



Northern Ireland
Assembly

Research and Information Service Briefing Note

Paper 30/15

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NIAR 21-15

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Supplementary information on the Irish Dairy sector in support of 29/15 NIAR 912-14

1 Background

This briefing note provides supplementary information to RaISe Briefing paper NIAR 912-14 which looked at the state of the dairy industry within the Republic of Ireland. In specific terms this briefing note provides the following information:

- production costs for the dairy Sector in RoI and NI;
- processing capacity in the Dairy Sector for RoI and NI;
- the yearly pattern of milk production in RoI and Ni. Has that pattern shown any fluctuations in monthly milk to market over last 10 years – is there any change in the pattern in RoI?;
- differences in milk production RoI and NI - grass fed versus more intensive system;
- work by Teagasc in RoI and by AFBI in NI aimed at a more effective and efficient dairy sector.

2 Production costs for the dairy sector

Table 1 below sets out the most up to date gross margin data for the dairy sectors in the Republic of Ireland and Northern Ireland.

Table 1 – Dairy sector gross margin per hectare data

Category	Republic of Ireland 2013 (€)	Northern Ireland 12/13 (£)
Gross margin (per ha)	2,435 ¹	1,541 ²³

Utilising an annual average 2013 € to £ exchange rate of 0.8492⁴ the ROI dairy gross margin per hectare would equate to £2,086. Whilst this figure would suggest that the ROI dairy system is more efficient and profitable based on most recent data, the ROI data it includes direct payments and the Northern Ireland data does not.

Given the potential caveats that make the comparison of gross margin data difficult, there is perhaps greater value in comparing farm income data. In this regard Farm Business Income (as used in NI) and Family Farm Income (as used in ROI) are directly comparable. Table 2 below sets out both of these measures for the 2012 to 2013 period in relation to the dairy sector.

Table 2: Farm Business Income/Family Farm Income data

Measure	2011-12(NI)/ 2012 (ROI)	2012-13 (NI)/ 2013 (ROI)
Dairy – Farm Business Income (NI)	£56,333 ⁵	£27,928 ⁶
Dairy – Family Farm Income (ROI)	€49,920 ⁷ (£40,500 ⁸)	€62,994 ⁹ (£53,494 ¹⁰)

The information in table 2 reveals that there has been variation in farm incomes for the dairy sectors. Whilst 2011/12, 2012 saw Northern Ireland dairy incomes being higher than those within the Republic of Ireland this trend was reversed in the following year.

3 Processing capacity for the dairy sector – ROI and NI

Accessing data on the number of milk processors and more particularly the volumes of milk that they process has proven challenging for both Northern Ireland and the Republic of Ireland. The data presented within this section is drawn from the licensing processes within both jurisdictions which require approval for a premises to operate as a food processor.

¹ [Overview of the Dairy System, National Farm Survey Results 2012, Teagasc](#)

² [Northern Ireland Farm Performance Indicators 2012/13, Policy and Economics Branch, DARD, dairy cow average data, page 8](#)

³ Does not include direct payment

⁴ [Average Foreign Exchange Rates, Credit Suisse, as per end of December 2013](#)

⁵ [Farm Incomes in Northern Ireland 2012/13, Policy and Economics Division, DARD, Table 2b, page 11](#)

⁶ *ibid*

⁷ [Overview of the Dairy System, National Farm Survey Results 2012, Teagasc](#)

⁸ Based on a Euro to GBP exchange rate of 0.8113 as derived from [Average Foreign Exchange Rates, Credit Suisse, as per end of December 2012](#)

⁹ [Overview of the Dairy System, National Farm Survey Results, 2013, Teagasc](#)

¹⁰ Based on a Euro to GBP exchange rate of 0.8492 as derived from [Average Foreign Exchange Rates, Credit Suisse, as per end of December 2013](#)

Data sourced from the Food Standards Agency(FSA)¹¹ reveals that there are 28 approved raw milk dairy products establishments within Northern Ireland who actually process raw milk. There is however no detail on the scale of milk processing conducted within each of these premises.

