Submission Regarding

'Ag-Climatise' - A Draft National Climate & Air Roadmap for the Agriculture Sector to 2030 and Beyond

to

Climate & Air Roadmap Consultation, Department of Agriculture, Food and the Marine, Climate Change & Bioenergy Policy Division, Grattan Business Centre, Dublin Road, Portlaoise, Co. Laois, Ireland, R32 K857

Cross Agricultural Engineering,
Newtown,
Rathangan,
Co. Kildare,
R51WR98.

January 2020

Introduction

The agricultural industry has long been a mainstay of the Irish economy, strengthening rural economies in particular, and providing a reputation for Ireland as one of the world's leading producers of the highest quality products and produce. However, in recent years and decades, the negative effects of the agricultural sector on the environment and its contribution to climate change has become increasingly apparent, prompting the need for changes to practices within the sector.

Further, potential economic uncertainties, such as Brexit, have called on the need to develop and diversify the Irish agricultural industry, not only to reduce the vulnerability of the sector to economic changes, but to develop new opportunities to further strengthen the sector.

In light of the above, a public consultation on a Draft National Climate & Air Roadmap for the Agriculture Sector to 2030 and Beyond is welcome. Ireland has a poor track record of hitting climate targets. Of particular interest should be the promotion of anaerobic digestion (AD) technology. This technology not only has the capability to reduce greenhouse gas emissions, but also provides an opportunity for the reliable, sustainable production of energy, and the production of valuable by-products, such as digestate, most frequently used as a fertiliser, which can be used in an agricultural setting to further reduce emissions and climate impacts,.

Company Background

Cross Agricultural Engineering is an indigenous Irish company founded in 1993 by Simon and Sandra Cross in Rathangan, Co. Kildare. Innovation has always been a cornerstone of the company's ethos, and Cross Agricultural Engineering has built a reputation as an award-winning producer of some of the highest-quality agricultural machinery available on the Irish and international markets. Cross Agricultural Engineering has long been passionate about sustainability, and fostered a particular interest in energy production through AD. Coming from an agricultural background, Simon Cross identified the benefits of AD in agriculture well over a decade ago, and has worked with AD plant operators in the UK and Europe to provide high-quality machinery which allow a variety of feedstocks to be utilised in AD plants.

AD in Ireland

AD is a well-utilised technology across mainland Europe. According to the European Biogas Association, over 70% of biogas plants for electricity in the EU operate on agricultural feedstock. AD is particularly common in countries such as Germany, where there were 10,431 AD plants in operation in 2017, of which c.80% were agricultural substrate-type plants (IEA

Bioenergy, 2018).The uptake of AD in Ireland has been much slower, with only 38 AD plants recorded in operation in 2018 (IEA Bioenergy, 2018). A report by the Sustainable Energy Authority of Ireland (2017) cites several barriers to the uptake of AD in Ireland, such as limitations in available feedstock resource, increased capital and operating costs, and investment risk, among others. AD provides a valuable and proven opportunity to decarbonise the agricultural sector, while also contributing sustainable, reliable energy to the national energy mix.

The draft document outlines a number of specific actions that relate to AD, as outlined below:

> *Action 8: Collaborate with DCCAE to ensure the enabling framework for microgeneration facilitates opportunities for the agri sector and rural communities to contribute to electricity decarbonisation.*
>
> *Action 9: Actively participate in the development of a National AD strategy including the consideration of appropriate sustainability criteria for biomass materials.*
>
> *Action 10: Collaborate with DCCAE and other key stakeholders to set a target for the level of energy to be supplied by indigenous biomethane injection and consider the necessary supports including funding mechanisms*
>
> *Action 13: Realise carbon savings from Anaerobic Digestion of up to 0.7Mt CO_2 eq per year by 2030 and 2 Mt CO_2eq per year by 2050.*

It is the experience of Cross Agricultural Engineering that cost remains one of the most inhibiting factors to potential developers of AD in Ireland, both at a small, medium and large scale. We believe that in order to increase the uptake and viability of an AD industry in Ireland, financial incentives are critical. Of key importance are feed-in tariffs (i.e. a payment per unit energy provided to the energy grid by AD plant operators – such feed-in tariffs are common practice in the UK and Europe). These feed-in tariffs allow AD plant operators to compile a viable business plan and model, which greatly assists with the securing of funding from lenders. Other financial incentives such as funding and low-interest loans specifically for AD development could be highly beneficial in establishing an AD industry in Ireland and should be considered in any plans to develop the AD industry. A 2017 European Commission report identified that "*there is still a lack of effective support schemes in many Member States*", and recommended that "*to ensure further growth of biogas and biomethane production and use in the EU…it is strongly recommended to implement an attractive, reliable and stable policy*

support scheme and a positive long-term outlook for the various stakeholders involved, on both the EU and Member State level". Specifically, in relation to Ireland, this report found that there has been no recognition of the additional carbon benefits of biogas/biomethane by authorities in Ireland, particularly in the context of Ireland's high agricultural emissions. The report also found that the deployment of biogas in Ireland as it relates to the electricity and heat sectors is inhibited by insufficient subsidies and support schemes.

In order to facilitate the growth of the AD sector in Ireland in a timely manner so as to contribute to Irish emission reduction and renewable energy production targets, it is essential that meaningful support schemes be developed and implemented as soon as possible.

The draft document also outlines a specific action which relates to the investigation of various crops for use in energy generation, as outlined below:

> *Action 29: Explore the cost effectiveness and sustainability of growing crops such as grass, potatoes, sugar beet or maize to meet opportunities in the bioeconomy or as materials for energy generation.*

Energy crops (mostly maize), provide about 50% of the biogas production in Europe, with the remaining production from a combination of landfill, organic waste (incl. municipal waste), manures and sewage sludge (Banja *et al.*, 2019).

Traditionally, sugar beet is grown for sugar production. Indeed, 20% of the world's sugar is produced from sugar beet (European Commission, 2011). The climate of Europe, particularly north Europe, is perfect for sugar beet, and just over 70% of the world's supply is produced in Europe (European Commission, 2011). Although sugar beet is traditionally a food crop, interest has grown in its potential use for biogas production through anaerobic digestion. This is because the high sugar content of the taproot means that biogas is produced in less than 14 days. Furthermore, 95% of the complete sugar beet can be converted into biogas (KWS UK Ltd., 2012). Once a popular crop in Ireland, the cultivation of sugar beet all but stopped in 2006, when Ireland lost its sugar quota. The quota loss resulted from a major overhaul of the European Union's sugar policy, which allowed for the integration of sugar policies into the Single Common Market Organisation (CMO). The quota management outlined in the European Union's CMO ended as of 30 September 2017, making sugar beet a more attractive crop for Irish growers. The intensive production of any crop, for any purpose, can have adverse environment effects, such as reduced biodiversity, reduced soil fertility, and increased

incidences of disease. As sugar beet is a biennial crop (grown every second year), these risks are significantly reduced. Sugar beet is not currently part of the Irish tillage rotation, and its inclusion is recommended to further heighten the attractiveness of the crop to growers and provide an excellent feedstock source for biogas production.

