The EU Approach

KJWA Workshop 2 (e)

"Improved livestock management systems, including agropastoral production systems and others"

Herwig Ranner – European Commission

European Union

The European Green Deal

CLIMATE PACT AND CLIMATE LAW

INVESTING IN SMARTER, MORE SUSTAINABLE TRANSPORT

STRIVING FOR GREENER INDUSTRY

ELIMINATING POLLUTION

ENSURING A JUST TRANSITION FOR ALL

FINANCING GREEN PROJECTS

MAKING HOMES ENERGY EFFICIENT

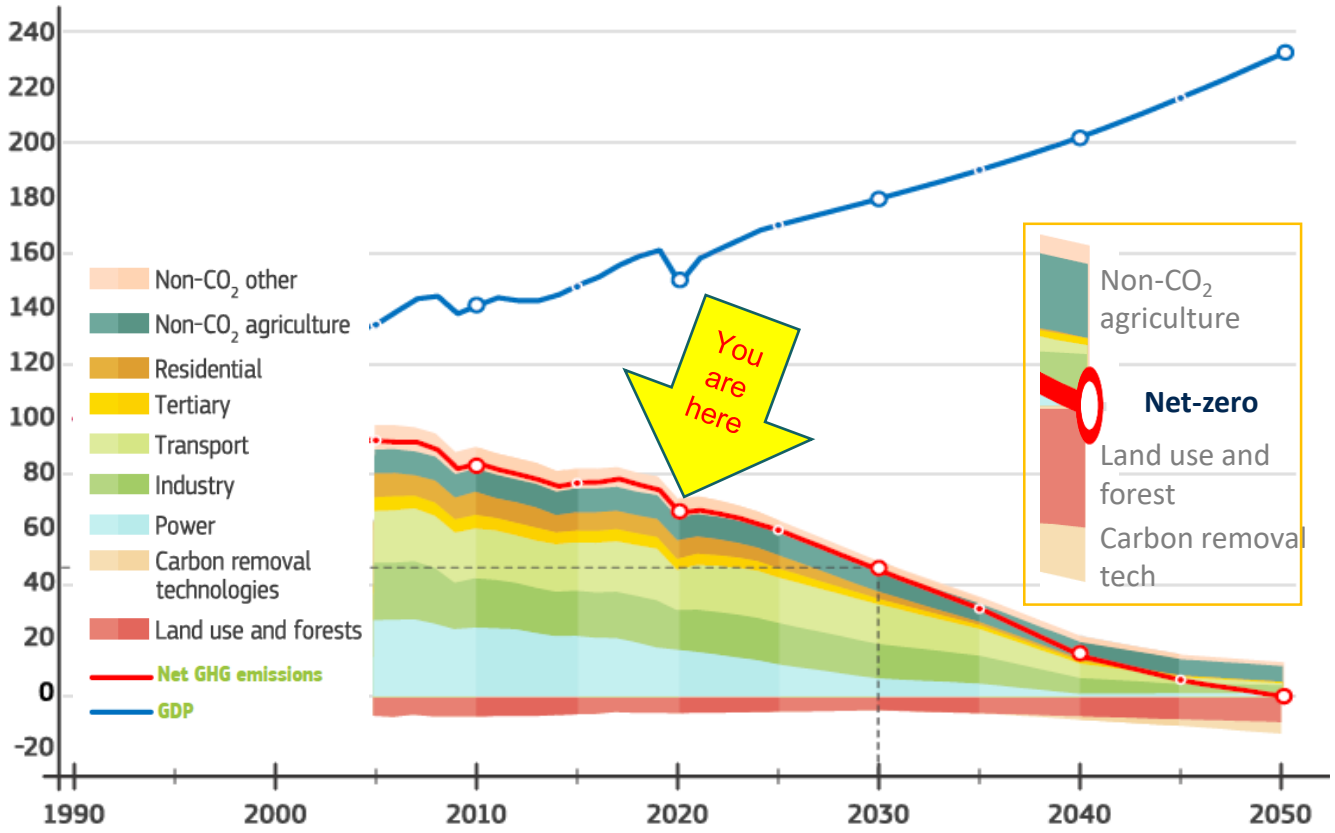
LEADING THE GREEN CHANGE GLOBALLY

FROM FARM TO FORK

PROTECTING NATURE

PROMOTING CLEAN ENERGY

Challenges in agriculture



EU 2030 climate target plan Impact Assessment
https://eur-lex.europa.eu/resource.html?uri=cellar:749e04bb-f8c5-11ea-991b-01aa75ed71a1.0001.02/DOC_2&format=PDF

- non-CO2 GHG (incl. CH4: 54%): -16% in 2030 (cfr 2005); (8% cfr baseline);
- C price: €55/tCO2eq
- Agriculture CH_4 is from biological processes > can not reach zero
- Higher costs for reducing CH_4 in agriculture than in other sectors
- Diffuse emissions, site and context-specific dependend
- Measurement, reporting and verification is challenging
- insufficient knowledge and expertise limiting uptake of some solutions
- Trade-off in mitigation actions
- Mitigation potential extists, decoupled from production:
  - Anaerobic digestion
  - Animal diet, feed additives, herd management
  - Breeding, herd health and animal welfare
  - Manure management
  - societal shift to more balanced diets
- Benefits for farmers (cost reduction, income diversification)

