



NUTRI•KNOW

STRUVITE (IT)

RENURE (BE)

POCKETBOER 2
(BE)

Grass2Algae
(BE)

MOPS (IE)

Duncannon Blue
Flag Farming (IE)

Biorefinery
Glas (IE)

Slurry
Concentrator
(ES)

Manure
Management
Tool (ES)

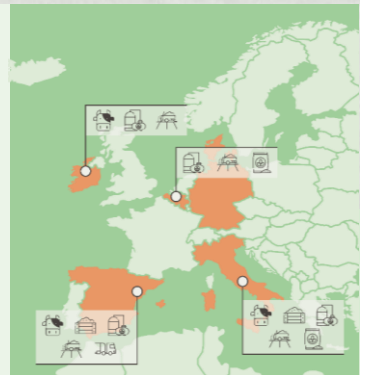
FERTICOOP-GO
(ES)

SOS_AQUAE
(IT)

GAS LOOP (IT)

Exchanging easy-to-understand nutrient management knowledge with farmers

NUTRI-KNOW aims to improve nutrient management practices in agriculture by establishing an ongoing cycle of knowledge exchange for the benefit of both farmers and the environment.



RENURE

REcoverd Nitrogen from manURE

RENURE aims to prepare the agricultural sector for the use of ammonium salt fertilisers (ammonium nitrate and ammonium sulphate) by making the transition from research-based field trials to a practical evaluation at the farmer's premises.

Main challenges

The Flemish agricultural sector faces a paradoxical scenario: while there is an excess of animal nutrients available, additional nutrients are being introduced in the form of fertilisers.

RENURE criteria

In 2020, the European Commission proposed the "RENURE" criteria to allow the safe use of recovered nitrogen from manure as a replacement for chemical fertilisers.

Ammonium salts recovered from manure through a stripping and scrubbing process are proposed as a priority of RENURE products.

Production of ammonium salts

Thin fraction of manure or digestate is atomised and the ammonia volatilizes under the manipulation of temperature and/or pH. This ammonia-rich gas is sprayed with an acid, whereby the ammonia is precipitated into an ammonium salt. Depending on the counter acid, nitric acid or sulfuric acid, ammonium nitrate or ammonium sulphate is produced, respectively.

Fertilising value

The obtained ammonium salts are slightly acidic, containing 100% mineral N without organic particles. Nitrogen concentration varies based on process conditions and efficiency. Field tests in 2022 indicated a comparable performance of the recovered ammonium nitrate as artificial fertilisers in terms of effectiveness and fertilising value.



Ammonium sulphate (left)
Ammonium nitrate (right)

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