LIFE Carbon Farming

Newsletter #4- August 2024

Welcome to the fourth issue of the Irish newsletter for LIFE Carbon Farming.

Since our last issue, there has been a host of events covering the topic of carbon farming. Some notable events featuring LIFE carbon farming were the Teagasc Carbon conference, BEEF 2024 and the Teagasc Johnstown Castle open day. We describe the topics addressed at these events, for instance monitoring, reporting and verifying emissions and sequestration of carbon. We also report on the activities of the future beef programme at the national beef open day – BEEF 2024 and cover sustainable farming practices presented at the "Farming for a Better Future" open day in Johnstown Castle.

Teagasc Counting Carbon Conference 2024

Dr Giulia Bondi, researcher in the Teagasc Climate Research Centre presenting "Carbon sequestration – a question of scale" at the carbon conference in Teagasc Ashtown

The Teagasc Counting Carbon: Science and Practice Conference was held on Thursday, 20th June at the Teagasc Research Centre at Ashtown, Dublin. Leading experts and specialists came to the conference to discuss innovative approaches to count carbon in soils and on farms. Applying these new methods and technologies will be crucial to assisting the sector stay within the sectoral emission ceilings established for it in the National Climate Action Plan. The third iteration of the Teagasc marginal abatement cost curve (MACC), published in mid-2023, set out the most cost-effective pathways to reduce GHG emissions and enhance carbon removals in the agriculture, land use and bioenergy sectors. The Teagasc MACC 2023 shows that there is a pathway for the agriculture sector to meet its emission targets for 2030. However, it requires a very high adoption of currently available mitigation measures and emerging technologies. To accelerate adoption of these measures, carbon farming is increasingly being proposed as a possible solution.

Professor Frank O'Mara, Director of Teagasc said "we must be able to measure carbon accurately". This is important for the credibility of national and European carbon farming schemes. In Ireland, carbon farming is relatively new. According to Dr Karl Richards "Carbon farming offers the potential for financial reward for actions to reduce emissions and enhance sinks". Dr Giulia Bondi, researcher in the Teagasc Climate Research Centre, presented the concepts and challenges around farming carbon. She spoke about the important

role soils play in storing carbon, pointing out that in Ireland the majority of soil carbon is in our peatlands.

Speakers at the event outlined several ways to measure carbon ranging from high tech satellite technologies to field based sampling. Teagasc is translating much of this research into practice through the Signpost Programme. Signpost demonstration farmers are applying mitigation technologies and are calculating greenhouse gases with the new sustainability digital platform, AgNav. This platform is currently being built by Teagasc, Bord Bia and the Irish Cattle Breeding Federation (ICBF), with the support of the Department of Agriculture of Food and the Marine. Dr Jonathan Herron delivered a paper describing the platform along with pathways to climate neutrality for a range of farming systems. He assessed a number of pathways with the standard global warming potential index and the split-gas approach. Christian Holzleitner, Head of Unit responsible for Land economy and Carbon removals at the European Commission's Directorate-General for Climate Action, stated that a major goal of the commission is for Europe to reach climate neutrality by 2050. Christian emphasised the need to cut emissions and capture carbon from the atmosphere by storing it in soils and forests. He outlined the latest plans around an EU Carbon Farming Framework and Certification process. Christian's presentation together with conference papers are available on the Teagasc Climate Centre webpage.

National Beef Open Day – Beef 2024

All the latest technologies available to cattle and beef farmers to meet the challenges facing the sector were presented at the BEEF2024 Teagasc Open Day, 26 June, at the Grange Animal and Grassland Research and Innovation centre in County Meath. 'Securing your future' was the theme of the event which covered several opportunities and ways for farmers to develop their businesses from a performance, profitability and sustainability perspective.

Crowds of beef farmers gathered at BEEF 2024 in Grange, Dunsany, Co. Meath

Director of Teagasc Professor Frank O'Mara said; "The beef industry generates almost €2.7 billion each year which is highly significant to the country's economy. Rural communities in Ireland heavily rely on the cattle industry with farming families at its core across the entire nation. It is impressive to see a number of families raising cattle in Ireland, thus maintaining a thriving rural economy."

Some of the top performing farmers, participating in the Teagasc Future Beef and DairyBeef500 programmes told stories of how their farms are developing and changing. For instance, John Pringle, a Future beef farmer, participated in the Suckler Beef village and in the Dairy Beef village, describing his 58 hectares mixed farm. He described actions including calving at 24 months, finishing stock younger, putting up a lot of hedgerows and trees, applying low emission slurry spreading (LESS) to cut down emissions on a multispecies grassland to boost carbon asset and profitability of the farm.

Dr. Paul Crosson, Teagasc Beef enterprise leader outlined how grass-based production systems underpin beef farming in Ireland. He described the economic advantage of producing and utilising grass to drive animal performance and detailed the strong environmental sustainability credentials of the sector. Paul also outlined how excellent beef genetics and high herd health status is crucial to increasing the competitiveness of Irish cattle farms.