Maize is also an excellent feedstock for biogas production, and it utilised extensively for such throughout Europe. Like sugar beet, maize has a high DM content which, which used in AD, results in a high biogas yield per tonne.

The efficacy of crops such as sugar beet and maize in AD throughout Europe is well-known. This knowledge needs to be applied to new Irish policies to maximise the output of any future AD industry, as well as maximise the profit potential for growers.

Conclusions

AD presents a vital opportunity for the agricultural sector in Ireland, with the potential to significantly reduce agricultural emissions, increase the share of renewable energy, and support a new income source for Irish farmers. In order to avail of these benefits, a meaningful support system needs to be implemented at a governmental level to develop and bring the AD industry in Ireland to maturity. Such support schemes have been implemented with great success across Europe, and it is time for Ireland to follow suit in order to meet climate and energy targets.

Given Ireland's favourable climate for tillage production, it is logical to promote the use of crop feedstocks in AD. Crops have been proven as an excellent feedstock for AD across Europe, and their use would also provide additional income opportunities for Irish famers.

Cross Agricultural Engineering fully supports the development of an AD industry in Ireland and note its potential contributions to the Irish economy and climate targets, particularly in the context of decarbonising the agricultural sector in Ireland.

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Dairy Industry Ireland
Ibec

Fri 10 January 2020.

Ag-climatise Public Policy Consultation

Dear Sir, Madam,

On behalf of Dairy Industry Ireland (DII), representing the Dairy Processing (primary and secondary) sector, we wish to make the following commitments and observations in relation to the Ag-climatise policy proposals:-

1. The Dairy Processing sector, commits to and will support the achievement and delivery of the strategies and objectives of the Govt's proposed Ag-Climatise policy, in partnership with its suppliers and key stakeholders, in support of the Govt's Climate Action Plan to reduce Greenhouse Gas emissions by 2030 in line with the Paris Agreement and as part of a clear path to achieve lower carbon emissions for the dairy and food sector.

2. The Dairy Processing sector recognises that addressing climate change and protecting the Environment is a serious issue for our society, economy and for the domestic and international consumers of Irish agri-food products.

3. The Dairy Processing sector working with its suppliers and key stakeholders will engage with and support the implementation of the strategies identified in Ag-climatise in the reduction of ag-emissions, in the enhancement of sustainable land use and in the development of new systems to contribute to sustainable energy and the decarbonising of energy systems.

4. The Dairy Processing sector working in partnership with suppliers and key stakeholders will support and assist in the delivery of the Action Programmes set out in Ag-climatise to deliver the changes identified in the Teagasc MACC curve.

5. It is suggested that the proposed Ag-climatise programme should build on the internationally recognized existing high/extensive carbon efficiencies of the Irish Dairy sector, the success of the Origin Green programme and its associated Sustainable Dairy Assurance Scheme, the success of DAFM sustainability funding programmes, the principles and approaches of the Dairy Sustainability Initiative and the joint Co-op and Teagasc Agricultural Sustainability and Support Programme – ASSAP.

6. The Dairy Processing sector herein re-commits to its participation and funding of the ASSAP pilot programme under which 10 Dairy Industry Farm Sustainability Advisors

work with 20 Teagasc Farm Sustainability Advisors, 30 LAWPRO Scientists, and 12 LAWCO Community Advisors to support water quality improvement across the country until 2021. It is suggested that the ASSAP programme should be expanded and widened to incorporate climate, bio-diversity, and ammonia as well as water in light of the common elements of improvement strategies for each so that there is an integrated approach to on-farm sustainability. It is suggested that the LAWCO and climate community programmes should be integrated at local level.

7. The Dairy Processing sector will participate in the whole of Govt/whole of sector partnership processes and structures proposed in Ag-Climatise in support of the achievement of Ag-climatise objectives and implementation and delivery of its strategies. The Dairy Sustainability Initiative mechanisms and the Dairy Sustainability Forum will be made available to support Ag-climatise objectives and policies.

8. The Dairy Processing sector commits to working collaboratively across sectors to identify and implement effective decarbonisation initiatives e.g. potential exists to establish partnerships across agriculture and energy sectors given the potential of renewable and biofuel generation on-farm currently. The Sector would welcome support and facilitation of cross-industry collaboration by the Department.

9. It is recognized that in addition, new approaches and mechanisms, will be needed to progress and advance the achievement of low carbon objectives for Irish society, the economy and the agri-food/dairy sectors. This will require an openness to new approaches and new solutions and the Dairy Processing sector will support and participate in the development of such new approaches and solutions.

10. All Processors will actively and at an early date promote in a co-ordinated way, with all stakeholders, the significant strategies which would assist and deliver climate change mitigation, building on work already underway as follows :- promotion of the use of protected urea with Fertilizer companies - steps underway, promotion of the use of lime with Lime producers and the Irish Concrete Federation (steps underway), reduced protein in concentrates for Dairy Cows (steps underway), Nutrient Mgt planning (underway in all Co-ops), use of LESS (regulatory requirements), .assessment of 0.5 Ha (in chunks) of native woodland on farm (assessments commencing for pilot farms), EBI - breeding changes, solar energy (framework offered with Electric Irl- other energy companies also offering), additives to reduce methane (Teagasc testing of same), engagement with and support of the forestry sector generally (discussions underway), AD/renewable gas exploration (steps/discussions underway). The existing Processor Farm Pilots programmes will be used along with the Teagasc Signpost Farms Programme to support the foregoing.

11. It is proposed that a joint messaging/communication programme on climate/sustainability be agreed and delivered at an early stage with DAFM, Bord Bia, Teagasc, Co-ops, Farm bodies etc so that there is a joined-up approach with active communication by all stakeholders.

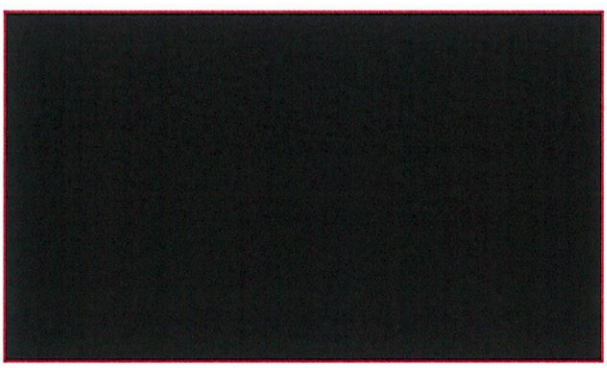
12. It is suggested that as part of a whole of Govt/whole of Sector joined up approach, that there would be strong benefits in aligning CAP, Govt and industry investment to support climate/sustainability objectives.

