

Nutrient Management and Nutrient Recovery Thematic Network Web: https://nutriman.net - biochar@3ragrocarbon.com

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Keywords: Nitrogen and Phosphorus nutrient recovery, novel technologies and innovative fertilizers, food safety and supply security, sustainable food production,

Facts:

- Inventory of over 100 innovative fertiliser processing technologies and recovered phosphorus/nitrogen products
- 50+ field demo show cases and workshops organised across EU to demonstrate novel applications to farmers and other practitioners
- Online training materials and videos to support farmers and practitioners

100 Nutrient Recovery technologies and novel fertilizer products to Support Farmers Operations

Promising novel phosphorus and nitrogen recovery technologies and fertilising products are currently being demonstrated to farmers across Europe. "The new nutrient recovery technologies and innovative fertilisers are crucial for our safe food production and supply security" states Edward Someus, coordinator of the NUTRIMAN project. He explains "NUTRIMAN is providing practical information during online and field demos, which will improve the uptake of these innovative technologies and market competitive novel fertilisers by farmers."

Partners in the NUTRIMAN thematic network project have created an overview of all available European market-ready innovative technologies and fertilizer product development results, which are ready to commercially offer recovery technologies and novel products. Farmers will benefit by receiving user and practice-oriented information on more than 100 novel solutions for nutrient recovery in their own language. Additionally, the top 25 solutions will be highlighted online and in 50+ field demos and workshops across Europe. The share of practical information in the NUTRIAN thematic network will help farmers to be informed about these innovative solutions which are offering improved food safety for less cost.

Phosphorus and nitrogen

While the market demand for more and healthy foods for less cost is rising, the stock for low cadmium contaminated mineral phosphorus fertiliser is getting rapidly depleted. In the past, the imported chemosynthetically processed mineral phosphates have been used extensively for intensive farming, resulting in more quantity and cheaper foods but low sustainability. Someus explains "in a world with finite resources there is no infinite development opportunity with sustainability" and "the Stone Age did not end because we ran out of stones and the Mineral Fertiliser Age is ending not because we have no more synthetic fertilizers, but rather because in a changing environment the new nutrient recovery technologies and novel bio-based fertilizing products opening new, safer, better and less costly ways". This time of change has been recognized by and reflected in the new European





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Fertilising Products Regulation, which is mandatory implemented from 2022 and in the new 2017 definition of phosphate as Critical Raw Material as well.

Europe's dependency

"Furthermore, European farmers depend for over 88% on the import of mineral phosphate fertilizers from other continents, which are also contaminated with toxic cadmium and uranium elements. The European Commission calls upon action to close the nutrient cycles and to produce Europe's own mineral resources. Promising new nutrient recovery technologies, bio-based fertilizers and other products are already available to support a sustainable food production. However, the potential of such novel applications is not sufficiently known by farmers", according to Someus. Pippi Langkous from the European Commission highlights "The uptake of these novel applications is crucial for our future food production."

NUTRIMAN project

Therefore, the EU-funded NUTRIMAN project is compiling and sharing information on these novel solutions with farmers and practitioners, using their EU-wide network. Practice-oriented fact sheets, training materials, videos and clear descriptions per application are being developed to facilitate decision-making. Online materials will be extended with over 50 life demonstrations and workshops which are held across Europe in 2019 and 2021, and the project will be maintained for long term until 2031. And to benefit more, all online materials will remain available for at least ten years after project end on the web Farmer Platform. More information: www.nutriman.net.