mixtures thereof, of a purity of at least 95 % dry matter of the material. The high purity material shall be **recovered from waste generated** from: "…" (b) a **gas purification or emission control process designed to remove nutrients from off-gases derived** from one or more of the following input materials and facilities: "…" (viii) **manure** within the meaning of Article 3, point 20, of Regulation (EC) No 1069/2009 **or derived products thereof**; or (ix) livestock housing facilities."*

Following this wording, the **ammonium salts from off-gases of manure or manure-derived products are considered as a waste-derived product**. This was also explained by the JRC-report on the criteria for high purity materials recovered from waste (CMC 15):

> *"Off-gases of manure are not covered under the Regulation (EC) No 1069/2009 on animal by-products, and fall within the scope of this CMC WW/15."*

This is underlined by the Commission Expert group on Fertilising Products in their FAQ [4]:

> *" 5.12 Are high purity materials out of off-gases generated by manure derived products within the scope of the Animal by-products Regulation?*
> *No**. Off-gases from manure are not animal by-products or derived products within the scope of the Animal by-products Regulation, as defined in Article 2 of that Regulation.** Therefore, the recovered high purity materials out of such off-gases are not within the scope of the said Regulation either and no end-point in the manufacturing chain has to be determined under the animal by-products rules for the use of such materials in EU fertilising products."*

This opinion of DG GROW is in line with the statement from DG SANTE [5]:

> *"question on nitrogen recovery from off-gases from manure treatment, manure storage, or livestock stables **I confirm that off-gases from manure are not subject to Regulation (EU) No I 069/2009, since emissions are not within the scope of that Regulation."***

However in practice, some member states consider the ammonium salts as waste-derived (in line with the logic of the FPR and the ABP-regulations, where the scrubbing salts are seen as waste product from purification of off-gases, and hence no End-point of manufacturing chain (EG 1069/2009 on animal by-products) should be declared).
Other member states make a distinction:

- Ammonium salts derived from scrubbing of air from stables are considered waste that are derogated to be used as a fertiliser. The ammonium off-gases in the stable air -emitted as a natural process- are considered to have **lost the direct physical and chemical link with the manure**.
- However, if the ammonium salts are derived from scrubbing of air that is originating from processing manure or derived products (controlled emission) they are considered to remain a manure product and hence an animal by-product. The argument that the ammonium off-gasses have lost the direct physical and chemical link to the manure treatment product that they originate from is not followed here.

The reason to consider the ammonium salts -recovered from the off-gases of manure and manure-derived products- as a manure is the definition of manure in the Nitrate Directive: *'livestock manure': means waste products excreted by livestock or a mixture of litter and waste products excreted by livestock, even in processed form*. However, the off-gases are not a processed form of manure, but an emission that has lost the physical link to the manure. **This interpretation of off-gases as processed manure and thus an ABP opposes the waste-derived status of the salts as outlined above and is not based on EU regulations on animal by-products or emissions and air quality.**

Furthermore, the **manure-ABP status does not contribute to the goals of the Nitrate Directive to protect water quality**: ammonium salts recovered from off-gases are defined as ReNure products and have been evaluated as equivalent to chemical fertilisers and safe to be exempted from the 170 kg N per hectare application limit under the Nitrate directive. In effect, the **ReNure status can be viewed upon as an 'end-of-manure' under the Nitrate Directive**. Therefore, it would seem unnecessary to confer the status of manure or animal by-product to the ammonium salts.

The manure/ABP status limits market uptake as it poses a **complex set of prerequisites on transport, handling and storage of the products (laid down in EC 1069/2009 and 142/2011) and requires registration, approval, control and and certification of all facilities, vehicles and actors along the market chain. This forms a logistical and administrative burden that further complicated and hinders the market entry and acceptance of the products**. The different interpretation between member states also **causes an unfair level playing field for producers in the different countries**.

This difference in interpretation of the legal status of the product has consequences that will not be solved by the implementation of the ReNure criteria or inclusion in FPR CMC 15!

