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Ollscoil Teicneolaíochta na Mumhan
Munster Technological University

***The “potential” role of the bioeconomy in
decarbonising agriculture in Ireland:
livestock sector***

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26-09-2021

www.mtu.ie

Ireland – background



5 million inhabitants
Averaging 30,000 positive net migration
17,3% born overseas



\$63,530 GNP per capita (top 10)
\$50,490 Average salary
Unemployment 2020 – 5.92%



Ranking in top 20 most innovative in Global Innovation Index



Ranking number 2 in Human Development Index

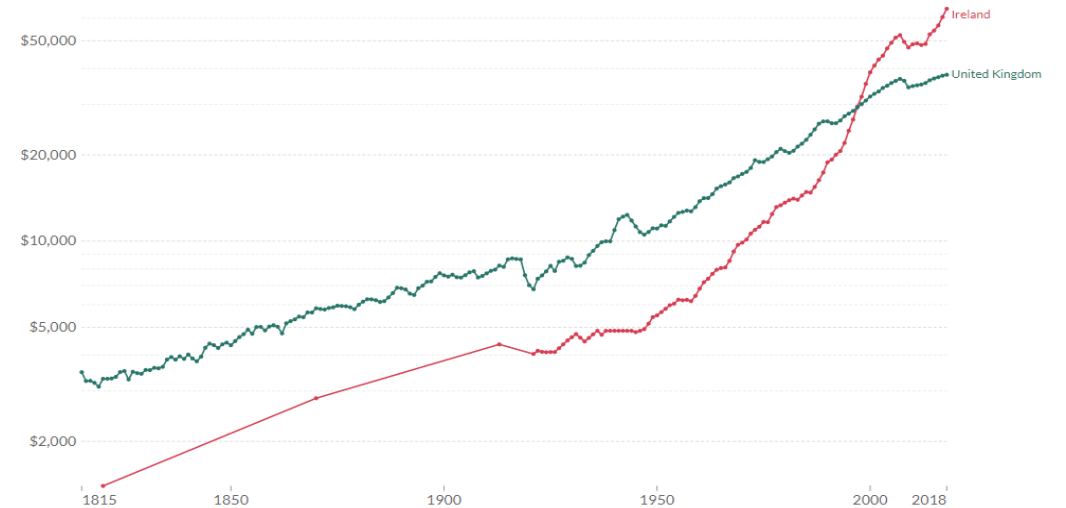
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GDP per capita, 1815 to 2018

GDP per capita adjusted for price changes over time (inflation) and price differences between countries - It is measured in International-\$ in 2011 prices.

Our World in Data

LINEAR LOG + Add country



Source: Maddison Project Database 2020 (Bolt and van Zanden (2020))

