



Response to First Draft Interim Report
of the Food Vision Dairy Group

25th April 2022

Submitted by the Irish Farmers Association

As part of its participation in the Food Vision Dairy Group, IFA made a substantial submission ahead of the preparation of the First Interim Report of the group (see Appendix 1 for Executive Summary). IFA has since received the first draft of the proposed interim report for the group. The following are IFA's observations and feedback to the draft report. This feedback is presented under the same headings and structures as the draft report is set out.

Overarching Factors Governing the Group's Deliberations

- As outlined in our original submission, it is our stated position that with sustained research into emerging mitigating technologies and their implementations, then Irish agriculture will meet its 2030 climate targets without any further policy interventions to restrict production. While other sectors of the economy are being asked to transition to more carbon efficient models, agriculture is the only sector where mandatory restrictions to production are being mentioned.
- The policy context in which the growth of the dairy sector occurred in the 2015-2021 period should be better illustrated. This context should include an outline of the imposition of milk quotas for 30-year period prior to 2015. It should also outline the prior agri strategies set out by Government, including Food Harvest 2020, which outlined an ambition to grow dairy production by 50% by 2020.
- Under "Goals of the Food Vision Dairy Group", it outlines that the "*activities of the Group must also take account of the requirement for the dairy sector to contribute towards achievement of legally binding targets set for the agriculture and land use sector in the Climate Action Plan 2021.*" The Food Vision 2030 Strategy did not set this out as a requirement of the Dairy Group – accordingly this reference should be removed.
- We acknowledge that the report highlights the "*unique features of biogenic methane*". This reference should be strengthened by outlining that the Climate Action and Low Carbon (Amendment) Act 2021 also specifically acknowledges this. IFA strongly believe that this justifies a sectoral emissions ceiling of 18 MT CO₂ eq. by 2030. IFA would welcome acknowledgement of the need for Agriculture to receive this emissions ceiling in the interim report.
- Page 6 outlines the capital investment of €1.5bn undertaken by the processing industry since 2015. However, it does not outline any detail relating to on farm investment. Detail of same is included in IFA's submission (page 7). This should be included along with detail of the level of dairy farmer borrowings (also included on page 7 of IFA submission). Furthermore, farmers have already invested in replacement animals, which depending on the acceptance or otherwise of some or all of the measures in this report, could be significantly impaired. All 3 groups, namely, this year's calved heifers, this year's maiden heifers, and this year's heifer calves, were all born or in utero prior to any mention, agreement or publication of climate constraints that are now under discussion. Any decision made, should not in any way affect the value, or the earning capacity of these animals.
- Page 6 also outlines that Dairy Industry Ireland indicated that there was 1.5%-2.5% capacity available in the peak week of 2020. This does not acknowledge the additional capacity that will be available following the construction of Glanbia's new cheese facility in Belview. The report should include this detail to provide more appropriate context to processing capacity.
- Page 6 references the Teagasc FAPRI-Ireland model which projects a compound annual growth rate of 1.73% in the 2020-2030 period. The recent trends in milk supply which points to a possible contraction in domestic supplies in 2022 should be included here, as witnessed by the recent adjustment by Glanbia to their peak milk supply scheme.

