A collaborative way forward

Cereals Event report

Collaboration, connections and working together were all themes that permeated this year's Cereals Event. *CPM* had boots on the ground to hear the latest from the industry.

By Melanie Jenkins and Janine Adamson

A new location in the rolling grounds of the Thoresby estate in Nottinghamshire saw this year's Cereals Event take on a different feeling: one of building bridges and making connections to strive for a better future for the industry.

A recurrent theme in a number of the seminars was climate change and greenhouse gas emissions (GHG) and how the industry will tackle these. With last month's news from the Climate Change Committee that the UK is no longer a world leader on climate issues due, in large part, to government actions and inaction, internal collaborative efforts among those in the agricultural sector are likely even more vital.

But how does farm productivity link with measuring GHG, asked Hugh Martinaeu of Map of Ag. "We have a climate emergency but there are also drivers coming from the supply chain, government and from financial institutions. The UK has been a global leader in developing climate policy and was the first country to have legally binging targets, so there's a national target set."

Policy drivers

"But the supply chain has become increasingly interested in this area and it's setting its own net zero targets. So we're having to increasingly demonstrate the emissions intensity of the products leaving farms," he explained.

However, there's a less well-known component driving this, which is coming from financial institutions and the Taskforce on Nature-related Financial Disclosures. "It's an important element of why we're increasingly going to be asked for information about our GHG emissions on farm."

What this effectively means is that financial institutions lending to agricultural businesses will have to allocate an emission to that loan, explained Hugh. "This is important because they'll have to drive down their emissions from the finance that's being loaned into farming.

"So there's a baseline requirement to measure and monitor in the supply chain, but also from the lending facilities. I would argue that the finance component is going to be an even larger element than either the supply chain or government targets in ▸

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▸ driving us to understand what's happening on farm over the next couple of years."

Other than driving down emissions, there are obviously opportunities to remove CO_2 from the atmosphere. "Soils is a key one, and then there's woody biomass, such as trees and hedgerows.

"So how can we improve our engagement with GHG emissions calculations? There are ways and means of doing this using key performance indicators for businesses," he said.

In an effort to streamline this process on farm, Map of Ag has produced a calculator that requires simple data inputs to produce a figure on this. "So looking at inputs, we've got nitrogen and fuel use, plus plant protection, and then the yield output — we're measuring the emissions generated from our system compared with how much output we're generating.

"If we can create a system where you input your information in an easy way and it then generates an emissions intensity calculation based on these keys things, then we can better understand and communicate the opportunities for emissions reductions."

Working together

One way to perhaps tackle on-farm emissions, alongside driving towards a successful business, could be through working together. According to Tom Allen-Stevens of the British

Agriculture's on the agenda

Beyond on-farm and community collaboration, even the political debate saw some unity between the NFU and Defra. At the Cereals Main Stage, show visitors were given the opportunity to 'quiz the political leaders' with NFU's Minette Batters and Defra's Mark Spencer. Mark's opening gambit was to praise the government for its approach to food security. "Never has agriculture and food been so high on the political agenda, government is taking it seriously. We're all up for the challenge, let's embrace it together," he said. Minette countered with agreement that the government might be taking it seriously now, but said she's been 'banging on about it' for the past 10 years and it's been a slow process for the NFU and, in some ways, painful.

Once the floor was open to questions, the topic of gene editing was raised and in particular, how to support its development. Mark explained that an existing barrier could be consumers, in that they're unlikely to recognise the importance of genetics, such as yellow rust resistance, in delivering the food they eat. Minette added that if the government match-funded the AHDB levy to support areas of research such as gene editing, it could be game-changing for the industry. Mark was unable to comment in response.

Another question that raised the temperature in the tent was about protecting parallel trade permits for plant protection products and seed treatments (parallel imports). The HSE set a final date for the sale of existing parallel products of 30 June 2023 and a final use date of 30 June 2024, so as explained by the audience, concern is around the future price and availability of PPPs. Mark said that it's 'top of the agenda', despite the cut-off date being worryingly close. In response, Minette stressed that it's too little too late. "This has been spoken about for so long, please extend the date and allow industry to work with you to find a solution," she said. Supporting growers to engage with fibre crops so they can benefit from the opportunities they offer was a popular point raised by the audience. Current regulation is a barrier for crops such as hemp, despite being a sustainable solution for a range of applications in the textiles industry.

"Defra hopes to acknowledge this and make it easier for growers to produce crops such as hemp and

On-Farm Innovation Network (BOFIN), there are two very good reasons for people in the industry to work more closely together. "Firstly, it makes very good business sense, and secondly, it makes farming far more interesting. And shared ideas are like gold dust," he says.

Working collaboratively is something New Zealand farmer, Roger Dalrymple, has done to help protect the agricultural industry in his homeland. "The whole world is under environmental challenges, from global warming to cutting carbon emissions and protecting biodiversity.

"In New Zealand, there are challenges in reducing greenhouse gas emissions and meeting freshwater policy from government, plus pressures to protect the environment," he explained.

