Meeting the Climate Change Challenge in Agriculture

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Presentation messages

- Sustainability is central to Irish food production
- Global demand for food is increasing and Irish produce is regarded as very efficient
- Policy is actively engaging with agriculture – “carrot & stick” approach; targeted approach
- CAP is evolving – environmental targeting
- Significant challenges, including recognised low mitigation potential, but also part of the solution
Potential Climate Change Impacts

All aspects of Irish agriculture will be affected by climate change, the main impacts will result from increased levels of atmospheric CO₂, changes in air and soil temperatures, changes in rainfall patterns and extreme events.

- **CO₂**: Level of atmospheric CO₂ are projected to increase markedly from current average levels (400 ppm) to 600 ppm by 2100.
- **Spring**: Spring is expected to occur earlier, extending the length of the growing season.
- **Temperature**: Average temperature changes of 1 - 3 °C by 2100.
- **Heatwaves and Droughts**: Increases in the occurrence of heatwaves and droughts is likely.
- **Wetter Winters**: Wetter winters are likely and this may result in difficulties in accessing land.
The Climate Change Challenge

**GHG Emissions**

> 30% of GHG emissions from Agriculture

EU agricultural emissions are approx. 10%

**GHG Targets**

20% emissions reduction by 2020; 30% by 2030

Both GHG and ammonia emissions projected to increase by 2030

**Renewable Energy Targets**

16% of energy demand from renewable by 2020

32% EU target by 2030

**Energy Efficiency Targets**

20% Energy Efficiency by 2020

32.5% Energy Efficiency by 2030
Sustainability is key

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

- ~ 4.5 million hectares (of a total of 6.9 million hectares) is dedicated to agricultural land
- 92.1% grassland, 6.3% cereals, 0.2% potatoes and 1.4% other
- Livestock production is the primary type of farming conducted
- 137,100 family held farms
- The average farm size: ~ 32.5 hectares
- 41,200 farmers are age 65 and over, 7,400 are under 35
- Average family farm income for full time farms ~€31,300 (dependent on farm type)
€12.6bn
Irish food and drink exports are valued at €12.6bn, an increase of 13%

Growth of €6bn since 2010 or €4.7bn

✓ 60% growth

8th
The 8th consecutive year of export growth in 2017

32%
International markets account for 32% or €4bn

35%
35% of Irish food and drink exports are destined for the UK – down from 37% – to a value of €4.5bn

33%
Other EU markets account for 33% of exports or €4.1bn

➡️ €4bn
Shipments of Irish food and drink to international markets grew by some 17 percent to €4bn.

➡️ €4bn
Export performance driven by a surge in dairy sales to over €4bn – comprising one third of all food and drink exports.

180
Irish food and drink is sold in 180 markets worldwide

Source: Bord Bia

Bord Bia
Irish Food Board

Growing the success of Irish food & horticulture
Current CAP & the Reform of CAP

Current CAP

- **Pillar I** – Direct payments to farmers on an annual basis
- **Pillar II** – Infrastructure, Environment and Development Support

CAP POST 2020

- Simplifying and modernising the policy
- More targeted, result and performance based support
- Fairer distribution of direct payments
- Enhancing environmental and climate ambition
- 40% of CAP’s budget is expected to contribute to climate action
Some current measures supporting Climate Friendly Farming/ Sustainable Farming

RDP 2014-2020 (CAP Pillar II payments)

Knowledge Transfer Programmes inc. Health and Safety Training

European Innovation Partnerships

GLAS

BDGP

TAMS

Nitrates
Steps to reducing emissions from Agriculture

On Farm Efficiencies/Abatement measures

Carbon Sequestration

Energy Efficiencies/Fossil fuel and energy intensive materials displacement and substitution
Role of Agriculture in Energy Production and Energy Use

ENERGY IN IRELAND
2018 Report

Note: Some statistical differences exist between inputs and outputs.
Sustainable Energy Agriculture Sector
Forestry

- > 300,000 ha planted since 1990 and €2.5 billion of state investment to date
- Contributes €2.3 billion to GDP, 12,000 employed
- Irish Round harvest was approximately 3.54 million cubic metres in 2017
- Nearly 4 million cubic metres of roundwood harvested each year. This will more than double to 8 million cubic metres by 2035
- Irish forests have sequestered about 3.8 million tonnes of CO₂ per year from the atmosphere (2007-2016)
- Demand for forest products is expected to increase by 20% by 2030 across Europe
Forestry: Challenges & New Incentives

- Low afforestation rates: ~ 4,000 ha in 2018
- Small plantations, average private grant aided 8.8 ha
- Road construction in private estate
- Bioeconomy and biomass supply shortfall
- Potential wood fibre available in RoI for energy, wood based panels and other uses to increase from ~1.9 million m³ in 2018 to ~ 4.2 million m³ in 2035
Energy Efficiency & Renewable Energy Supports

Targeted Agriculture Modernisation Scheme

Energy Efficiency Measures

Renewable Energy Technology Supports

Horticulture Programmes

Producer Organisation Scheme

Commercial Horticulture Scheme

LED Lighting

Heat Transfer Units

Energy Efficiency Upgrades

Solar PV

Biomass Boilers
Energy Efficiency & Renewable Energy Supports

EIP Projects
- Small Biogas Demonstration Programme
- Biorefinery Glas Project
- Irish Biochar Cooperative Society

Total investment of €3 million

Animal-By Product Regulations

To encourage alternative safe domestic disposal outlets including the safe use of ABP as a feed stock in biogas plants

Environmentally friendly, sustainable process

10 biogas plants under DAFM regulation operation with 2 additional plants shortly
Summary

- **Need to protect Green Credentials - BUT Significant challenges**
- **Agriculture is a contributor to climate change, impacted by climate change, but is also part of the solution**
- **Policy actively engaging with agriculture**
  - Understand points of engagement – market, regulation, incentive vs tax, adaptation
  - Optimise use of CAP reform opportunities and next agri food strategy
- **The unique role of agriculture & forestry in the global climate change response is increasingly recognised:**
  - Continued improvement in on-farm efficiencies
  - Maximise carbon removals
  - Increase contribution to energy inside and outside farm gate
Thank you
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