Allocation of CH_4 emissions in EU-27 and Globally

EU contributes to 5% of global methane emissions

41% global CH4 emissions from natural sources (biogenic), weatland, wildfire

5 - Waste management: 26%
Global: 20 – 26%
Share of CH4: 94%

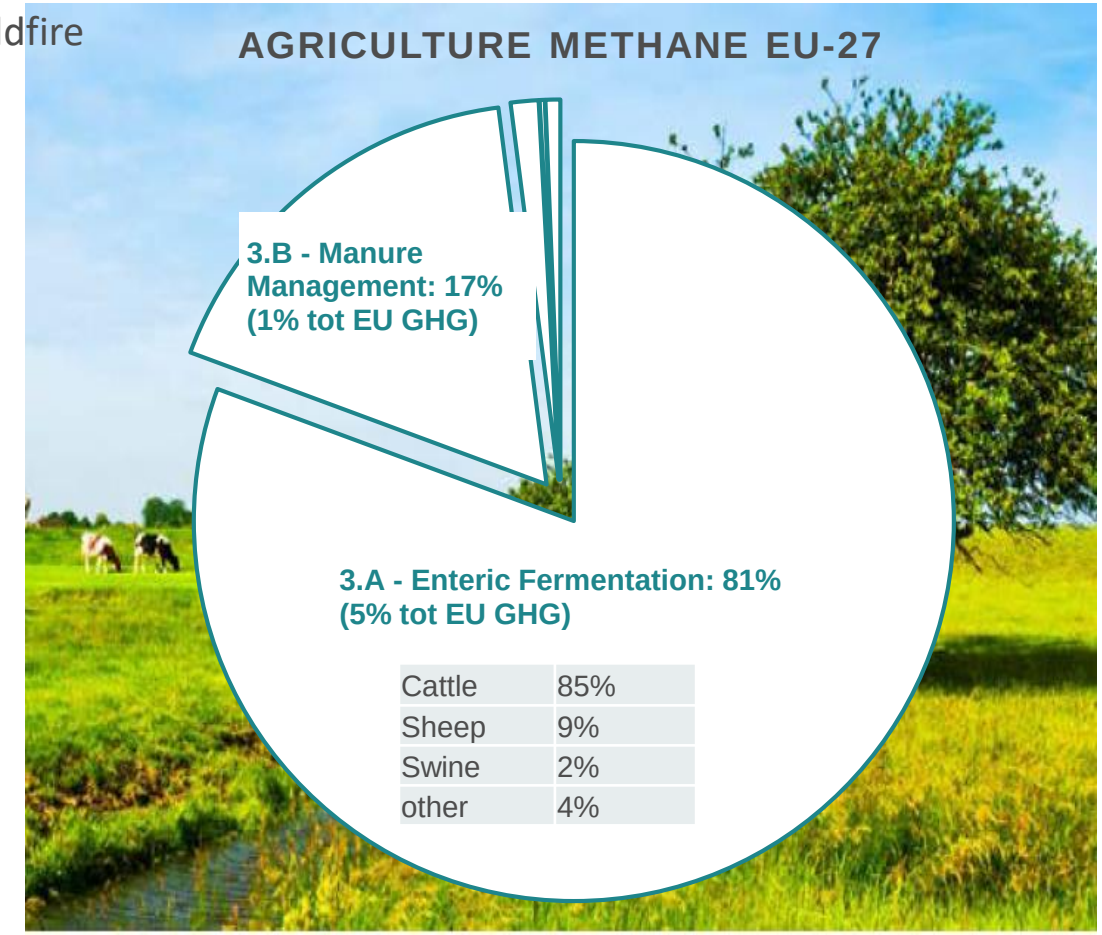
1 - Energy: 19%
Global: 19 – 30 %
Share of CH4: 3%

2 - Industrial Processes and Product Use 0%

4 – LULUCF:1%
Share of CH4: 2%

3 - Agriculture: 54%
Global: 40 – 53%
Share of CH4: 54%

59% global is antropogenic



European Commission

European Environment Agency (EEA), (2018). EEA greenhouse gas - data viewer.
https://www.eea.europa.eu/ds_resolveuid/f4269fac-662f-4ba0-a416-c25373823292

International actions in the EU methane strategy

Assess regulatory **tools** on **fossil energy** imports

Work with **importing** and **partner countries** to **align** efforts

Develop a **transparency tool** for supply chain emissions

Work to **secure a UN based pathway** on methane in **2021 UNGA**

Agriculture

- COP 26 extract best practices
- EU will help to foster both collaboration and the exchange of knowledge and best practices to improve implementation of climate action in agriculture.
- help non-EU countries with knowledge exchange, best practices, and the setting up of pilot projects in the context of the Climate and Clean Air Coalition (CCAC) agriculture initiative
- EU's-international partnerships on research and cooperation will continue to support climate action in agriculture-related projects (livestock management, grazing land management and forestry)
- Promote the mitigation potential in the rice-cultivation sector in Asia through cooperation projects.

