

Ireland's Strategy for a More Profitable Beef and Sheep Industry
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The agri-food industry is Ireland's largest indigenous industry with a gross annual output of €24 billion, exports worth almost €9 billion with some 135,000 people employed in the sector. Beef and sheep are important sectors in the agri-food industry with total cattle numbers of 6.6 million and 5.1 million sheep. Ireland's beef and sheep production is primarily grass based which is a low-cost source of animal feed.

Ireland has over 60,000 beef suckler farms with 1.1 million beef suckler cows and an average herd size of 17 cows. The suckler cow is normally a cross-bred cow. Fifty percent of the 1.1 million dairy cows are also bred to beef bulls. Annual beefmeat output is 540,000 tonnes of which 85% is exported at a value of €1.8 billion; 50% of exports are to UK and 48% to continental Europe. Live beef cattle exports in 2011 were over 200,000 animals valued at €200 million, giving total beef exports of €2 billion for the sector.

There are 32,000 sheep farmers with 2.35 million ewes divided approximately 4 to 1 between lowland and hill production systems. Total sheepmeat production is 53,000 tonnes of which 41,000t (75%) is exported valued at €180m; 70% exports are to UK and France with the majority of the balance to Germany, Sweden and Belgium.

The beef and sheep sectors are critically important parts of the social, economic and cultural fabric of Ireland. They are employment rich and export focused. However, there are challenges in relation to farm level profitability in both sectors.

The Teagasc National Farm Survey showed that the estimates for family farm income by farm production system in 2011 was: dairying €9,617; suckler beef €10,600; cattle other €14,967; sheep €17,084; mixed livestock €34,750 and tillage €35,737. This demonstrates the relatively low income of beef and sheep farms compared to dairy and tillage counterparts. However, up to 50% of beef and sheep farms have an off-farm income which is important for the survival of many of these farmers.

Global population was 4 billion in 1975, passed 7 billion in October 2011 and predicted to exceed 9 billion by 2050. Today 50% of the world's population lives in cities, by 2050 this number is expected to exceed 66%. And for the new economic giants, such as in Asia, increasing affluence is leading to an increasing demand for western style food. The demand for protein will increase in line with population increases. This will present growth opportunities for the Irish beef and sheep sectors, but there will be competition from other sectors (pigmeat and poultry) and other countries.

Improving competitiveness will be key at all levels of the supply chain, if we are to avail of these opportunities. At processor level, the focus will be on processing efficiency, innovation, product and market development and adding value. At farm level, the key challenge is improving profitability. This means targeting better management, improving genetic merit of the cattle herd and sheep flock, reducing the negative impact of poor herd/flock health on efficiency and ensuring Ireland produces the high quality beef and lamb that the market requires. In addition to efficiency of production, market price, of course, also impacts significantly on profitability.

The 2010 Teagasc Farm Survey showed that the net profit per hectare of the top 10% beef and sheep farmers was €473 and €481 higher, respectively, than the bottom 10%. This difference in profit shows the potential to improve profitability on many beef and sheep farms.

The Irish Cattle Breeding Federation (ICBF) has indicated the potential from breeding alone to increase the profitability of the existing suckler cow herd is well over €100m by 2020. ICBF believes this could be achieved through a combination of better quality cows and breeding, achieving carcass weights at a younger age and better carcass quality, enhanced productivity and disease resistance. Central to this is the role played by a higher number of increasingly efficient, market orientated beef producers.

A positive and collaborative approach of all stakeholders is crucial to achieving improved profitability in the beef and sheep industry. A wide range of stakeholders are involved. These include industry stakeholders (cattle and sheep breeders, herdbooks/flockbooks, commercial beef and sheep farmers and their representatives, geneticists, AI organisations, advisors, veterinarians, livestock markets, meat plants, ICBF, Animal Health Ireland, and farming press) and State stakeholders (Department of Agriculture, Food and the Marine, Teagasc, Universities, Bord Bia and Enterprise Ireland).

Recognising the challenges to profitability, Ireland has in place a range of measures, from broad policy to specific targeted State supported actions, as part of an overall strategy for improving profitability of the beef and sheep industries.

