

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

Fresh grass is loaded, washed, crushed and pressed using an extruder to separate up to 50% of the protein into a liquid juice fraction and the remaining 50% into a high solid fibre press cake that can be fed directly back to the cows.

Farmer-led Bioeconomy

The biorefinery model could allow farmers to continue to feed their cattle, with reduced emissions, while producing three co-products which can increase their overall farm efficiency.

Products

- Liquid protein fraction is separated as a green protein concentrate suitable for animal feed for chickens and pigs.
- Residual fraction contains highvalue sugars (fructooligosaccharides) that are extracted and used as a prebiotic in animal nutrition, improving animal gut health.
- The remaining liquid fraction contains sugars and minerals that are concentrated, spread as a grass whey biofertiliser or can be used to produce biogas through anaerobic digestion.





Biorefinery with solid press cake and liquid prebiotic/grass whey fraction

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