An Roinn Talmhaíochta,
Bia agus Mara
Department of Agriculture,
Food and the Marine

Ireland's Approach

KJWA Workshop 2 (e)

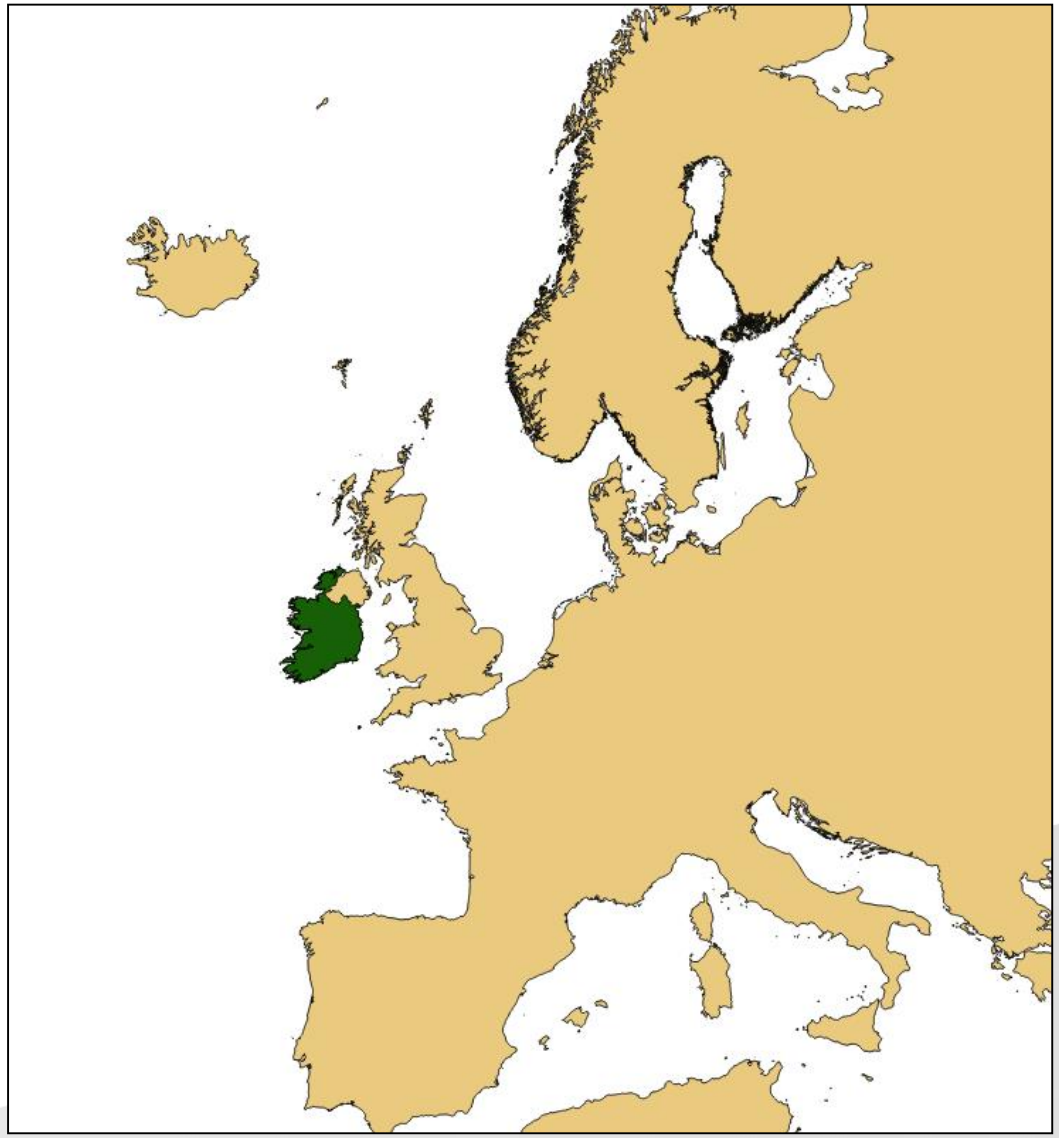
"Improved livestock management systems, including agropastoral production systems and others"

Philip Blackwell

Climate Change Policy

Ireland

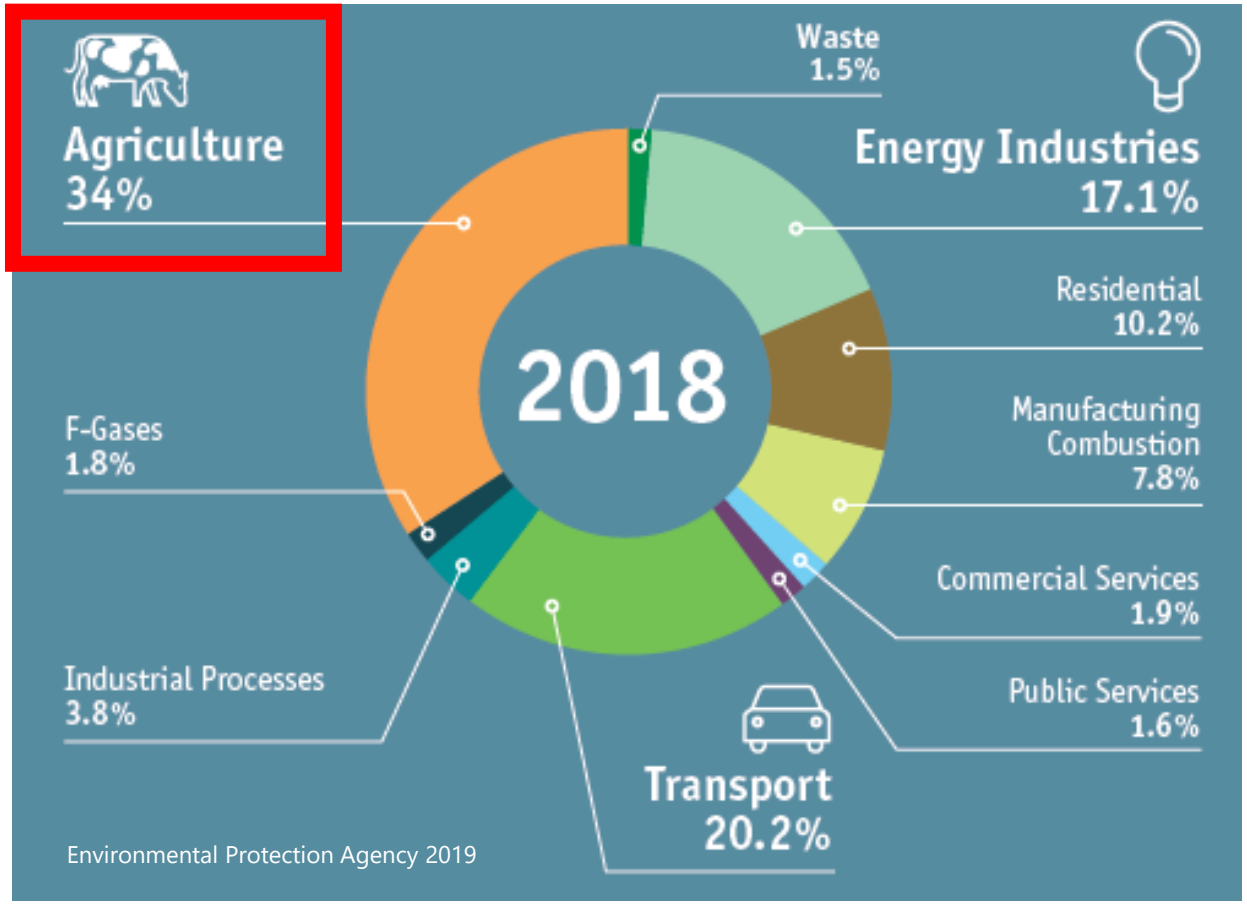
- Located on the Western seaboard of Europe
- Diverse varied landscape a mix of lowland and upland areas comprised of grasslands, peatlands, heath, rivers, lakes, marshes, woodlands, forestry and coastland.
- 6.9 million hectares of which 4.5 million are used for agriculture
- Temperate climate suited to grass based livestock production system
- Agricultural area
    - 93% Permanent Grassland
    - 7% Arable
- Total number farmers 140K- average farm size 32.5ha
- Long growing season = Long grazing season