Food Harvest 2020

In 2010 Ireland published the *Food Harvest 2020 Report* (FH2020); a strategic plan for the development of the Irish agri-food sector drawn up by a committee of industry representatives in cooperation with the Department of Agriculture, Food and the Marine and its agencies (Teagasc, Marine Institute and Bord Bia). It is a vision for the future of the Irish agri-food industry with the aim of improving competitiveness and growth through a coordinated national policy. It covers all of the agri-food sector, including beef and sheep, from primary production through to processing and marketing. The compelling vision of FH2020 is the belief in the underlying growth potential of the sector and the need to realise the targets set through a coordinated response from Government and State agencies and a parallel strong commitment by industry. The Minister for Agriculture, Food and the Marine chairs the High Level Implementation Committee.

FH2020 sets out ambitious growth and export targets. For each of the beef and sheep sectors the target is to increase value of output by 20% through improved genetics, animal health, farm efficiencies, product quality, knowledge exchange and marketing. And indeed the Beef Activation Group which reported in 2011 considered that having regard to the significant price developments in recent years, a more ambitious target of 40% increase in the value of beef output could be set.

In order to achieve the ambitious targets, FH2020 sets out a total of 215 recommendations. Many of the steps needed to be achieved are primarily commercial decisions by industry. FH2020 contains 22 recommendations for beef across farm competitiveness, technology transfer, production systems, processing and marketing, including the following:

- The Department of Agriculture, Food and Marine and livestock industry continue to support ICBF's programme of genetic improvement
- Important role of Suckler Cow Welfare and Breeding Scheme in contributing to genetic improvement
- Strong collaboration between State agencies to ensure relevant research outputs are applied at farm level, especially through the greater use of the Teagasc BETTER Farms Programme and Discussion Groups.
- The processing sector, with support of relevant State Agencies, needs to embrace consumer-led product and packaging innovation to increase value-added beef exports

A total of 12 actions refer to sheep, including:

- The Department of Agriculture, Food and the Marine and sheep sector strongly support Sheep Ireland to develop a new breed improvement programme
- Sector improve the uptake of new technology on farms through Discussion Groups and Teagasc BETTER Farms Programme for sheep
- The processing sector, with support of relevant State Agencies, needs to embrace consumer-led product and packaging innovation to increase value-added sheepmeat exports

The State supports the beef and sheep industries through a series of measures relating to research, breeding, data capture, knowledge exchange, animal health, marketing and structural investment, many of which were initiated in the last 3 to 4 years.

Research:

The Department of Agriculture, Food and the Marine recognises the importance of a strong knowledge base for sustainable primary production and for underpinning development of new dairy and meat products and processes and continues to invest significantly in research. DAFM operates 3 competitive research funding programmes (food, agriculture production and forestry) with expenditure of over €20m annually in recent years. Research institutions (Teagasc, Universities and Institutes of Technology) compete for the funding on the basis of collaborative projects. These programmes are instrumental in building up capability and expertise in research teams that is then at the disposal of farmers and the processing industry to drive improvements in efficiency, productivity and innovation.

In 2011 industry led Advisory Groups developed strategic research agendas for food (*Food Research Ireland (FRI)*) and agriculture production (*Support for Sustainable Agriculture Production through Research and Innovation*” (SSAPRI)). FRI and SSAPRI identify research priorities that are needed to underpin food and agriculture production and help deliver the growth targets in FH2020. Many of these priorities were included in a research call that was announced in December 2011. As examples, key priorities identified in SSAPRI include animal breeding/genetics/reproduction, animal well-being and grass management/breeding, all impacting on beef and sheep profitability.

Teagasc, the National Food and Agriculture Authority, funded by the Department of Agriculture, Food and the Marine, incorporates research, knowledge transfer and education in a single organisation to support agriculture in Ireland. It undertakes research relevant to the real needs of farmers and the food industry, including beef and sheep production research.

Teagasc established a **Suckler Beef Research Demonstration Farm** at Grange in 2009 with the objective of having a high profit sustainable suckler herd demonstrating optimal animal breeding, grass based feed supply and technical efficiency, for the purpose of dissemination to Irish suckler beef producers. Teagasc established a new **Sheep Research Demonstration Farm** at Athenry in 2011, again with the aim of evaluating and demonstrating the benefit of applying the most recent research knowledge in terms of efficiency and profitability.

ICBF and Sheep Ireland also carry out research into beef and sheep genetic evaluations whilst also developing breeding programmes, many of which involve collaboration with Teagasc. Research on genomics is a good example of the latter.