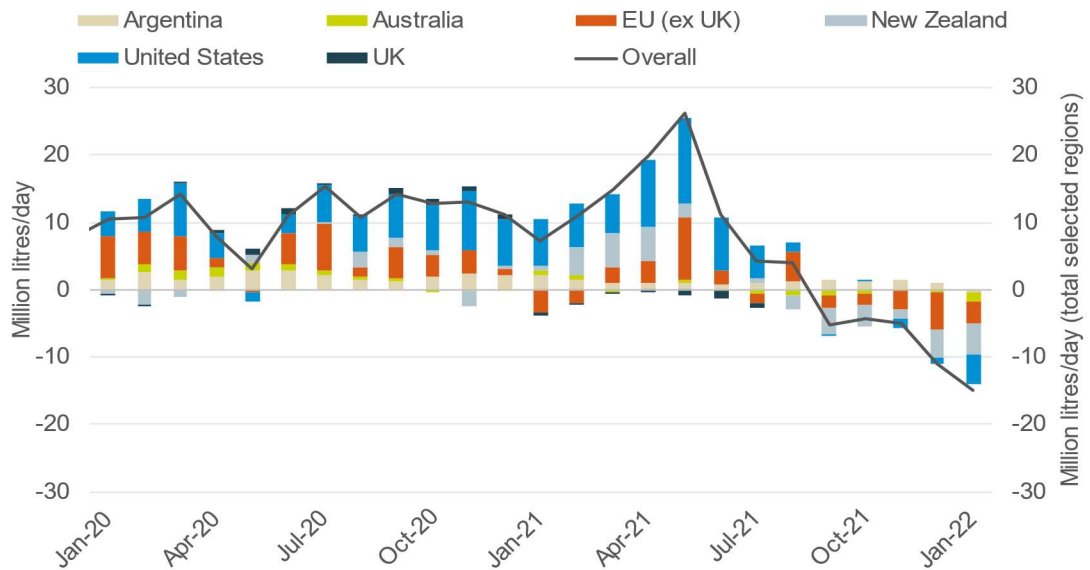
- The likely dampening impact of the increased conditionality associated with the new CAP programme should also be referenced.
- On Animal Health it must be remembered that along with the farmer, improved animal health measures significantly benefit many outside the farm gate also and this must be considered when identifying funding for any such measures.
- In the Teagasc Situation and Outlook for Irish Agriculture - April 2022 it has been highlighted how the other sectors of Irish Agriculture will suffer declines in farm income in 2022, with Dairy once again showing its resilience from an economic perspective. There is an onus on Government to properly support the more vulnerable sectors of agriculture, in particular the drystock sectors. This would help reduce the economic imbalance that currently exists between dairy and other Irish farming sectors.
- As outlined in our original submission it is estimated that Ireland's carbon footprint per unit of milk output is less than half the international average. Any restrictions on Irish dairy production will inevitably lead to a rise in global emissions due to carbon leakage. The Climate Action and Low Carbon (Amendment) Act 2021 (Climate Act) outlines that the government must give due regard to the impact of carbon leakage as a consequence of measures implemented by the State. This needs to be clearly referenced in the interim report.

Developing World Food Security Crisis

- Food Security is now a more pertinent issue globally than it has been in over a generation. In a joint statement on April 13 2022 the Heads of the World Bank Group (WBG), International Monetary Fund (IMF), United Nations World Food Program (WFP), and World Trade Organization (WTO) stated *"The world is shaken by compounding crises. The fallout of the war in Ukraine is adding to the ongoing COVID-19 pandemic that now enters its third year, while climate change and increased fragility and conflict pose persistent harm to people around the globe. Sharply higher prices for staples and supply shortages are increasing pressure on households worldwide."*
They went on to outline how *"Surging fertilizer prices along with significant cuts in global supplies have important implications for food production in most countries, including major producers and exporters."* They outlined how *"The increase in food prices and supply shocks can fuel social tensions in many of the affected countries."*
The joint statement finished by calling for *"coordinated actions ranging from provision of emergency food supplies, financial support, **increased agricultural production, and open trade.**"* To help alleviate the worst effects of the current crisis.¹
- As outlined in our original submission, not only nationally but also at a global level milk supplies are contracting as the below graph illustrates.

¹ <https://www.imf.org/en/News/Articles/2022/04/13/pr22117-joint-statement-wbg-imf-wfp-and-wto-call-for-urgent-coordinated-action-on-food-security>

Annual change in average daily milk deliveries



Source: AHDB, Ministerio de Agroindustria, Dairy Australia, DCANZ, Defra, Eurostat, USDA

- There is currently also a developing crisis on edible oils worldwide, as reported by Reuters² Indonesia will ban the exports of palm oil from April 28th. This combined with problems in edible oil production in Malaysia, Ukraine and in exports of same from Russia mean prices are reaching all-time highs and scarcity of supply is being reported globally.