Agriculture has a large share of Ireland's Emissions

Timeframe	Percentage Change	Absolute Change, CO_2 eq.
2005-11	-9.5%	-1.9 Mt
2011-17	12.8%	2.3 Mt

- Agriculture largest contributor to GHG emissions in Ireland
- Above EU average of 10%
- Sources of emissions:
- Methane (CH4)
- Nitrous Oxide (N2O)



Multiple Environ Challenges in Ireland

Drivers
- Animal numbers
- Fertiliser sales and trends

Impacts
- Greenhouse gas emissions
- Ammonia emissions

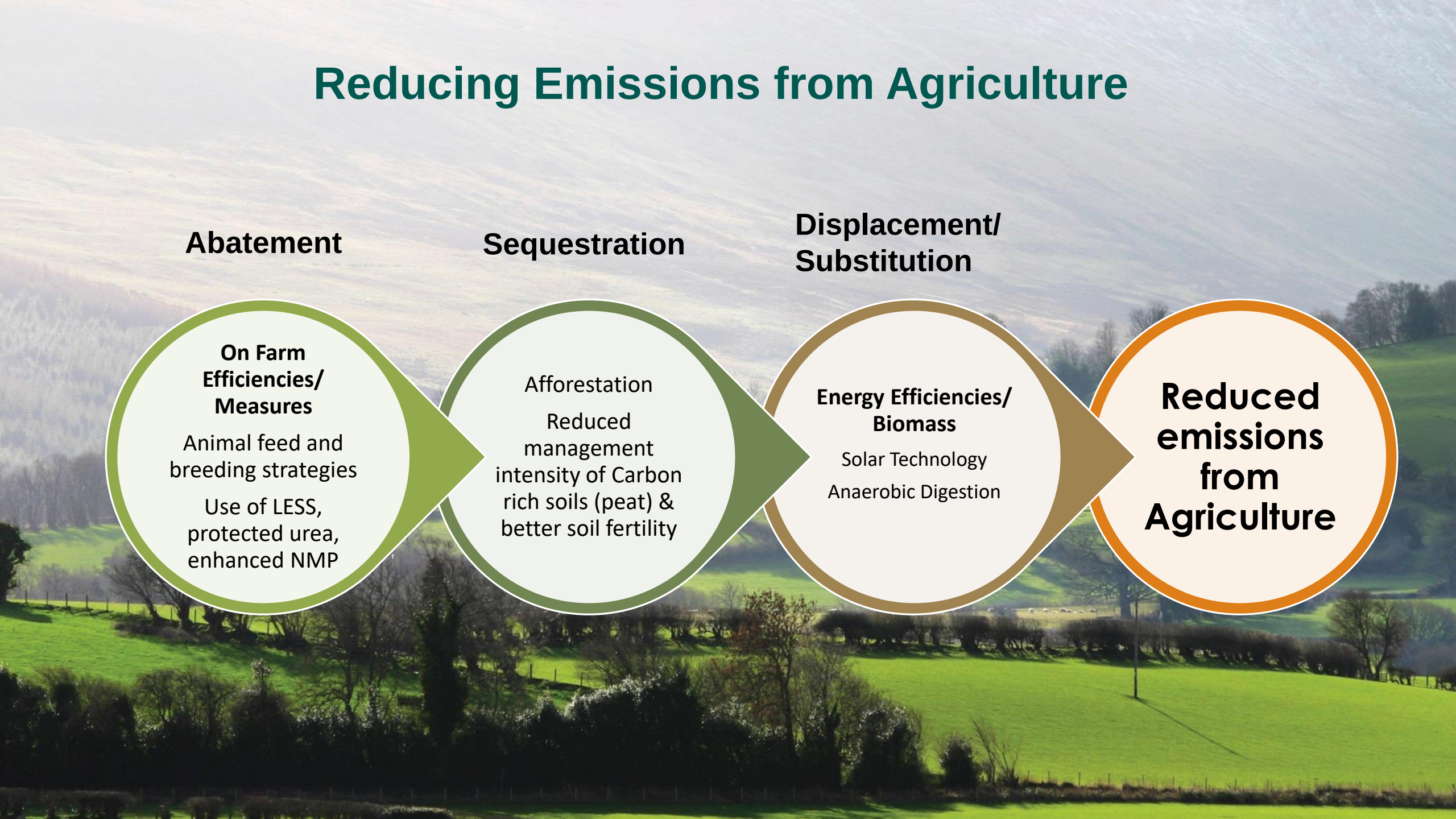
- Biodiversity
- Water quality
- Soil fertility

