Specific Mitigation Measures

Nutrient Management

A1 – Slurry application via trailing shoe versus splash plate.
A2 – Timing of slurry application by splash plate.
A3 – Biological nitrogen fixation in grass clover swards.
A4 – Nutrient Management Plans.

Livestock Management

B1 – Sheep genetic improvement via OVIS.
B2 – Beef and dairy cattle genetic improvement via BOVIS.
B3 – Nutritional analysis of feed.
B4 – Targeting waste as a result of disease – BVD.

Renewable Energy and Fuel Efficiency

C1 – Slurry based on farm AD vs traditional dairy manure management.
C2 – Installation of Biomass Boilers.
C3 – Land utilisation to grow energy crops.
C4 – Optimise energy use on-farm.

Locking in Carbon

D1 – Locking in carbon in grass and soil.
D2 – Locking in carbon in peatland (sequestration).
D3 – Locking in carbon in new woodland biomass.
D4 – Managing existing woodland to deliver GHG abatement.

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INVESTORS IN PEOPLE

DMS: 12.13.025

Efficient Farming Cuts Greenhouse Gases

www.dardni.gov.uk/publications-environment-efficient-ghg-report

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AN ROINN
Talmhaíochta agus Forbartha Tuaithe

MÄNNYSTRIE O
Fairms an Kintra Fordèrin

The Greenhouse Gas Reduction Strategy and Action Plan is a report by the Agriculture and Forestry Greenhouse Gas Stakeholder Group - 2011

Strategy Outline

The Strategic Objective is to promote and encourage the adoption of technical efficiency measures on-farm that will lead to improved business performance and help reduce GHG emissions. Our ambition is to reduce emissions per unit of output and have a robust measurement methodology on which to base future targets.

Our strategy aims to:

- Improve the agriculture and land use GHG inventories by smartening the measurement to include local circumstances;
- Research scientifically the potential for locking in more carbon in soil/grass initially and in peatland later;
- Encourage implementation, by communicating, firstly, to farmers and land owners and secondly, to customers, a number of measures to achieve emissions reductions. Farmer based case studies have been developed to demonstrate best practice in emission reduction.

Implementation Themes

Four key themes designed to reduce emissions intensity have been identified:

- **A - Better nutrient and fertilizer management** (mainly minimal costs but incentives available);
- **B - Better livestock management** (with mainly moderate costs);
- **C** - Optimising **renewable energy** generation and encouraging **fuel efficiency** on farms (high installation costs but incentives available);
- **D** - Better land management by **locking in carbon** in soils, peatlands and grass (unclear magnitude of potential and costs, research results pending); and
- Better land management by **locking in carbon** in new and existing woodlands (mainly moderate costs but incentives available).

Case Studies included in the GHG Reduction Strategy and Action Plan

	Mitigation Measure Ref.
Nutrient Management	
• Dairy (Lavery)	A1, A2, A3, A4
• Potatoes (McMaster)	A3, A4, C4
• Barley and Wheat (Chambers)	A3, A4, C4, D3, D4
Livestock Management	
• Sheep – upland (McHenry)	B1, B4
• Sheep – lowland (Martin)	B1, B3
• Dairy (McConnell)	B2, B3
• Beef (O'Kane)	B2
• Beef and Sheep (Milligan)	A3, D1
Renewable Energy and Fuel Efficiency	
• Mushrooms (McKeever)	C2, C4
• Wheat (Kane)	C2, C3, C4
• Pigs (Anon)	C4
• Anaerobic Digestion (BH Energy)	C1, C4
• Biomass Boiler (Best)	C2, C3
Locking in Carbon	
• Beef and Sheep (Milligan)	A3, D1
• Barley and Wheat (Chambers)	A3, A4, C4, D3, D4
• Sustainable Forestry (Baronscourt)	D4

Further details of the Case Studies are included in the GHG Reduction Strategy and Action Plan.