- All these developments on Food Security Worldwide must be considered before contemplating any short-sighted measures which may restrict food production in Ireland.

² <https://www.reuters.com/world/asia-pacific/indonesia-ban-palm-oil-exports-shore-up-supply-soyoil-futures-surge-2022-04-22/>

Analysis of cost impact of any proposed measures

The draft interim report does not include any analysis of the effect at farm level of proposed measures. A full economic, and social impact assessment of all proposed measures is needed and should be committed to in the interim report. This assessment must also outline the costs of implementing any measures at farm level and the requirement for public funding to fully mitigate these costs.

Proposed measures and recommendations

Prior to outlining IFA's feedback on proposed measures, we set out below recommendations from our original submission which IFA believe should be incorporated into final report recommendations:

- Currently, GHG emissions from agriculture are measured solely on a production basis, penalising carbon-efficient food producers which Ireland clearly is. A review of GHG emissions from agriculture on a consumption basis urgently needs to be completed in line with the commitment in the 2019 Programme for Government – Our Shared Future. A move to emissions measurement on a consumption basis would fundamentally change Irish emissions calculations.
- Recent commentary emanating from the Food Vision Dairy Group has had an impact on dairy farmer business decisions. Some farmers, fearing that 2022 may be some sort of reference year for output restrictions, have postponed possible cow culling decisions as a result. The interim report should state categorically that there are no plans for the introduction of restrictions is vital to remove this level of uncertainty.
- The economic returns from the dairy sector, when compared with the other sectors, is one of the key reasons for the growth in the sector. The lack of government support for the more vulnerable sectors, in particular the drystock and tillage sectors, was a significant contributor to dairy expansion. Improving the viability of other sectors will lead to less farmers considering moving sector on the basis of financial returns from their current farming business. This should be included as a recommendation as part of the interim report.

IFA feedback on proposed measures in draft interim report

1. Consider Voluntary Retirement/Exit Scheme

Discussed at the fourth meeting of the Food Vision Dairy Group, presentation on how a Voluntary Retirement Scheme may work; with accompanying reduction scheme for farmers who wish to scale back activity proposed.

Observations

- We have significant concerns around this proposal which was already expressed in our submission. IFA does not believe this is a scheme that should be considered at this time.
- A number of aspects of this proposal are unclear and were not discussed during the Food Vision Dairy Group meetings.
- It is clear from the wording of this proposal that the Department of Agriculture envisage a retirement scheme working in tandem with a restriction on production – effectively a cow cap by the backdoor.
- This is clearly evident in the proposal with respect to the establishment of a “favoured category”. The inclusion of such classifications, confirms our initial concerns that a retirement scheme will effectively be a cap on cow numbers by default.

<ul style="list-style-type: none"> • Before there can be any further consideration of a retirement scheme there must be a full commitment that there will be no output restrictions on existing dairy farmers or future new entrants and that any scheme will be publicly funded in its entirety. • This discussion must include representatives from all farming sectors.
<p>Clarifications</p> <ul style="list-style-type: none"> • N/a
<p>Funding</p> <ul style="list-style-type: none"> • See above

<p>2. Explore the potential of Cap-and-Trade methane-focused emissions model <i>DAFM introduced three emissions mitigation policy options for the dairy sector at the third meeting of the Food Vision Dairy Group:</i> <i>(i) Cap and Trade: set an overall cap on methane emissions, assign methane or production rights, and allow dairy and beef farmers to trade their rights within an overall cap.</i> <i>(ii) cow number constraint on production</i> <i>(iii) milk-volume constraint on production</i> <i>While cow-number and milk volume constraints have been rejected as options by Group stakeholders, the Cap-and-Trade model was acknowledged as a least-worse option, should restrictions be needed and that it merited further consideration.</i></p>
<p>Observations</p> <ul style="list-style-type: none"> • IFA is not in favour of a Cap-and-Trade methane-focused emission model. The Irish dairy industry has just come out of a 30-year quota period which totally stifled organic growth, generational renewal and the ability of a farmer to earn a decent living from his or her land as he or she sees fit. We cannot accept a proposal that would see such restrictions come in on the industry again. If any of the 3 models outlined above, or any other “quota by another name” was to be imposed on Irish dairy or for that matter on any part of Irish ruminant agriculture it would seriously endanger the traditional family farm model that we have here in Irish farming. • In addition, any discussions or recommendations on Cap-and-Trade models should not be progressed by the Food Vision Dairy Group in isolation given its potential direct impact on other sectors of Irish Agriculture.
<p>Clarifications</p> <ul style="list-style-type: none"> • N/a
<p>Funding</p> <ul style="list-style-type: none"> • N/a