Data from the Department of Agriculture, Food and the Marine (DAFM)¹² reveals there are a total of 188 approved milk or dairy establishments within the Republic of Ireland, although 24 of these are explicitly identified as non-processing establishments. As an additional caveat, unlike the data for Northern Ireland, there is no confirmation as to whether the establishment is an actual milk processing plant. In terms of scale 40 of the approved processing establishments are identified as large, whilst 108 are identified as small-medium, but it should be noted that no detail is provided with regard to the definition of these quantitative terms.

It would appear that the only sources for limited quantitative data on the milk processing sector within Northern Ireland and the Republic of Ireland are found within the Going for Growth Strategy document(NI) and a Dairy Background paper in support of 2025 Agri-Food Strategy consultation(ROI). The information from these documents is set out in table 3 below.

Table 3: Milk processing volumes statistics – NI and ROI

Document	Milk Processing statistics
Going for Growth Strategy Document(NI) ¹³	<ul style="list-style-type: none"> • 12 main processing companies operating over 14 sites • 8 of these sites processing 80% of NI milk compared to 6 processing 80% of ROI milk
Dairy Background Paper – 2025 Agri Food Strategy consultation (ROI) ¹⁴	<ul style="list-style-type: none"> • 82% of the milk produced is processed by the six major processors (Glanbia, Kerry, Dairygold, Lakeland, Aurivo and Arrabawn)

4 Yearly pattern of milk production

Figures 1 and 2 provide seasonally aggregated data for the seasonal intake of domestically produced milk by creameries/pasteurisers (ROI) and milk production figures (NI).

Looking at the data it is apparent that there is seasonal variation in milk production across both jurisdictions with the highest production being in Spring and Summer, and Winter being lowest.

¹¹ [List of approved milk and dairy establishments in Northern Ireland, Food Standards Agency website, 7th July 2014](#)

¹² [Milk & Dairy Establishments approved and/or registered under SI No 432 of 2009, DAFM website](#)

¹³ [Going for Growth, Agri Food Strategy Board, page 50](#)

¹⁴ [Dairy Background paper in support of 2025 Agri-Food Strategy consultation, DAFM website, 19th December](#)

Figure 1: Seasonal intake of domestic milk by creameries and pasteurisers within the ROI – Winter 2004 to Autumn 2014¹⁵