OurWorldInData.org/economic-growth • CC BY

1000 2018

CHART

MAP

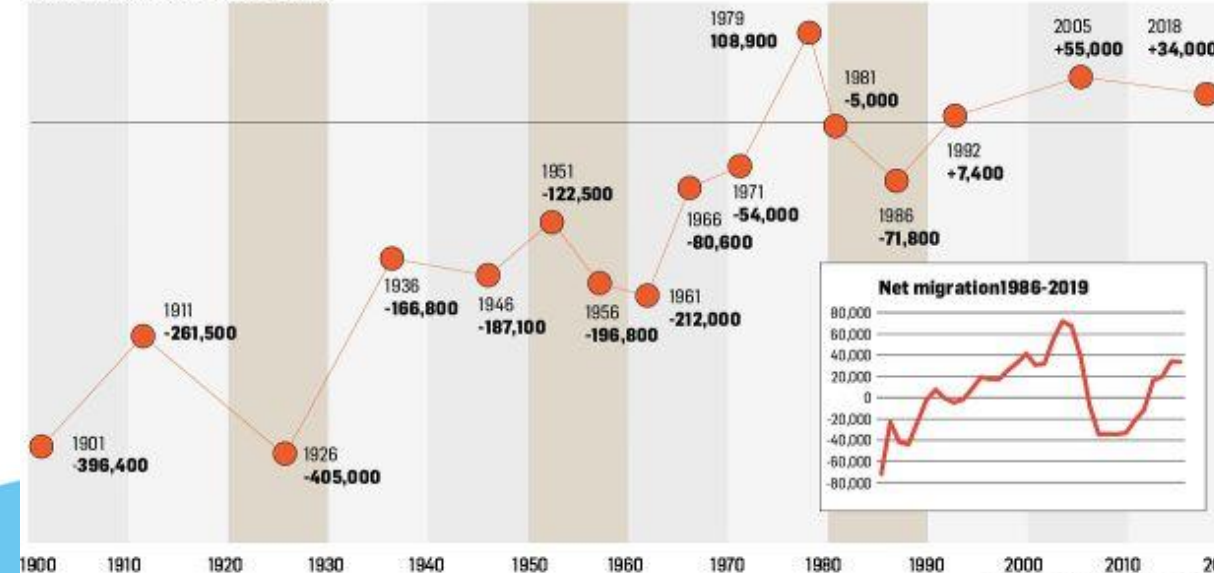
TABLE

SOURCES

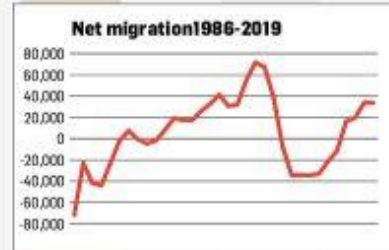
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Net migration 1900-2019



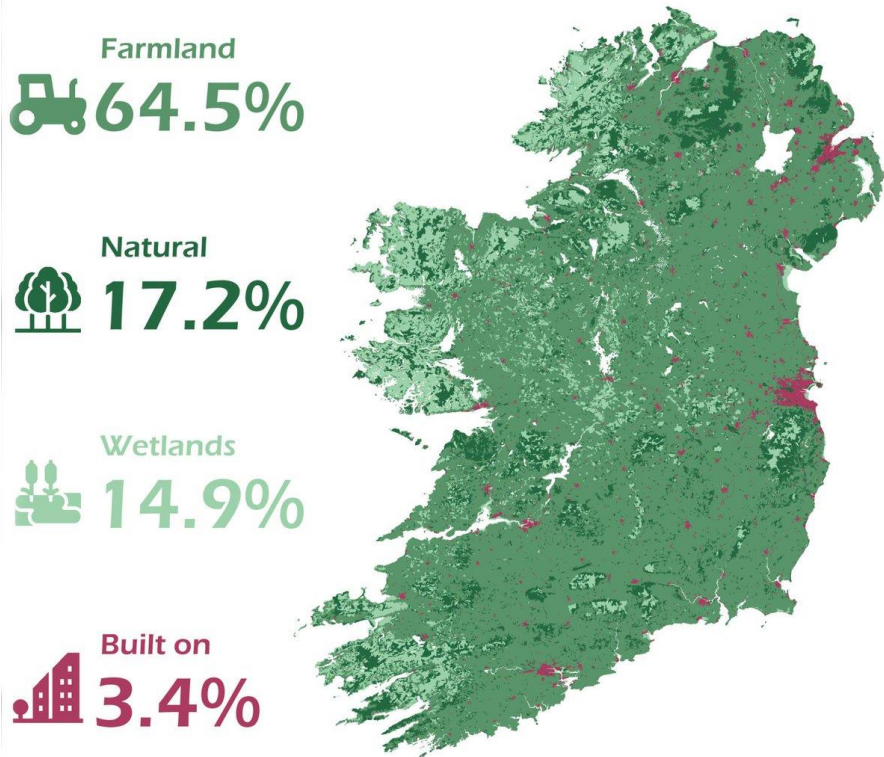
Net migration 1986-2019



Graphic: Paul Scott / IRISH TIMES GRAPHIC

The “green island”

