



Northern Ireland  
Assembly

## Research and Information Service Briefing Note

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Paper 136/14

16th September 2014

NIAR 463-14

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# Overview of Teagasc Grange facility and specific beef support programmes

## 1 Background

Teagasc – the Agriculture and Food Development Authority – is the national body providing integrated research, advisory and training services to the agriculture and food industry and rural communities within the Republic of Ireland.

**Teagasc was established in September 1988 under the Agriculture (Research, Training and Advice) Act, 1988 and currently employs 1,100 staff at 52 locations throughout the Republic of Ireland with an annual operating budget in excess of €160 million<sup>1</sup>.**

**Around 75% of Teagasc's yearly budget comes from the Irish exchequer and EU funding with the balance generated from earned income.** Some 40% of the budget is devoted to research with the remainder split half and half between advisory and education services.

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<sup>1</sup> [Teagasc website, 26th August 2014](#)

**The Teagasc site at Grange operates as both a Research and Advisory centre and plays host to the Grange Animal & Grassland Research and Innovation Centre**, which is the national Beef Research Centre providing research information on all aspects of beef production in the Republic of Ireland.

**The vision for Grange is to be a centre of international scientific excellence in research and technology development for the efficient production of safe, quality, healthy beef, in profitable production systems that meet stringent environmental and animal welfare standards<sup>2</sup>.** Key features of the facility include the following:

- 250 ha of grassland;
- a cattle accommodation capacity of over 1100 animals;
- facilities to individually feed 300 animals (Broadbent/Calan Gates) and fully automated intake system for 100 animals;
- A suite of forage, animal tissue and molecular laboratories are available to support the research programme.

## 2 Specific Beef Support programmes run from/related to the Grange site

### 2.1 Research

The Grange site is engaged in a broad range of research areas that support the beef sector including:

- **Genomic Selection/Genetics and Breeds** – identifying desirable traits for beef; cattle and seeking to ensure that these traits are maximised within sires;
- **Beef systems** – evaluation of pasture and concentrate finishing methods;
- **Grassland** – evaluation of productivity for different grass species;
- **Forage conservation** – techniques for improving the quality and life of forage
- **Nutrition** – evaluation of impacts of different feeding mixes;
- **Meat quality** – evaluation of factors contributing to meat quality or characteristics;
- **Animal Welfare** – evaluation of the impacts of travel on animal stress and use of mats or woodchips on concrete slatted floors;
- **Environment** – evaluation of low rate intermittent slurry aeration on slurry quality and exploration of methane production on cattle rumen. Also ongoing work on crops grown specifically for renewable energy production e.g. use of grass for the production of bio based products and biofuel;
- **Systems Modelling** - development of a model of Irish spring calving beef production – identification of optimal approaches;

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<sup>2</sup> [Grange pages, Teagasc website, 26th August 2014](#)

- **Cattle Reproduction** – evaluation of mechanisms to increase cattle fertility and boost embryo development.

## 2.2 Derrypatrick Herd at Grange

Derrypatrick Herd - objective of this initiative is to establish a standalone, high profit, sustainable suckler beef systems research farm demonstrating optimal animal breeding, grass-based feed nutrient supply and technical efficiency, for the purposes of research dissemination to Irish suckler beef producers. Herd has been in existence since 2009 and is being used to benchmark data from the BETTER farm programme

Makeup of the Derrypatrick Herd - 120 suckler cows comprising four breed types (~30 of each) - Limousin x Friesian, Limousin x Simmental, Charolais x Limousin and Charolais x Simmental - of known genetic merit, mated to high genetic merit, late-maturing sire breeds, producing bull and steer, plus heifer, progeny on predominantly grass-based, spring-calving, calf-to-beef systems operated at a relatively high stocking rate (>200 kg organic Nitrogen/ha)<sup>3</sup>.

## 2.3 BETTER Beef Programme<sup>4</sup>

Joint Teagasc programme with the Irish Farmers Journal and also endorsed/supported by key meat processing firms within the Republic of Ireland (ABIP, Dawn Meats, and Kepak Group) and the FBD Trust. Not based at Grange but draws upon and contributes to work being undertaken there.