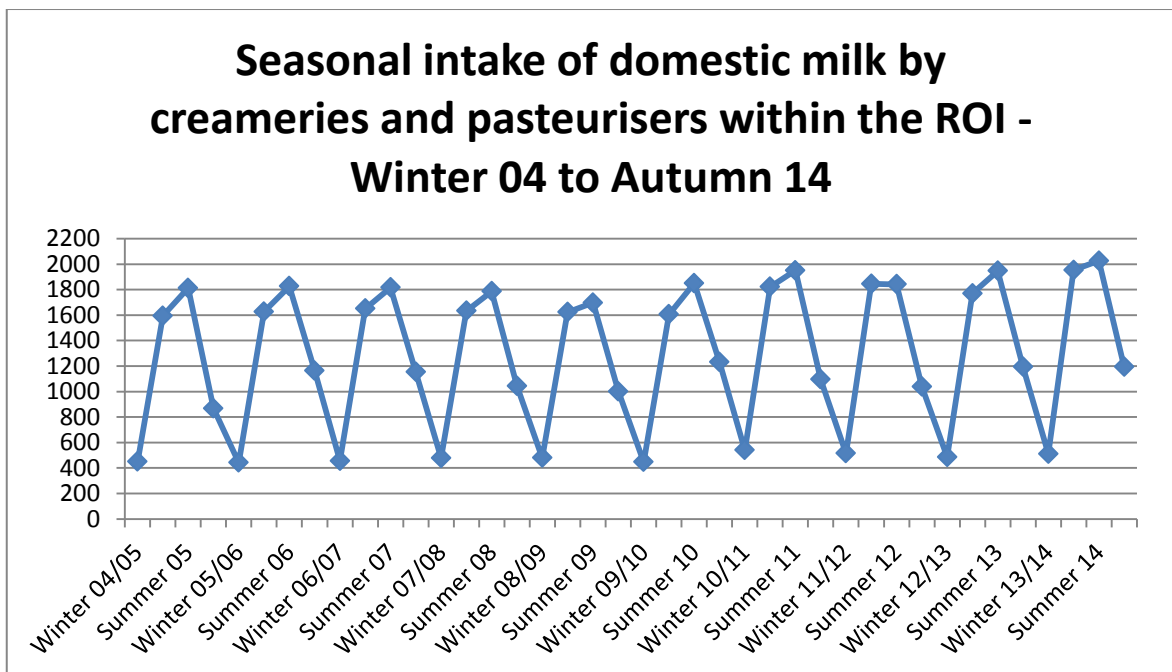
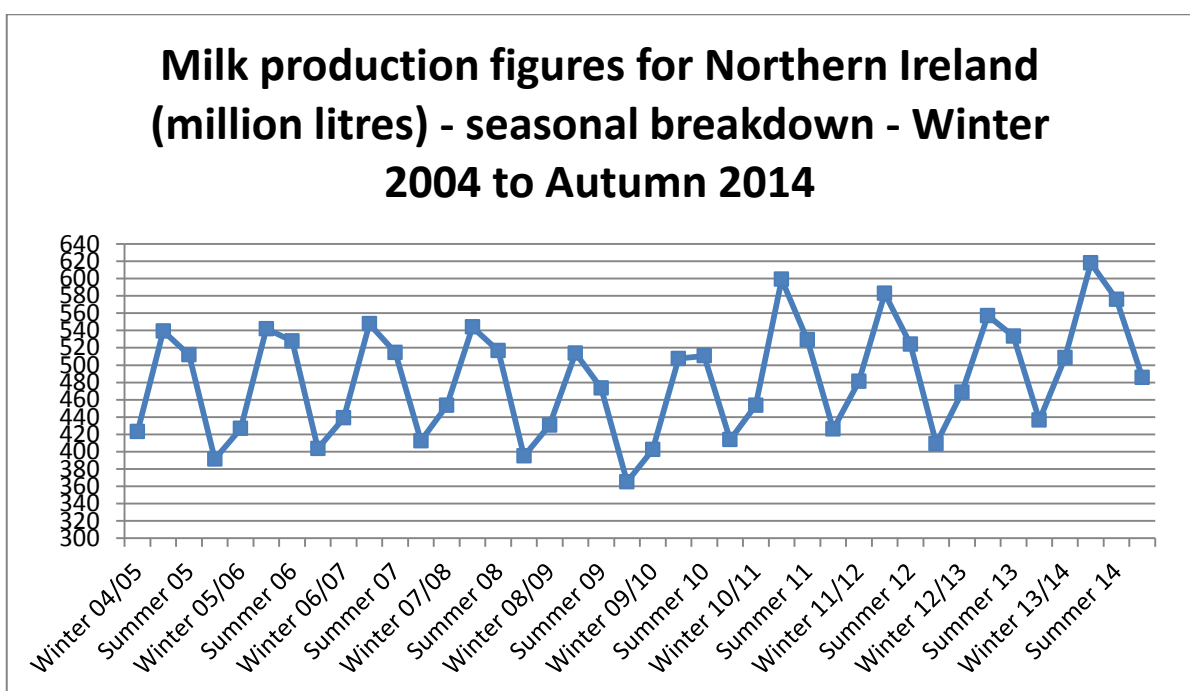


Figure 2: Seasonal milk production figures for Northern Ireland – Winter 2004 to Autumn 2014¹⁶