<p>3. Explore the possibility of monitoring carbon production at individual farm level with a view to future carbon farming options</p>
<p>Observations</p> <ul style="list-style-type: none"> • The measurement and monitoring of carbon production at individual farm level is an issue that affects all farmers and merits a wider multi-sectoral discussion before being progressed. • IFA agrees that correct measurement of all sequestration along with emissions is required at farm level across all sectors. • All carbon credits must to be ring fenced for use primarily in agriculture and only then, after all required for use in agriculture have been utilised, could any be transferred outside of agriculture.

- However, IFA is clearly outlining that support for this proposal on looking at future carbon farming options does not in any way change our opposition to the methane-focussed cap and trade model under measure 2.

Clarification

- Who will own the data generated from this - will each farmer own all data on their farm?
- From reading this proposal are we correct in assuming the farmer will own any and all carbon credits his/her land may generate?

Funding

- The cost of generating this data for all farms in Ireland is likely to be significant. Given the benefits it will give to more accurately assessing our national emissions levels, the cost of this must be borne by the State.

4. Reduce chemical N use in the dairy sector by 35% in the short term

(Reduction from approximately 200k tonnes current usage to 130k tonnes)

Observations

- While IFA is supportive of measures to reduce the overall use of inorganic nitrogen, a proposed 35% reduction in usage is totally unworkable at farm level.
- Such a drastic drop in fertiliser usage over such a short time frame would have serious consequences on the amount of grass Irish farmers can grow. This would result in a significant reduction on their income through either a reduction in farm output or the replacement of the grass they can no longer grow with other more expensive and less carbon efficient feeds.
- According to the 2019 Teagasc National Farm Survey, dairy farms spread a total of 185kgs of inorganic nitrogen per hectare. A 35% reduction would drop this figure to c.120kgs per hectare annually. We are unaware of any basis in research that this is a sustainable level of inorganic nitrogen usage on Irish grass based dairy farms.
- It is imperative that results from commercial dairy farms (such as signpost farms) attempting such a reduction in inorganic nitrogen is first available to see how realistic is this goal and to show how best an individual farmer can go about implementing it without negatively affecting grass production on their farm.
- Under the latest Nitrates Action Programme (2022 – 2025) there is a reduction of 10% on the allocation of inorganic nitrogen that can be spread on farms. We first need to assess how this affects grass production on these farms before contemplating a further reduction in inorganic nitrogen levels.
- The adoption of clover as a means of replacing inorganic nitrogen is a medium to long-term process. In reality it will take a number of years for a farm to incorporate enough clover swards to see any meaningful reduction in chemical nitrogen application rates.
- There is a very real chance such a drastic change in farm practices will lead to output reductions and potential food security issues.
- This proposal can only be considered in combination with proposal 14 on clover and Multi-Species Swards (MSS) adoption. Please review our responses to that proposal when considering this proposal.

Clarification

- Research must show how any agreed level of reduction is possible at farm level in all parts and soil types of the country while maintaining grass production. This research should be completed on commercial dairy farms.
- Has research looked at foliar application of Nitrogen on grassland farms as a way of reducing the total Nitrogen spread?

- The winner of the 2021 Enterprise Ireland Innovation Arena Award in association with the National Ploughing Championships was a company who have produced a bio-stimulant that when combined with nitrogen fertiliser results in up to 20 percent less nitrogen being needed in order to grow the same amount of grass, has further independent research taken place on this product and investigated if it could be rolled out widely to the Irish market.