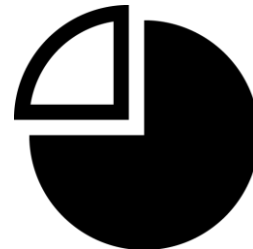
How land is used in Ireland



Agri-food sector generated 7% of gross value added in 2016 (€13.9 billion)



Agri-food sector accounts for almost 10% of national employment



Agri-food companies source 74% of raw materials and services from Irish suppliers, compared to 43% for all manufacturing companies

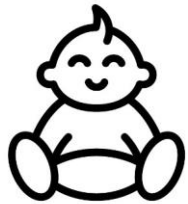
Adding value to Irelands livestock sector



10th largest dairy export nation



DPTC
DAIRY PROCESSING
TECHNOLOGY CENTRE



10-15% of worlds infant nutrition formula



MOOREPARK
TECHNOLOGY LIMITED
Your partner in food product development



56% of worlds cream liquor

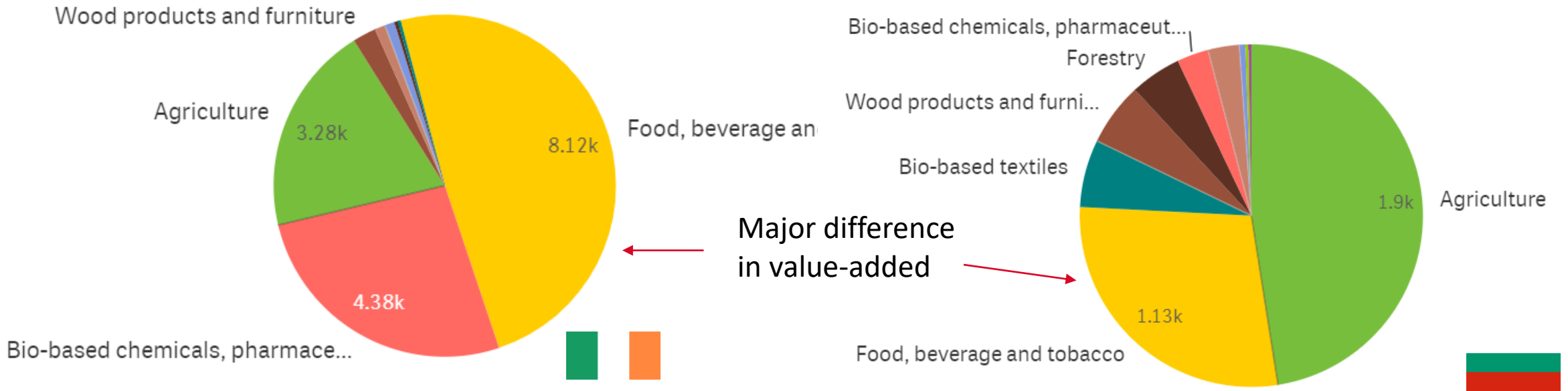


STRATEGIC INNOVATION,
MAXIMUM IMPACT_

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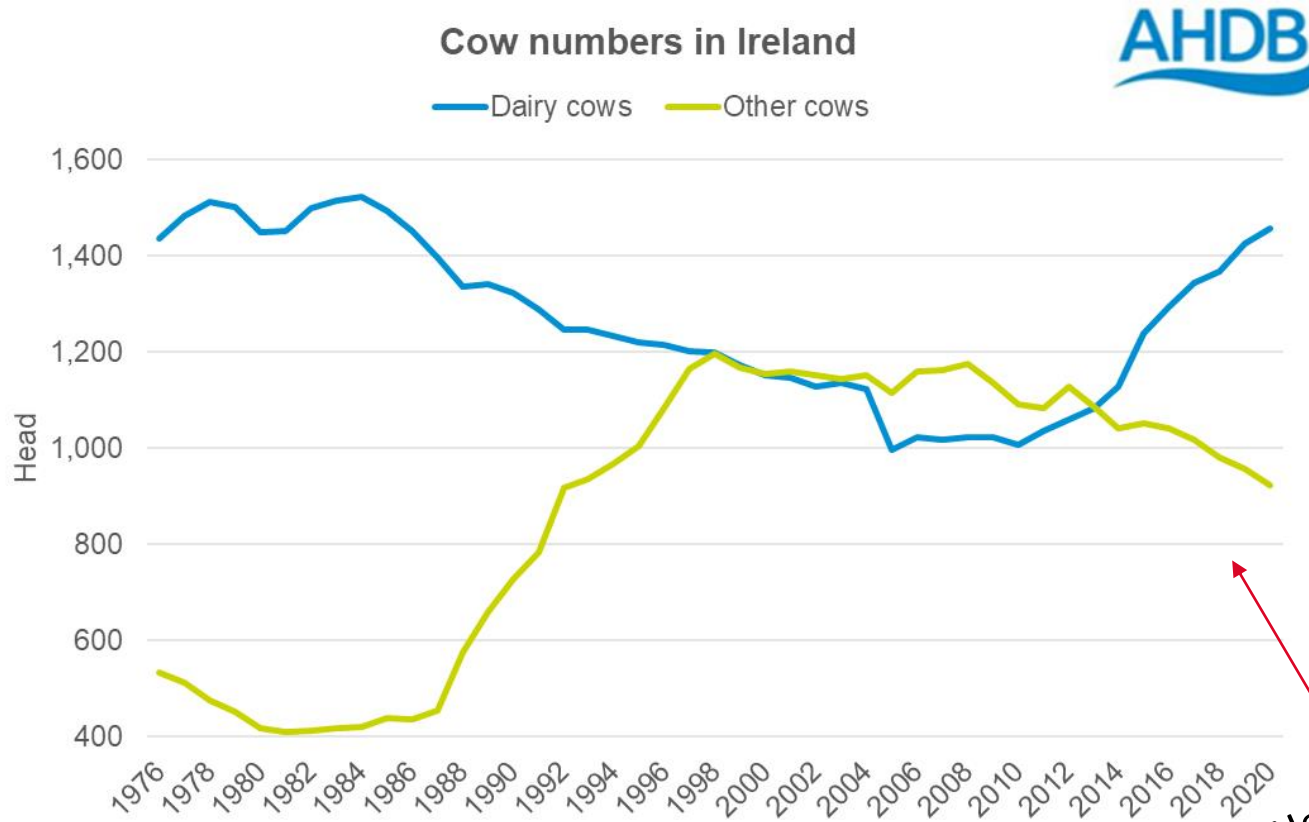
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Value-added in the bioeconomy by sector

