



**ICOS submission to the
Department of Agriculture, Food and the Marine on
The potential for Greenhouse Gas (GHG) Mitigation
within the Agriculture and Forestry Sector**

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Contents

Introduction	2
Agricultural Emissions in Ireland.....	2
The Right to Emit will be Limited	3
Linking Sustainability & Profitability	3
Ensuring Balance	4
Requirement for Increased Research	4
Climate Change Mitigation Possibilities.....	5
Forestry Mitigation Possibilities.....	5
Agricultural Mitigation Possibilities	7
Conclusion.....	9
Contact Information.....	10

Introduction

The agri-food sector is one of Ireland's most important indigenous manufacturing industries, employing in the region of 50,000 people directly, as well as providing the primary outlet for the produce of 128,000 family farms.

ICOS members are at the heart of this industry with over 12,000 of these employees being directly employed by member co-operatives in Ireland, and many of the family farm unit's owner members of these co-operatives across a range of agri business sectors. These jobs are dispersed throughout all regions of Ireland, especially rural areas. Nationally, ICOS plays a key role in ensuring Ireland's export-led economic recovery while it also provides the foundation for sustainable rural development.

The co-operative agricultural economy faces the challenges of reducing GHG emissions while responding to an increased need for food from a growing global population and rising affluence. Independent Joint Research Centre work completed in Brussels by the European Commission shows that dairy and beef production in Ireland is highly efficient and the volume of production is such that substantial emissions reductions have already been achieved by improvements in farm practices such as manure management, energy use, improved breeding and grassland management.

Over the next 10 years, our responsibilities around sustainability and greenhouse gas mitigation will be a key component of the success or failure of our growth plans. We have to maximize the environmental benefit of our grass based system of production in Ireland. Ireland is officially recorded by the Joint Research Centre of the European Union as having one of the lowest levels of greenhouse gas per litre of milk and kg of beef produced in the EU. We need to further leverage a build on this independent data as a unique selling point in our international sales efforts. Given the growing global demand for protein based foodstuffs, Ireland must and promote the logic of permitting the island to maximise its grass based food production relative to the same food being produced in a less environmentally efficient location.

Agricultural Emissions in Ireland

Ireland is in a relatively unique international position with regards to the weight of agricultural emissions. In 2013, agriculture accounted for 32% of total national emissions. Among developed nations, only New Zealand has a higher proportion of total GHG emissions associated with agriculture. Agriculture emissions are projected to grow on an annual basis to 2020. This reflects the impact of Food Harvest 2020 and the projected increase in food production following the removal of milk quotas. Co-operative based businesses are at the heart of these plans and owner members have made significant investments to facilitate this increase. For the period 2013-2020, total emissions from agriculture are projected to increase by 9% or approximately 3% above 2005 levels. Ireland's uniquely high propor-

tion of agricultural emissions within the EU and the relative importance of this sector to the Irish economy, underscores the importance of the rapid and systematic introduction of those measures under Pillar I and II of the CAP that are designed to promote and encourage a lessening of agriculture's greenhouse gas emissions.

The best approach to combining optimum economic development with compliance with sustainability and climate change commitments is to pursue maximum efficiency in production, across the sectors. While there is a possibility of an international climate change agreement which might contain binding commitments on emissions reduction, which could have negative implications for the beef and dairy sectors, particularly, Ireland also has the ability, due to our small scale, to build a sustainability position based on efficiency of production, maximising production off a small emissions base.

Ireland must build on its first mover advantage with Origin Green and its introduction of milk and beef quality and environmental sustainability schemes that are independently audited and accredited. Some dairy co-ops have further augmented these measures with their own programmes to push the sustainability agenda to the heart of our production.

The Right to Emit will be Limited

In order to avoid damaging restrictions on total greenhouse gas emissions, the dairy and beef sectors, particularly, must commit to the full development of the Bord Bia Quality Assurance Schemes, with an enhanced Carbon Navigator function. Such a development would be an important first step in maximising our efficiency of production and thereby reducing our emissions per unit of production. The right to emit will become a limited resource that we must compete for in the market, just like fuel, fertiliser, feed, capital and labour, and we must be the most efficient users of that resource.

Linking Sustainability & Profitability

ICOS has made strides to link the concept of sustainability and profitability. Our members have embraced the "sustainable intensification" of food production agenda. Ireland has been a champion of this approach for several years in the EU and internationally with the development of the Origin Green brand by the Government in tandem with Irish co-operatives and general Irish agribusiness

Ireland must continue to gather political support globally to approach to the twin challenges of climate change and food security at international level. It is estimated by the OECD that by 2050 the world population will reach nine billion, 70% of whom will live in urban areas.

Last year's UN Climate Summit in New York was one such opportunity where Ireland joined a new voluntary global initiative - the Alliance on Climate Smart Agriculture – which aims to bring together Governments and other stakeholders around the three pillars of climate smart agriculture:

- Sustainably increasing agricultural productivity and incomes;

- Adapting and building resilience to climate change;
- The reduction or removal of greenhouse gases emissions, where possible.