Funding

- Teagasc research has shown that just a 10% reduction in inorganic nitrogen usage on a dairy farm reduces farm profitability by 5% (Teagasc). Clover has the capacity to somewhat offset this impact but it is inevitable that any significant reduction in inorganic nitrogen will lead to a substantial cut in dairy farm profitability.
- Accordingly, dairy farmers will need to be sufficiently compensated for the expected farm profitability impact any form of this measure will have.

5. Achieve an 80% replacement rate of CAN with Protected Urea by the end of 2025 for grass based dairy production systems

(If total N usage in the dairy sector is targeted to be 130k tonnes by end of 2025, approximately 100k tonnes of this projected total should be applied in from of protected urea)

Observations

- Can availability of Protected Urea be guaranteed to reach this target?
- Currently the shelf life of Protected Urea is c. 6 months. Is there any research on extending this? The capacity to store Protected Urea over winter months would provide farmers with additional flexibility to purchase stocks during periods of lower market prices.
- If it is not possible to extend the shelf life of protected urea then a secure forward buying system should be implemented whereby farmers could buy protected urea in one period and take delivery in another.

Clarification

- There are a small number of soils where the response to protected urea is not optimal, further investigation on its use is required in such soils.

Funding

- Industry support and collaboration required to offset the higher cost of protected urea especially during initial period to ensure farmers use protected urea instead of CAN based products.

6. Slurry amendments (acidification) - ensure 100% adoption of slurry additives by the end of 2025

Observations

- The above measure is one we would broadly support on the basis that proper research is completed and financial support is made available to farmers to cover the additional cost of usage of slurry additives.

Clarifications

- As part of the research on the “Mild Acidification” of slurry it must also be investigated if this will have an adverse effect on soil PH.

Funding

- Any costs of installing/maintaining slurry acidification systems on farm will require public funding and support.

7. Development of methane-mitigating feed technologies

Discussed in detail at the additional online meeting of the Food Vision Dairy Group.

Observations

- The above measure is one we would broadly support on the basis that proper research is completed and financial support is made available to farmers to cover the additional cost of usage of feed additives.

Clarifications

- Awaiting results in a pasture-based setting

Funding

- The additional cost of usage of feed additives cannot be borne by dairy farmers – state financial support is a requirement.

8. Development of Breeding Strategies

Discussed in detail at the additional online meeting of the Food Vision Dairy Group. There are two separate breeding strategies;

(i) Continued selection on EBI, albeit with additional emphasis on carbon related traits such as female fertility and

(ii) selection on new traits within the EBI, such as the direct measurement of methane and/or earlier age at slaughter. Strategy 1 can be considered an enabling factor and more short term. Strategy 2 can be considered as having a direct impact and is medium to longer term.

Observations

- There needs to be more coordination between all stakeholders and especially with breeding companies to ensure that all male and beef-type female calves born to the dairy herd are suitably bred for the needs of the beef industry and can achieve optimum age of slaughter.
- Sexed semen needs to be further encouraged for use at farmer level to promote the breeding of high-quality dairy replacements with the remainder of the herd bred to suitable beef breeds.

Clarifications

- How can it be ensured that any efficiency improvements from breeding are immediately reflected in the national emissions inventory model.

Funding

- A means of funding the initial large cost of genotyping the herd will need to be identified along with the ongoing costs of genotyping all progenies born each year.
- In order to further encourage beef farmers to rear beef progeny from the dairy herd the quality of calf will be paramount.
- Funding for additional calf rearing accommodation on dairy farms will be required to promote this.

