

**31<sup>st</sup> July 2020**

**EU Methane Strategy Roadmap  
Submission by the Irish Cooperative Organisation Society**

ICOS is the umbrella body for over 130 co-operatives in Ireland – including the Irish dairy processing & milk purchasing co-operatives, livestock marts and other rural based enterprises, such as breed societies, animal health and AI societies – whose associated businesses have a combined turnover in the region of €14 billion, with some 150,000 individual members, employing 12,000 people in Ireland, and a further 24,000 people overseas.

The European Commission roadmap identifies three main sectors responsible for the methane emissions; the energy sector, the agricultural sector and the waste sector. Our input will focus on methane emissions from the agricultural sector. We would like to make the following observations as part of our submission:

- In Ireland, farming activity due to complex natural processes results in greenhouse gas (GHG) emissions, predominately methane through enteric fermentation from the digestive systems of ruminant livestock and stored manure, as well as nitrous oxide.
- As outlined by the European Commission within its roadmap, it is difficult to mitigate these emissions due to their biological nature. While a reduction is possible to an extent, methane emissions in agriculture cannot be eliminated. We underline that there are no silver bullet solutions to reducing GHG's from agriculture.
- In Ireland, it is important to point out, that agriculture accounts for a relatively large proportion of our national GHG inventory due to the structure of the Irish economy, which lacks heavy industry. However, due to our grass-based model of food production, the European Commission's Joint Research Centre has recognised Ireland's dairy sector as the most carbon efficient in Europe.
- It must also be recognised that agricultural emissions are produced in the production of food. With a growing world population and therefore growing demand for food, the answer to methane reduction, cannot be to lower food production. Rather it should be to increase the uptake of emission reduction practices and technologies and the promotion of low emission per kg of food produced. This focus is essential to ensure that this issue can be tackled in a sustainable and socially conscious manner.
- Livestock in Ireland is reared predominately on a grass-based diet. Ruminant livestock convert plant matter into high quality sources of dairy and meat protein for human consumption via the microbial ecosystem that exists in the rumen called the rumen microbiome. The rumen microbiome consists of bacteria, fungi, protozoa and archaea which convert grass into an energy source for ruminants. The rumen also produces methane as a by-product of fermentation. The conversion of grass into human edible protein is a sustainable model of production that reduces the need to convert human edible protein into more protein.

- We wish to emphasize the important differentiation between methane and other GHGs, such as carbon dioxide. In June 2018, researchers from the University of Oxford (Oxford Martin School) called for the creation of a fairer way to calculate short lived GHG's such as methane, compared to long lived GHG's such as carbon dioxide. Methane is 25 times more potent as a GHG than carbon dioxide but only remains in the atmosphere for a period of 12.4 years, compared to carbon dioxide, which remains in the atmosphere for thousands of years. It is necessary to recognise the shorter lifespan and cyclical nature of methane in the atmosphere. As such, methane can be described as a flow gas, compared to other GHG's which build in the atmosphere over a longer time horizon.
- Teagasc (Ireland's farm advisory, education and research body) has developed a detailed plan called the Teagasc Marginal Abatement Cost Curve (MACC), which has identified 26 actions an individual farmer can take to reduce GHG emissions across 3 broad areas - agricultural production, land use and farm scale renewables through the displacement of fossil fuels.
- Key measures contained in the MACC curve include the continued adoption of good, efficient farming practices such as improving the Economic Breeding Index (EBI) and beef genetic merit of your herd, better grassland utilisation and incorporation of clover into grassland, getting soil pH right, switching to a form of urea fertiliser, known as protected urea and, spreading as much slurry as possible in the spring, and using a low emission equipment, such as the trailing shoe. In relation to methane reduction, the main efficiency measures focus on animal genetics, improved finishing times, optimising output per head, extended grazing and animal health and diet.
- Despite the factors limiting mitigation in agriculture, there is an overwhelming need to fund new research and develop new technologies designed to reduce emissions from agriculture. There are exciting innovations in this sphere at different stages of development, which requires ongoing support at EU level through Horizon research funding and other initiatives.
- A leading area of research relates to the role of feed additives to mitigate methane emissions while monitoring their effects on animal productivity. Additives including 3-NOP, seaweeds, oils, halides and encapsulation for slow release options at pasture are being examined. We emphasise the importance of ensuring that research findings cover the potential impacts on food safety as part of ongoing research activity. Additives for inclusion in slurry and manure require further research.
- Anaerobic digestion (AD) using slurry and grass can produce biogas, that can be upgraded and injected into the national energy grid. AD is a proven technology with significant potential to reduce methane emissions from stored slurry and manure, as well as reducing nitrous oxide emissions and offsetting fossil fuel as an energy source. However, in order for a sustainable biogas industry to develop and take root, public support and investment for the sector will be required at EU and national level.

ICOS welcomes the opportunity to make s submission to the European Commission's roadmap on methane and we look forward to participating in future dialogue and discussion on this topic.