

Sustainable Irish Beef

A SECTOR COMMITTED TO REDUCING ITS CARBON FOOTPRINT



The grass-based nature of Irish beef production means that it is far more environmentally sustainable than many competitor products



Irish beef's low carbon footprint makes it one of the top five most carbon efficient beef producers in the EU



Grasslands on which Irish cattle feed provide a huge carbon sink that offsets greenhouse gases, yet this is not accurately reflected in emissions accounting



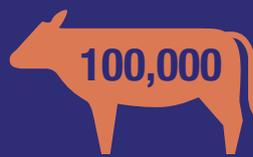
Beef processors are working closely with Animal Health Ireland and Teagasc on programmes aimed at improving animal efficiency and further reducing emissions



There has been a 5% reduction in the carbon footprint on farms that joined Bord Bia's Sustainable Beef and Lamb Assurance Scheme (SBLAS) in 2014



Over 212,000 carbon footprint assessments have been completed across 50,000 Irish farms as part of Bord Bia's Origin Green Programme



Each 1-month reduction in the national average age at slaughter reduces emissions equivalent to 100,000 cows and industry is incentivising younger slaughter age



MIl members are actively involved in a range of measurable sustainability targets (including reduced energy, water and waste initiatives) through the Origin Green programme

Sustainability Credentials

Alongside the economic importance of the meat and livestock industry are crucial considerations of sustainability and environmental impact due to the global threat of climate change. Ireland's natural advantage in terms of climate and our grass-based production systems makes it one of the most efficient beef producers in the world from an environmental perspective. Our sustainability credentials are strong in an EU or global context. Ireland's beef is amongst the top five most carbon efficient in the European Union.

MIl members nevertheless recognise that we must all continue to work to reduce our carbon footprint, to be part of addressing this global challenge, to meet the expectations of our consumers and to

align with national, EU and global emission reduction targets.

Work underway

The pasture based grass-fed nature of the Irish beef sector offers significant advantage from an environmental sustainability and biodiversity perspective. Work is already underway on breeding strategies, enterprise efficiency and grass utilisation to drive reduced emissions. Over 90% of our beef output is part of the Sustainable Beef & Lamb Assurance scheme which encompasses ongoing measurement of emissions at farm level. More than 212,000 individual carbon footprint calculations have taken place on over 50,000 beef farms. As a sector, we are fully engaged on the task ahead.

Science Solutions

Building on the efforts already underway, major progress is possible on emissions reduction through genetics and wider breeding strategies and through reduced age at slaughter of animals. A one-month reduction in the age of slaughter can deliver emission reductions equivalent to 100,000 cows. Processors are incentivising further progress on age at slaughter. Science can provide the solutions without the need for herd reduction.

Equally, livestock production must be treated fairly and credited for soil carbon sequestration and proper recognition of the nature of biogenic methane versus carbon dioxide emissions. It should also be recognised that livestock production plays an important role in preservation of biodiversity.

Carbon sequestration

All food production by its very nature produces carbon. The process of beef farming emits GHGs (Greenhouse Gas), principally through methane from the livestock. However, what is often forgotten is that the grasslands on which Irish cattle feed provide a huge carbon sink that offsets a lot of the GHGs produced. This is not appropriately reflected in the way emissions are monitored when accounting for GHGs. Credit must be given to the sector for the removals of GHGs. It is important that changes are made to the accounting methods to appropriately recognise the ongoing sequestration element of Irish grassland.

Biogenic Methane

Biogenic methane such as methane from ruminant livestock is different from other greenhouse gases because of its biological origin and its relatively short life span in the atmosphere. Many scientists propose a new GHG accounting metric, GWP* to replace the current GWP100 metric for biogenic methane. Effectively, in a situation of stable biogenic methane emissions from a stable national bovine herd, there is much less long-term additional warming. This is a critical issue for Irish agriculture as biogenic methane makes up about 60% of agricultural GHG emissions. The climate metrics applied for ruminant livestock should reflect the accurate impact of methane on global temperatures.

Animal Health

Research by the Teagasc GHG Working Group shows that improved animal health can contribute a 147,000 tonne reduction in CO2 eq. emissions per annum as healthier animals are more productive and require less inputs. This is why processors provide significant funding to Animal Health Ireland (AHI) for its Beef HealthCheck programme which aims to improve the health of the cattle herd by providing post-mortem feedback to producers, thereby helping farmers (and their vets) to make appropriate interventions to improve animal health within their herd.

A healthier herd means less inputs required, less finishing days and a younger animal at slaughter. In addition

to improving the economics of the beef enterprise, this offers significant benefits in reduced emissions. It also has another important benefit in reducing the need for antimicrobial treatments in the sector.

Age at Slaughter

Work by the ICBF and Teagasc confirms that reducing the average age of slaughter of animals makes a significant contribution to reducing GHG emissions. For every one-month reduction in the national average age of slaughter, a reduction of 250,000t of CO2 equivalent can be delivered. This is equivalent to the emissions from approx. 100,000 cows. Therefore, continuation and intensification of progress in our breeding strategy and on-farm production systems can deliver significant GHG reduction contributions without the need for herd reduction.

Carbon leakage

By 2050, the global population is expected to reach 9.8 billion and the planet will need to produce 70% more food while doing so in a sustainable manner. Whilst the focus on hitting domestic targets is understandable, it would be counter-productive to reduce agricultural production in Ireland, which would lead to increased beef production in other parts of the world with less carbon efficient systems. Such carbon leakage effect works against overall global efforts on climate change.

Processor initiatives

In addition to supporting research and working with farmers to reduce on-farm emissions to ensure that in terms of carbon footprint, Ireland is one of the most efficient beef producers in the world, Irish beef processors are leaders in Europe in terms of their work to reduce the environmental footprint of their industry. This is achieved through:

- Increased adoption of the Science Based Targets Initiative (SBTi) to meet the Paris Agreement commitment to limit global warming to an increase of 2°C above pre-industrial levels
- Through participation in Bord Bia's Origin Green programme, processors commit to achieve measurable

sustainability targets on an annual basis across the areas of raw material sourcing, manufacturing processes and social sustainability



- In terms of meat processing operations, MII members are involved in initiatives to reduce water consumption, reduce energy usage, reduce waste to landfill, and various biodiversity programmes, all of which are independently verified under the Origin Green programme

Industry Research



STRATEGIC INNOVATION,
MAXIMUM IMPACT

Meat Technology Ireland (MTI) is a research collaboration between processors, academia and Enterprise Ireland, with a significant element of the work programme focussed on sustainability including detailed research into the potential for genetics to reduce age at slaughter, a key factor in relation to emissions. MTI is also looking at packaging, with the aim to develop new processes / products to maximise the shelf-life of Irish beef and lamb and ultimately to reduce waste.

Teagasc Signpost Farms



MII beef processing members are providing significant financial support and collaboration to this new initiative which aims to reduce GHG emissions from Irish agriculture, while creating more profitable and sustainable farming enterprises. Key elements of the programme include improving water quality, improving biodiversity, reducing inputs and transitioning to more sustainable farming practices