9. Common policy on milk intake from new entrants

Observations

- IFA acknowledge the recognition of the need to protect the family farm and associated grass-based model in Ireland.
- Just like for existing dairy farmers there must be an opportunity for expansion where a young person takes over an existing holding. If we are to encourage young people into dairy farming, they must envisage it as a progressive industry with an opportunity to run their business without externally imposed restrictions and with a view to it being financially viable into the future.
- In some instances, generational renewal may happen through the partnership model with a new entrant/young person farming in partnership with a relation etc for a period. There must be an opportunity for expansion in this instance to ensure the business can generate sufficient returns to support the income of the second generation now involved.
- Ultimately the relationship between a new entrant and his/her processor should be the overarching relationship that governs policy for new entrants.
- The Department has not defined what a “Mega-herd” is, this is an unfortunate term to use given that the average herd size in Ireland is substantially smaller (84 cows per 2020 Teagasc National Farm Survey) than many other milk producing countries. This term could be easily taken out of context in any discussion on dairy farming in Ireland.

Clarifications

- What exactly is a “New Entrant”? Is it a person starting out dairying that has not partaken in the industry before or does it include a person taking over a current dairying enterprise from a previous generation?

Funding

- N/a

10. 1) Increase investment in Climate Change Research and in Knowledge Transfer

2) Establish a Climate Change Research Liaison Group (CCRLG) with the EPA

Observations

- We agree on the need to increase investment in Climate Change Research and Knowledge Transfer.
- Research needs to be broadened beyond research farms to incorporate more commercial farms such as an expansion of the Teagasc signpost farms programme.
- Input from private organisations completing research should also be considered. Any promising research from such organisations could then be trialled independently.
- Farmer representatives must be part of the proposed Climate Change Research Liaison Group.

Clarifications

- N/a

Funding

- Imperative that funding streams for this work are identified and utilised as soon as possible.

11. Climate Action Communications Strategy

The requirement for increased and enhanced farmer communications in the climate action space was discussed throughout the meetings of the Food Vision Dairy Group.

Observations

- We agree on the proposal to highlight farm-level actions which directly impact the agriculture inventory, including farm efficiency education programme aimed at improving herd efficiency and performance, with income, labour efficiency, farmer well-being and farm safety as core KPIs.
- However, added to communication on what farmers need to do, a piece of work is also required to communicate to other farmers and the general public on what farmers are

currently doing. This needs to be highlighted to give farmers confidence that their positive actions from a climate action perspective are recognised and highlighted. Examples include;

- The Agricultural Sustainability Support and Advisory Programme (ASSAP). We also recommend that an alternative name should be considered for this programme that better conveys its purpose to farmers and the general public.
 - Reductions in CO₂ per Kg of milk solids produced on Irish farms
 - Success of the Economic Breeding Index (EBI) in reducing emissions intensity
 - Adoption and success of LESS
 - Successful uptake of Protected Urea
 - Progress with Sign Post farms etc.
- It must be reflected in any material coming from this Group and in any communication strategies that the nutritional value of dairy is superior to any alternatives as was outlined per the below in our initial submission.

Nutrient density of beverages in relation to climate impact by Annika Smedman, Helena Lindmark-Mannsson, Adam Drewnowski, Anna-Karin and Modin Edman 2010

Food item	Percentage of NNR in 100 g product	Number of nutrients >5% of NNR	Nutrient density (A)	GHG emission (B)	NDCI index (A/B)
Milk	126	9	53.8	99	0.54
Soy drink	53	3	7.6	30	0.25
Oat drink	32	1	1.5	21	0.57

Note: Nordic Nutrition Recommendations (NNR); Nutrient Density to Climate Impact index; greenhouse gas emission [grams of CO₂ equivalents per 100 g of product] (GHG emission)

Clarifications

- N/a

Funding

- N/a

12. Increased adoption of Low-Emissions Slurry Spreading (LESS)- ensure 100% adoption of LESS by the end of 2025 for dairy farmers

Observations

- Agree in principle on the increased adoption of Low Emission Slurry Spreading for dairy farmers
- However, we do not agree it should be made mandatory, rather through incentivisation and information sharing as in measure 11 to ensure widespread adaption is achieved.

Clarifications

- N/a

Funding

- Investment in low emissions slurry equipment (LESS) is expensive. Funding must be made available to all farmers (including those farming under Nitrates Derogation) to have such equipment on farms, so slurry can be spread at the optimal time.