13. It is recognized that in the implementation of low carbon strategies, there are significant co-benefits for other environmental priority areas including ammonia, water quality, and bio-diversity as well as co-benefits for soil productivity improvement which will improve farm productivity and farm incomes. As set out earlier, a new integrated on-farm sustainability approach is suggested incorporating all of these objectives.

14. As a first step, the Dairy Processing sector working in partnership with its suppliers and the key stakeholders previously identified will seek to achieve early adoption of the low carbon approaches and strategies identified in Ag-climatise by the initiation of an advisory and promotion strategy to underpin the implementation of the Teagasc MACC measures, by the development of a network of pilot demonstration farms to demonstrate best farm practice in the implementation of the Teagasc MACC and the support of research and development.

15. The Dairy processing sector confirms its support for the analysis and findings of the NESC paper "Self Organisation under Deliberate Direction – Irish Dairy and the Possibilities of a New Climate Change regime" – Professor Charles Sabel, Professor Rory O Donnell and Larry O Connell Director Nesc.

16. The Dairy Processing sector confirms its full commitment to the achievement of Ag-climatise objectives as part of a clear path to reach low carbon goals for the Irish dairy and agri-food sector.



Dairy Sustainability Ireland

Fri 10 January 2020.

Ag-climatise Public Policy Consultation

Dear Sir or Madam,

On behalf of Dairy Industry Ireland (DII), and on behalf of the Irish Co-operative Organisation Society (ICOS), representing the Dairy Processing (primary and secondary) and Co-op Sector, and as part of the Dairy Sustainability Ireland Initiative (DSI), we wish to make the following commitments and observations in relation to the Ag-climatise policy proposals:-

1. The Dairy Processing /Co-op Sector, commits to and will support the achievement and delivery of the strategies and objectives of the Govt's proposed Ag-Climatise policy, in partnership with its suppliers and key stakeholders, in support of the Govt's Climate Action Plan to reduce Greenhouse Gas emissions by 2030 in line with the Paris Agreement and as part of a clear path to achieve lower carbon emissions for the dairy and food sector.

2. The Dairy Processing/Co-op Sector recognises that addressing climate change and protecting the Environment is a serious issue for our society, economy and for the domestic and international consumers of Irish agri-food products.

3. The Dairy Processing/Co-op Sector working with its suppliers and key stakeholders will engage with and support the implementation of the strategies identified in Ag-climatise in the reduction of ag-emissions, in the enhancement of sustainable land use and in the development of new systems to contribute to sustainable energy and the decarbonising of energy systems.

4. The Dairy Processing/Co-op Sector working in partnership with suppliers and key stakeholders will support and assist in the delivery of the Action Programmes set out in Ag-climatise to deliver the changes identified in the Teagasc MACC curve.

5. It is suggested that the proposed Ag-climatise programme should build on the internationally recognized existing high/extensive carbon efficiencies of the Irish Dairy sector, the success of the Origin Green programme and its associated Sustainable Dairy Assurance Scheme, the success of DAFM sustainability funding programmes, the principles and approaches of the Dairy Sustainability Initiative and the joint Co-op and Teagasc Agricultural Sustainability and Support Programme – ASSAP.

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9. It is recognized that in addition, new approaches and mechanisms, will be needed to progress and advance the achievement of low carbon objectives for Irish society, the economy and the agri-food/dairy sectors. This will require an openness to new approaches and new solutions and the Dairy Processing and Co-op Sector will support and participate in the development of such new approaches and solutions.

10. All Processors/Co-ops will actively and at an early date promote in a co-ordinated way, with all stakeholders, the significant strategies which would assist and deliver climate change mitigation, building on work already underway as follows :- promotion of the use of protected urea with Fertilizer companies - steps underway, promotion of the use of lime with Lime producers and the Irish Concrete Federation (steps underway), reduced protein in concentrates for Dairy Cows (steps underway), Nutrient Mgt planning (underway in all Co-ops), use of LESS (regulatory requirements), .assessment of 0.5 Ha (in chunks) of native woodland on farm (assessments commencing for pilot farms), EBI - breeding changes, solar energy (framework offered with Electric Irl- other energy companies also offering), additives to reduce methane (Teagasc testing of same), engagement with and support of the forestry sector generally (discussions underway), AD/renewable gas exploration (steps/discussions underway). The existing Processor/Co-op Farm Pilots programmes will be used along with with the Teagasc Signpost Farms Programme to support the foregoing.

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14. As a first step, the Dairy Processing/Co-op Sector working in partnership with its suppliers and the key stakeholders previously identified will seek to achieve early adoption of the low carbon approaches and strategies identified in Ag-climatise by the initiation of an advisory and promotion strategy to underpin the implementation of the Teagasc MACC measures, by the development of a network of pilot demonstration farms to demonstrate best farm practice in the implementation of the Teagasc MACC and the support of research and development.

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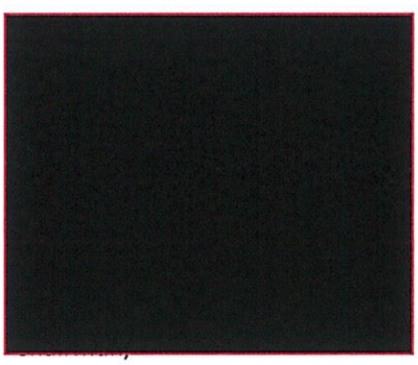
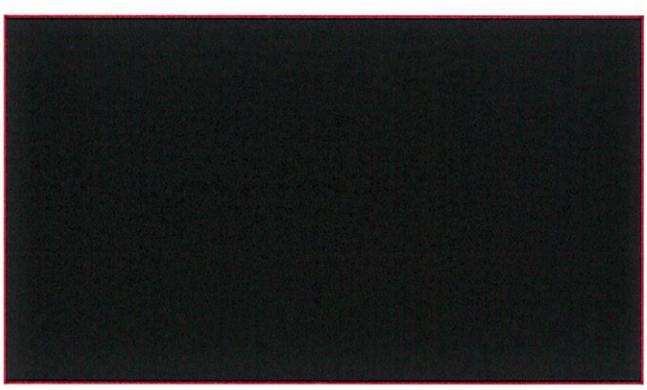


Dairy Industry Ireland



Irish Co-operative Organisation Society

Public Consultation on Draft National Climate & Air Roadmap for the Agriculture Sector to 2030 and beyond

Response from

January 2020

Introduction

Drinks Ireland represents producers and distributors of alcohol beverages on the island of Ireland. This includes small micro-breweries and boutique distilleries to multinationals such as Diageo, Irish Distillers-Pernod Ricard and Heineken Ireland.