Head of Drystock Knowledge Transfer in Teagasc, Pearse Kelly, underscored the importance of work life balance, the need for succession planning for farmers, managing off-farm employment, and developing family farm businesses. Earlier finishing of cattle is among the key strategies to reduce GHG emissions from the agricultural sector. The Beef Quest research project, funded by the Department of Agriculture, Food and the Marine and led by Teagasc, was introduced to farmers. The steps open to farmers to play a role in trying to improve water quality are being highlighted as part of The Better Farming for Water Campaign, with staff from ASSAP and the Agricultural Catchments Programme outlining the eight actions that farmers are being asked to take. To catch up with the information presented at BEEF2024 visit www.teagasc.ie/beef2024

Teagasc Johnstown Castle 2024- Farming for a Better Future

Pictured at first stand of the Johnstown Castle Open Day from left to right are: Professor Frank O'Mara, Director of Teagasc, Dr. Karen Daly, James Browne, Minister of State and Dr. David Wall

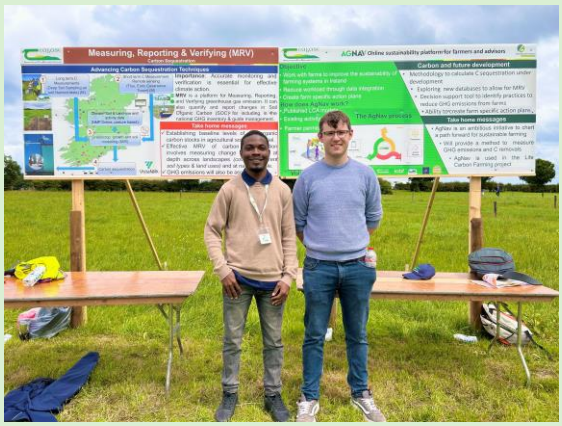
The Teagasc Johnstown Castle Open Day was held Tuesday, 16 July at the Environment, Soils and Land Use Research Centre, Johnstown Castle, County Wexford. The theme of the open day was "Farming for a Better Future" James Browne T.D. Minister of State at the Department of Justice opened the event at the first stand.

Teagasc Director, Professor Frank O'Mara endorsed the open day by describing it as an event showcasing all the key benchmarks and indicators (KPIs) for sustainable farming systems, and how Irish farms can reach. Teagasc has identified the technologies and farming practices that are important to help farms become more resilient in the face of a changing climate. Frank added that technology will play a very big role in meeting the challenges, and there is a large research programme at Johnstown Castle and other Teagasc centres to develop and adapt the technologies.

Up to date advice and research to support farmers on their journey to more sustainable farming were displayed. Dr Karen Daly, acting Head of the Teagasc Environment, Soils and Land Use Research Centre mentioned some of the many actions for sustainable and resilient farm systems spread across soil health, soil fertility, soil carbon sequestration, biodiversity, gaseous emissions and water quality, which were on display at Johnstown castle. All of these actions are considered scientifically robust. They will give farmers the confidence to implement new practices and technologies on their farms.

Dr. Donal O'Brien and Dr. Jonathan Herron, research officer at the Animal and Grassland Research and Innovation Centre,

Moorepark, came through with a presentation on the role of AgNav in monitoring, reporting and verifying carbon farming. AgNav is a digital platform that provides farmers with accurate and verifiable data likely to be relevant for carbon farming schemes. AgNav platform integrates Teagasc life cycle assessment (LCA) model into the ICBF infrastructure to calculate carbon footprints of farms using existing data to streamline an assessment process that feeds into action planning or decision making for farmers. This platform is currently used to develop action plan for livestock farmers participating in the LIFE carbon farming (a 5-year project). The system is available to beef and dairy farms that are Bord Bia certified, though there is a plan to expand the scope by including all cattle farms as well as other enterprises.



Bright Ketadzo (left) and Dr. Jonathan Herron pictured at the 2024 open day in Johnstown Castle

Dr. David Wall, Enterprise Leader at Johnstown Castle said; “We are asking each farmer to identify and implement the best solution for their farm business from a range of possible measures and look at the supports available from the Teagasc advisory service and other professionals.”

Farmers attending the open day learned how sustained improvements in grazing management, breeding of genetically elite animals, reducing the age of finishing and increasing use of home-grown feed will lead to reductions in emissions. As well as these recognised technologies for improving livestock production systems, emerging technologies are being tested for Irish systems, such as feed additives for reducing biogenic methane and the selection of lower methane-emitting animals in future, holding the potential to further reduce emissions.

The farming community has a significant role to play in helping achieve good water quality targets and the Teagasc Better Farming for Water campaign has a clear goal to reduce nutrient and sediment loss to water through its 8-Actions for change focussing on nutrient management, farmyard management and land management. Good nutrient management planning is a major corner stone to reducing diffuse nutrient losses.

A wide ranging booklet ‘Farming for a Better Future’ containing all the information disseminated at the event is available https://www.teagasc.ie/Farming-for-a-better-future

See you in the next issue

Newsletter compiled by Bright Ketadzo and edited by Dr. Donal O'Brien
Teagasc, CELUP, Johnstown Castle, Co. Wexford.

To find out more about LIFE Carbon Farming in Ireland and Europe visit:

- LIFE Carbon Farming Ireland
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