

## 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.



# GOi Struvite

# Struvite Livestock manure and digestate treatment to reduce emissions and produce struvite

STRUVITE operational Group designed and implemented a prototype, a farmscale system, capable of recovering struvite from agricultural digestate.

## Challenge

Producing digestate treated fractions which release less ammonia and greenhouse gas (methane and nitrous oxide) emissions than raw input digestate, particularly during the digestate field application.

### Activity

Monitoring the emissions (ammonia, nitrous oxide and methane) from field applications of treated digestate fractions compared to untreated digestate.

### Results

The nitrogen emissions (sum of Nammonia and N-nitrous oxide) generated from the application of the treated digestate to the soil were lower than the untreated digestate:

- reduced by 19% for the treated supernatant fraction due to depleted content of N.
- reduced by 63% for the precipitated fraction, even if rich in nitrogen and phosphorus, thanks to their presence in saline form (struvite).