Drinks Ireland welcomes the opportunity to respond to the Department of Agriculture, Food and the Marine's public consultation on its draft National Climate & Air Roadmap. Drinks Ireland members play a crucial role in the viability and success of Ireland's agri-food sector. The Irish drinks industry is committed to sustainability and playing its part in Ireland's response to the climate change challenge.

Context

The Irish drinks industry makes a substantial contribution to Irish agriculture. Irish breweries and distilleries purchase c. 230,000 tonnes of Irish produced malt and grain annually. This represents over two thirds of all malt and grain used in Irish brewing and distilling. This includes the full capacity of Irish malting output as well as a substantial volume of un-malted barley and smaller volumes of other Irish-grown grains.

As the Irish drinks industry grows its global exports, there will be an ever-increasing demand for Irish malt and grain. A survey of major Irish breweries and distilleries points to projected increases in annual demand over the next five years of:

- Standard malts: 5%
- Peated/Special malts: 8 -20%
- Un-malted barley 10-15%

The planned expansion in production capacity by the largest Irish malting house is very welcome, but further expansion and diversification in malting production will be required to meet demand generally; and for peated and specialist strains of malt which are not currently produced in Ireland.

Significant challenges are posed by climate change in the form of increasingly disruptive weather conditions from drought to severe rain. For example, in 2018, the impact of the extreme weather events led to a substantial decrease in cereal production of 23% as a result of decreased area and reduced yields.

Irish breweries and distilleries – in a clear contribution to the circular economy – generate over 500,000 tonnes of high-nutrient, moist animal feed. This helps displace the need to import animal feed.

Reduce Agricultural Emissions - Question 3

Are there other actions that could be considered to maximise the contribution of sustainable land management? Is there more that farmers / the food industry itself can do?

Firstly, we are disappointed that the question refers narrowly to the 'food industry'. We continue to encourage DAFM to more actively recognise and call-out 'drinks' and to refer to the 'food and drinks industry'.

Secondly, we are also disappointed and surprised at the very limited recognition in the draft roadmap to the potential role of the tillage sector.

We note that the draft roadmap suggests that *"much of Ireland's climate and landscape... is not suited to forms of food production other than those involving livestock. "*

However, this ignores the fact that Ireland used to have significantly greater area planted under cereal crops in the past.

Since 1985, the total area planted with spring barley has fallen 62% from 248 hectares to only 93.3 hectares in 2018 (according to latest figures from the CSO). While there has been some recent shift directly from spring to winter barley, approximately 60% of the area once previously planted under spring barley now holds no barley. In the past six years the cumulative total area under wheats, oats and barley has declined 15.6% from 306 hectares to 258 hectares.

This loss in area is predominantly due to the growth of the Irish dairy sector, with strong support from Government. This poses major challenges as future growing demand for Irish malting barley and Irish grain cannot be met if the area being planted is in decline.

This loss of area is also counter-productive in terms of Ireland's response to climate change.

We note that the draft roadmap refers in places to the results of the Teagasc Sustainability Survey on emissions for different modes of farming. For example, the draft roadmap states *"that the top performing third of cattle farms emitted, on average, 9.6 kg CO2 equivalent per kg beef, compared with 14.9 kg CO2 for the bottom performing third of cattle farms".*

However, the draft roadmap fails to acknowledge that the same Teagasc Sustainability Survey found that, in 2015-2017, greenhouse gas emissions per hectare from tillage farming (2.0 tonnes Co2 eqv/ha) were approximately a quarter of the emissions from dairy farming (8.5 tonnes) and half of the emissions from cattle farming (4.2 tonnes).

Drinks Ireland would recommend that the draft roadmap be updated to include commitments to:

- **More focused research of the opportunities for tillage farming, in its totality, to support climate action in the Irish context;**
- **Introduction of policies and incentives, as part of CAP or otherwise, to support a reversal in the decline in the total area planted with cereal crops, particularly spring barley.**

Acting in Partnership - Question 7

Are there other actions which the State could consider, particularly in partnering with industry?

The Irish drinks industry is committed to working with Government and all stakeholders to ensure a sustainable and viable future for the Irish tillage sector, which in turn can support the continued growth of Ireland's indigenous drinks industry.

Drinks Ireland would recommend that the draft roadmap be updated to include commitments to:

- **Reconvene the Tillage Forum with the objective of engaging all stakeholders in developing an agreed new strategy for the future of the Irish tillage sector;**
- **Introduction of policies and incentives, as part of CAP or otherwise, to support a reversal in the total area planted with cereal crops, particularly spring barley.**

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Climate & Air Roadmap Consultation
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Climate Change & Bioenergy Policy Division
Grattan Business Centre,
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Co. Laois

14th January 2020

Re: "Ag Climatise" A Draft National Climate & Air Roadmap for the Agriculture Sector to 2030 and Beyond

Dear Sir/Madam

The Environmental Protection Agency (EPA) welcomes the opportunity to make a submission on the proposed Climate and Air Roadmap for the Agriculture Sector to 2030 and Beyond. The period to 2030 will shape the future direction of agriculture and its response to environmental concerns and adaptation to climate change. It will also provide opportunities to realise the potential that exists to both produce goods and consume goods in an environmentally sustainable way. As you may be aware the EPA has recently prepared submissions to your Department with respect to public consultations

- Recognition of the **relative importance** of agriculture in Ireland for rural and national sustainable development;
- Identification and quantification of the **pressures** placed on Ireland's natural environment by agricultural and other land management practices which are **causing significant problems** for water quality, air quality, nature and climate change and **risking the reputation** of Ireland as a food producing nation with strong environmental credentials;
- The synergies and antagonistic effects of **one form of emission** to the environment (air and water) and/or reduction in one form of emission to the environment on **another form of emission** (air and water) need to be fully explored and considered.
- Recognising the **opportunities** available for Ireland in getting it right and being able to prove its credentials as a **world leader** in sustainable, low carbon and environmentally friendly agriculture and land management.

and strategic plans regarding the key environmental challenges facing the agricultural sector, namely water quality, air quality and greenhouse gas emission abatement. Recurring themes throughout these reports and submissions are:

The Agency's views and/or recommendations in this response to public consultation should be examined in conjunction with our responses to the DAFM Public Consultation on the Nitrates Derogation[1], the Proposed Strategy for the Irish Agri-Food Sector to 2030[2] and the CAP Strategic Plan SWOT analysis[3].

There are a number of key strategic points that we wish to make in relation to the Roadmap and we have also provided some additional commentary on specific sections of the roadmap.