Climate Action Plan 2019– Sectoral Targets

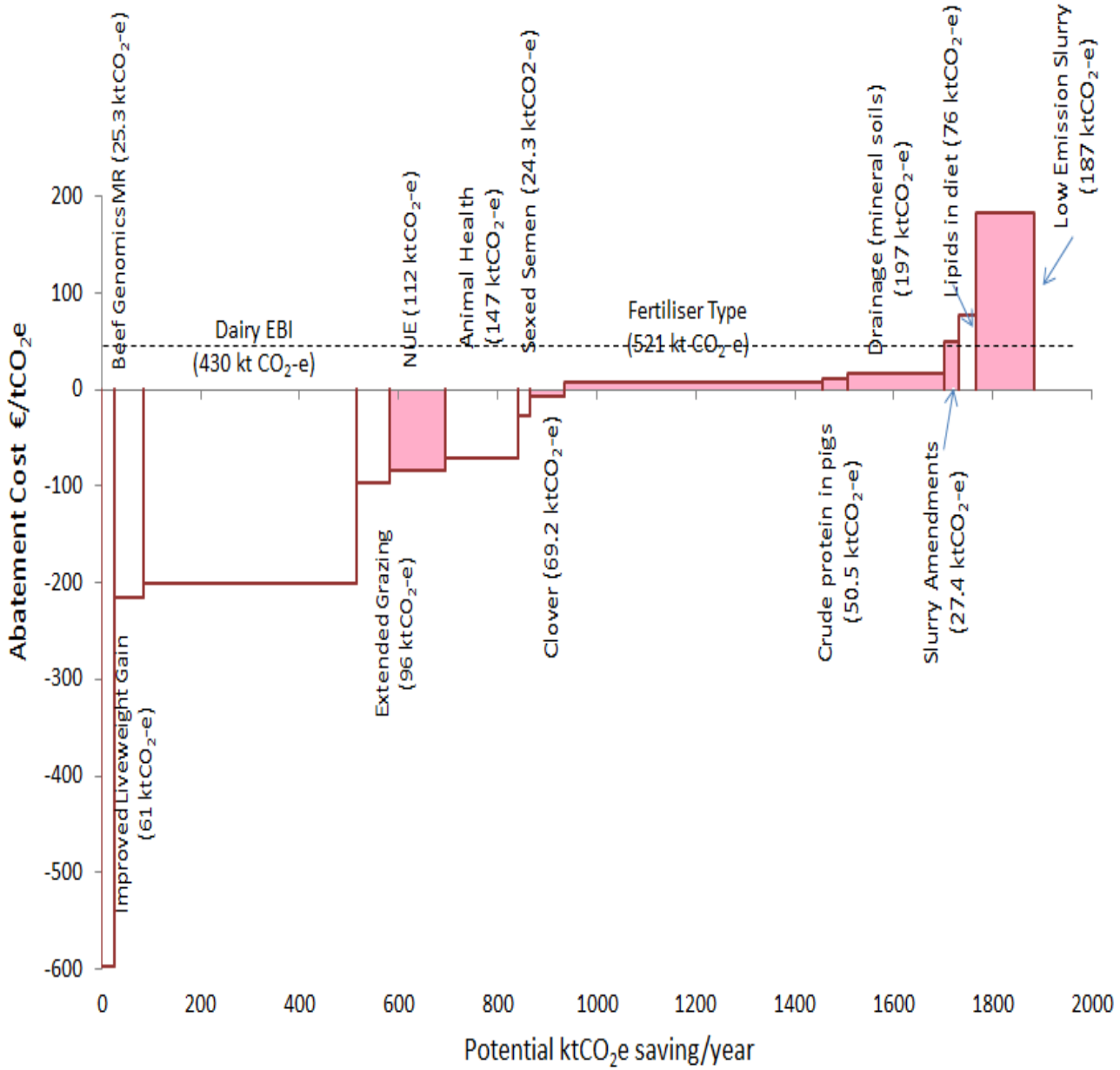
- Identifies how Ireland will achieve its 2030 targets for carbon emissions, and puts us on a trajectory to net zero by 2050.
- Progress measured through National Inventory Reporting updated annually
- Updated Climate Action Plan for 2021 to achieve step up in ambition

Key Sectoral Targets	
Electricity	50-55%
Transport	45-50%
Built Environment	40-45%
Enterprise	10-15%
Agriculture	10-15%

