



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)

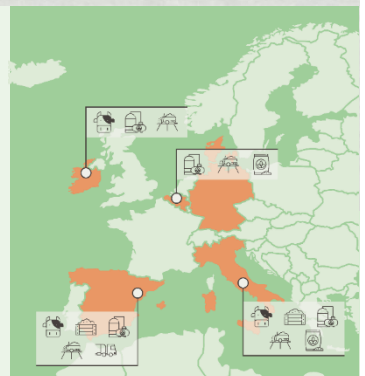
SOS\_AQUAE (IT)

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

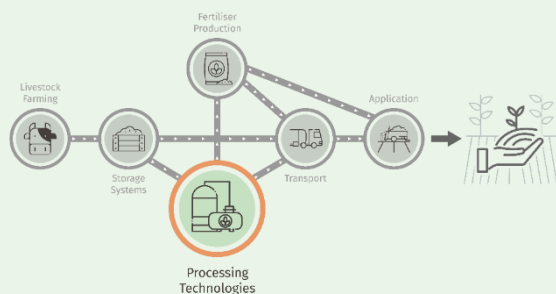
The device draws ammonia rich-air from the stable through suction ducts located below the slatted floor. The air treatment is based on the chemical absorption of ammonia by counter-current acid washing into a tower. The process takes place at pH 4.5 and sulfuric acid solution is used as an absorbent matrix.

### Activity

Monitoring and evaluating the air treatment efficiency and cost-benefit in pig livestock.

### Results

- Development of an advanced air treatment system, ready for practical implementation.
- Effective reduction of ammonia emissions by extracting and treating air from beneath the slatted floor.
- Achieved significant emission reduction with lower treatment flow rates (14 m<sup>3</sup>/h per pig).



The air treatment plant

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