And like the UK, New Zealand has issues with the disconnect between the public and farming. "We've got to fix this and get people back on board. We're stronger together and we must work this way as an industry because it's not enough as an individual farm. To do this we have to get tools in the toolbox that will allow others to tell our story, and this means having data about the environment on farm that proves we aren't polluting it. "How can we push back if we don't understand this."

To try and realign the attitudes towards farming from ▸

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poppy/opium. Regulation is currently overseen by the Home Office, which perhaps doesn't understand the difference between hemp and cannabis," said Mark.

Minette was astounded that the Home Office has such power in this situation, stating that, again, this has gone on for many years. Mark concluded the conversation by explaining that Defra had tried to instigate conversations, but the Home Office 'doesn't seem open'.

Later in the afternoon, experts took to the Main Stage to discuss 'great soils and great crops'. During this session, regenerative farmer Angus Gowthorpe shared that a new cover crop guide would soon be available to help inform species selection and establishment and termination practices.

Having helped to co-develop the guide along with the Farmer Scientist Network, Angus believes it'll help to give farmers more confidence when it comes to selecting the right cover crops, particularly for those with difficult soil conditions. He explained that as a farmer from Yorkshire, he'd found information was lacking for those with heavy clay soils in the north of England.

Angus said the online platform will be available to use from the end of August and that it presents the first farmer-led, scientifically supported guidance for cover crops. A preview will also be shared at the Great Yorkshire Show (11-14 July).

Delegates heard experts as they took to the Main Stage to discuss 'great soils and great crops'.

▸ local communities, farmers in New Zealand have started community catchments and Roger is part of the Rangitikei Rivers Catchment Collective. Consisting of 700,000ha, 23 sub catchment groups, and 350 farmers — who are signed up and paying a voluntary fee — the group is working to gather information about the local community and the environment, explained Roger. "It's all about having strong vibrant communities and it's something farmers world-wide must do to educate the masses.

"We're looking to support and educate farmers in the group too, as well as making improvements to get ahead of what society wants. The community catchments are about us taking responsibility for how we look after our soils and our waterways.

"We want to be able to support our communities, it's not just a one, two or three-year vision, it's a 15 to 30-year vision of what we want to have happening in our local community. If we can do this well, then it's a great story and it's making farming sustainable for ourselves and our grandchildren."

Closer to home, the Landscape Enterprise Networks (LENs) are bringing farmers together with private and public finance to create nature-based solutions that both benefit the farmer and the local or wider community, as well as the paying business.

LENs started in Cumbria but has now been rolled out across the UK and into the EU, explained Alison Rickett of 3Keel. "So how does it complement the farm business as a possible income? It's a system that links buyers and sellers of nature-based solutions. Buyers can include multi-national companies, national or local ones, right down to local government."

These companies are often looking to purchase services from farmers that will help with things such as sustainability projects, she said. "LENs establishes a list of what buyers are looking to achieve and this is taken to farmers — the supply side — to see if they can help deliver it."

Nature-based solutions

A project could include anything from cover crops to flood management and if a farmer can supply this then they'll enter market negotiations with the company looking to buy, explained Alison. "A price is established based on what it'll cost for these nature-based solutions to be carried out and formal contracts are written up. One thing that is quite different with LENs is that actions are 100% paid for, it's not that you'll have to put money in. Some measures may only last a year, but other things like tree planting or wetlands could last for many years.

"This has been demand led, but we're getting more farmers come to us. And although farmers have a lot to offer, it doesn't necessarily mean we'll have a ▸

Power of the pulse

Over at the PGRO stand, a new collaborative project was launched which aims to help farmers reduce agricultural emissions through increasing pulse crop production. 'Nitrogen Efficient Plants for Climate Smart Arable Cropping Systems' (NCS) is a four-year £5.9M initiative involving UK farms and a range of industry partners.

Its main purpose is to achieve a reduction of 1.5Mt CO_2e per annum, or 54% of the maximum potential for UK agriculture. To do this, the project hopes to increase pulse cropping in UK arable rotations to 20% (currently 5%) and develop and test new feed rations for the livestock industry.

PGRO's Roger Vickers believes that despite the benefits of pulses and legumes in UK farming systems being widely understood, they've never been truly and accurately measured. As a result, their value has been underplayed and the potential of pulses to help address the climate crisis has gone unrecognised.

"We now have the science, the tools and the know-how among British farmers to not only tap into that potential, but to develop it further," said Roger.

Working alongside BOFIN, the first stage of the project will give 200 UK farmers support to establish their business' carbon baseline using the Farm Carbon Toolkit. The GHG emissions from these farms will then be tracked throughout the project to form a fundamental part of the dataset.

Those farmers with the drive to do more will be known as 'Pulse Pioneers' and will be paid to work with scientists to co-design crop and feeding trials which will be hosted on their farms.

Keen to expand knowledge exchange beyond this core group, the project has also launched the PulsePEP (Performance Enhancing Platform), led by ADAS.

