Teagasc Sheep Programme

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Teagasc

Animal & Grassland Research and Innovation Programme

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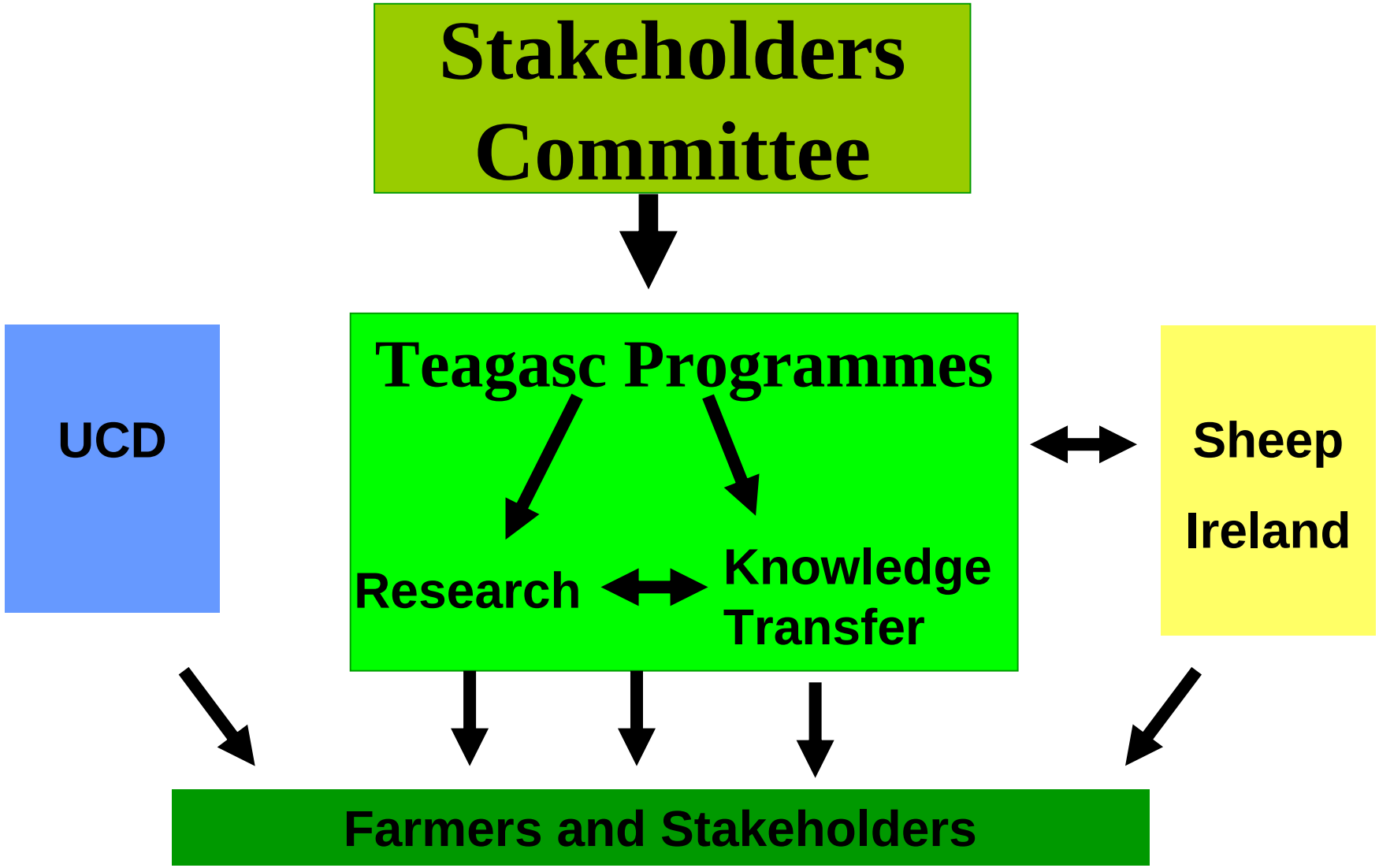
CONTEXT

- **32,000 Sheep producers Nationally**
- **2.5 million ewes**
- **Average flock size < 100 ewes**
- **Low weaning rate 1.3 lambs /ewes**
- **75% of lamb meat exported**
- **Efficient lamb production give very good incomes**
- **Increased lamb prices for 2010 & 2011**
- **Significant scope for increasing output at farm level & nationally**
- ***Food Harvest 2020***
- **Anthelmentic Resistance**





Stakeholders Committee
Teagasc Programmes
UCD
Sheep Ireland
Research
Knowledge Transfer
Farmers and Stakeholders