Key Points

1. The EPA welcomes the overall structure of the roadmap, the nine high level objectives set out in Parts 1, 2 and 3 and the associated actions. Part 1 should also include a specific reference to the ammonia marginal abatement curve and associated targets for 2030.
2. The scale of the challenge ahead for the agriculture sector is very significant with the environmental sustainability trends for water quality, air quality, greenhouse gasses and biodiversity all going in the wrong direction at present. The overall success of this Roadmap will depend on the ability of the sector to **reverse these trends in a measurable, verifiable and reportable manner**. The sectors sustainability credentials and reputation rely heavily on this. Early, regular and publicly accessible reporting will also be needed to demonstrate progress and the Roadmap would benefit from a clear mechanism for how and when such measurement and reporting will happen.
3. A recurring theme of recent EPA submissions on national plans for agriculture is that any proposed changes in land management or farm practice under this Roadmap or other strategies or plans should seek to address **the multiple benefits** of improved water quality, reductions in greenhouse gas and air pollutant emissions and enhanced biodiversity.
4. The three-legged stool or three pillared model for sustainability applied to Foodwise 2025 did not achieve the necessary focus on environmental issues as evidenced by the continuing deterioration in water quality in agricultural catchments and the increases in both greenhouse gasses and ammonia from agricultural sources. The EPA suggests that a pyramid structure is now required, indicating that social and economic sustainability for the sector are not possible without an evidence-based environmentally sustainable foundation.
5. Whilst acknowledging the scale of the distance to target with respect to greenhouse emission levels at a national level, the document does not provide sufficient detail of the expected growth in emissions levels of greenhouse gas emissions and air pollutants from the sector in the absence of implementation of actions. This is an omission that should be addressed. It is important that stakeholders understand the level of ambition required against a scenario where no actions are implemented. This will result in a more focused discussion on policies targeted at driving down emissions to the environment.

[1] http://www.epa.ie/pubs/epasub/nitratesdirectiveconsultationsubmission.html
[2] http://www.epa.ie/pubs/epasub/subirishagrifoodsectorto2030.html
[3] http://www.epa.ie/pubs/epasub/subcapstrategicplanswotanalysis.html

Additional Points:

Introduction

1. The EPA notes that the main focus of the roadmap document is aimed at greenhouse gas emissions from the sector, however the effects of the sector on air pollution and air quality, water quality and biodiversity and their inter-connections do not appear to be adequately addressed. The synergies that exist and antagonistic effects of emission reduction measures of one form of emission to the environment (air and water) on another form of emissions (air and water) need to be fully explored and considered. This should be a recurring theme throughout the document. Additionally, the EPA notes that there is a need to also include the role of biodiversity in terms of its loss, improvement and the ongoing ecosystem monitoring required as part of Ireland's commitments under the National Emission Ceilings Directive[4] and Statutory Instrument No. 232 of 2018[5].

The Challenge & Our Obligations

1. The EPA identified in its submission on Food Wise 2025 the need to recognise that all parts of the country are not equal in the context of intensification and that some parts of the country are less able to intensify i.e. nutrients behave differently in the landscape depending on the soil type and setting and therefore measures needed to mitigate problems also need to vary depending on the physical context. Not only is this true of releases to water, it can also be applied to emissions of greenhouse gases and air pollutants and enhances the need for actions that have multiple benefits.

2. The EPA welcomes the recognition that "*the achievement of environmental targets may be possible whilst maintaining a stable cattle herd*" and also that "*if actions are not adopted quickly and effectively it will not be possible to deliver on commitments*". Furthermore, "*radical action may be needed for sectors experiencing growth*" as stated in the document. These are important statements which need to be front and centre of Roadmap development.

3. Recognising that competitor countries such as Denmark, The Netherlands, the United Kingdom and New Zealand have established ambitious climate actions for their agriculture and food sector. To be recognised as a leader, ambitions in this area need to be increased and clearly identified as early as possible. Additionally, a clear distinction is required with respect to the nuances associated with the terms "Climate Neutral" and "Net Zero" emissions in outlining ambitions for the agriculture and food sector.

Draft Climate and Air Roadmap for the Irish Agricultural Sector Part 1 – Implementing Changes Now

1. The EPA welcomes the inclusion of the Teagasc Marginal Abatement Cost Curve for greenhouse gas emission abatement. However, of no lesser importance is the Teagasc Marginal Abatement Cost Curve for ammonia emission abatement. The document would benefit from specific inclusion of the ammonia abatement cost curve given that the Roadmap is being presented for both climate and air. We recommend that the first objective in Part 1 be expanded out to include the 2030 targets for ammonia reductions. Of particular note, Actions 1, 2, 3 and 4 suggest a level

[4] National Emissions Ceilings Directive (2016/2284/EU)
[5] S.I. No. 232/2018 – European Union (National Emission Ceilings) Regulation 2018

of ambition above and beyond those presented in the Teagasc MACC for greenhouse gas emission reduction. This is to be welcomed. However, the EPA wishes to highlight the importance of Monitoring, Reporting and Verification of these actions "on the ground". This is extremely important in terms of the inclusion of policy actions in the estimation of emission inventories and projections of greenhouse gases and air pollutants which are submitted by the EPA to the EU and the United Nations Framework Convention on Climate Change on an annual basis.

2. Action 5 requires the review of the National Forestry programme with the aim of delivering 8,000 ha of afforestation per annum. This is an important national action that requires further additional incentivisation. Current afforestation rates are approximately 4,000 ha, which if continued at this level may place the delivery of 26.8 Mt CO_2 eq of land use credits under the Effort Sharing Regulation (Regulation (EU) 2018/842)[6] at risk. Every opportunity to increase environmentally sustainable forestry and woodland planting rates should be explored in this regard. Additionally, the identification of measures across all land uses that either reduce emissions or increase sequestration in a manner that is measurable, verifiable and reportable should be explored as a matter of urgency.

3. The targeting of 40,000 ha of peat based agricultural soils for reduced management intensity in Action 6 is an important action that requires implementation. However, the identification of the most appropriate areas and regions would be enhanced significantly with the development of spatially explicit land use mapping. The EPA would welcome the opportunity to discuss this matter further with DAFM in the near future so as to enhance reporting requirements under Regulation (EU) 2018/841[7].

Draft Climate and Air Roadmap for the Irish Agricultural Sector Part 2 – Acting In Partnership

1. It is clear that a greater role exists for enhanced knowledge transfer and agricultural knowledge and innovation systems. The EPA acknowledges the role of sustainability metrics in this regard as identified, however it wishes to highlight the Smart Farming Initiative[8] as an important conduit that could be scaled up to facilitate more rapid and widespread transfer of knowledge on the use of best practice to reduce environmental emissions at farm level.

2. The EPA welcomes recognition of the importance of utilising Nature Based Solutions (NbS) for climate resilience in water protection and biodiversity - however this should also consider the role of NbS in flood risk management and their deployment will require guidance and training as well as engagement with all stakeholders. The commitment to embedding climate adaptation planning within the Department's policies is welcome but should ensure that the resilience of the sector in a range of plausible scenarios is considered. Coherence with the climate adaptation plans and strategies of other sectors and local authorities is also required.

