



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)

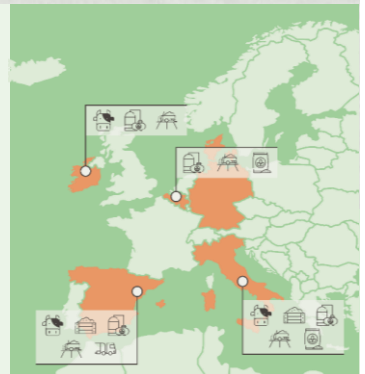
FERTICOOP-GO  
(ES)

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.



# Biorefinery Glas

## Small-Scale Farmer-led Green Biorefineries



Biorefinery Glas focuses on the demonstration of a small-scale grass biorefinery with farmers in South West Ireland to diversify farmer produce while resolving significant challenges in traditional agriculture.

### Biorefinery Process

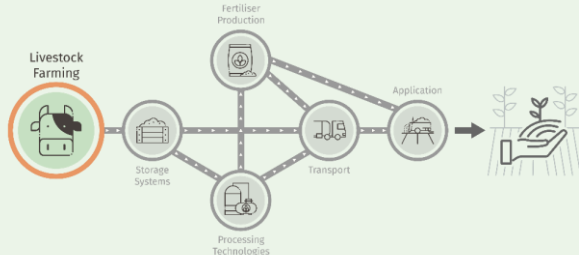
A by-product of the biorefinery process is press cake silage that can be fed back to cows.

### Cattle Trial

Two dietary treatments, grass silage and direct replacement with press cake. Weighed amounts were fed to 30 autumn calving cows twice a day during milking for 77 days, 14 days acclimatisation and 63 days trial. Milk and rumen samples were analysed for overall cow performance. Feed analysis to assess the effect of press cake on the cows was conducted throughout the trial.

### Results

- Dry matter intake was lower in the press cake fed group compared to grass silage.
- Milk quality and protein didn't differ between the two groups, but milk fat and milk solids content were lower in press cake fed cows.
- Rumen ammonia concentration in press cake fed cows decreased compared to grass silage.
- Nitrogen excreted in the milk increased but N & P excretion decreased in press cake fed compared to grass silage.
- NUE increased in press cake compared to grass silage.



Press cake silage ready for baling and cows feeding on press cake

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our journey!**

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