AgNav: Putting Climate Action Planning in Farmers’ Hands

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A Sea of Numbers…
How do we plot a course?
Multi-Level Targets

- National Targets
- Agriculture Sector Targets
- Organisations...Companies...
  - Farmers
FROM NUMBERS TO ACTIONS...

WHAT ARE THE CURRENT GREENHOUSE GAS EMISSIONS?
WHAT ARE THE SOURCES?
WHAT IS THE TARGET FOR OUR SECTOR?
HOW DO WE GET TO THESE TARGETS?
WHAT DOES IT MEAN FOR AN INDIVIDUAL FARMER?
Emissions Targets for Agriculture

Climate Action Plan 2024

23 Mt COe
2018

17.5 Mt CO2e
2030
Marginal Abatement Cost Curve (MACC)

Source: Teagasc
Virtuous Cycle

Know Your Number

Examine Your Options

Check Your Progress

Make Your Plan
• Robust scientific models
• Validated data sources
• Ability to run models at large scale
• Farm specific Action Plans
• Advisory channels to assist farmers on this journey

**Agnav** platform developed by Teagasc, Bord Bia, and ICBF to support farmers to improve the sustainability of their farms
Organisational Roles

- **Scientific Research**
- **Peer Reviewed Carbon Models**
- **Farm Advisory Programmes**

- **Central Database**
- **IT Implementation of Models**
- **User Interfaces**

- **Farm Level Quality Assurance**
- **Validated Datasets**
- **Farm Planning Tools**

**Scientific expertise & research outputs**
- Carbon assessment models & tools
- Signpost Advisory Services & demo farms
- Relevant datasets

**IT Infrastructure & resource**
- Data processing & analysis
- AIM data
- Relevant datasets

**QA scale and infrastructure**
- Farm Sustainability Survey
- Carbon Footprints (Farmer Feedback Report)
- E-Learning
- Sustainability Planning Tools
- Relevant datasets

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[Image 61x563 to 459x853]
[Image 486x28 to 506x118]
[Image 107x360 to 129x411]
[Image 250x367 to 267x404]
[Image 390x364 to 410x418]
[Image 486x694 to 530x831]
The pathway to Action..

1. Assess
   - Sustainability Survey

2. Analyse
   - Forecaster
   - Action Planner

3. Act
   - AgNav
On-Farm Emissions & Forecaster
Farm Action Plan

Sustainability actions

Search for sustainability actions...

Select a theme
1. Greenhouse Farm Emissions
2. Environmental Tools

Select an action area
1. Improve my Farm Emissions
2. Forecast Tool Actions

Key/Legend: ⚫ Environmental Benefit ⭕ Economic Benefit

Implement Practices to Achieve Optimal Grazing Season Length
Benefits: ⭕ ⭕ ⭕ ⭕ ⭕
COMPLETED: 30/03/2023
Quick Request
View action details

Reduce Chemical Nitrogen Usage
Benefits: ⭕ ⭕ ⭕ ⭕ ⭕
COMPLETED: 16/04/2024
Quick Request
View action details

Use Protected Urea
Benefits: ⭕ ⭕ ⭕ ⭕
MORE DETAILS REQUIRED
View action details

Use Protected Urea

Guidance / Benefits

Guidance
Consider using protected urea to reduce nitrogen losses and improve fertilizer efficiency. This fertilizer releases nitrogen more slowly, reducing the amount of nitrogen lost to the environment. Apply protected urea at the recommended rate and time to achieve optimal growth.

Target Completion Date
13/05/2024

Suggested Actions (please select and/or add Action Notes below)
- Maximize the use of protected urea on the farm to reduce greenhouse gas emissions.
- Order protected urea from the merchant for next year.
- Replace all straight nitrogen with protected urea.
- Replace urea with protected urea.
- Replace CAN with protected urea.
- Trial the use of protected urea on a section of the farm.

Additional Information
Benefits: ⭕ ⭕ ⭕ ⭕ ⭕
Expires: After 1 Year

Further Resources
Protected Urea
Ongoing Developments

• Further **Forecaster functions**:
  • Genetic Gain and Methane Efficiency
  • Feed additives
  • Concentrate feed
  • ...and more..

• Integration with Beef and Dairy Processor Sustainability Schemes
Future Developments

- Additional indicators:
  - Carbon sequestration
  - Biodiversity
  - Water quality
  - Economics of climate action mitigation at farm level
Progress to data ... future plans
Future Developments

• High demand from other enterprises:
  • Sheep
  • Tillage
  • Pigs
  • Poultry
  • Horticulture
  • Forestry
• All LCA models used must be peer reviewed
Key Benefits

- Farmers are requesting guidance and support to deliver improvements.
- Maximises use of existing databases in the agri sector (verified data).
- Opt in, - All subject to farmers permission.
- Scientific oversight for development of robust and accurate system.
- No duplication for farmers, - one source of the truth.
- Freely available to all farmers.
Thank you for your attention