Reducing Emissions from Agriculture



Teagasc Marginal Abatement Cost Curve



1. Improved Beef Maternal Traits
2. Beef Genetics: Optimised live-weight gain
3. Dairy EBI
4. Extended grazing
5. Nitrogen-use efficiency
6. Improved animal health
7. Sexed Semen
8. Inclusion of Clover in pasture swards
9. Fertiliser Type (Reducing N emissions)
10. Reduced crude protein in pigs
11. Draining wet mineral soils
12. Slurry amendments
13. Adding Fatty Acids to dairy diets
14. Low-emission slurry spreading*

* Double dividend as it also reduces ammonia emissions

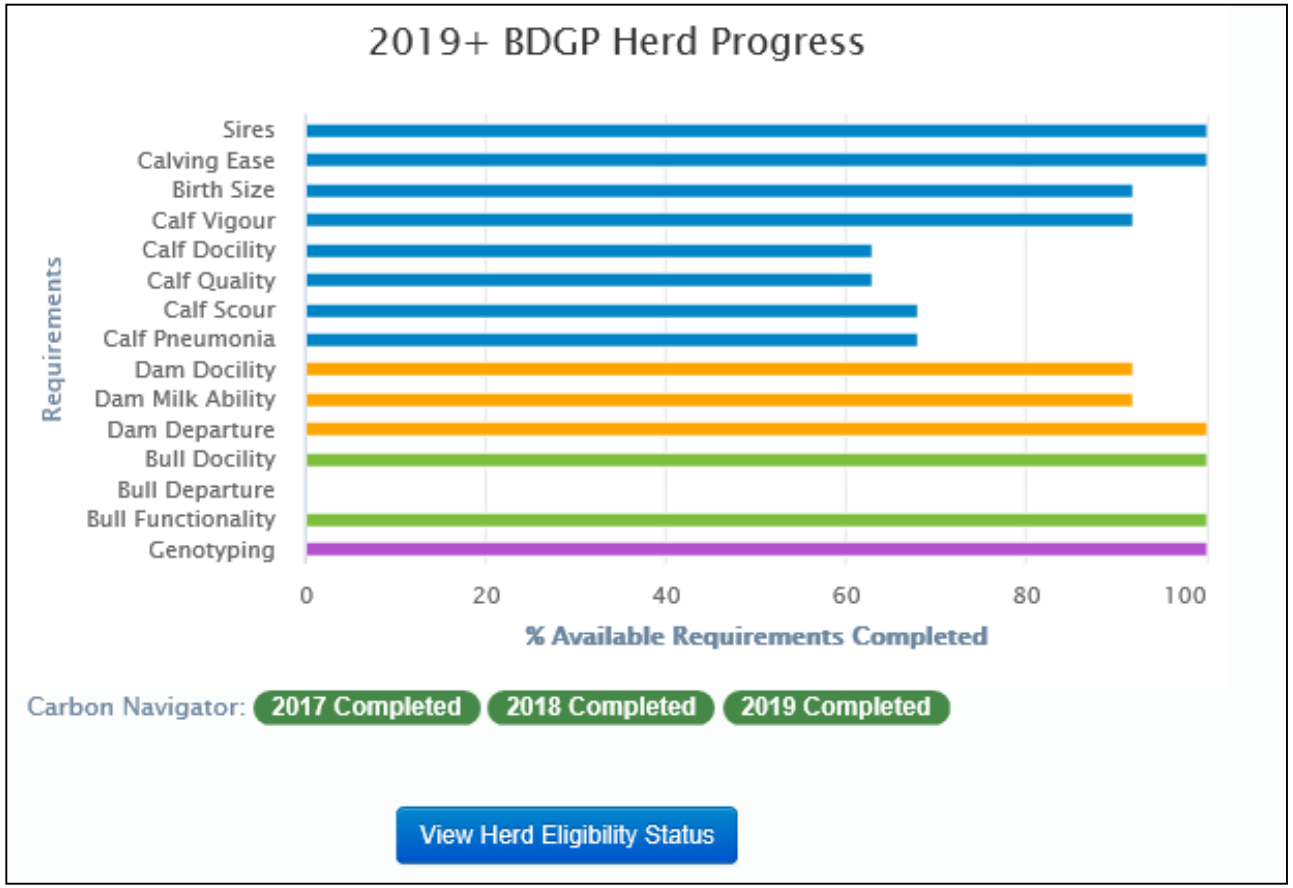
Beef Data Genomics Programme (BDGP)

(1.Improved Beef Maternal Traits & 2. Beef Genetics: Optimised live-weight gain)

- Improve the genetic merit of the national herd through the collection of data and genotyping animals and to lower greenhouse gas emissions by improving quality and efficiency

- Improve farmer profitability and reduce the greenhouse gas intensity of Ireland's beef production.

- Aims to build an accurate picture of the animal population in a central database (i.e. sire details, movement details, DNA samples, health & welfare data, lameness , slaughter data).



Beef Data Genomics Programme (BDGP)

Payments to farmers who undertake to carry out actions aimed at improving the genetic merit

Surveys and Data

- docility, quality, milking ability, as well as some animal health issues such as scour and pneumonia.