Harmonizing the views regarding the status of ammonium-salts originating from off-gas cleaning between the various branches of the European Commission (DG GROW, DG SANTE, DG ENV, DG AGRI) is a prerequisite for such circular economy processes and associated products to enter the market as sustainable, renewable alternatives to synthetic nitrogen fertilizers which are produced from conventional chemical processes using fossil resources (natural gas).

In concreto, the views expressed in the various documents and communications by DG GROW [4] and DG SANTE [5] are supportive of this transition, whereas ambiguous interpretation towards the remaining status as 'manure' for such products *vis-à-vis* the Nitrates Directive in other proclaimed positions by the European Commission may hinder or delay the transition towards more circularity in mineral nitrogen flows in European agriculture.

DG ENV needs to make a clear statement aligning with DG GROW and DG SANTE that the ammonium salts derived from off-gases of manure or manure treatment processes are not animal by-products and are not considered as manure under the Nitrate Directive.

This joint position is undersigned by the following European research and innovation projects.

Date 7th June 2022

For more information or enquiries please contact the drafters of the position paper:

- Dr. ir. L. van Schöll, NMI, Laura.vanscholl@nmi-agro.nl
- Prof. dr. E. Meers, University of Ghent, Erik.Meers@UGent.be

References

[1] EUROPEAN COMMISSION Brussels, 23.3.2022 COM(2022) 133 final COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE EUROPEAN COUNCIL, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Safeguarding food security and reinforcing the resilience of food systems

[2] Huygens, D., Orveillon, G., Lugato, E., Tavazzi, S., Comero, S., Jones, A., Gawlik, B. and Saveyn, H., Technical proposals for the safe use of processed manure above the threshold established for Nitrate Vulnerable Zones by the Nitrates Directive (91/676/EEC), EUR 30363 EN, Publications Office of the European Union, Luxembourg, 2020, ISBN 978-92-76-21539-4 (online),978-92-76-21540-0 (print), doi:10.2760/373351 (online),10.2760/984729 (print), JRC121636.

[3] Huygens D & Saveyn HGM. Technical proposals for by-products and high purity materials as component materials for EU Fertilising Products, EUR 31035 EN, Publications Office of the European Union, Luxembourg, 2022, ISBN 978-92-76-50116-9, doi:10.2760/185544, JRC128459.8.2 (pag 38, 41).

[4] Note to the Commission expert group on Fertilising Products on the frequently asked questions in the implementation of the Fertilising Products Regulation. Meeting of 4-5 April 2022. Item 3.5 on the Agenda/21.03.2022

[5] European Commission DG for health and Food Safety Letter to Cssrs concerning safe recycling of nutrients in Animal By Products (ABPs) and manures Ref. Ares(2022)4033785 - 31/05/2022. Response to question raised by the ESPP on 25th of April 2022 to Stella Kyriakides, European Commissioner for Health and Food Safety and: Thierry Breton, European Commissioner for Internal Market

info@phosphorusplatform.eu

De: SANTE-CONSULT-G2@ec.europa.eu
Envoyé: mardi 31 mai 2022 14:54
À: info@phosphorusplatform.eu
Cc: SANTE-CONSULT-G2@ec.europa.eu
Objet: [RE] Letter to Cssrs concerning safe recycling of nutrients in Animal By Products (ABPs) and manures-Ares(2022)4033785
Pièces jointes: [Re] Letter to Cssrs concerning safe recycling of nutrients in Animal By-Products (ABPs) and manures.docx.pdf

Dear Mr Hermann,

Please find enclosed the reply of the European Commission to your email.

Best regards.

Simon Carrette
Unit G2 Secretariat

European Commission
Directorate-General for Health and Food Safety (DG SANTE)
Animal Health (Unit G2)

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EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR HEALTH AND FOOD SAFETY

The Director-General

Brussels
SANTE/MK/sc(2022)3918061

Subject: **Letter to Cssrs concerning safe recycling of nutrients in Animal By-Products (ABPs) and manures**

Dear Mr Hermann,

Thank you for your letter of 25 April 2022 informing about the possible recycling of nutrients in animal by-products (ABPs) and manure, and requesting the Commission to engage in actions enabling the safe recycling of these products.