13. Nitrogen Use Efficiency – Liming and soil pH - Ensure 100% of dairy farms are soil testing for PH

Observations

- We agree in principle to this proposal.

Clarifications

- N/a

Funding

- As mentioned in the proposal, supports such as were in previous REPS should be looked at to further encourage farmers to get their soils to the optimal PH.

14. Clover Adoption and Multi-Species (MSS) - ensure 100% adoption rate by the end of 2025 for dairy farmers**Observations**

- IFA is supportive of measures to increase the incorporation of additional clover on Irish farms. However, establishing clover takes time which must be recognised and provided for.
- Research on how best to incorporate clover to existing swards across all soil types needs to be completed on commercial farms with the results communicated to farmers.
- It must be recognised that changing from perennial ryegrass sward to clover sward or MSS on any farm will take a significant amount of time and cost. If attempted too quickly it could result in a fodder shortage across the sector.
- The availability of Clover Safe sprays must be ensured in the Irish market, farmers need to be able to control weeds in clover swards and research must be undertaken to identify MSS safe sprays also.
- Farmers currently use the Pasture Profit Index when choosing what grasses to include in a reseed. Consideration must be given to amendments to this index to take account of the medium-term move to reductions in use of inorganic nitrogen.
- The incorporation of MSS is a relatively new concept for Irish dairy farmers. Accordingly, there needs to be further research before its widespread use can be advised. At present very mixed performances are being reported by some farmers who have trialled MSS on their farms. This leads to a fear that anecdotal reports may negatively affect its uptake before more complete research on what species etc to use on Irish farms is available. Also, appropriate practical advice on how best Irish farmer can incorporate and manage MSS on their farms will be required.

Clarifications

- What does “100% adoption rate by the end of 2025 for dairy farmers” mean?
- Work on enteric fermentation from Clover and MSS needs to be completed and results incorporated into the national inventory.

Funding

- Continued funding to cover the cost of setting Clover and MSS as provided in 2022 is required.
- Further funding to cover research on what species are best to set in an Irish context and dissemination of the results of this research.

15. Milk recording- ensure 100% adoption rate by end of 2025**Observations**

- Policy should further encourage the uptake of Milk Recording, highlighting the benefits, especially financial of doing this. IFA opposes the mandatory implementation of this measure.
- Currently farmers are reporting issues around the availability of milk recorders, the quality of the equipment used for recordings and the dependability of some of the results generated. This may present a challenge to adoption levels.

<ul style="list-style-type: none"> It is very regrettable and short-sighted that the Department of Agriculture did not include milk recording as an Eco Scheme in Ireland's draft CAP Strategic Plan submitted in December 2021. However, there is an opportunity to correct this with the publication of the Commissions Observation letter, this opportunity should be embraced.
<p>Clarifications</p> <ul style="list-style-type: none"> Does the Industry have the infrastructure to support the milk recording adoption rate ambition?
<p>Funding</p> <ul style="list-style-type: none"> Consider option of grant-aiding farmers to install approved milk recording equipment in their own parlours to increase frequency and accuracy of results.

<p>16. Develop Energy Diversification Opportunities</p>
<p>Observations</p> <ul style="list-style-type: none"> Farmers are very supportive of Energy Diversification opportunities; however, Government support is severely lacking at this current time. Micro Generation such as rooftop solar must also be made accessible and financially worthwhile for all farmers. This requires upfront capital grants combined with realistic feed in tariffs on the excess electricity generated. IFA have already made a number of submissions to Government on this issue.
<p>Clarifications</p> <ul style="list-style-type: none"> If energy production is defined as an economic activity in agriculture will all GHG savings be reflected in the agricultural inventory?
<p>Funding</p> <ul style="list-style-type: none"> Large upfront costs are required in investments relating to Anaerobic Digestion and Biomethane production. Substantial capital grants and other supports will be required to see these rolled out on Irish farms. If carbon-mitigation benefits of this energy diversification are attributed in the main to the Energy sector instead of agriculture then funding for these projects must also come from the Energy sector (either State or private). Agriculture funding cannot be directed to projects where the mitigation benefits are not retained within the sector.

