

NERM 2024

16-17 April 2024
Brussels & hybrid

Nutrients in Europe Research Meeting

Towards closing nutrient cycles for a sustainable future, from R&D to implementation

NERM is organised by ESPP and the Horizon 2020 projects FERTIMANURE, LEX4BIO, RUSTICA, SEA2LAND, WALNUT

SITE VISIT

Wednesday 17th April 2024 (optional)
14h00 - 19h30

FERTIMANURE – The Bio Sterco farm

Detricon on-farm stripping-scrubbing unit to recover ammonium salts from pig slurry (Hooglede, Flanders, Belgium)



The Bio Sterco farm, located in Hooglede, Belgium, has the capacity to house 454 sows, 5 boars, and 5524. Additionally, it operates its own manure treatment facility, which has been operational since 2011 and currently has a maximum capacity of 52000 t y⁻¹. The manure treatment system comprises a conventional processing setup, featuring a centrifuge for mechanical separation, an activated sludge tank primarily focused on nitrification-denitrification (NDN) removal, and a settling tank to eliminate activated sludge from the effluent.

To enhance the treatment process, pure oxygen aeration tanks and an NH₃ stripping-scrubbing unit have been incorporated into the system. The NH₃ stripping-scrubbing unit, consisting of two vertical acrylate stripping columns and a scrubbing column, can process up to 20,000 t y⁻¹ of manure. Depending on the scrubbing acid used, it recovers either ammonium sulfate or ammonium nitrate.

Furthermore, the treatment installation incorporates a tertiary treatment pathway to refine the effluent from the NDN treatment into dischargeable water. This tertiary treatment involves a P-precipitation unit and a constructed wetland spanning 1268 ha. During the visit, participants will have the opportunity to inspect the various treatment steps implemented at the facility.

<https://www.youtube.com/watch?v=zhHmOtXkSOo>