I am pleased to inform you that my services have already initiated the relevant work to address this issue, of which we are fully conscious. Notably, ash of Category 2 and 3 materials, including ash derived from incineration, co-incineration and combustion of manure as well as several other derived products referred to in Article 32 of Regulation (EU) No 1069/2009, are under discussion with the Member States with a view to determining end points in the manufacturing chain of organic fertilisers and soil improvers. The objective is to open the harmonised market of "CE-marked" fertilisers under the new EU Fertilising Products Regulation 2019/1009.

I would also like to highlight that the use of ash from the combustion and/or incineration of Category 1 meat-and-bone meal in the manufacturing of organic fertilisers and soil improvers is currently not allowed in accordance with Article 32 of Regulation (EU) No 1069/2009. We are aware of the issue and my services are preparing a mandate to the European Food Safety Authority (EFSA) to assess the safety of this material. The Commission would be in a position to consider the use of these ashes only if EFSA evaluated it positively and if the use of this ash was no longer seen as a serious risk. Such change would however require an amendment of Regulation (EU) No 1069/2009 and the process would therefore require some time.

As regards your last question on nitrogen recovery from off-gases from manure treatment, manure storage, or livestock stables I confirm that off-gases from manure are not subject to Regulation (EU) No 1069/2009, since emissions are not within the scope of that Regulation.

Yours sincerely,

[e-signed]

Sandra GALLINA

Mr Ludwig Hermann
President
European Sustainable Phosphorus Platform
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To: ***Stella Kyriakides, European Commissioner for Health and Food Safety***
and: ***Thierry Breton, European Commissioner for Internal Market***
European Commission, Rue de la Loi 130, 1049 Brussels, Belgium.

Object: Safe recycling of nutrients in Animal By-Products (ABPs) and manures
Brussels 25th April 2022

Dear Ms Kyriakides, dear Mr Breton,

Animal by-products, such as livestock manures, meat and bone meal ash, and other secondary ABPs and derived materials, represent the biggest potential for nutrient recycling (together over 80% of secondary phosphorus in Europe[i]).

Safe recycling of nutrients from manures and other Animal By-Products is therefore central to the EU's Circular Economy and Green Deal Farm-to-Fork policies.

However, **the war in Europe, and its global consequences on fertiliser production, phosphate rock and potassium supply, and on food security, make this increasingly important and urgent**.

Industry and stakeholders have strongly raised concerns, repeatedly since 2017[ii] and most recently with the joint letter of 11th March 2022[iii]), that **all animal by-products and derived products (ABPs) will be effectively excluded from all CE-mark fertilisers under the new EU Fertilising Products Regulation 2019/1009 (FPR)** when it enters into force in July 2022, with exclusion both of their direct use in fertilising products and of their input to CE-mark composts and digestates.

We are aware that discussions are underway concerning materials listed by Parliament and Council in art. 46 of the Fertilising Products Regulation, and we hope that these will now rapidly lead to regulatory proposals.

With the present letter, **we request that you ask your services to also engage actions on the following important potential sources of secondary nutrients, in order to provide a regulatory framework for safe recycling**:

Ashes from ABP and manure combustion.

A core principle of the ABP Regulation is that incineration of ABPs under Industrial Emission Directive conditions (850°C, 2 seconds, etc), and subject to avoidance of cross-contamination, ensures safe disposal of ABPs, for Cat2-3 and for Cat1 materials. The EFSA Opinion of 20/10/2021 concluded 99-100% certainty[iv] for Cat2 and Cat3 ashes. Manure (Cat2) ash represents a significant potential for nutrient recycling, in particular poultry manure which is already largely incinerated for energy recovery, resulting in an ash which is a valuable fertiliser.