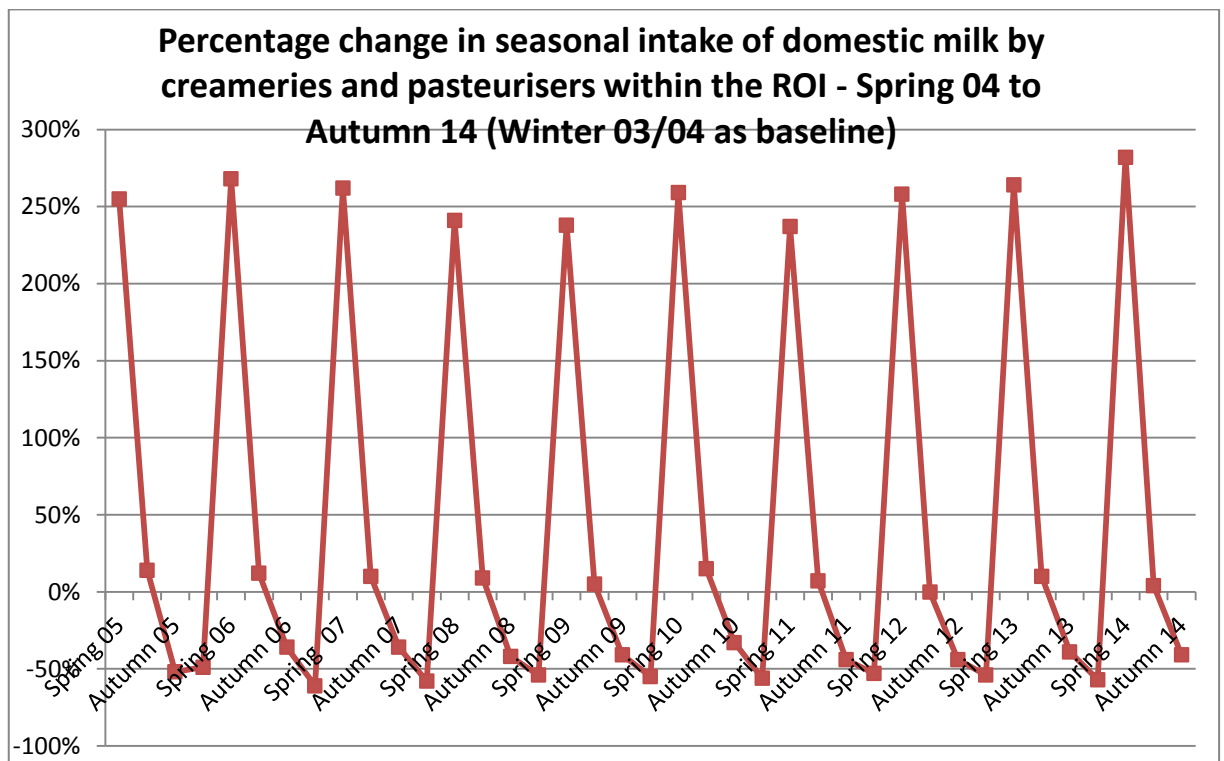
Whilst there is seasonal variation in milk production in both jurisdictions, there is however a difference in the range of production (i.e. lowest to highest) when comparing

¹⁵ Derived from Intake of Cows Milk by Creameries and Pasteurisers (Million Litres) by Domestic or Import Source and Month data available from the Central Statistics Office - <http://www.cso.ie/en/index.html>

¹⁶ Derived from milk production statistics data available from DARD - <http://www.dardni.gov.uk>

Northern Ireland to the Republic of Ireland, with the greatest seasonal range being found within the Republic of Ireland.

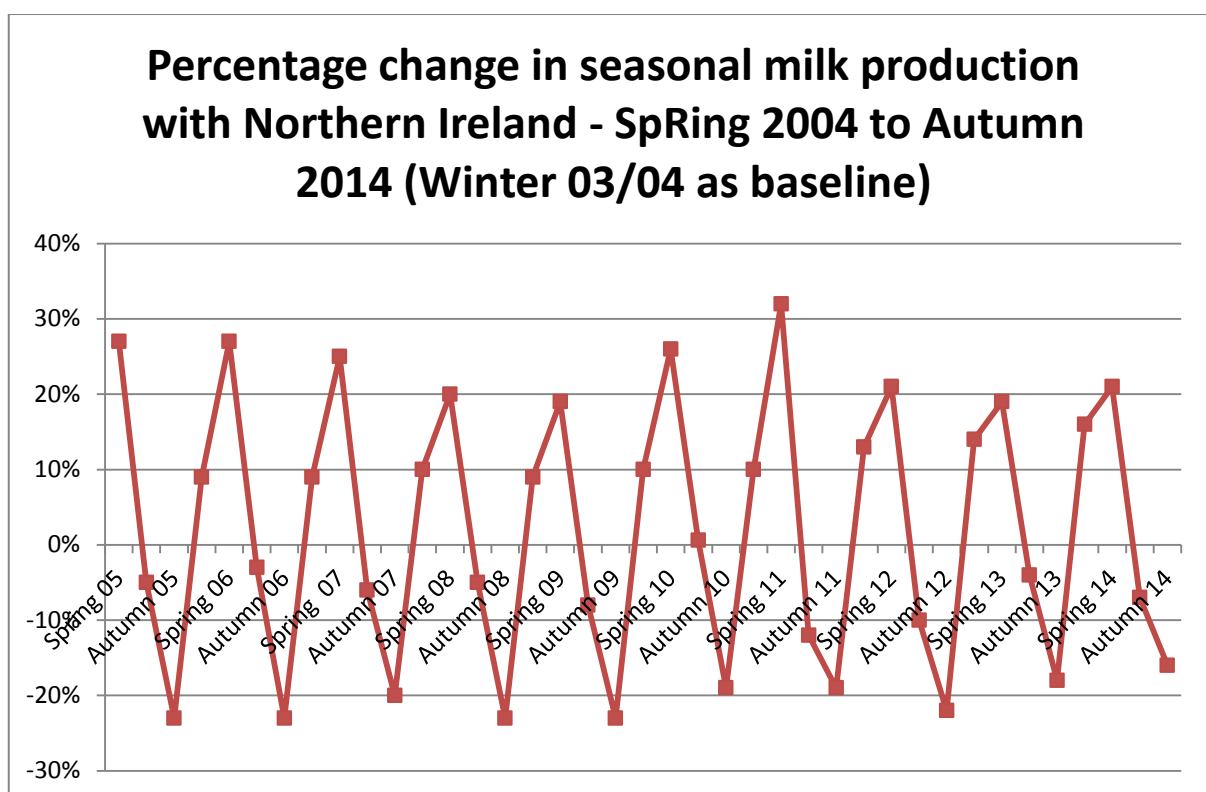
Figure 3: Percentage change in seasonal intake of domestic milk – ROI – Spring 2004 to Autumn 2014 (Winter 03/04 as baseline)¹⁷



