

## Partners



## Funding Agencies



The European Agricultural Fund for Rural Development: Europe investing in rural areas



Biorefinery Glas is a European Innovation Partnership (EIP) funded by the Department of Agriculture, Food, and the Marine (DAFM) under the Rural Development Programme 2014-2020

For further information please contact:

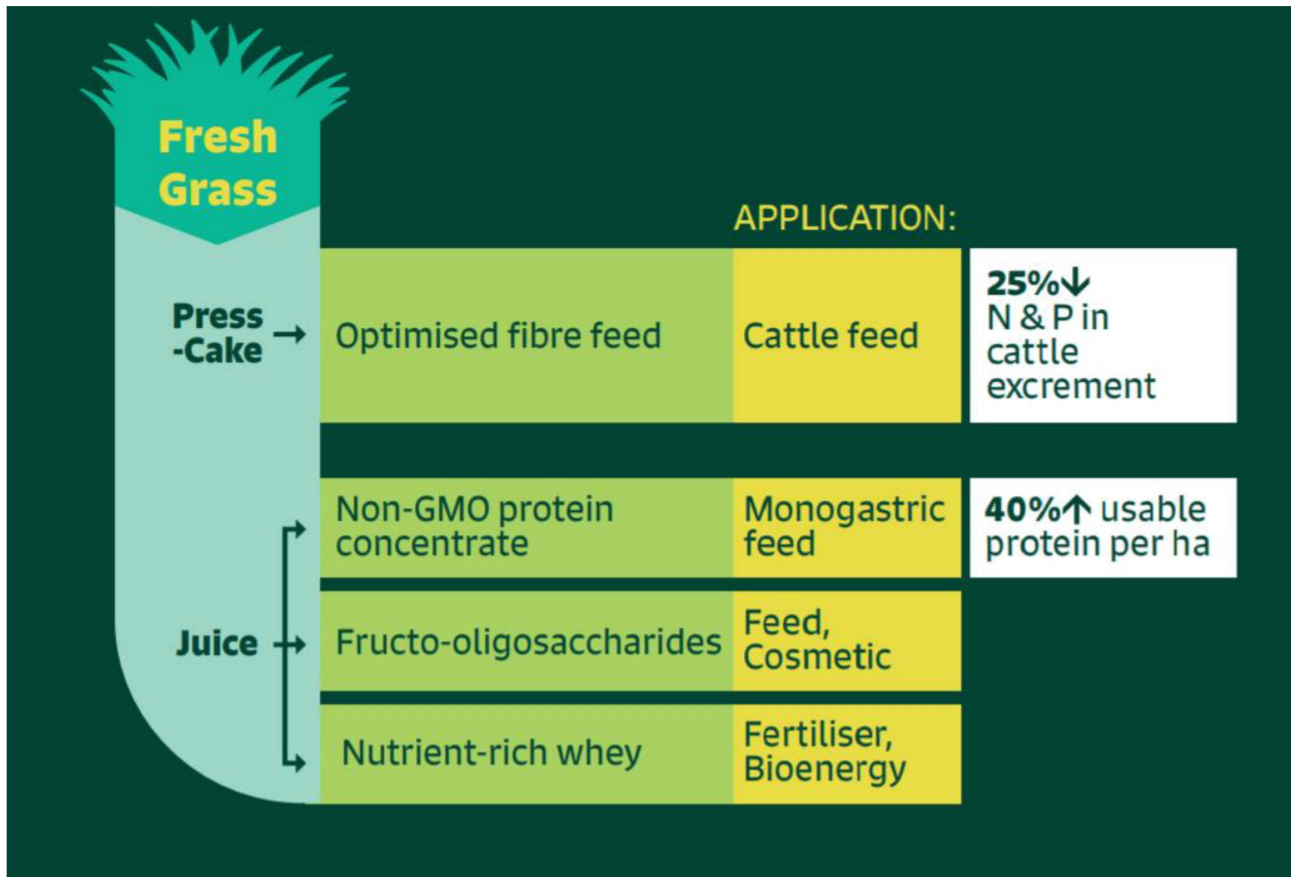
-  [www.biorefineryglas.eu](http://www.biorefineryglas.eu)
-  @biorefineryglas
-  @biorefineryglas
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## Biorefinery Glas