"This will be the defining project of our time," said Roger. "It's not just the chance for UK agriculture to make a seismic shift towards net zero, but it'll also deliver a prosperous and resilient way of farming for communities worldwide."

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▸ buyer. It's multifunctional and we've found lots of ways to deliver projects," added Alison.

"And these solutions are then delivered in a collaborative manner," she said. "At the end of a project, the aim is for the land, soils and farmers benefits. The relationship building for LENs to work is huge and without it we wouldn't be able to deliver projects. As it grows, the aim of LENs is to build farm business resilience and help farmers achieve far more than they would have done otherwise.

A further way to work together to achieve business success is through joint ventures, according to Ceres Rural's Will Gemmill. "I've been setting up joint ventures since 2005, when wheat was £60/t, and there was a desperate requirement to get fixed costs out of the business. The first joint venture I did was between the home farm and my cousin. A year later, we took another partner on and went up to four partners in that business."

So how does a joint venture work? "In its simplest form, two farmers get together and

Bright future for biologicals

A new investment for Corteva Agriscience is its biologicals portfolio which Cereals was the launch pad for. Although the firm first announced its acquisition of both Symborg and Stoller in late 2022 and completed in March 2023, the event was the first opportunity for farmers to hear from the Corteva team what this means for the firm.

"Corteva's biologicals portfolio is a new investment and an area of growth for the company which we feel chimes well with regenerative farming, zero carbon and sustainability goals," explained the firm's John Sellars.

One of the products in the portfolio, Blue N — also called Nutritia N — is a bacteria (*Methylobacterium symbioticum*) that is formulated as water dispersible granules (WDG) and is foliar applied. "This is an endophyte bacteria which is alive and lives on the plant for its lifecycle. The bacteria fixes nitrogen from the atmosphere, and then converts it to ammonium which is used to make amino acids inside the plant.

"The bacteria takes about a week to colonise the plant and every week thereafter it's securing the equivalent of 3kgN/ha. So we think the bacteria is fixing the equivalent of 30kgN/ha on average," said John.

"The enzymatic reaction from the bacteria isn't just securing N but is doing so in a far more sustainable way than using inorganic N," he added.

Blue N can be applied either on top of or instead of N in cereal crops, said Iuliia Kovalova of Corteva. "But this will depend on the N regime in place. Usually, a low N regime you'd be applying on top, but in high N scenarios of over 200kgN/ha, you'd be looking at reducing applied N. In sugar beet we recommend applying Blue N in slightly reduced N scenarios."

It's recommended on a wide range of crops but the current focus has been on wheat, oilseed rape, potatoes, sugar beet and maize, explained John.

Growers can expect to see more coming Corteva's biologicals programme over the coming years, including Nutritia Rhizo, a soil applied probiotic bacteria which helps plant roots uptake more nutrients and is aimed at row crops such as vegetables, potatoes and sugar beet.

set up a joint business, which is usually contracting and often set up as a limited company or a limited liability partnership (LLP).

"And once you're set up, you contract back to the parent businesses at cost, so hopefully you're getting the work cheaper and you've got a contracting business that can then work for third party farms if you want to — hopefully at a profit," explained Will.

But why go into a joint venture? "One of the main reasons is the reduction in fixed costs, which is typically £100-£150/ha — roughly 15-25% of your labour and machinery costs. So there's a financial reason and it also immediately creates economies of scale."

It can also release management time and means the original business structure can remain the same. "So you'll retain 100% of the profit, but also 100% of the risk, and created a more professional approach as you have to plan more carefully."

A joint venture could also allow farms to invest into newer technology and helps farmers cultivate a more positive frame of mind, he added. "It puts you back on the front foot."

But joint ventures aren't without downsides, warned Will. "One of the issues to be aware of is the chemistry of the farmers coming together — they have to be like-minded and often with similar sized businesses. It also requires a more planned approach, with regular formal meetings. Budgets have to be put together and costs have to be determined, as well as how to approach the rotation and harvest — so a written agreement is essential."

Another aspect to be aware of is the tax implications. "If you transfer equipment from the old trading business into the new limited company or LLP, you create what's called a profit on sale, so you have to be careful you haven't generated an artificial profit in one year, something which can be avoided by phasing the sale over a few year. And the other thing to be aware of is the annual investment allowance.

"These decisions have to be made from the outset and you must lay out what you want to achieve from it. A joint venture can make big savings for the parent businesses and nearly all of the ones I've set up have grown in size and developed to be profitable contracting businesses." ■

Breeder KWS showcased pipeline varieties at the show including their first hybrid barley – KW21-1961 (Inys). The variety offers a solid disease resistance package of 7 for rhynchosporium, 7 for mildew and 6 for net blotch, as well as an untreated yield of 109%. Overall, it was the leading hybrid barley in NL1 trials (harvest 2022). The variety is being launched in recognition of growth in the hybrid barley market segment, and should be commercially available in 2024. Following this, KWS hopes to offer a portfolio of hybrid barleys which focus on greater crop resilience.