By way of illustration of this point the percentage changes from season to season are set out in figures 3 and 4, and reveal that it is not unusual for Spring production to be more than 250% greater than Winter production within the Republic of Ireland. By comparison Northern Ireland has less variation in production with Spring production generally only exceeding Winter production by between 9% and 16%.

¹⁷ Derived from Intake of Cows Milk by Creameries and Pasteurisers (Million Litres) by Domestic or Import Source and Month data available from the Central Statistics Office - <http://www.cso.ie/en/index.html>

Figure 4: Percentage change in seasonal milk production – NI – Spring 2004 to Autumn 2014 (Winter 03/04 as baseline)¹⁸



5 Differences in milk production systems – grass vs more intensive

There do not appear to be comparable statistics for milk production systems within Northern Ireland and the Republic of Ireland in relation to grass and concentrate utilisation within the dairy herd.

A recent Teagasc presentation(March 2014) delivered as part of the Rural Economy and Development Programme (REDP) did seek to compare the 2 systems based on available data, and figure 5 below is taken from this presentation.

The data in figure 5 suggests that grass will form a smaller proportion of the ration composition on dairy farms within Northern Ireland compared to dairy farms within the Republic of Ireland – but it should be noted there is no direct and NI specific data cited within the presentation or the source it is based on to affirm this assertion.

The Teagasc presentation also contained a comparison between direct costs borne by dairy farms (€/ha) within the Republic of Ireland and Northern Ireland (see figure 6). Whilst this data was an average, based on the years 2007,2008 and 2009 it revealed that dairy farms in Northern Ireland were spending 1.84 times more on feed, which would support the suggestion that the Republic of Ireland has had a greater emphasis on grass utilisation and lower use of concentrate.

¹⁸ Derived from milk production statistics data available from DARD - <http://www.dardni.gov.uk>