3. The EPA notes in Action 18 the development of a network of demonstration "sign post" farms which will provide on farm experience of the benefits of embracing climate action. The EPA suggests that taking a singular approach may not be the best course of action (see point number

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[6] Regulation (EU) 2018/842 Binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement and amending Regulation (EU) No 525/2013.

[7] Regulation (EU) 2018/841 Inclusion of greenhouse gas emissions and removals from land use, land use change and forestry in the 2030 climate and energy framework, and amending Regulation (EU) 5225/2013 and Decision No 529/2013/EU

[8] https://smartfarming.ie

1 above) and that these demonstration farms should also include actions to control air pollutants such as NH_3 and the experience garnered in the Agricultural Catchments programme to date also be adopted with respect to reducing nutrient loss to water.

4. Action 19 states that methane emissions will be monitored with a view to stabilising emissions by 2020. No further information is provided on how this is to be achieved in such a short time frame. The EPA would welcome further information with regard to this action.

Significant challenges exist for the agri-food sector with respect to emissions to air (both greenhouse gases and air pollutants), water and impacts on biodiversity. These challenges have increased due to expansion in recent years (mainly in the dairy sector). An environmentally sustainable foundation must now be put in place to maintain the longstanding importance of agriculture and food production to the Irish economy and rural communities. The EPA will continue to work with the Department of Agriculture, Food and the Marine and its agencies with the objective of developing a clean, healthy and well protected environment, whilst also supporting agriculture and food production and rural communities.

Yours sincerely,

Submission by the Farm Tractor & Machinery Trade Association (FTMTA) in response to the Department of Agriculture, Food and the Marine's consultation process in relation to the "Ag-Climatise" Draft National Climate & Air Roadmap for the Agriculture Sector to 2030 and Beyond.

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[redacted]

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Foreword

This document is a response by the Farm Tractor & Machinery Trade Association (FTMTA) to the Department of Agriculture, Food and the Marine's consultation process in relation to the "Ag-Climatise" Draft National Climate & Air Roadmap for the Agriculture Sector to 2030 and Beyond. The response has been prepared by FTMTA as the representative body of the Irish agricultural machinery trade.

The Irish agricultural machinery industry is very cognisant of the challenges posed to our farming customers and the wider economy by the challenges around climate change. FTMTA support the statement made in the consultation document that "we are not starting from a point of inaction" and believe that it is important that the progress made to date in this regard be recognised. We further endorse the Department's view that, while we need to achieve the goals set down in the Climate Action Plan, we must protect the economic viability of our primary producers. Agriculture together with all its related downstream and upstream business activities is a vital sector within our economy and it should be remembered that, little over a decade ago, in the face of the global economic downturn, we, as a nation, were very thankful for the economic activity generated by our ever resilient agriculture sector. Farming and the related activities remains the economic driver of rural Ireland and, particularly at a time when many aspects of rural life are under increasing pressure, this position must be protected.

Clearly it cannot be disputed that agriculture is the largest contributor to overall emissions in Ireland but this must be taken in context. Unlike many of our EU partners and neighbours, Ireland has no substantial tradition of heavy industry and, in the absence of such a heritage, our agricultural emissions will therefore always seem disproportionately high. This figure is not, in the view of our Association, a true reflection of the environmental impact of a sector that has already made great improvements in regard to emissions and other environmental related factors. Obviously, dairy cow numbers have increased greatly since the removal of the milk quota restrictions and even in the latter years of quota as farmers prepared for the new reality. Furthermore dairy herds are in general now operating at far higher yield levels and this has also had an impact. The consultation document makes the point that the development of the sector will need to focus on greater efficiency rather than on continuing increases in cow number. In reality this is already happening with availability of suitable land, and indeed labour, eventually setting a natural limit to herd size. Progressive farmers, supported by schemes such as TAMS and the availability of improved mechanisation technology , are already focussing on efficiency in all aspects of their operation. The striking example in relation to one of the most

significant mechanised activities in Irish farming is the widespread adoption of low emissions slurry spreading systems. Undoubtedly, the support available for such systems under TAMS has aided farmers in making this investment and the moves to regulate for more widespread adoption of these systems for farms availing of the nitrates derogation will play a further part. Irrespective of grant aid or regulation, farmers are keen to maximise the fertiliser value from slurry and the various low emission spreading systems offered by our industry are the keen to unlocking this.

Our Association would argue our industry has made substantial progress over many years in supporting the development of more efficient farming practises and has simultaneously facilitated significant energy efficiency gains in Irish agricultural. We recognise the importance of maintaining and furthering that progress and welcome the opportunity to participate in this consultation process.

Introduction to the Farm Tractor & Machinery Trade Association

The Farm Tractor & Machinery Trade Association Ltd. (FTMTA) is the representative body of the agricultural machinery industry in Ireland and is one of the oldest trade groups in the country having existed in one form or another since 1913.

The membership of the Association comprises in excess of 200 businesses engaged in the manufacture, import, distribution, retail sale and servicing of farm machinery in Ireland. The member firms of the Association account for the vast majority of the turnover of the agricultural machinery sector in Ireland and the member firms of the Association provide relatively significant levels of good quality employment in the rural areas in which, by the nature of their business, many of them are located.

The mission of the Association is to promote the highest standards of professionalism in the farm machinery industry and FTMTA and its membership are working to deliver a high quality, viable and local industry to meet the evolving farm mechanisation requirements of progressive Irish farming businesses.

FTMA provides training and advisory services for its member firms and negotiates and consults with state agencies, farming organisations and other bodies in the interests of the machinery sector. In 2007, the Association developed the Farm Machinery Industry Training Centre near Naas as a purpose-built facility for the ongoing training of personnel within our sector.

FTMTA organises two flagship farm machinery events on alternate years as showcases for our membership and industry. The FTMTA Farm Machinery Show is a three-day indoor show first held in 1989 and which most recently drew some 21,000 visitors to Punchestown in February, 2019. A more recent innovation has been FTMTA Grass & Muck which is a one day working demonstration event that saw an attendance of over 11,000 people at Gurteen College near Birr in May of 2018 and which will return to that venue during May, 2020.

Introduction to the Irish agricultural machinery industry

Ireland has a long and proud tradition in the farm machinery space and our machinery manufacturing sector is well represented on the international stage with FTMTA member firms such as McHale, Samco, Dairymaster, Cross, Abbey, Tanco etc. all exporting worldwide in significant volumes.

The overall industry employs approximately 6,000 people in the Republic and generates an annual domestic retail turnover of some €550 million in addition to substantial export earnings. Given the role played by Irish manufacturers within the farm machinery supply chain, a far higher percentage of the total sales accrues to domestic firms than would be the case in most comparable engineering sectors.