EFSA has not, to date, assessed Cat1 ash.

Meat and bone meal ash represents a circular nutrient potential of nearly 10% of mineral fertiliser phosphorus use in Europe (ref. as (i) above) and for operational reasons Cats 1 – 3 meat and bone meal are not generally incinerated separately, so the ash is all Cat1. Cat1 ash thus represents a significant potential source of secondary phosphorus in Europe, with a high level of quality (high phosphorus content, low contaminant levels). It has been and still is used directly as a fertiliser in the UK with no safety concerns, has been also used in other Member States (e.g. disposal of Fipronil eggs in the Netherlands) and is subject to obligatory phosphorus recovery in Switzerland[v].

We therefore request that:

- **Cat2 and Cat3 ash, under CMC13, should be "fast tracked" for authorisation in CE-mark fertilisers**, by rapidly defining as an **ABP End-Point** for incineration of these materials, corresponding to the IED conditions (850°C), subject to avoidance of cross-contamination.

- **the European Commission should mandate EFSA for an Opinion on the safety of Cat1 ash**. We suggest that this mandate cover both direct use of Cat1 ash as a fertilising product and also use of Cat1, Cat2 and Cat3 ash to produce "commodity chemicals" (phosphoric acid, phosphate salts) which might then be used directly, or after chemical processing, for production of feed or food minerals (phosphates, potassium salts).

Nitrogen recovery from off-gases from manure treatment or storage, livestock stables

- It has been indicated (draft FPR FAQ) that off-gases are not ABPs by art. 2 of 1069/2009. This is not obvious to non-experts: in order to provide legal certainty for operators, please can you **specify the legal text, guidance document or jurisprudence which confirms that off-gases are not ABPs**?

- Beyond the legal aspect, it is essential to ensure safety and to support consumer and farmer confidence in the safety of recycled nutrients: **please can you therefore clarify what evidence is available to the Commission proving the safety of minerals recovered from such off-gases** (CMC15)?

- To ensure safety and confidence, we also propose that the **Commission mandate an Opinion from EFSA on minerals recovered from ABP off-gases**, in which case we ask that stakeholders and industry be consulted in the definition of this mandate (process parameters). We again request that this mandate covers not only the possible use of recovered mineral salts in fertilising products, but also (directly or after chemical processing) use in animal feeds, commodity chemicals.

We look forward to your response to these propositions, which aim to respond to the need to facilitate the nutrient Circular Economy in Europe whilst guaranteeing safety and supporting consumer and farmer confidence.

Yours sincerely

Ludwig Hermann, President

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[i] *Based on: Van Dijk, Lesschen & Oenema "Phosphorus flows and balances of the European Union Member States." Sci Tot Env 2016 https://doi.org/10.1016/j.scitotenv.2015.08.048*

[ii] *Industry joint letter of 20/11/2017 here www.phosphorusplatform.eu/regulatory*

[iii] *Joint letter signed by 11 industry federations to Mr Reviriego Gordejo, Head of Unit G2 at DG SANTE, available here www.phosphorusplatform.eu/regulatory*

[iv] *degree of scientific certainty that the specified process will achieve the required reduction of levels of the most resistant of the specified pathogens.*

[v] *Swiss ordinance on limitation and elimination of waste 4th December 2015 in French (OLED) www.admin.ch/opc/fr/official-compilation/2015/5699.pdf and in German (Abfallverordnung, VVEA) www.admin.ch/opc/de/official-compilation/2015/5699.pdf*