Figure 5: Ration Composition on average size farms (selected dairy regions)¹⁹

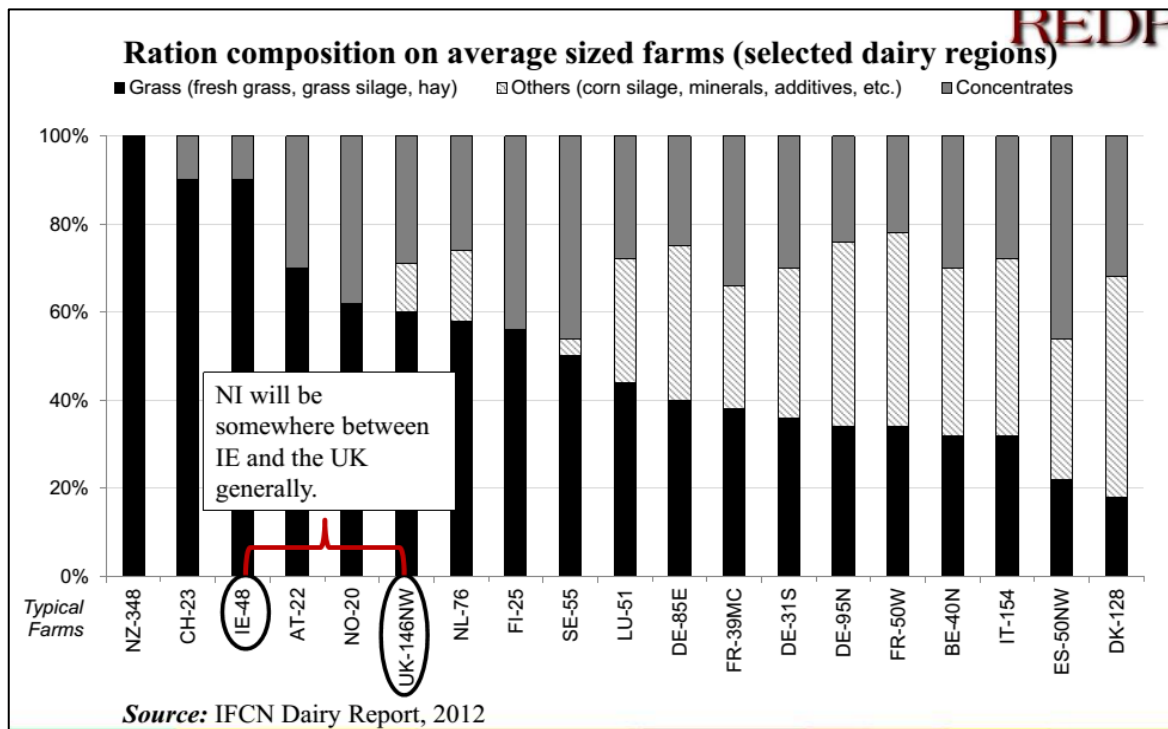


Figure 6: Dairy enterprise €/ha output and direct costs – Northern Ireland and Ireland²⁰

Dairy enterprise €/ha output & direct costs		
	Ireland	N. Ireland
Feed	641	1180
Fertiliser	177	176
Other Livestock Costs	209	246
Other costs	16	18
Total Direct costs	1043	1620

Source: FADN data (averaged over 2007, 2008, and 2009)

¹⁹ Patrick R. Gillespie, Cathal O'Donoghue, Trevor Donnellan, Fiona Thorne, Thia Hennessy, and Stephen Hynes, A comparison of dairy production systems - the north and the south, Teagasc presentation, March 2014

²⁰ ibid

6 Work by Teagasc in ROI and by AFBI in NI aimed at a more effective and efficient dairy sector

6.1 AFBI

The AFBI Science Strategy 2014-2020²¹, which effectively establishes the organisation's research priorities up to 2020, includes a section looking at Sustainable Livestock Production Systems as a so called 'core science theme'. The overall aim for this work as well as the individual component parts is set out below. The researcher has highlighted those areas with a particular significance for the dairy sector within Northern Ireland. It should also be remembered that there will be specific pieces of individual research contributing to these wider objectives.

AFBI's Strategy for Sustainable Livestock Production Systems: To provide a robust science base to DARD for policy development and to assist the local agri-food industry to improve the competitiveness and environmental sustainability of livestock production systems while achieving the targets set out in the Going for Growth Strategic Action Plan (Agri-Food Strategy Board, 2013), AFBI will:

- ***Further develop expertise in nutritional strategies to reduce methane emissions and nutrient losses from livestock systems and to investigate their inter-relationships with animal performance and welfare. A multi-disciplinary approach to the development of precision animal feeding systems will bring together AFBI's specialists in soil and livestock science, in strategic partnership with other research organisations, in the areas of transcriptomics, proteomics and metabolomics.***
- ***Further develop expertise in precision feeding systems to improve "whole farm" feed efficiency on dairy, beef and sheep farms. AFBI will use a holistic approach encompassing rumen function, nutrient partitioning, nutrient losses (nitrogen and phosphorus), GHG emissions (methane and nitrous oxide), milk production and health and fertility parameters. This will involve cross-cutting science, including expertise in endocrinology, and veterinary and livestock science.***
- ***Further develop expertise to exploit the scientific opportunities that arise from the development of integrated industry databases to significantly increase genetic progress in cattle and sheep. AFBI will use a multi-disciplinary approach through cross-divisional working and collaborative partnerships with other research organisations, to provide genetic evaluations, including genomics, and develop online management tools based on data from commercial herds and flocks in Northern Ireland.***

