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*For immediate use*

**Net Zero ‘marathon’ needs best science and accurate data**

Farmers at last week’s Banff and Buchan Monitor Farm meeting heard that net zero was ‘a marathon and not a sprint’, and that sustainable farming choices needed to insist on the best science, with accurate, precise data on individual farms.

Key speaker Professor John Gilliland, who owns a farm as well as being a special adviser to Quality Meat Scotland (QMS) and Agriculture and Horticulture Development Board (AHDB) on net zero, discussed his experience of working practically on the subject with a group of Northern Irish farms in a government-funded project:

“The first thing on our journey was that everyone understood that net zero meant achieving an overall balance between emissions produced and emissions taken out of the atmosphere. It is the sum of your emissions, minus the sum of your sequestration. This is adjusted for any fossil fuel CO2 emissions displaced by renewables and for any methane emissions reduced by waste management. It is not zero emissions.

“And while I can talk about carbon, water quality, biodiversity and so on, profit is important, and we also need to produce good quality food to deliver good human health.”

His research so far showed that no two farms were the same, and that ‘some would find the journey easier than others’.

For generating data, using a helicopter-mounted laser picked up every tree and hedge on farm more accurately than satellite, while Agricarbon’s soil core sampling to 1m (or bedrock) showed how much carbon was in soils. Their accuracy meant that any change would be picked up when the process was repeated in five years, demonstrating progress. He added that 97% of stored carbon on the farms was in the soil, rather than in trees and hedges.

Choosing the right ‘tools’ to support net zero ambitions for individual farms is important. While new approaches to reducing emissions such as feed additives and green fertiliser were available, they came at ‘huge cost’, he warned. “Look at the things you can do which will drive profit and reduce emissions.”

These options were often around productivity, such as improving breeding, health and genetics. Irish work on lime showed that in some soils, achieving a pH of 6-6.5 boosted fertiliser utilisation, and he acknowledged this was an area of science which needs addressed, and he has requested AHDB’s nutrient management guidance look at the Irish science.”

Other areas the farms looked at included grazing willows which gave double the benefit as grazing leaves in reducing cattle methane emissions and creating a field run-off risk map using the laser-generated field map and phosphate soil surveys. Multispecies pastures which provided a variety of rooting depths helped with water mitigation, reduced fertiliser use, and boosted earthworm numbers by 300%, he said.

He welcomed the new AHDB/QMS carbon baselining project, and urged farmers to apply:

“The key thing is to measure and manage, but we need more sophistication to the measurement. We can reduce emissions, increase carbon in our soils and increase biodiversity – and we can stay profitable if we get the knowledge about how to do it.’

Monitor Farmer, Bruce Irvine explained that he had recently had some fields mapped by Hutchinsons’ Omnia system. With some very variable soil types across individual fields, this had helped him better understand where he might be able to vary his approach to soil management. He has grown multispecies swards on-farm for the last 15 years to help boost drought tolerance but is now considering planting willow in some field margins for his sucklers to browse.

Peter Beattie, Monitor Farm regional adviser said: “I was struck by the evidence that most carbon is stored in soils, rather than above ground. John’s talk highlighted the importance of slurries and manures in improving soil carbon stocks, along with good lime levels and avoidance of compaction to maintain a vibrant living soil.

“The work being done through the Monitor Farm programme, coupled with the new baselining project, will give everyone plenty to think about in terms of how they go about aiming for net zero.”

**Ends**

**Notes to editors:**

Professor John Gilliland will be speaking at the QMS Industry Breakfast at the Royal Highland Show this Friday (21 June), to which press have been invited.

About Monitor Farm Scotland:

· The Monitor Farm Scotland programme is managed by Quality Meat Scotland with support from AHDB.

· The programme is fully funded by the Scottish Government Knowledge Transfer Innovation Fund.

· The nine farms chosen to take part in this four-year programme reflect the diverse tapestry of livestock and mixed farming across Scotland.

· The aim of the programme is to help to farms reach full economic, social, and environmental sustainability by optimising production.

· The programme is farmer led and farmer driven with support from specialists and experts to assess farm performance, explore opportunities, and develop solutions to the challenges faced.

· Each Monitor Farm will be steered by a management group of 10 to 12 farming businesses with support from the local community group.

· The learnings and the example set by Monitor farms aims to benefit farmers across the whole of Scotland.

· The programme is managed by an in-house delivery team, who are funded through the programme and managed by QMS.

· For more information visit: https://www.monitorfarms.co.uk/

About QMS:

QMS is the public body responsible for promoting the PGI labelled Scotch Beef and Scotch Lamb brands in the UK and abroad and also promoting Scottish pork products under the Specially Selected Pork logo.

Please note that the use of the word Scotch in the Scotch Beef PGI and Scotch Lamb PGI brands is correct and should not be substituted for an alternative such as Scots or Scottish. The history of the use of the word Scotch in this way, traces back to the 18th century.

QMS also helps the Scottish red meat sector improve its sustainability, efficiency and profitability and maximise its contribution to Scotland's economy.

The quality assurance schemes run by QMS cover more than 90% of livestock farmed for red meat in Scotland. They offer consumers in the UK and overseas the legal guarantee that the meat they buy has come from animals that have spent their whole lives being raised to some of the world’s strictest welfare standards.

Scotland’s beef, lamb and pork producers make an important contribution to the country’s economic, social and environmental sustainability, contributing over £2 billion to the annual GDP of Scotland and supporting around 50,000 jobs (many in fragile rural areas) in the farming, agricultural supply and processing sectors.

For more information visit www.qmscotland.co.uk or follow QMS on Facebook or Twitter.