Overall & Specific Objectives of the Programme

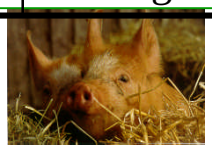
Increase the <u>productivity</u>, <u>sustainability</u> and <u>competitiveness</u> of Irish sheep production systems

- **Increase production efficiency –Grazed grass**
- **Increase the rate of genetic gain**
- **Adopt best practices in relation to animal health**
- **Improve product quality**
- **Enhance knowledge transfer to drive farm efficiencies**
- **Provide Leadership to the industry**




Research Programme Staff

Programme	Research Staff	Collaborators
Research-Demonstration Farm & Variety Evaluation	P. Creighton & M. O'Donovan (MP)	T. Boland (UCD), DAFF
Lamb Meat Quality	M. Diskin, A. Moloney, D. Troy, P. Allen (Ashtown),	F. Monaghan (UCD)
Ewe Lamb Rearing & Grazing	T. Keady, C. Lynch, B. Good & O. Keane, M. McHugh	
Flock Health	B. Good & O. Keane (GR)	G. Mulcahy, T. De Waal, T. Sweeney (UCD) & QUB
Genetics	N. McHugh, D. Berry, M. Diskin	A. Fahey (UCD) Sheep Ireland
Bio-Economic Modelling	N. McHugh, L. Shalloo, C. O'Donoghue, P. Creighton, M. Diskin	Sheep Ireland NUI Galway
BETTER Farm	M. Diskin, C. Lynch & M. McHugh	Teagasc Specialists Advisors/Veterinarians



Teagasc Resources

- **Flocks**
  - Pedigree 350 ewes (Suffolk, Texel, Belclare and Cambridge
  - Non Pedigree 360 Crossbred
  - Research / Demonstration 390
  - 7 BETTER farms (n~ 1500 ewes) expanding to 10 farms (n~ 3000+ ewes)

- **Laboratories** (Athenry & Grange)

- **Land**
  - 160 ha
  - Staff

- **Staff**

Meat Quality Health

Project Leader: **M. Diskin**

Collaborators: **Drs A. Moloney (Grange); P. Allen, AM Mullen & D. Troy (Ashtown), & N. McHugh, (Moorepark) F. Monaghan (UCD)**

- **Project Title:** The effects of castrating lambs and diet on the physical, colour and sensory attributes of lamb meat

- **Objective:** The overall objective of this study is to establish for Irish lambs the effects of gender (castrate v male), diet (grass, concentrates, and concentrates with different compositions), age at slaughter, and breed on meat quality (pH, colour, odour and eating quality attributes).

Outputs

- Irish sheep farmers will benefit from the greater efficiency of production of entire male lambs, bringing lambs for slaughter earlier with lower feed inputs.
- Processors will benefit from having more lambs finishing earlier in the season and from the greater leanness of entires.
- Enhanced shelf life of lamb.
- Increased domestic and export market lamb sales due to leaner products.
- Increased sustainability of lamb production in Ireland as a result of reduced on farm animal interventions and improved carcass traits
- Increased domestic and export market lamb sales.
- Enhanced nutritional quality of lamb due to more lean meat and less fat from entire lambs

Flock Health: Drug Resistance

- **Nematodirus:** no resistance problem to date
- **Anthelmintic resistance is a problem nationally**
  - 95% of flocks resistance to bendzimadazole
  - 48 % of Flocks resistance to levamisole

- **Resistance on Better Farms**
  - 3/3 of flocks resistance to bendzimadazole
  - 2/3 of flocks resistance to levamisole

Flock Health

Project Leader: Drs B. Good & O. Keane

Collaborators: Drs G. Mulcahy, T. De Waal

T. Sweeney (UCD) , & Queens, Belfast

Project 1

- **Title:** Establishing the information database required to enable the development of a GIS-based forecasting model for the control of fascioliasis in Ireland

- **Objective:** To provide up-to-date baseline data on the epidemiology of fluke.

- **Output:** The results will be used to identify factors that improve the forecast ability of models to predict fluke infection at flock level.

Flock Health

Project Leader: Drs B. Good & O. Keane
Collaborators: Drs G. Mulcahy, T. De Waal T. Sweeney (UCD) , & Queens, Belfast

Project 2

- **Title:** Molecular approaches to identifying nematode species and studying the genetic basis for benzimidazole resistance in ovine nematodes

- **Objective:** To develop molecular methods that can provide us with the tools to better understand the factors that promote or hinder the development of resistance.

- **Outputs:** Possible to distinguish between various gastrointestinal species of importance in Ireland namely Teladorsagia, Trichostrongylus and Cooperia and to determine the frequencies for genes that control BZ resistance in mixed nematode populations.

- More rapid diagnostic tests for large scale epidemiological investigations and in studying factors that are important in hindering the development of resistance.