Small-scale, farmer-led green biorefineries



# Drivers and Approach



# Presscake as an optimised feed for cows

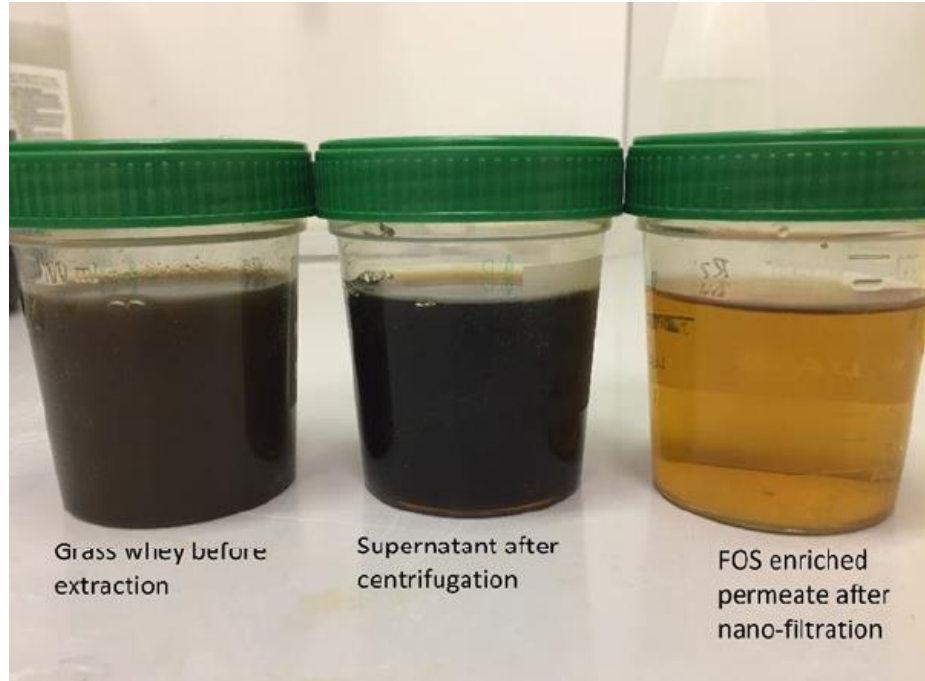
Item	Treatment			
	GS	PC	SEM	P-value
<b>DMI (kg DM/d)</b>	<b>19.33</b>	<b>18.00</b>	0.34	0.01
<b>Feed efficiency</b>	1.31	1.27	0.02	0.46
Milk yield (kg/d)	28.02	27.33	0.72	0.51
No significant difference in milk quality				
<b>Nitrogen Intake and Output</b>				
<b>Intake kg/d</b>				
Feed N Intake (kg/d)	<b>0.71<sup>a</sup></b>	<b>0.60<sup>b</sup></b>	0.03	<0.0001
<b>N output (kg/d)</b>				
Milk	<b>0.19</b>	<b>0.18</b>	0.01	0.5
Feces	<b>0.21<sup>a</sup></b>	<b>0.15<sup>b</sup></b>	0.01	<0.001
Urine	<b>0.29<sup>a</sup></b>	<b>0.24<sup>b</sup></b>	0.01	<0.001
<b>NUE (%)</b>	<b>27.25<sup>a</sup></b>	<b>33.03<sup>b</sup></b>	0.62	<0.001
<b>Methane Emissions Analysis Rusitec</b>				
<b>Gas production (l/d)</b>	1.31	1.26	0.27	0.90
<b>Methane (mmol/d)</b>	<b>6.61</b>	<b>5.71</b>	1.24	0.63

# Protein Co-product as Soya Replacement or other applications

- Similar amino acid profile to soyabean meal
- Locally produced feed for monogastics
- Reducing environmental consequences of soya and other protein imports
- Good performance to date in feeding trials
- Potential for upgrading into plant protein for humans



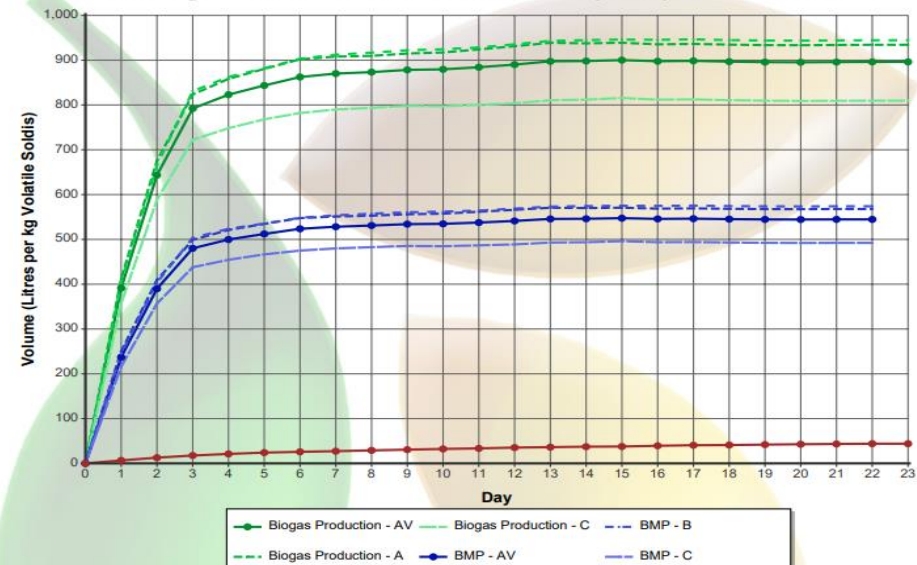
# Additional Green Biorefinery Co-products



- Other potential products:
- Oligosaccharides
- Technical fibres
- Amino Acids, lactic acid
- Biofertiliser, biogas



Plot of Biogas and Biomethane Potential (BMP) - Inoculum Subtracted



# The future of green biorefineries

- Integration of multi species swards grass
- Getting cooperation from farmers
- Improving range of feedstocks
- Convincing market partners
  
- **How the Commission can help?**
- Supporting carbon credit access for farmers
- Embedding bioeconomy within KT programmes, CAP and RDPs
- Making green biorefining a key part of EU and national protein strategies



# Thanks to our Team





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