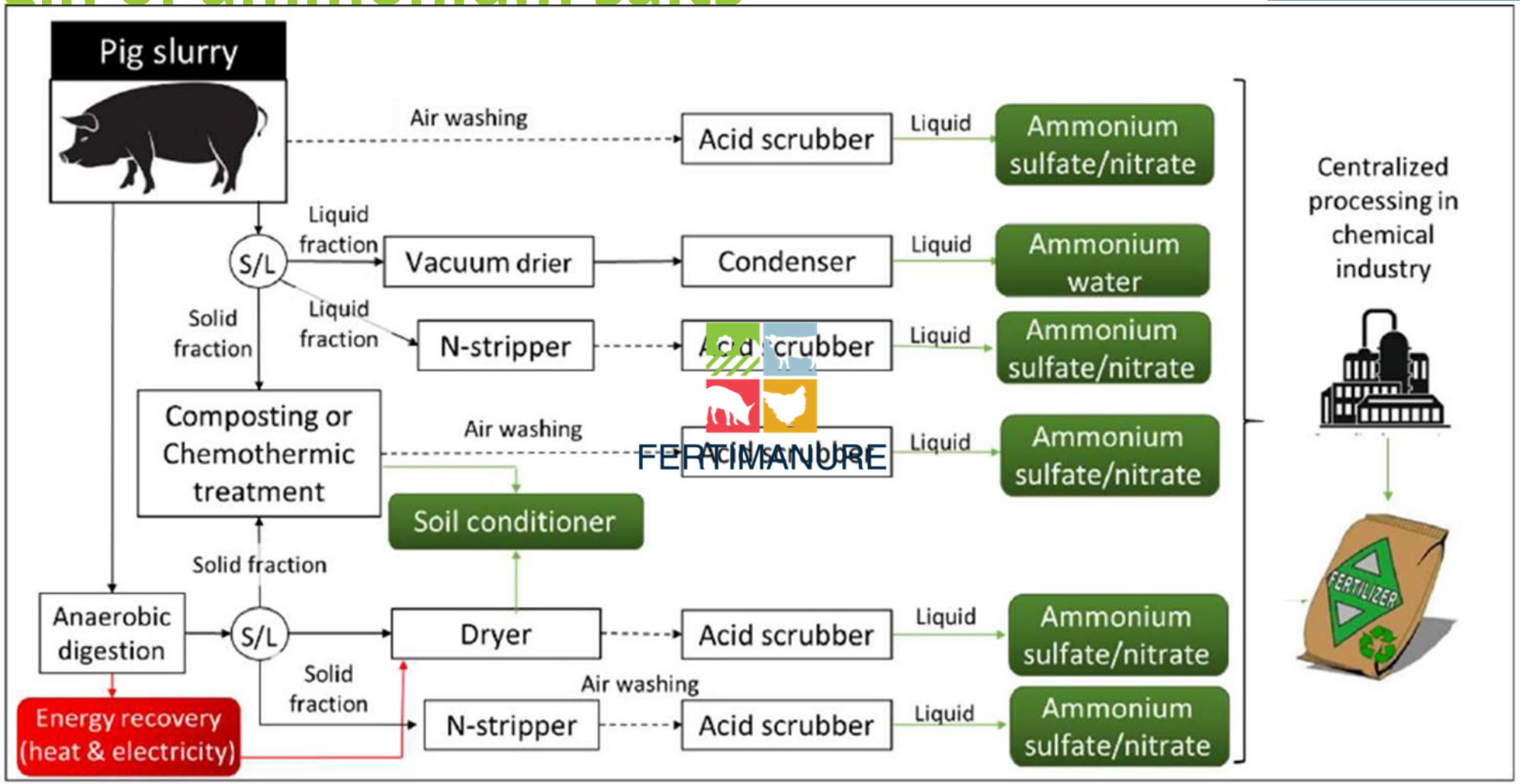
Interreg North-West Europe
Co-funded by the European Union
ReNu2Cycle

Legal status of ammonium salts from stripping/scrubbing

Antwerp, 22/03/2024

Prof. Erik Meers & Laura van Schöll

Origin of ammonium salts



DG Grow

FAQ document to FPR, Q 8.29

- Ammonium salts from stripping/ scrubbing off- gasses from manure or manure treatment under scope FPR
-
- Can be used as component material CMC 15 in EU fertilisers (DG GROW)
- Free internal trade in EU

8.29 Are high purity materials out of off-gases generated by manure derived products within the scope of the Animal by-products Regulation?