Breeding:

Breeding is a powerful tool available to Irish beef and sheep industries to improve profitability. Maximising profit through genetic gain is critical to maintaining incomes on Irish farms. Ireland has taken significant steps in recent years to drive beef and sheep breeding.

Since its establishment in 1998, **ICBF** has developed a world class infrastructure and has succeeded in making significant advances in cattle breeding to the benefit of commercial farms, dairy and beef industries and its members. In 2008 **Sheep Ireland** (operated by ICBF) was established. Significant progress is being made in infrastructure development and data collection for sheep. Both ICBF and Sheep Ireland genetic evaluations and breeding schemes are targeted at identifying animals that increase future profits. The Department of Agriculture, Food and Marine provides annual funding to support the work of both ICBF and Sheep Ireland and is also represented on their governing Boards.

Data Capture:

The availability of data for genetic evaluations is critical. In order to identify the genetically most profitable animals ICBF and Sheep Ireland need ancestry data and performance data. This data is generated from a combination of calf registrations, herdbooks/flockbooks and animal recording.

The Department of Agriculture, Food and the Marine makes its National Cattle **Animal Identification and Movement** system (**AIM**) database available free of charge to ICBF with a nightly transfer of data from herds whose owners grant permission which currently includes 80% of beef farms. All cattle births, movements (farm to farm, to markets and slaughter plants and exports) and deaths are recorded in the system. AIM is an integral part of Ireland's food safety/traceability control system and is also a critical building block for ICBF's integrated cattle breeding database.

A Suckler Cow Animal Welfare and Breeding Scheme was launched by The Department of Agriculture, Food and the Marine in 2008. One of the main objectives of the Scheme was to address the problem of the relatively low level of beef animal data available for breed improvement purposes when compared to dairy animal data. Participating beef suckler farmers receive a payment per animal in return for meeting a range of conditions, in particular recording all animals through the Animal Events recording system to the ICBF database. Data captured includes information on identification (dam, sire and calf), calving (ease, mortality and gestation length), calf quality and docility. The Scheme is critical to building the ICBF database for beef and has proved a significant success in this regard, demonstrated by the fact that in 2011 alone 763,396 calves from 34,436 participating suckler herds were recorded.

Slaughter plants provide animal identification, carcass weight, conformation and fat grades information to the Department of Agriculture, Food and the Marine which in turn is transferred to ICBF. Carcass images are also transferred from slaughter plants to ICBF.

In addition to data from AIM, the Suckler Cow Scheme and slaughter plants, ICBF also captures data from herdbooks, AI organisations, on-farm weight recording and linear scoring and livestock market weights and prices. The resulting **National Cattle Breeding Database** has a powerful technological capability for achieving genetic gain and for other purposes such as providing information to the cattle industry and supporting disease eradication initiatives. ICBF has prioritised streamlining the flow of data from farms and improving the quality of information returned to farms.

Sheep Ireland database sources information from flock books, pedigree flocks, the commercial flocks participating in the Central Progeny Test and the Maternal Lamb Producers Programmes as well as the Teagasc and University College Dublin research flocks.

Knowledge exchange:

Knowledge exchange to enable the adoption of the most up to date technologies and information leading to improved production efficiencies and farm output is also critical to improving profitability. There are a range of measures in place to assist farmers in this regard.

Beef Technology Adoption Programme (BTAP) was launched by The Department of Agriculture, Food and the Marine in February 2012. It is designed to encourage beef farmers to adopt new technologies to improve their business and is intended to provide participants with the knowledge and skills necessary to reduce costs, increase output and increase profit margins on their farms. BTAP offers beef farmers the opportunity to join a local beef discussion group, meet regularly with an advisor facilitator (Teagasc or Agriculture Consultant), provide Animal Events data to ICBF and join ICBF HerdPlus. Importantly, it also requires the farmer to adopt best practice in key business areas such as grassland management, animal breeding, animal health and welfare and financial management. The Programme offers farmers an incentive to participate. The Department has made €5m available in 2012. Over 6,000 beef farmers have applied to join the Programme.

Teagasc operates a **Knowledge Transfer Advisory Programme**, delivered to farmers on a one-to-one basis by local advisors supported by enterprise specialists based at Teagasc development centres. Approximately 6,000 commercial beef and sheep farmers participate.