This type of political interaction is vital to ensure our climate change obligations are adhered to while recognising the planets population needs to eat.

Ensuring Balance

We are now building towards what is potentially a defining agreement in Paris in December 2015, which will set the ground rules for agriculture emissions targets for the next generation. ICOS has seen studies done by the Commission's research agencies in Brussels including 'An economic assessment of GHG mitigation policy options for EU agriculture' edited by Thomas Fellman which offers scenarios that would result in major reductions in the size of Ireland's livestock herds.

The assessment of greenhouse gas mitigation policy options for the EU suggests scenarios which would see the size of Ireland's beef herd down by 35.1 per cent, while the dairy herd would fall by 5.5 per cent.

ICOS finds these projections immensely concerning for our members, and they show how some aspects of European policy are in conflict.

On the one hand we have the Commission's plans for the EU Agri economy strive to meet the global food security challenge of feeding 9 Billion people. On the other, we have Commission environmental plans which their own economic modelling envision wholesale reductions of the EU livestock herds.

Our co-operatives and Irish agriculture in general are making strides to embrace the environmental agenda, and we are constantly attempting to build the connection between sustainability and profitability, to foster support in the farming community.

Any introduction of arbitrary environmental targets for the Irish agricultural sector without due regard for the inherent environmental efficiency of much of Ireland's agricultural output and the significant investment being made at production and processing level to integrate improved environmental performance with increased productivity , would be unwarranted and would be likely to totally undermine these efforts. Its immediate consequence would be for production to move outside Ireland the EU, to areas of the world whose GHG output per kilogram of product produced are vastly inferior to what we are doing in Ireland, totally negating the policy, while decimating our agricultural economy.

Requirement for Increased Research

Ireland has been assigned a target of minus 20% as part of the second Kyoto protocol commencing in 2013. This target, which is twice the European average for the NETS, is very challenging. It is

particularly challenging for Ireland where agriculture is the largest sector for emissions in the NETS and within that sector, livestock being the largest producers of emissions. ICOS would encourage and support an accelerated research focus by Teagasc and our co-operatives in identifying efficient techniques that will moderate the effect of such emissions. Further reporting regarding progress with our sustainability targets is needed. This has to be done at all the 3 levels of sustainability; environmental, economic and social metrics.

Climate Change Mitigation Possibilities

ICOS worked with the Department during the CAP negotiations and has been active on behalf of the co-operative movement in supporting the development of effective climate change mitigation programmes across both Pillars I and Pillar II. We are currently awaiting the approval of the Pillar II elements of these new schemes by the Commission, but we are confident that they will play a significant role in the development of climate change mitigation actions in our sectors. Full compliance with Single Farm Payment Greening requirements, plus the optional adoption of GLAS measures will be important measures to ensure the protection of our environment and associated biodiversity.

The sustainability survey, as conducted by Bord Bia, includes a carbon audit and Ireland is the first country in the world to assess the footprint performance of farms on a national scale. ICOS supports the continued development of an on-farm approach to carbon auditing as part of an overall knowledge transfer programme which aims to instil in farmers best practice in respect of environmental management.

Forestry Mitigation Possibilities

Ireland's national forest estate now covers approximately 11%, of the land area. The level of forest cover is more than three times lower than the EU average of 37%. It is estimated that the economic value of the forest sector in 2012 was €2.3 billion, when both indirect and induced effects are taken into account. The sector is responsible for approximately 12,000 jobs in the economy.

- ICOS supports the proposals to increase the area of land under forest from 11% currently to 18% by 2049
- ICOS will assist in the support and development of Forestry Producer Groups to provide an appropriate organisational, operational and knowledge transfer structure for timber producers that will more effectively align the commercial aspirations of forestry growers with the necessary environmental targets and constraints now being imposed
- ICOS recommends a review of existing measures and schemes for the cultivation and use of bio-energy crops. The objective should be to increase significantly the growth and usage of these crops

- ICOS recommends the use of the co-operative producer group model to encourage the promotion of anaerobic digestion and other bio energy technologies at on-farm at farm level along with the creation of networks of producers that would permit the development of regional hubs for the onward transport, storage and processing of gases for suitable commercial uses. ICOS has submitted a comprehensive paper to the Department of Communications, Energy and Natural Resources on this topic which should be examined

Irish forests are both a significant store and sink of carbon. Representations should be made for the inclusion of forest sinks as part of Ireland's measured non-ETs emissions.