No.

Off-gases from manure are not animal by-products or derived products within the scope of the Animal by-products Regulation, as defined in Article 2 of that Regulation[13].

Therefore, the recovered high purity materials out of such off-gases are not within the scope of the said Regulation either and no end-point in the manufacturing chain has to be determined under the animal by-products rules for the use of such materials in EU fertilising products.

DG Sante

- Ammonium salts from off-gasses **are not manure** as defined in ABP-R EC1069/2009, as derived from emission

→ Not under scope of ABP-REC 1069/2009, so **no End point declaration needed or even possible**

EUROPEAN COMMISSION
DIRECTORATE-GENERAL FOR HEALTH AND FOOD SAFETY

The Director-General

Brussels
SANTE/MK/sc(2022)3918061

Subject: **Letter to Cssrs concerning safe recycling of nutrients in Animal By-Products (ABPs) and manures**

Dear Mr Hermann,

Thank you for your letter of 25 April 2022 informing about the possible recycling of nutrients in animal by-products (ABPs) and manure, and requesting the Commission to engage in actions enabling the safe recycling of these products.

I am pleased to inform you that my services have already initiated the relevant work to address this issue, of which we are fully conscious. Notably, ash of Category 2 and 3 materials, including ash derived from incineration, co-incineration and combustion of manure as well as several other derived products referred to in Article 32 of Regulation (EU) No 1069/2009, are under discussion with the Member States with a view to determining end points in the manufacturing chain of organic fertilisers and soil improvers. The objective is to open the harmonised market of "CE-marked" fertilisers under the new EU Fertilising Products Regulation 2019/1009.

I would also like to highlight that the use of ash from the combustion and/or incineration of Category 1 meat-and-bone meal in the manufacturing of organic fertilisers and soil improvers is currently not allowed in accordance with Article 32 of Regulation (EU) No 1069/2009. We are aware of the issue and my services are preparing a mandate to the European Food Safety Authority (EFSA) to assess the safety of this material. The Commission would be in a position to consider the use of these ashes only if EFSA evaluated it positively and if the use of this ash was no longer seen as a serious risk. Such change would however require an amendment of Regulation (EU) No 1069/2009 and the process would therefore require some time.

As regards your last question on nitrogen recovery from off-gases from manure treatment, manure storage, or livestock stables I confirm that off-gases from manure are not subject to Regulation (EU) No 1069/2009, since emissions are not within the scope of that Regulation.

Yours sincerely,

DG ENV ??

Council Directive 91/676/EEC of 12 December 1991 concerning the protection of waters against pollution caused by nitrates from agricultural sources

Article 2

For the purpose of this Directive:

(a) 'groundwater`: means all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil;

(b) 'freshwater`: means naturally occurring water having a low concentration of salts, which is often acceptable as suitable for abstraction and treatment to produce drinking water;

(c) 'nitrogen compound`: means any nitrogen-containing substance except for gaseous molecular nitrogen;

(d) 'livestock`: means all animals kept for use or profit;

(e) 'fertilizer`: means any substance containing a nitrogen compound or nitrogen compounds utilized on land to enhance growth of vegetation; it may include livestock manure, the residues from fish farms and sewage sludge;

(f) 'chemical fertilizer`: means any fertilizer which is manufactured by an industrial process;

(g) 'livestock manure`: means waste products excreted by livestock or a mixture of litter and waste products excreted by livestock, even in processed form;

(h) 'land application`: means the addition of materials to land whether by spreading on the surface of the land

Evaluating Agronomic and Environmental Performance of Bio-Based vs. Synthetic Fertilisers: Compilation of 4-year Field trials

Vaibhav Shrivastava*, Amrita Saju, Ivona Sigurnjak, Nimisha Edayilam, Tomas Van De Sande, Erik Meers

