

Hello everyone.

Today, I'm sharing a number of key points from the **2024 Signpost Conference and General Assembly**.

1. Ireland has warmed by 0.7 degrees Celsius over the last 30 years in comparison with the previous 30 years, and has also experienced both increased rainfall and sunshine, reflecting global climate shifts.
2. The Signpost Farms have made significant progress in adopting greenhouse gas emission cutting technologies such as protected urea, lower fertiliser nitrogen application rates, liming and low-emission slurry spreading.
3. The Walsh family dairy farm, winners of the inaugural Teagasc FBD Environmental Sustainability Award 2024, outlined the steps they have taken to become more environmentally sustainable, while continuing to focus on running a technically efficient and financially profitable business. With a carbon footprint of 0.81 kg CO₂eq/kg FPCM and a nitrogen balance of 80 kg N per hectare, they are "top of class" in these two measures. The challenge now is to support other farmers to make the same progress.
4. While grass growth prediction models indicate an increase in annual grass growth in the future, climate prediction models indicate that Irish farmers face the increased risk of summer droughts, warmer and wetter winters and intense rainfall events. This will require farmers to adapt to these changed weather patterns, with practices such as more diverse swards, better infrastructure, building fodder reserves and optimising stocking rate recommended.
5. Teagasc research with methane reducing feed additives shows that emerging solutions like 3-NOP and red seaweed hold real promise for cutting methane emissions in ruminant livestock. However they are still a few years away from use on Irish farms, and future research work will focus on, firstly, identifying practical ways to include feed additives in the diets of grass fed ruminants, and secondly, the business model for their use.
6. Reducing the age at finishing of beef animals is a key practice to achieve our GHG reduction targets, and while significant progress was made in the past decade to reduce age at finishing, this progress stalled in 2023. While this could well be due to a year effect, relating to 2023 weather and grass growth patterns, there is a need to refocus on this target.
7. In relation to carbon storage in our soils, Teagasc research on our Signpost Farms, has found that grassland soils tend to have higher carbon stocks than tillage soils (although the difference is small), with deeper soil layers storing between 20 and 30 percent of total soil carbon. In our research, soil carbon stocks were measured to a depth of 60 cm. Overall, soils on the Signpost Farms are estimated to contain more carbon than typical Mediterranean type soils, containing between 48 and 199 tonnes carbon per hectare.
8. Teagasc has deployed technology to map the Signpost Farms for both biodiversity and carbon stored. Less intensive hedgerow management and tree planting will enhance carbon capture and habitat quality. On average, our Signpost Farms have lower habitat scores than that of all farmers, suggesting an area for future improvement.
9. Cover crops are a key climate mitigation measure for tillage farmers, helping to increase soil carbon content, with the added benefit of reduced nitrate leaching. However support schemes, such as ACRES and the Water EIP are important and necessary incentives to increase their uptake.

Thanks to our Signpost Farmers for their commitment to the programme, to all my Teagasc colleagues for their work on the programme, and to our Programme partners for their continued support.

Finally, presentations and papers from the events are available on the Teagasc website.