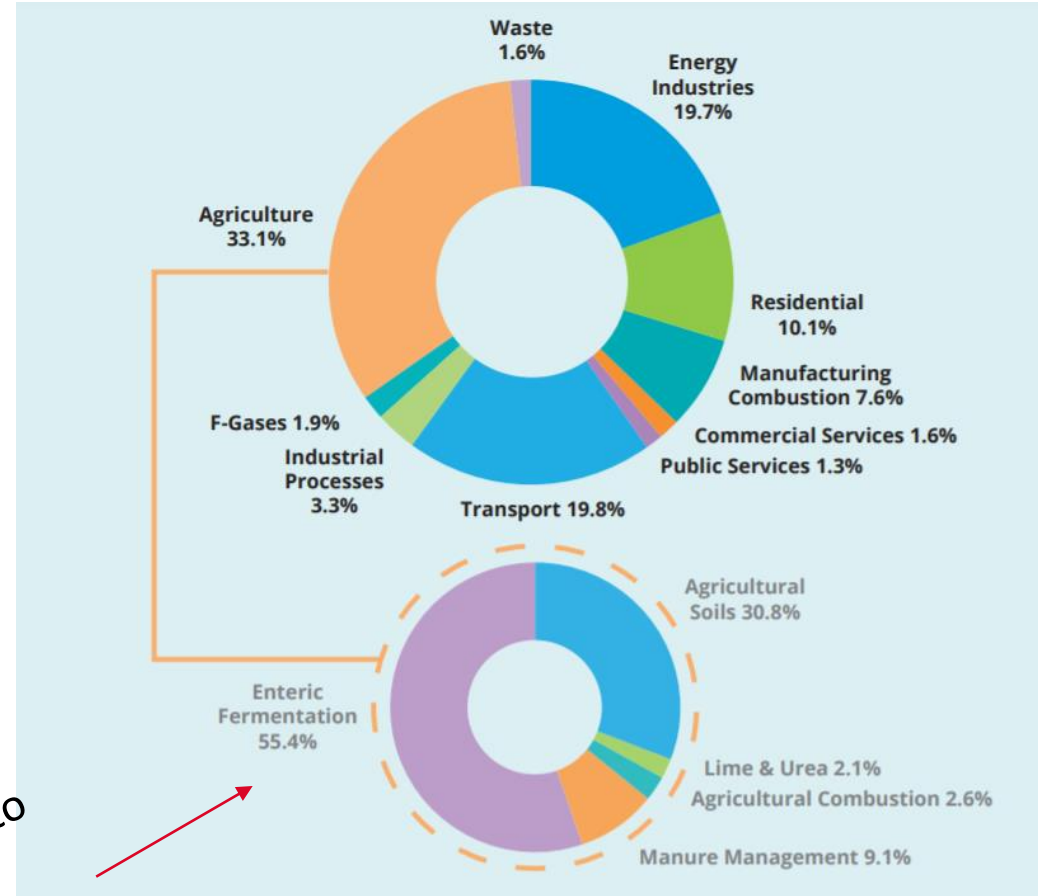


Value added in the bioeconomy by sector Ireland and Bulgaria (Joint Research Centre, 2017)

The “not so green island”



Source: Central Statistics Office Ireland



Lesson to learn - Need to include low-emission strategies as a model for sustainable growth

Bioeconomy - a strategy for more sustainable growth



Rialtas na hÉireann
Government of Ireland

National Policy Statement on the Bioeconomy

February 2018

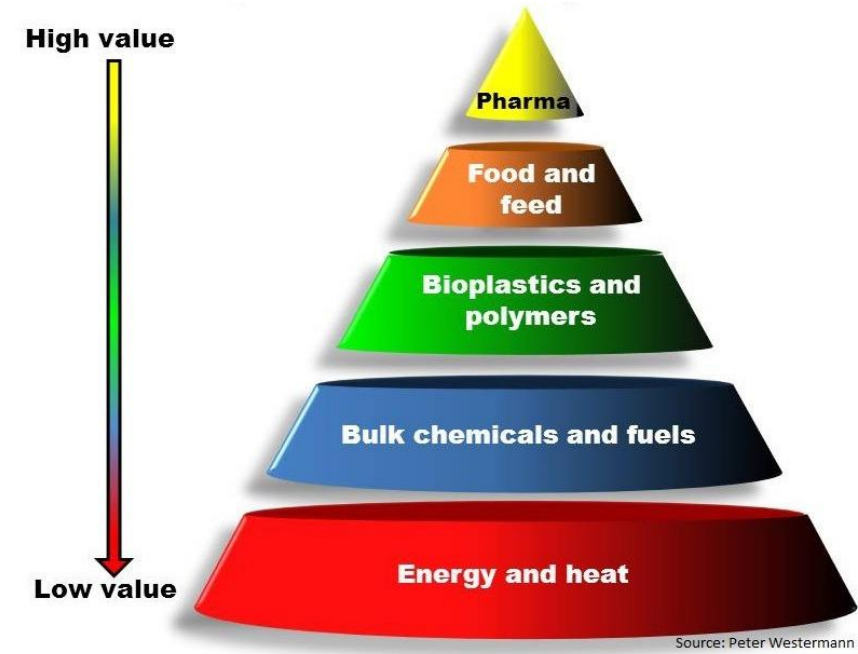
Rialtas na hÉireann
Government of Ireland