FERTIMANURE

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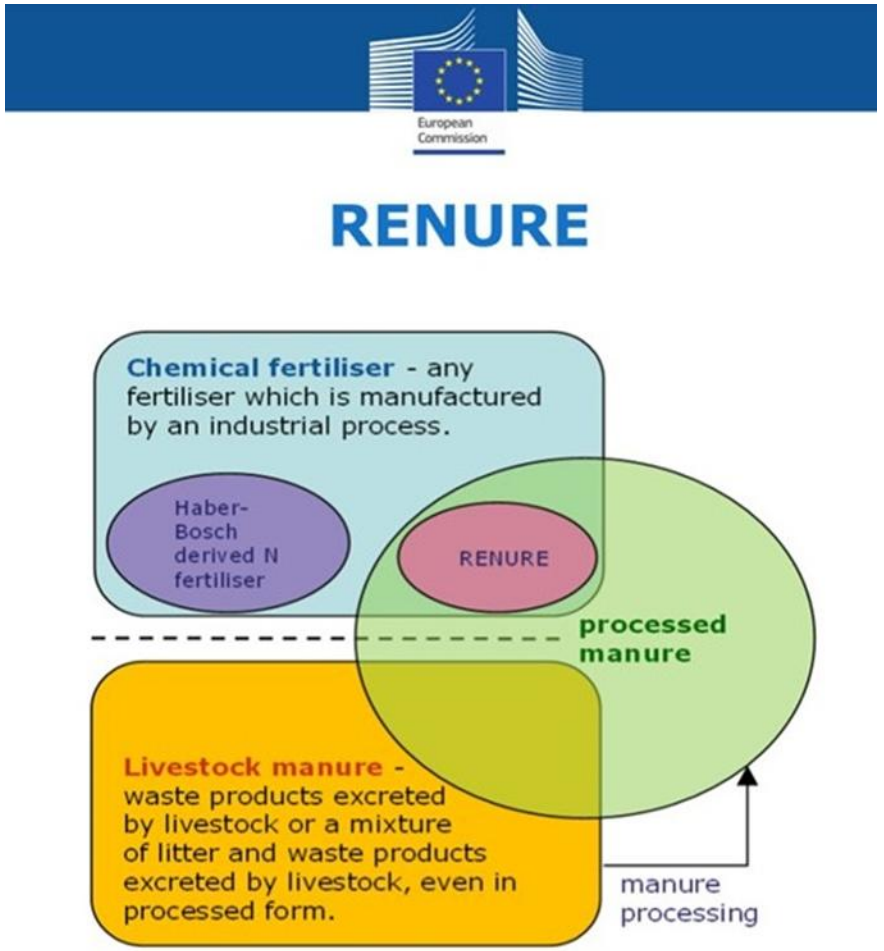
Interreg North-West Europe ReNu2Farm
European Regional Development Fund

RE-SOURCE
LAB FOR BIORESOURCE RECOVERY

Nutri2Cycle

GHENT UNIVERSITY

Ammonium salts within ReNure



Definitions manure differ

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Nitrate Directive Art 2.g.

'livestock **manure**': means waste products excreted by livestock or a mixture of litter and waste products excreted by livestock, *even in processed form;*

ABP-R art 3.20.

- **Manure** 'means any excrement and/or urine of farmed animals other than farmed fish, with or without litter'
- *Processed manure:* manure treated with one of the sanitation methods mentioned in the Annex IV
- *Manure-derived product*: products obtained from one or more treatments, transformations or steps of processing of manure;

1. Need for **harmonisation of terms**
2. Need to clarify the current **interpretation** of manure in Nitrate Directive:

   'even in processed form'