The BETTER farm beef programme aims to **develop a road map for profitable beef production through improving technical efficiency within the farm gate**. The focus is very much on **boosting profitability on farms by reducing production costs and increasing farm output** by focusing on a number of key areas as follows:

- **Breeding** – improved genetic quality leading to high quality, marketable weanlings and finished cattle. Also a focus on high conception rates, weaning rates and tight calving patterns;
- **Grassland Management** – developing practical grassland management systems to deliver high liveweight gain at optimal stocking densities with reduced reliance on concentrate feed;
- **Performance Monitoring** – each participant farm is assessed and 3 year plan drawn up with regular and intensive monitoring;
- **Key Performance Indicators** – will be set for various stages of the production system thereby enabling farmers operating similar systems to benchmark their own business performance;

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<sup>3</sup> [Derrypatrick Herd page, Teagasc website, 26th August 2014](#)

<sup>4</sup> [BETTER Farm Beef Programme page, Teagasc website, 26th August 2014](#)

- **Better Technology Transfer** - better understanding of how and why technologies are adopted by farmers and lead to improved design and implementation of advisory programmes and provide clear signals on areas for future research

Phase 1 of the programme was originally rolled out across 12 farms (across the Republic of Ireland) and there was a **headline target of achieving a gross margin of €1,000/ha on the selected farms over the 3 year period (from a starting average gross margin of €386/ha in 2008)**. The key achievements of this first phase of the programme have included:

- **increased stocking rates** (up from average of 1.85LU/ha in 2008 to 2.03LU/ha in 2011) – more efficient use of pasture
- **decreased mortality at birth** (down from 4.5% to 2.7%) – use of better sires and removing poor performing cows
- **tightening up of calving spread** – virtually all now in a 12-14 week spread in autumn or spring. Impact of reduced labour, fewer stock groupings and lower theoretical potential for disease
- **improved liveweights** – (24% increase) – improved calf quality has had a real impact – increased liveweights have increased farm output and improved gross margin;
- **grassland management** – better monitoring and utilisation had maximised weight gains;
- **Animal health** – tackling issues like BVD quickly and effectively.

#### Final results from phase 1<sup>5</sup>

- **49% increase in gross output (up from €1,016 in 2008 to €1,512 in 2011)**
- **Variable costs have been cut over the programme from 62% of gross output in 2008 to 43.9% in 2011.**
- **Gross margin has increased by 118% from €386/ha in 2008 to €843/ha in 2012. In practical terms, on a whole farm basis across the group (of 12 farms) participants farms are €27,000 better off at gross margin stage.**
- **66% of the gain in gross margin came from production gains rather than an increase in the price of beef.**

#### Phase 2<sup>6</sup>

Phase 2 of the Teagasc/Irish Farmers Journal BETTER Farm Beef programme is now underway. Phase 2 aims to use the lessons learned from phase 1 to increase the impact on a greater number of commercial farms over a 3 year period.

<sup>5</sup> [BETTER Farm Beef Programme, Phase 1 results, Teagasc website, 26th August 2014](#)

<sup>6</sup> [BETTER Farm Beef Programme, Phase 2 introduction, Teagasc website, 26th August 2014](#)

A BETTER Beef Farm is being set up in every county and phase 2 will see a doubling of participants to 35 farms. It also sees the number of advisers attributed to the programme double as compared to phase 1.

## 2.4 National Beef Conference

The Grange site played host to the 2014 National Beef Conference which attracted more than 8,000 visitors and provided a forum to discuss the issues/challenges facing the beef sector within the Republic of Ireland, as well as showcasing ongoing work/research designed to secure the future of the sector.

A key headline from this conference was the assertion by Dr Paul Crosson from Teagasc that based on the data Teagasc held, **beef farmers needed a price of €4/kg (£3.19<sup>7</sup>) to deliver a viable margin, and closer to €4.50/kg (£3.59<sup>8</sup>) if they are to safeguard the sector in the long term from rising input prices and the impacts of weather volatility.<sup>9</sup>**

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<sup>7</sup> Exchange rate on 20<sup>th</sup> August 2014, using XE.COM

<sup>8</sup> *ibid*

<sup>9</sup> "Farmers need €4/kg for beef – Teagasc", Irish Farmers Journal, 19<sup>th</sup> June 2014