ICOS welcomes this expansion and development of the forestry sector but recommends that the government:

- a) Ensure that forestry being developed is not just as a means of offsetting carbon penalties but can act as a real rural economic driver and additional income for landowners
- b) Ensure that the incentives to plant and develop forestry are safeguarded for landowners so that they can be guaranteed a return on their investment once the forestry matures to a saleable product
- c) Focus on supporting forestry producer organisations to access new markets and develop their businesses collectively
- d) Ensure that the industry can develop in a co-operative manner which will help the co-ordination of benefits for members and also help the sector be more cohesive environmentally
- e) Clarify where the additional land for forestry is targeted and that this won't impact on parallel government policies to expand the beef and dairy sectors

The forestry sector has a wide knock-on effect to many other rural businesses including contracting for thinning, extracting, planting, forestry management consultancy etc. and also in the processing sector from the saw mills to the sale, installation and maintenance of biomass heating equipment. The tourism sector is a beneficiary of a developed forestry sector and tourist activity businesses are being developed on the back of mature woodlands.

As a result of this, efforts should also be made to ensure the sector is fully serviced so there is a sufficient market, and qualified personnel to ensure the forestry product being produced by our farmers can be sold to ensure a reasonable additional income to many farm families.

In light of this, ICOS would further recommend

- a) Swift implementation of Renewable Heat Incentive with an opening for retrospective payments system to be introduced so as not to stop sales of biomass heating equipment in the meantime
- b) The public sector can help stimulate demand particularly through the usage of biomass in the heating of public buildings
- c) Incentivise biomass fuelled, district heating systems to be developed in rural towns and villages between private, public and community buildings to reduce energy usage and further develop the biomass market
- d) Provide clear information & support for communities and businesses wishing to play their part in mitigating greenhouse gas emissions by changing the fuel source that powers their activities to clean, local biomass
- e) Again the co-operative model here would encourage community buy in and benefit, as well as making it easier to stamp a cohesive climate change policy on the efforts

Agricultural Mitigation Possibilities

The following measures were identified and need to be allocated priority funding by the Department of Agriculture and its associated agencies, and ICOS is ready and willing to help with the implementation and expansion of these policies utilizing the co-operative model where there is a fit:

- Improving the genetic merit of the dairy herd
- Higher daily weight gain in beef cattle
- Extended grazing season
- Manure management
- Other gains in nitrogen efficiency (includes use of clover)
- Use of nitrification Inhibitors
- Minimum tillage techniques
- Increased use of cover crops
- Bio-fuel and bio-energy crops
- Anaerobic digestion of pig slurry

Ireland's natural comparative advantage lies in the production of grazed grass and we have over 3.6 million hectares of land devoted to grassland. There are a number of options for maintaining and restoring soil carbon, in our grasslands particularly in light of the changes in the CAP regulations agreed

at the end of last year. ICOS strongly recommends that the Irish government strongly lobbies for the inclusion the following:

- a) Counting soil carbon changes towards EU targets under climate change policy
- b) Farmers and other land managers need to be incentivised to maintain existing soil carbon or a minimum level of soil carbon
- c) Cross-compliance conditions in Pillar 1
- d) Voluntary agri-environment-climate measures in Pillar 2
- h) Offset schemes linked to the Emissions Trading Scheme

Research to date indicates that with appropriate management, conflict between efficient farming and processing and care for the environment can be minimised and this must be a key focus of our plans to develop our industry. Knowledge Transfer initiatives on the importance of greenhouse gas reduction to our industry should be integrated at farm discussion group level, and show how the implementation of such measures and similar measures in regard to Air, Water and Biodiversity will actually enhance profitability. ICOS supports the continued development of direct on-farm schemes and measures that identifies environmental risks and opportunities, and promotes the continuous growth of the stewardship principle within the agriculture and agri-food sector.

The Department needs to continue to support farmers through agri-environmental risk assessment and planning programs that provide incentives to increase the adoption of sustainable agriculture practices at farm level and to develop new approaches that support the adoption of sustainable agriculture practices.

Conclusion

It is vital that the Irish Government ensure that food security concerns are put on an equal footing with climate change concerns. Disproportionately restricting Irish agricultural output when global demand for food continues to grow and when Irish farmers are recognised as delivering a very high level of farming efficiency would mean that this demand would have to be satisfied by geographies where farmers leave a far larger carbon footprint than Irish farmers.

ICOS views the challenges of climate change from a co-operative perspective. It recognised the need to communicate and impart knowledge and information to producers through their co-operatives that will result in significant and ongoing behavioural change on the part of producers that will result in significant and positive environmental outcomes. ICOS believes that both at EU and global policy levels that there is a need for a clearer understanding of the competing and complimentary natures of environmental and food security. Current environmental policies are not sufficiently nuanced to reflect the sometimes competing goals of food and environmental security. There is a need for a further refinement of measurement and accounting procedures as they are applied to the global environment. There needs to be a greater recognition that the environmental efficiency of producing certain foodstuffs is greater in some geographies than in others. Greater recognition needs to be given to the positive effects on the environment of agriculture, effects such as the capacity of permanent grasslands and forestry to be highly effective sinks for the storage of carbon.

ICOS believes that co-operatives and their members are willing collaborators in achieving the appropriate balance between agricultural output and environmental priorities.

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