Irish machinery manufacturers produce high quality and well regarded, innovative, farm machinery and have gone from strength to strength in global machinery markets. It has been very encouraging to see a number of FTMTA member manufacturers invest heavily in new or redeveloped facilities in recent years. Agricultural machinery manufacturing is one of the few indigenously owned, export orientated, engineering sectors within the Irish economy and is an area where Ireland is developing a worldwide reputation and customer base for innovative products related to our key primary agricultural strengths of grass based dairy and beef production.

By the nature of the trade they are engaged in, many, indeed most, farm machinery businesses are based in rural areas where they provide a relatively significant level of good quality employment in locations where such employment is otherwise not easily found. In a small village, the local farm machinery dealer can have the same employment impact as a large manufacturing facility in a more urban location. In the manufacturing segment, in particular, of the machinery industry, employment creation benefits from a multiplier effect with smaller sub-contractors or suppliers setting up to serve the main manufacturing business. Agricultural machinery manufacturing has a tendency to develop somewhat in hubs or clusters with a number of manufacturers located in relatively close proximity to each other thereby generating business for a number of sub suppliers in that area. This is seen very clearly in the cases of Mayo and Carlow, both of which are home to a significant number of machinery manufacturers.

On the retail side of the industry, new tractor sales are the traditional bench mark of the health of our industry and fell by 74% from 2007 to 2010. The turnover of a typical retail farm machinery dealer fell by over 50% in that time. Thankfully we have seen recovery in the trade since then but it is slow and

fragile progress at best and many businesses are operating under very challenging conditions. Tractor sales have stagnated at less than 2,000 units per annum in recent years which provides numerous challenges to the industry.

Given the limited size of the Irish market, all Irish machinery manufacturers who hope to grow sustainable businesses ultimately look to gaining sales in export markets. The business tends to operate on an all island basis and firms from both sides of the border will develop customers on the other side of the border before ever looking at true exports off the island. Britain has traditionally been the first export market for most Irish manufacturers due to logistics, common language and similar farming practises. From that base, Irish machinery exports have now grown to reach markets all over the world with Irish machines working on farms as wide spread as Germany, the Middle East, Australia, New Zealand and the United States.

The UK market continues to be a significant market for our machinery exports and many of our smaller manufacturers would see far in excess of 50% of their exports sale coming from the UK market. In this context is clear that Brexit poses significant challenges for the manufacturing element of our industry as well as the threat posed to domestic, retail activity by any negative impact on the exports of Irish food products to the UK in the post Brexit environment.

The agricultural machinery industry in the context of addressing climate and air challenges

The farm machinery industry has made substantial progress in the delivery of energy efficiency over the year and remains committed to helping in the reduction of Greenhouse Gas (GHG) Emissions even further into the future. Manufacturers of tractors and other self propelled machinery have consistently met the increasingly strict exhaust emission standards in recent years while also developing solutions to improve fuel efficiency in the context of fuel representing a substantial input for our customers.

Developments by our industry to support improved energy efficient with consequent environmental benefits have gone much further than simply improvements in engine and exhaust technologies and impressive progress has been made in recent years in the realm of smart technologies around GPS and guidance technologies. Locally, the adoption of such technologies has been supported through TAMS and has become far more widespread that could have been though possible even ten years ago. It must be stressed that the potential of the machinery industry to contribute to a reduction in GHG should not be viewed in the context of improvements regarding the tractor or self propelled machinery alone but has a far more wide ranging dimension in relation to the energy efficiency aspect of overall agricultural mechanisation involving the use of trailed and mounted implements in conjunction with tractors.

Agricultural machinery manufacturers, including Irish manufacturers, are driven by constant product development to meet the needs of modern farming customers. The ongoing development of modern, sustainable, agricultural mechanisation is underpinned by several requirements including machine efficiency in relation to the machine in question, process efficiency in the completion of the task on hand and operation efficiency including the use of enhanced technology to simplify the use of the machine. While it can be easy to focus on the machine efficiency aspect as the most obvious area for improvement, in practise more sustainable gains in relation to energy efficiency can be made through training for both machine operator and service personnel as well in terms of machine selection with a focus on the use of the most appropriate machine or combination of machines for the required task.

In the realm of machinery usage GHG emissions are obviously heavily influenced by fuel use with the vast majority of carbon in diesel fuel subsequently emitted in the form of CO_2. In reality, efficiency in terms of fuel use and the conversion of fuel into usable energy at their disposal has long been a demand of machinery buyers on economic grounds. This market pressure will obviously continue and therefore our industry will continue to innovate in this

area with follow through benefits in terms of reduced emissions levels derived from improved fuel consumption levels.

As highlighted previously, the role of machinery in Irish (and indeed) global agriculture must be viewed in the wider context of the machines required to carry out specific functions. Given our grass based dairy and beef production sectors, the two largest mechanised activities in Irish agriculture are silage making and slurry spreading. Unsurprisingly these are areas where our indigenous machinery manufacturing sector has developed substantial strengths that the relevant businesses have been successfully able to transfer to global markets. Irish manufacturers have made great progress in many aspects of these activities and are producing machines that can operate at the highest levels of efficiency.

The development of GPS based technologies in agricultural was first seen predominantly in tillage related activities and while continuing in importance in that enterprise, helped in the Irish market by the TAMS II Tillage Capital Investment Scheme, such technology is now relatively widespread across many aspects of grass land farming also. The efficiencies in input use facilitated by even a basic guidance system allow reduced fuel consumption and also deliver reduction in fertiliser use with consequent decreases in ammonia emissions. The use of such systems on Irish dairy farms to any great extent would have been unimaginable even ten years ago and there is clearly scope for further improvements in this regard.

The tillage sector has clearly seen more, and earlier, uptake of GPS based technologies and this facilitated the introduction of new cultivation techniques with dramatic reductions in the number of field passes required bringing about large reductions in fuel use. Lower impact cultivation systems also, due to the disturbance of less soil, also deliver improved fuel consumption.

The machinery industry has already made significant progress in relation to the reduction of the environmental impact of the machinery that we supply, albeit that the original drivers of such efforts were economic and, in some instances, regulatory. FTMTA believe that our industry will continue to make a valuable contribution as the overall sector moves to a more environmentally and climatically sustainable bases. Innovation and product development are to the forefront of our industry and will enable us to offer our farming customers the mechanisation solutions to support their farming businesses as they evolve.

The availability of farm labour is an issue that has come into sharp focus in recent years and this issue is mirrored to some extent in our own industry. While the machinery industry can help to alleviate the labour situation in

farming through the provision of more efficient and productive equipment, our own industry must be able to attract high calibre new entrants in the technician and engineering roles that underpin our sector.

Response to the specific questions posed in the consultation document

We have confined our answers to those questions where we believe the views of our industry are most relevant.

Part 1: Implementing Changes Now

1. Reduce agriculture emissions to at least 19 Mt CO2eq by 2030

Question 1
Are there other actions that could be considered for inclusion to further enhance progress and credibility of agricultural actions? Is there more that farmers and the food industry itself can do?