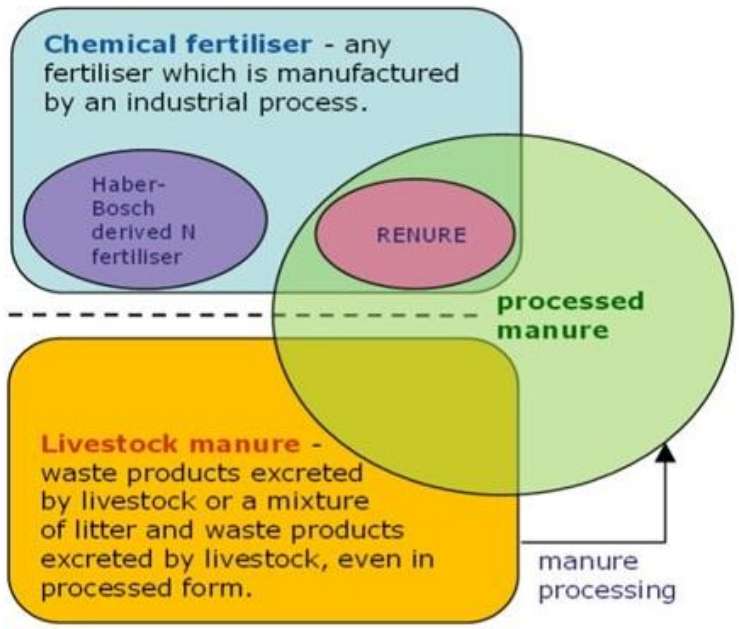
   is to be read as

   'manure-derived product as defined in ABP'
3. **Aligning opinions of DG Grow, DG SANTE and DG ENV that ammonium salts recycled from off-gasses are not manure under either the ABP-R not the Nitrate directive**

Ammonium salts from off gasses

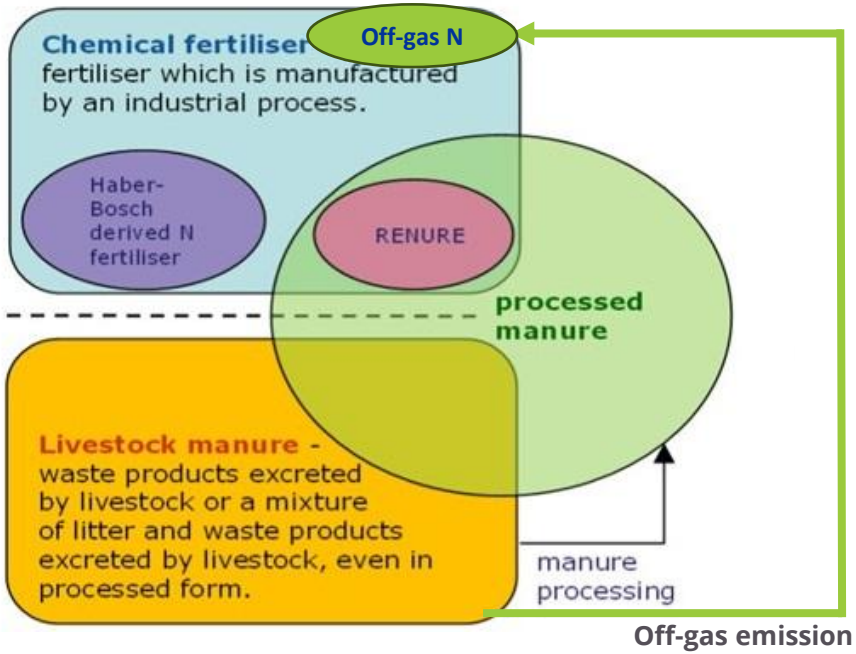
European Commission

RENURE



European Commission

RENURE



Joint letter EU projects

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- A harmonized view by the European Commission considering that off-gases emitted by animal manure are not considered animal manure themselves and therefore are not subject to Regulation (EU) 1069/2009

- Thereby considering that Nitrogen recovered from such off-gases also are not subject to said Regulation

- Thereby concluding that ammonium salts recovered from emissions by scrubbing operations from ammonia rich gases coming from stables, composting, drying, etc. operations carried out on manure, or mixtures of manure with other products, or processed manure are not considered as manure under the definition the Nitrate Directive.

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More information?

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ESNI
ESNI CONFERENCE
European Sustainable Nutrient Initiative
September 18-19, 2024

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Thank you