<p>17. Co-op Sustainability Programmes</p>
<p>Observations</p> <ul style="list-style-type: none"> Overall, IFA is broadly supportive of this measure. However, any funds required to support this cannot impact the price paid for farmgate milk.
<p>Clarifications</p> <ul style="list-style-type: none"> Any such schemes should be made simple for the farmer to understand and thus encourage measure that reduce carbon emissions.
<p>Funding</p> <ul style="list-style-type: none"> Outside funding must be identified for such schemes.

Appendix 1

Executive Summary (IFA original submission to Food Vision Dairy Group)

Irish dairy production is one of the most carbon efficient in the world underpinned by our grass-based production system. In the past decade our carbon efficiency continues to improve as we embrace new technologies and increase productivity. We are confident that with sustained research into emerging mitigating technologies Irish agriculture will meet its 2030 climate targets without any further policy interventions to restrict production.

According to the United Nation (UN) the world's population is projected to increase by 26% by 2050. It is estimated that 58% more milk will be required by 2050 compared with 2010 consumption levels to cater for this increase (FAO). It is estimated that Ireland's carbon footprint per unit of milk output is less than half the international average. Therefore, any restrictions in Irish dairy production will inevitably lead to a rise in global emissions due to carbon leakage.

Over the past number of years Irish Dairy farmers have shown their willingness to step up when required. The adoption of Low Emission Slurry Spreading (LESS) technology, the adoption of protected urea to replace ammonium-based fertilisers, the adoption of the Economic Breeding Index (EBI), and the incorporation of clover into pasture swards are just a few examples where dairy farmers have proved they will embrace new technologies that reduce emissions.

The Irish dairy sector, when assessed under economic, environmental and social sustainability, has very strong credentials. The carbon footprint of Irish dairy output is among the lowest in the world. Water usage tells a similar story with water usage levels a fraction of our international counterparts due to Ireland's natural rainfall levels. From a social perspective, dairy farming has allowed the next generation to pursue a career in farming while the average Irish herd size is much lower than our international counterparts.

The Teagasc Marginal Abatement Cost Curve (MACC) outlines the capacity for current proven technologies to deliver reductions in emissions. The adoption of these technologies must be accelerated through innovative industry and government initiatives. The dairy sector across farmer and processor level, has invested c. €3.7bn into the Irish economy over the past 7 years. As a result of this investment, dairy farmer borrowings are the highest among all farm sectors. Any restrictions introduced could have major implications on the financial vulnerability of a sizeable cohort of Irish dairy farmers.

Research into new technologies that will assist in reducing emissions from the dairy sector continue to show substantial potential. This research includes a more accurate measurement of methane emissions from grass-based diets (which is likely to be significantly lower than current estimates); feed additives such as 3-nitrooxypropanol (3-NOP) which received EU market approval in February 2022; and slurry additives. The area of breeding and the work of the Irish Cattle Breeding Federation (ICBF) can deliver further reductions based on improved breeding and selection. Other new technologies such as ZELP (Zero Emissions Livestock Project) may also result in significant reductions in emissions with research ongoing to prove these. Research into the level of carbon that grassland and hedgerow can sequester is also underway with results expected in the second half of this decade. This research needs to be given sufficient time to harness the opportunity it presents.

Global demand for dairy is forecast to increase with an ever-expanding world population and a growing middle class. The Climate Action and Low Carbon (Amendment) Act 2021 (Climate Act)

outlines that the government must give due regard to the impact of carbon leakage as a consequence of measures implemented by the State. Restricting dairy production in Ireland has the potential to significantly increase global emissions associated with dairy production and thus must be avoided.

Ireland's dairy and beef production systems, while highly efficient from a carbon footprint perspective, are judged solely on greenhouse gas emissions (GHG) measured on a production basis. A production-based measurement fails to reward regions whose carbon emissions are below average and does little to inhibit carbon leakage. It is imperative that a review of GHG emissions from agriculture is carried out on a consumption basis in line with the commitment in the 2019 Programme for Government – Our Shared Future.