Food Vision 2030

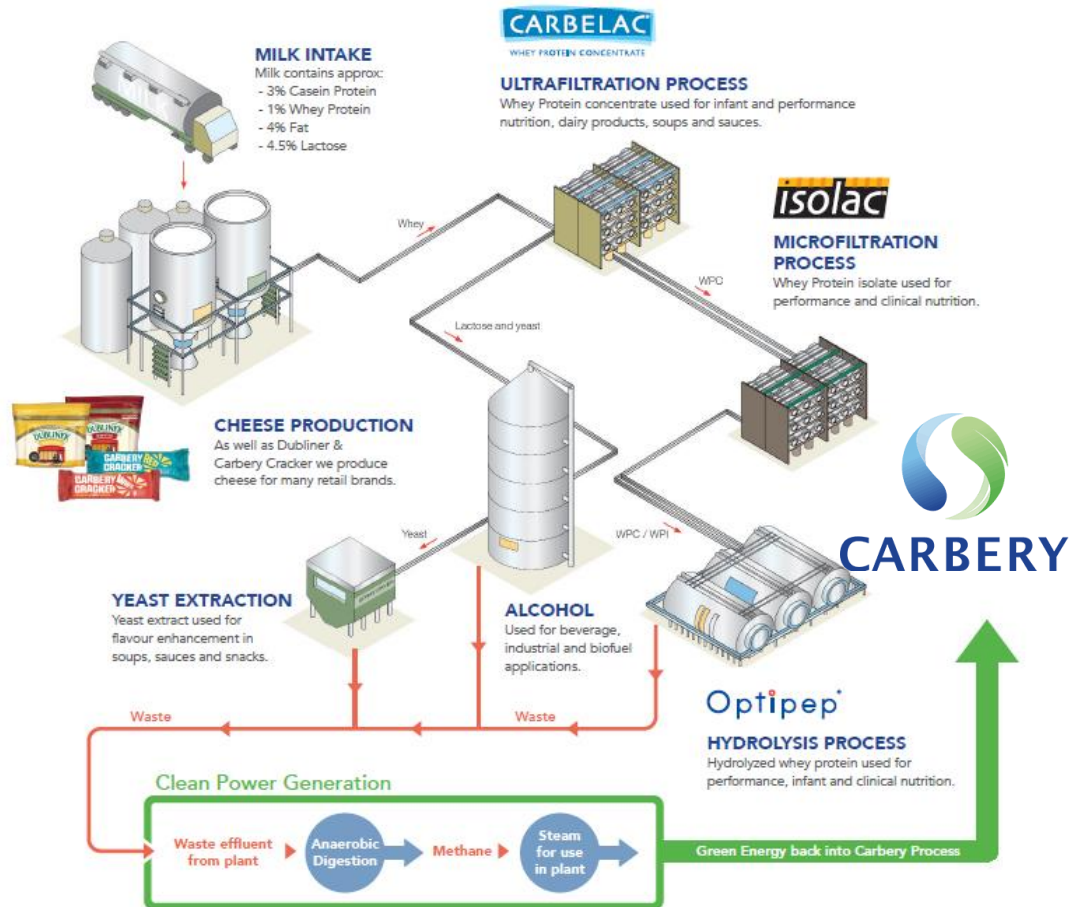
A World Leader in Sustainable Food Systems

GOAL 6
Embed the Agri-Food Sector in the Circular, Regenerative Bioeconomy

- 2 Clean Water
- 4 Quality Education
- 7 Affordable and Clean Energy
- 9 Industry, Innovation and Infrastructure
- 12 Responsible Consumption and Production
- 17 Sustainable Cities and Communities