Answer 1
Given the already widespread adoption of low emissions slurry spreading technology, it may be possible to work more quickly towards a target of effectively 100% of all slurry being spread by such systems.

There is also scope for improvement in the spreading of artificial fertiliser. While most tillage farmers and larger dairy operations are now spreading artificial fertiliser using elements of precision technology, much fertiliser spreading is still carried out with outdated and less accurate machines.

Question 2
Have you any feedback on how uptake of these actions can be encouraged and facilitated?

Answer 2
The current grant aid under TAMS to support investment in low emissions spreading systems does not facilitate the purchase of such machinery by agricultural contractors. Given that a large element of slurry spreading activity is carried out by the contracting sector it does seem likely that support of that sector in this regard would have a benefit in terms of even more wide spread adoption of low emission slurry spreading technology.

There is an issue to be addressed in that, while grant aid has supported the purchase of low emissions spreading systems, older and less environmentally friendly machinery remains in situ. There is a requirement for some form of scrappage scheme to ensure the removal from the market of older traditional spreaders as they are replaced with new technology. If they remain available, the likelihood is that they will continue to be used to at least some extent.

A move to improve the general standard of fertiliser spreaders in use in a similar way to the existing sprayer test introduced under the Sustainable Use Directive should also be considered. Investment in more advanced precision fertiliser spreader will not be a realistic option for all farms in the short to medium term but small improvements in relation to existing machines would also bring benefits both in fertiliser use and fuel consumption.

2. Enhance the development of sustainable land management practices by delivering 26.8 Mt CO2eq abatement through LULUCF actions over the period 2021 to 2030.

Question 3
Are there other actions that could be considered to maximise the contribution of sustainable land management? Is there more that farmers and the food industry itself can do?

Not answered.

Question 4
Have you any feedback on how uptake of these actions can be encouraged and facilitated?

Not answered.

3. Contribute to sustainable energy and decarbonisation of energy system

Question 5
Are these actions sufficient, or are there others you would suggest? Is there more that farmers and the food industry itself can do?

Answer 5
Renewable, farm based, energy production operations such as microgeneration or larger AD operations seem like a win / win proposition for Irish agriculture and the overall economy. The experiences of other EU member states who are far more advanced in developing such operations show that environmental benefits can be delivered while using existing farm waste and indeed creating a new income stream within farm operations. We already have a number of Irish farm machinery manufacturers who are producing machinery that is in use in alternative energy production in other countries and it is clear that we need to develop similar strategies here.

Question 6

Have you any feedback on how uptake of these actions can be encouraged and facilitated?

DAFM would also like to hear your views on the barriers and challenges to deployment of energy efficiency and renewable technology and also the types of supports and incentives that could increase deployment and wide spread adoption.

Answer 6

Small scale, on farm, microgeneration plants are likely to become more widespread over time as the attractiveness of generating energy for on farm consumption from the slurry that is in plentiful supply becomes more obvious.

For larger, commercial, anaerobic digestion operations to be become more widespread the long standing issue around the feed in tariff to the national grid must be addressed. Commercial viability will be the driver of the adoption of such technology.

Part 2: Acting in Partnership

The State will play its part

Question 7
Are there other actions which the State could consider, particularly in partnering with Industry?

Answer 7
As already mentioned, in the context of older slurry spreaders, there is a requirement for a scrappage scheme in relation to older machinery covering tractors, self propelled items and implements. The advances being made in energy efficiency and reduced environmental impact by new machinery are of course forgone by the use of older less efficient machines. The usable lifespan of agricultural machines tends to be quite lengthy so without an incentive it will take decades to remove some of this equipment from Irish farms.

While a grant to support a scrappage scheme for older machinery would be welcome and would also have benefits in relation to farm safety, obviously this may not be financially possible to the extent required. It should be possible to offer a incentive for the scrappage of older machines by introducing an accelerated capital allowances programme to cover the purchase of qualifying, replacement machinery.

A greater role for producers, farm advisors and processors

Question 8
Are these actions sufficient, or are there others you think that Industry should pursue?

Answer 8
The mention in Action 18 of the consultation document of "a network of demonstration "sign - post" farms" is welcome. The value of demonstrating new technology in a practical way is well proven.

Question 9
Given that the State and policies such as the CAP can't finance or deliver all of the actions required, which actions or measures could Industry fund?

Not answered

Question 10
Do you have views on how the market could better incentivise and/or reward primary producers for adopting and implementing the necessary actions?

Answer 10
Our consumers (local and international) must come to realise that Irish farmers produce high quality products in already far more sustainable ways than many of our competitors. Such product must receive a fair price to allow a viable future for the producer. Unfortunately, in many cases, the consumer seems to want the highest standards at the lowest price and two are irreconcilable.

Part 3: Preparing for the Future

Question 11
What are your views on these six guiding principles in preparing for the future? Are they sufficiently comprehensive or are there others you would add?

Answer 11
FTMTA accept the strategy and direction outlined by the six guiding principles. We would like to see a greater focus on Principle Number 3 in relation to Sustainable Resources as we believe that this is an area that will us to make great improvements in energy efficiency and in way that will be economically positive for Irish agriculture.

Question 12

Innovation is now widely recognised as a key driver of long-term growth and sustainable development and addressing of challenges such as Climate Change. What type of approaches and processes could assist the Irish agri-food innovation system to address economic and societal challenges and facilitate increased networking, collaboration and investment?

Answer 12

As previously mentioned, innovation has already allowed our own industry to greatly improve the environmental impact of the machinery which we supply. We have a strong tradition in Ireland of innovation in agricultural mechanisation at industry and college level. The changing requirements in relation to Climate Change and other environmental factor are already being addressed by businesses and educational institutions and this must continue and develop to not alone support Irish farming but also to allow our agricultural machinery manufacturing sector to further enhance its position based on our strengths in efficient grass based production.

Summary

FTMTA are clear that the challenges facing us around climate change are real and that Irish agriculture must do its parts in addressing these. We do believe that the impact of agriculture on our national emissions is being taken out of context given our lack of heavy industry and we are clear that substantial progress has already been made by Irish farming and supply sector such as our own in improving matters.

Such improvements must continue and the draft Roadmap provides a framework for a co-operative whole of industry approach. Irish farming has always embraced initiatives which will enhance the perception and reputation of our food products. Likewise, Irish farming has always been willing to adopt new technology to bring efficiency to the business and in that context evolving mechanisation technology can very much support the required improvements in relation to climate change and air quality under the Roadmap.

FTMTA strongly believe that a scrappage machine, whether supported by a grant scheme of some sort or an Accelerated Capital Allowances programme, to remove older and less efficient machinery from Irish farms and facilitate the more widespread adoption of modern technology can have a large role to play in reducing the environmental impact of Irish farming.