



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)

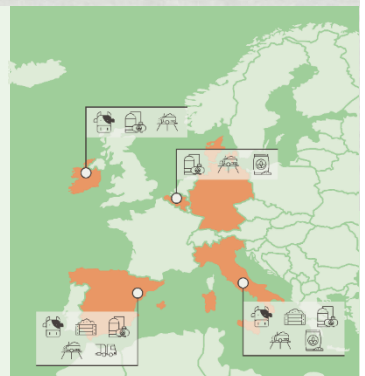
FERTICOOP-GO  
(ES)

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.



# Gas Loop

## Emissions capture for a virtuous nitrogen cycle in pig livestock

GOi Gas Loop

Gas Loop has developed and monitored an air washing system that removes ammonia from the air of animal housing and recovers it in an ammonium sulphate solution. This increases animal welfare and productivity due to better air quality inside the pig housing.

### Approach

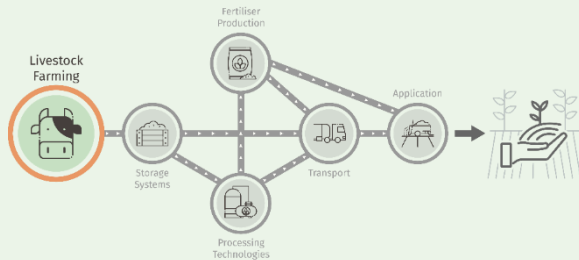
Sustainable solutions aimed at reducing ammonia emissions and greenhouse gases, while simultaneously enhancing animal and worker welfare, should be prioritised in the list of Best Available Techniques (BATs) for pig farming.

### Activity

- Monitoring the air treatment efficiency in pig livestock housing.
- Evaluating indoor air quality in the treated pig house compared to an identical untreated pig house.
- Evaluation of the animal feed conversion index and the state of the pig's lung health at the slaughterhouse.

### Results

- Pig livestock became more sustainable.
- The ammonia concentration was 62% lower than in untreated rooms.
- Ammonia emissions into the atmosphere were reduced by 54%.
- Ammonia emissions avoided 1,94 kg  $\text{NH}_3$ /animal place per year.
- The ammonia reduction in the pigsties improved animal welfare, the pig's lung health and the health of workers.
- The best breeding conditions increase the feed conversion rate and nitrogen use efficiency.



Pig livestock rooms

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