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Myerscough College

Opportunities for all to succeed

FOOD AND FARMING INNOVATION & TECHNOLOGY (FFIT) CENTRE

Lancashire Enterprise Partnership

Supported by the Lancashire Enterprise Partnership (LEP)

uclan University of Central Lancashire | Myerscough Associate School

Welcome to the Food and Farming Innovation and Technology Centre

A new centre for research and development in association with the food and farming industries. A centre of excellence to develop the adoption of precision farming techniques particularly within the livestock and grassland sectors, but with additional interests and capabilities in food development (local processing and adding value), sustainable agriculture, food security and horticulture.

The Food and Farming Innovation and Technology Centre (FFIT Centre) is part of Myerscough College and is located at its Lodge Farm near the Preston Campus.
Myerscough College has a long history in Agriculture and Land based education since its inception in 1896. The College offers courses at both Further and Higher Education in subjects including agriculture, agricultural engineering, game-keeping, countryside, arboriculture, horticulture, equine, animal welfare and management, ecology and research. This education stretches across all levels from foundation learning to postgraduate research. Within the College staff there is expertise to cover livestock management, nutrition, agronomy, management, statistics, research, trials and many other land based specialisms.

The Future

The College is currently seeking to identify key partners to assist with the development of the vision for the new FFIT Centre. Partners may be interested in the direct use of the facilities to undertake research and product development or they may wish to support the adoption of innovative technology by current students, farmers, producers and the agricultural and food sector in general.

If you would like more information after having read this leaflet then please contact our Director Of Farming Innovation and Technology, James Oddie at joddie@myerscough.ac.uk or telephone on 01995 643467.

Facilities and Expertise Available

The Food and Farming Innovation and Technology Centre provide facilities suitable for strategic research, industrial trials and product development. This will enable the demonstration of new products and research at the "farm and fork" levels, gaining full impact and independent verification.

The College Farms

Myerscough Lodge Farm is 6 miles north of Preston (135 ha).
Myerscough Hall Farm is the site of the main campus with activities including Equine, Animal Care, Green Infrastructure (parks, gardens, roadside, greens and woodland), Golf and sports-turf.
Lee Farm is suitable for grassland or arable cropping (93 ha).
Light Ash Farm & Primrose Hill provides grassland cereal and alternative forage production. (79 ha)

In total over 307 ha (758 acres).

These farms currently support the following livestock production:

- 220 Commercial Holstein Dairy Cows.
- 1500 Mule ewes.
- 20 Pedigree Aberdeen Angus - producing bulls.
- 60 Lowland Suckler Cows (Stabiliser & British Blue x Holstein put to Aberdeen Angus Terminal Sire.

Track Record in Knowledge Transfer

We also have an excellent record of accomplishment in acting as a conduit between academia and our extensive range of industrial contacts e.g.

- Farm Northwest/Livestock Northwest (www.farmnw.co.uk), established in 2009 with the aim to improve farm competitiveness, support farmers to enhance nutrient use efficiency and assist with animal health and welfare.
- National Environmental Research Council (NERC), Green Infrastructure Knowledge transfer looking at Urban life and Sustainable Cities, where we are working with Tree Officers, Landscape Architects, Tree Nurseries etc. to select trees using physiological traits, that will give greater resilience to our urban tree stock.
- Working with companies and Universities to test products, commercial fertiliser trials, field scale testing of beneficial organisms, feed and supplement trials.

Conference and Meeting Facilities

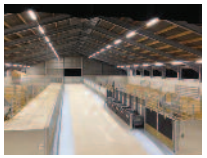
The Food and Farming Innovation Centre (scheduled for completion in July 2017) building includes:

- Conference facilities (between 40 to 100 capacity).
- Meeting breakout rooms.
- Social and dining areas.
- Product development labs and food stores.
- Data/ instrument room with IT links to sensors around the farm.
- Field laboratory for processing and preserving material.
- Grassland monitoring and improvement.
- Teaching laboratory.
- An area immediately adjacent to the site is available for Field trials.

Livestock Innovation Centre

The livestock building itself is 2325 m² with silo and feed store occupying a further 740 m². This and the commercial farm enable us to:

- Assess alternative feeds & forage crops.
- House animals in at least 8 group pens.
- Monitor animals with an EID weighing system & software.
- Accommodate rearing trials on grassland.
- Monitor animal intakes, health and live weight gain GroSafeTM drinking trough technology.
- Undertake feed efficiency trials with GrosafeTM feeder technology.
- Assess grazing system using Wi-Fi technology.
- Forage crop and grass trials using split silage / forage clamps.
- Perform intake trials using grazing paddocks.
- Promote precision farming practices with associated embedded technology.
- Hand livestock with a state-of-the-art hydraulic crush and hydraulic shedding system.
- Clean and washing animals for presentation.
- Maintain animal health efficiently with automatic ventilation system.
- Monitoring of animal behaviour via CCTV.



Food

- Product development labs where raw materials can be developed into 'value added'.
- Products such as cheese, yogurt, ice-cream or ready meals.
- There are storage facilities for the raw materials and the finished products (both dry and cold).
- Basic commercial kitchen facilities and equipment which complies with Environmental Health standards.

Resources

- **Over 5 hectares available for field trials.**
- **Modern glasshouses.**
  1276 m² of modern glasshouse facilities. Automatic climate control, CO2 enrichment and LED lighting options.
- **Analytical equipment.**
  A range of modern equipment is available including onsite UK Met Office weather station.

RESEARCH PROGRAMME

Past and Current

We have conducted a number of commercial feed and supplements trials for livestock with a range of commercial partners.

- We have field trial experience, mainly with Lancaster University, testing research that works at both laboratory and glasshouse level, at the field scale.
- These have recently included trials with rhizobacteria (bacteria which live in the vicinity of the plant roots) to improve water use efficiency. We have undertaken commercial fertiliser trials and novel fertiliser treatments to improve nutrient recycling.
- We have existing trials on animal welfare, mainly with the University of Central Lancashire, or commercial partners looking at horse welfare, tigers and pigs.

Future

The Food and Farming Innovation and Technology Centre opens many possibilities for future research programmes, particularly with industrial backing and matched public funding.

- Rearing & Finishing on forages and alternative feeds.
- Mixed grazing systems with sheep and grazing strategies.
- Methane isotope outputs of dairy & beef on forage based feed systems.
- EID as an economic and performance management tool.
- Maximising output kg meat per ha minimising inputs / nutrient efficiency / power labour etc.
- Lifetime performance cows, kg meat.
- Effect of climate change on forage quality and animal performance.
- Work with local abattoirs on new VIA technology, sheep finishing, stock selection and carcass quality.
- Calf production in Kg/ha from different dairy cross dams.
- Climate change, atmospheric gas change and effects on crop production.
- Developing resilience in plants and crops to climate change.