Since 2008 Teagasc operates the **BETTER Farm Beef Programme** with support from the Irish Farmers Journal, the Meat Industry and FBD Trust. The objective of the programme is to demonstrate the potential to turn efficiency into profit. The 16 selected BETTER beef farms are well managed commercial farms where research recommendations are applied to the main farming system and the results measured and demonstrated at local level and profiled in the Irish Farmers Journal. The programme focuses on boosting profitability by reducing production costs and increasing farm output. A key component is a farm plan targeting breeding, grassland management and performance monitoring. Participation in discussion groups is a vital component of the programme and is considered the best method of encouraging knowledge transfer. The gross margin per hectare for the 16 farms has more than doubled from €86 in 2008 to €843 in 2011 with technical efficiency responsible for two-thirds of the improvement and increase in beef price making up the balance. The success of the programme is such that there are plans to expand it.

Teagasc also operates the **BETTER Farm Sheep Programme** since 2010 which consists of 10 commercial sheep farms used for research and knowledge transfer. A farm plan is drawn up for the selected farms which includes breeding policy, flock management, grassland management, feeding practices, financial performance, marketing policy and farm facilities. The programme also requires the recording of individual ewe (litter size, mortality, weight) and lamb performance (weights at birth, 7 and 14 weeks and at sale) for all sheep on the farm. The information gathered from these commercial farms is shared to improve efficiency on other commercial farms through discussion groups and organised visits.

In 2007 ICBF launched **HerdPlus** for pedigree and commercial beef herds and in 2010 Sheep Ireland launched **LambPlus** for pedigree sheep flocks. These services are built around genetic evaluations and reproductive information on a whole herd/flock basis and provide easy to follow information to the farmer on all animals in the herd/flock including comparison of the herd/flock to the national average figures. The numbers participating in beef HerdPlus and LambPlus are 8,800 herds and 350 flocks, respectively.

Animal Health:

Acknowledging that herd health impacts on efficiency of production, **Animal Health Ireland (AHI)** was established in 2009 with the objective of reducing the negative impact of non-regulated cattle diseases on efficiency. It is industry led, supported by the Department of Agriculture, Food and the Marine, and is mandated to pursue effective control strategies for important non-regulated cattle diseases. Stakeholders include farmers, farmer organisations, dairy and beef processors, professional/advisory support services and Government and State agencies. A consensual approach to programme design and implementation is reached

following industry wide discussions. AHI has a strategic alliance with ICBF for the provision of the information infrastructure to support its activities, including currently substantial database development to support AHI's BVD eradication programme.

Marketing:

With over 80% beef and 70% sheep output exported, it is important that Ireland secures markets that deliver the best returns for the Irish beef and sheep industries. While demand and supply dynamics in recent years have meant a welcome shift in focus to high value EU markets, the Department of Agriculture, Food and the Marine is engaged on an ongoing basis with authorities in many EU and third countries to ensure that Irish beef and sheepmeat has access to the maximum possible number of markets worldwide, which is critically important if the targets in Food Harvest 2020 are to be achieved. This involves a collaborative effort between the Department, Bord Bia, industry and a network of Irish Embassies who in the current economic climate have a strong focus on developing trade opportunities for Irish companies.

Bord Bia, a State agency responsible for providing strategic market development and promotion, plays a critically important role with its network of strategically located offices overseas.

Structural Investment:

The Department of Agriculture, Food and the Marine has provided significant support in recent years to livestock farmers and the meat processing industry for investment in structural development. Support of well over €1 billion has been paid to about 50,000 farmers in the past 6 years, primarily for investment in animal housing, silage and waste storage facilities. The objective of the support is to assist farmers to develop their businesses, increase scale and efficiencies and comply with demanding environmental and food safety standards.

The Beef and Sheepmeat Investment Fund was established in 2008 to support the meat processing sector. The Departments provides the financial support and Enterprise Ireland implements the Fund. In 2009 15 capital investment projects were approved for grant assistance of €69 million. The aim of the Fund is to make financial support available to the processing sector to upgrade and modernise their facilities, lower costs, improve efficiencies, increase employment and increase exports.

Conclusions

Demand for food will increase significantly in the period to 2050. Ireland has the natural advantage of water, grass and land and low production costs. It can position itself to take maximum advantage of these trends, but it must improve its competitiveness. There are challenges for the beef and sheep industries with a wide range of factors impacting on profitability. Small incremental improvements across these factors can have a very positive effect on profitability. The State working in partnership with industry, from primary producers to processors, has a comprehensive strategy in place that affords the beef and sheep industries the opportunity to improve competitiveness at all levels of the supply chain.