



Biorefinery - a small-scale farmer focused biorefinery demonstration project (EIP-Agri)

COUNTRY

Ireland

PROJECT PROMOTER

Institute of Technology, Tralee

PROJECT PARTNERS

Carbery Dairy Co-operative
Barryroe Co-operative
University College Dublin
GRASSA BV

FUNDING

RDP funding, EUR 940 498

RDP MEASURE

M16 – Cooperation (EIP-AGRI)

DURATION

2019

CONTRIBUTION TO

- Generating environmental benefits
- Mitigating climate change
- Increasing efficiency of biomass resource use
- Creating value through improved production methods or processing technology
- Creating value through increased cooperation among value chain actors

KEYWORDS

Pilot / demonstration project, cooperation, adding value, bio-based waste, residues or by-products

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WEBSITE

www.facebook.com/Biorefinery-Glas-2165506523708858/

Private companies, research institutions and farmers set up an EIP-AGRI project that will help farmers improve their income by becoming biomass processors rather than just suppliers of raw biomass. The project will provide new opportunities to diversify agricultural production and contribute to reducing GHG emissions in the agricultural sector.

The project activities include setting up and operating a small-scale mobile grass biorefinery that will be used for demonstration purposes on multiple farms in South West Ireland. The project partners will develop a process for producing and validating multiple products from grass through biorefining. These include an improved fodder press-cake fibre for cattle, a protein concentrate feed for monogastric animals and high-value prebiotic sugars.

The new process will allow for the recovery of nutrients for use as fertilizer; it will promote cooperation between farms based on the principles of bioeconomy and develop new business models. Moreover, it will facilitate several bioeconomy

knowledge exchange activities between Irish farmers and develop an extensive communication campaign, including digital storytelling, with farmers playing a central role.

The project takes into account regional factors such as establishing a 'route-to-market' for local farmers. Semi-finished products will be processed through the co-operative agri-food industry and sold as finished products. Finally, solutions will be developed to help even those producing only small volumes to penetrate the market.

The environmental benefits of the project include the production of cattle feed thanks to the improved use of grass protein through the biorefining process. This will reduce the imports of soybean and associated GHG emissions.

Measuring the project's environmental impact will be achieved through feed trials that include an analysis of nitrogen and phosphorus concentrations in the animals' excrement.

RESULTS

- ✓ A 40% increase in usable protein per hectare is expected by optimising grass protein usage.
- ✓ A reduction in nitrogen and phosphorous losses by 25% and related emissions from the dairy sector, by improving nitrogen use efficiency whilst simultaneously reducing indirect GHG emissions.