Genotyping

- animals genotyped each year will be at least equivalent to 60% of the number of calved suckler cows

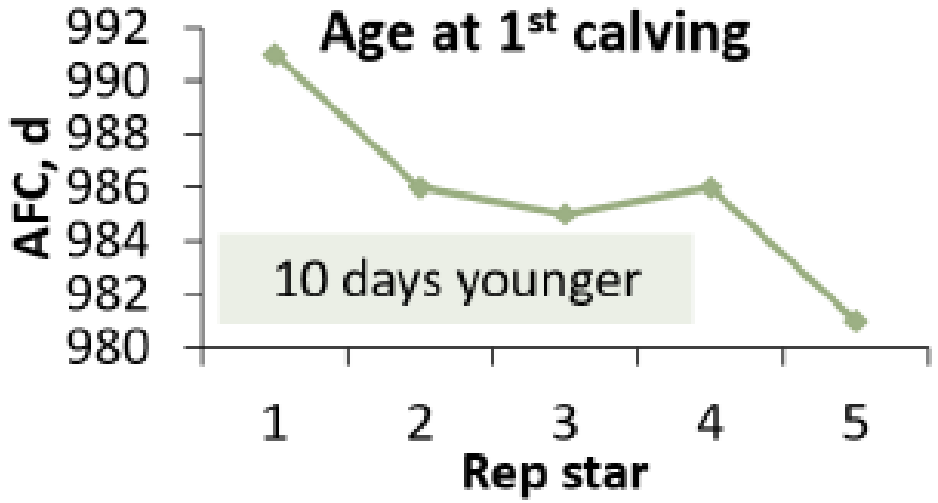
Replacement strategy

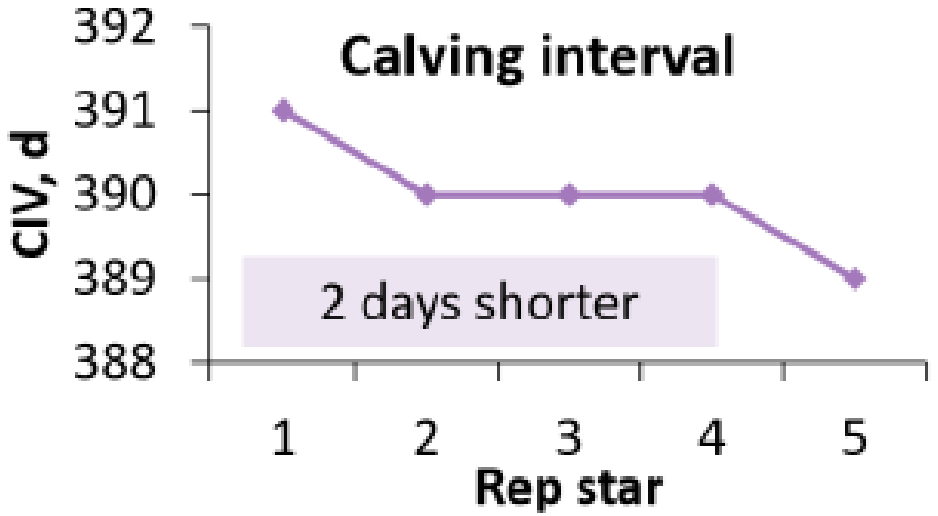
- required to maintain a proportion of high genetic merit animals on their holding

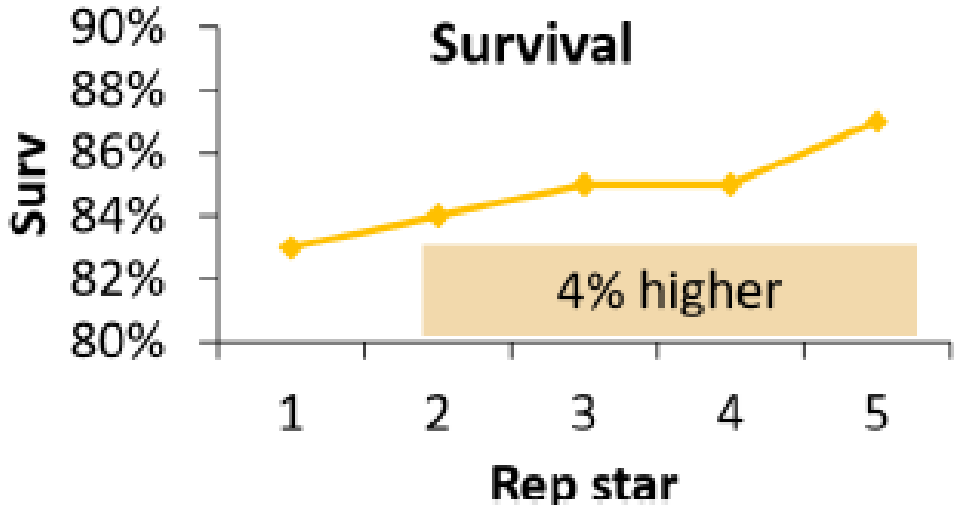
Bovine Viral Diarrhoea testing

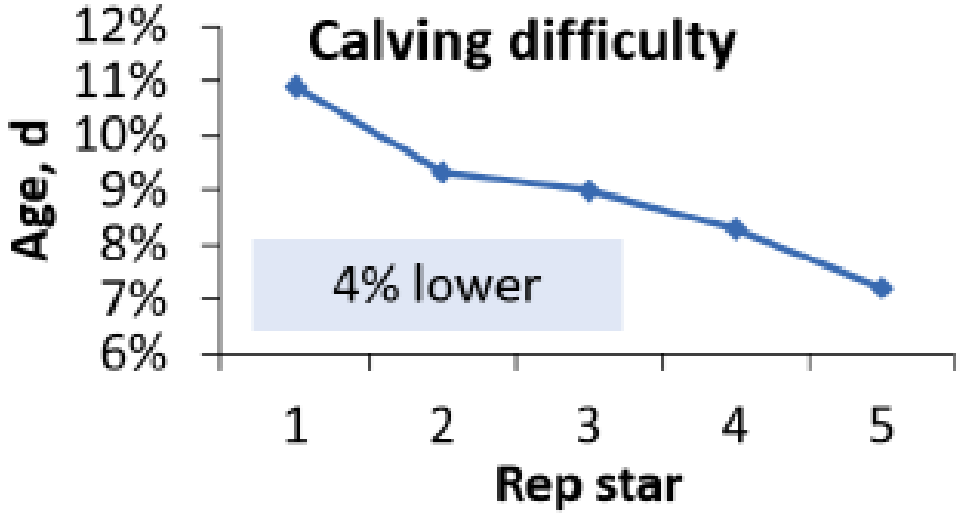
- Animals must be tested for BVD within 20 days of birth.