²¹ [Science Strategy 2014-2020, Agri-Food and Biosciences Institute](#)

- **Develop the most up-to-date breeding techniques for forage grass, protein crops, cereals, potatoes, mushrooms and soft fruit, including the use of genomics and phenomics as appropriate**
- *Continue to support plant breeders and statutory agencies through the provision of independent, accredited trialling of new crop varieties.*
- *Further develop expertise in plant genomics, agronomy, ecosystem services, and harvesting and utilisation of biomass crops*
- *Develop further expertise in plant genomics, physiology and fibre technology in order to enhance the quality of, and identify new commercial opportunities for existing and potential new crops to be grown in Northern Ireland*
- *Maintain expertise in the ecology of grassland, heather moorland and farm woodland to identify and promote management practices which optimise utilisation of resources and increase biodiversity.*
- **Develop a model to predict grass growth on a regional basis to assist the industry in the efficient production, management and utilisation of grass in the diets of grazing livestock.**
- **Exploit the scientific opportunities which arise from the development of integrated industry databases, including application of the key performance indicators collated from the BovIS online application to benchmark the competitiveness of the local dairy and beef sectors against international best practice in advance of the abolition of milk quotas in the EU in 2015.**
- **Develop a cattle DNA bio-bank on which to base future genomic studies, including a range of new phenotypic information e.g. GHG emissions and nutrient utilisation.**
- *Continue to develop expertise in beef and lamb systems for upland pastures while promoting biodiversity.*

6.2 Teagasc

Most of Teagasc's work in support the dairy industry industry is based at Moorepark Animal & Grassland Research and Innovation Centre, and there is an overall Dairy Research Programme designed to '*...increase the competitiveness of the dairy industry through scientific research and to do so in a manner compatible with food quality and safety, the environment and animal welfare requirements.*'

The overall Dairy Research Programme and its constituent research areas is and associated sub programme areas is summarised in table 4 below.

Table 4: Teagasc Dairy Research Programme - Moorepark²²

Research area	Objective	Sub-programme areas
Animal Research Programme	Generate and procure new knowledge to support innovation, technology transfer and education in the key areas of dairy production including breeding, nutrition, growth, reproduction, health, product quality, labour efficiency and facilities that will underpin the future profitability, competitiveness and sustainability of the sector	<ul style="list-style-type: none"> •Genetic improvement of Animals •Physiology of Reproduction, Growth and Lactation •Animal Health and Well-Being •Animal Facilities, Labour, Automation and Energy Efficiency •BETTER Farms •Animal Nutrition and Product Quality
Grassland Research Programme	Generate and procure evidence-based knowledge to support innovation, technology transfer and education in the key areas of Irish grass production including grass breeding, growth, fertilisation, utilisation, nutritional value, and develop grazing systems that will underpin the profitability, competitiveness and sustainability of the sector and enhance food security	<ul style="list-style-type: none"> •Grass Breeding, Establishment and Renovation •Grass Growth, Sward Dynamics and Utilisation •Nutrition Efficiency •Grass Feed And Value •Grazing Management and Conservation •Sustainable Production Systems and System Analysis
Environment Research Programme	Provide evidence based knowledge to support and underpin the development of an environmentally sustainable, competitive and profitable agri-food sector that will sustain rural communities.	<ul style="list-style-type: none"> •Soils and Nutrient Supply •Greenhouse Gases and Climate Change •Water Quality
Rural Economy and Development	Produce high quality social science research and policy advice to improve the competitiveness, profitability and sustainability of Irish agriculture and to enhance the quality of life in rural Ireland	<ul style="list-style-type: none"> •Organics

²² Derived from data available on the Teagasc Moorepark website

<http://www.agresearch.teagasc.ie/moorepark/researchprogramme/researchprogramme.asp>