Bio-based initiatives at process level

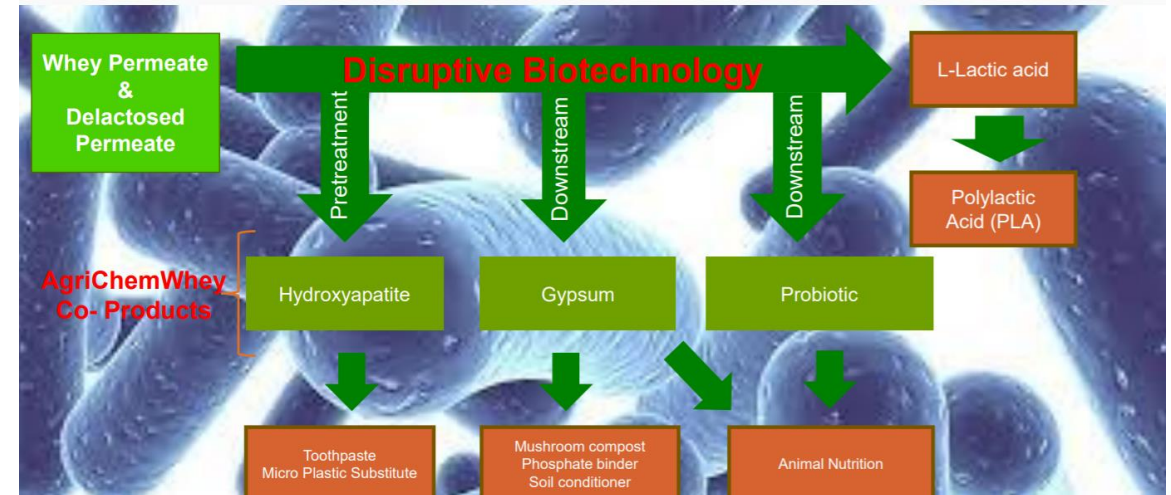


AgriChemWhey



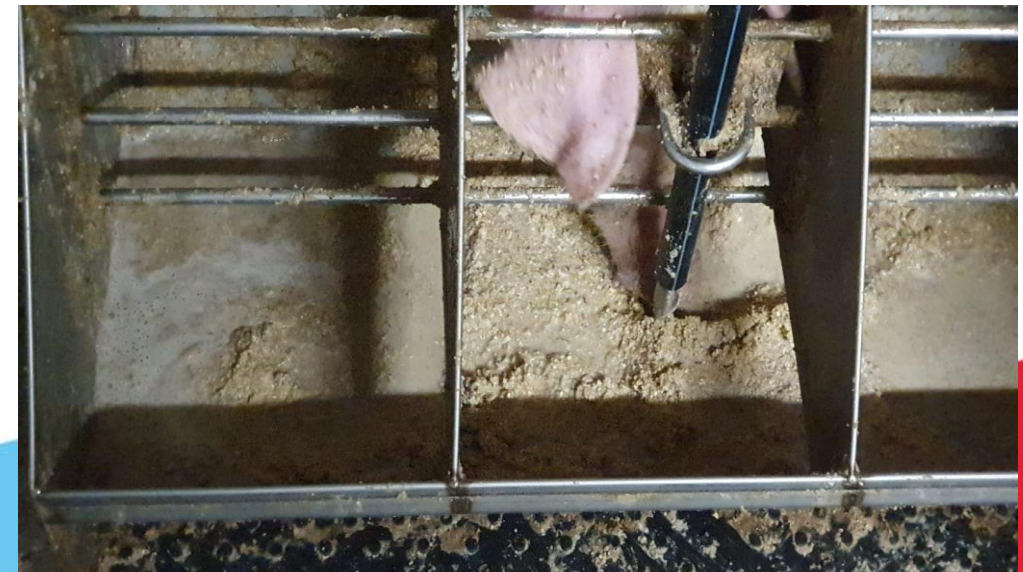
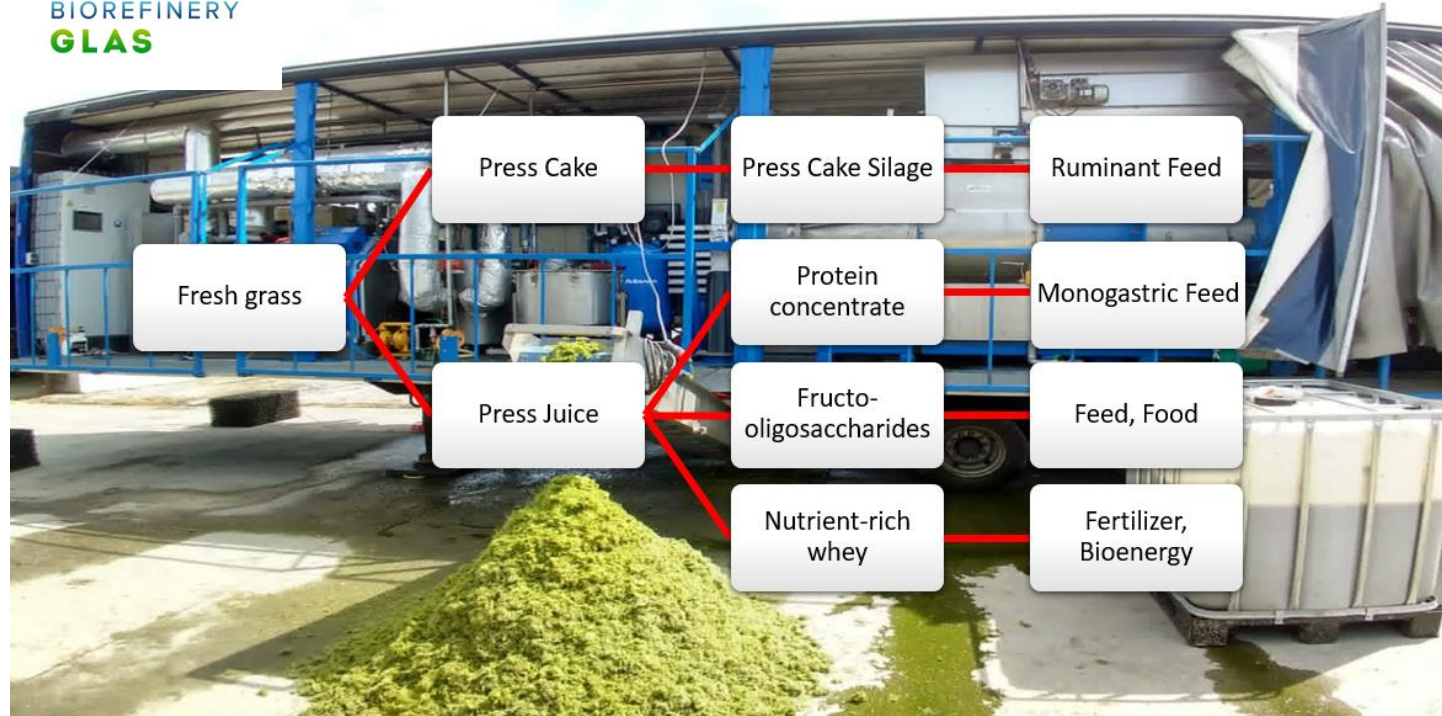
glanbia

Action: Convert low value Whey Permeate side-streams from dairy processing into Lactic Acid and valuable co-products



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Bio-based initiatives at farm level



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Farmer focused bioeconomy engagement and demonstration

Irish EIP-AGRI Operational Group
'One-Stop-Shop' NRN Storyboard Project Database



Coopid



**AGRI
FOR
UALOR**

Conclusions

- Livestock sector can make a significant impact in value creation, while bringing major socio-economic benefits for rural regions
- The growth of livestock and agri-food sector can also bring emission challenges
- The bioeconomy offers many opportunities to combine value-add creation with opportunities for emissions reduction through displacement of emission intensive products
- As guardians of the land there are many opportunities for farmers and cooperatives to become major players in Europe's bioeconomy producing food, feed, material and energy products => if we want a stable bioeconomy this needs to happen in a fully integrated way
- Integration of bio-based products and energy can offer a good balance between value creation and emissions reduction



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Thank You!

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