Fertility and Calving Difficulty









Carbon Navigator

- Quantifies the environmental gains that can be made on each applicant's farm by setting targets in key areas such as grassland management.

- Illustrates what that change would mean in terms of reduced GHG emissions from his/her herd and the increased profitability associated with such a change.

Carbon Navigator

Farm performance from **01-Jan-2017** to **31-Dec-2017**

1. Length of grazing season
Average turnout and housing date of each category of stock to be used

Suckler Cows:	Turnout Date	24-Apr-17
	Housing Date	17-Nov-17
	OR	
	100% Out Wintering	☐
Yearlings:	Turnout Date	24-Mar-17
	Housing Date	17-Nov-17
	OR	
	100% Out Wintering	☐

2. Nitrogen usage

• Total CAN or equivalent compound N Used	1.5	tonnes
• Total Urea Used	1	tonnes
• Total Concentrate Fed	2.5	tonnes

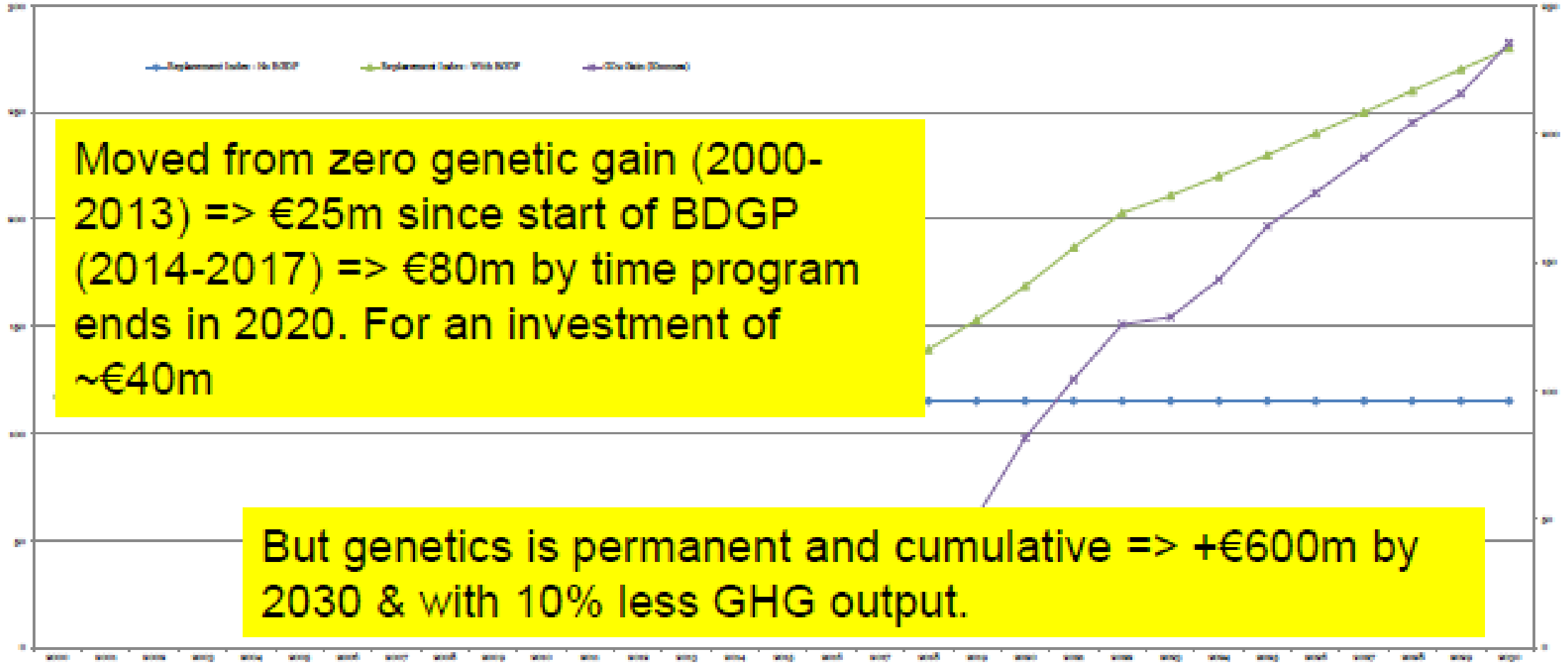
3. Slurry and FYM Management

• % Spread in Spring (after end of closed period)	10	%
• % Spread in Summer (May, June, July)	10	%
• % Spread Later in the Year (Aug - closed period)	80	%

• **Application Method**

Splash Plate: ☐ Umbilical System: ☐ OR Not Applicable: ☐
Trailing Shoe: ☑ Other: ☐

Carbon Benefits from Beef Genomics



Thank for your attention!