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RAGT open day

Broadening horizons

With the summer comes a host of open days from plant breeders, agronomy companies and product manufacturers alike. As part of this year’s tour, CPM heads to Ickleton to meet Lee Bennett and hear what’s in the pipeline for RAGT.

By Janine Adamson

The past few years have been on the slower side of business, discloses RAGT’s Lee Bennett. But that’s all about to change as the company prepares to launch a host of unique varieties, wider innovations and all-round alternative thinking.

For a start, it’s no longer just about wheat, although new material continues to feed through including eight new Group 4 hard varieties. But nevertheless, from optimised biogas feedstocks to winter oats, Lee stresses that RAGT is dramatically broadening its horizons.

At the fore is a commitment to all aspects of sustainability – whether that be environmental, financial or beyond – to support growers to make positive changes to their production systems. One solution

which he believes ticks many of these boxes is the company’s work to transform the establishment of cover crop mixtures.

“The idea is to combine three different seeds together through pelletisation to allow growers to broadcast a cover crop mixture into standing wheat, up to 15 days prior to it being harvested,” explains Lee.

“This gives up to an additional two weeks for the cover crop to get going, which could be the difference between successful establishment or not. It’s acknowledged that later-sown cover crops have less time to develop and therefore might not provide the desired soil health benefits; whereas this helps to mitigate that limiting factor,” he says.

Seed coating

The pelletisation works by coating seeds of different sizes and mass in a special inert technology which enables the mix to be broadcast up to 36m using a fertiliser spreader. Not only does this have benefits for the crop, but it also results in reduced sowing costs and fuel consumption.

“Pelleting the seed, which protects it while waiting for emergence, has been shown to improve the biomass of the cover crop – the soil coverage for the pelleted seed (oilseed radish, vetch and phacelia) was measured at 90%, whereas for the non-pelleted seed, 65%.

“Then using the MERCI method, which predicts the nitrogen available from cover crop residues over time, we can conclude that the pelleted pre-harvest mixture will return around 159kgN/ha to

the following crop, compared with 44kgN/ha for non-pelleted,” explains Lee.

As for using the fertiliser spreader to broadcast the seed, this reduces the fuel consumption to around 1 l/ha, he adds. “We believe this technique has a number of practical applications including for companion cropping oilseed rape, which we’re trialling across six UK farms this autumn.”

A topic which Lee freely admits he’s vocal about, is the use of insecticides, or in this case, highlighting the benefits of what’s being coined insecticide-free wheat. RAGT’s work in this area spans from its Genserus range of BYDV-resistant wheats, to rescoping how varieties are evaluated



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through the Recommended List system.

This is because on the whole, he believes most farmers don't want to use insecticides anymore. "It means trialling RL varieties using insecticides isn't a reflection of current on-farm practice. So we're running our own independent trials of 20 varieties across 18 sites, leaving them to natural BYDV infection.

"They're treated with a standard fungicide and PGR programme, but receive no insecticide. As a result, we have the only data set for varieties which offers a true reflection of on-farm practice. Of course for us, this means we can demonstrate the value of BYDV resistance when it comes to yield parity," says Lee.

Beyond this, the company has also been investigating sequential inoculation with aphids to evaluate the performance of different varieties and their response to BYDV infection across the season, including RAGT's pipeline genetics.

Spring infection risk

This is in reaction to the changing flight patterns and overall behaviour of aphids (the vector of the virus) – as winters become milder the risk of spring infection becomes greater. "Ultimately, we want to understand whether spring infection can really be that bad," queries Lee.

"We've seen the effects of spring aphid feeding and BYDV transmission at our sites in France – it exhibits as red tipping on the ears. So for the UK trial, we're inoculating with infected aphids in winter alone, both winter and spring, and then spring alone. This will enable us to understand the symptom nuances at a deeper level," he continues.

According to Lee, there's little awareness surrounding the potential of spring BYDV infection. "There seems to be less stunting at this stage in the season, but there's still discolouration and red tipping. It certainly has an impact which means potential yield loss."

Recognising this season's challenges in relation to inclement weather which resulted in greater spring cropping and then constricted seed supply, Lee says RAGT is working to bring a new range of alternative cereals to the market, including spring wheats.

However, what makes these spring wheats different, is they have no vernalisation requirements so can be sown from autumn through to April.

"Simply put, they behave like winter wheats but suit being planted in spring too, without the associated high seed



RAGT has been working to transform the establishment of cover crop mixtures through seed pelletisation.

rates which come with conventional spring wheats. These options are starting to pique interest because they offer more flexibility," comments Lee. "They're what we call a new style and are ideal for poor autumns."

Equally, he believes the market potential for spring oats is on the up too. "We see this as a growth segment having launched RGT Vaughan in 2023 – a clean variety which is suitable for the organic sector.

"We also have another three new spring oat varieties in the pipeline which all-in-all, makes for an active oat breeding programme," points out Lee. "We're also looking at winter oats, with an absolute focus on end use quality rather than just top yields."

For something different, RAGT has been investigating how to best cater for the growing biogas market to reduce the reliance on maize and rye, which Lee believes is the direction of travel. "I think there's a desire to create more diversity in feedstocks for anaerobic digestion.

"If you take a crop like winter triticale (RGT Eleac / RGT Rutenac), it actually delivers higher energy yields than hybrid rye which may prove surprising. Then there are options such as sorghum and sunflowers, or interplanting different combinations or all of the above," he says.

"Although maize is the largest grown AD feedstock in the UK at present, this may change as the threatened ban on seed treatments looms again, which would make it near-on impossible to grow the crop successfully."

And despite the message ringing loud and clear – RAGT is more than just wheat – the options for that crop look promising



The company has been investigating how to best cater for the growing biogas market to reduce the reliance on maize and rye, including the use of triticale.

too. That's because coming through the pipeline are eight Group 4 hard wheats at the National List stage, which Lee says is playing in new territory for the breeder.

"It's a given that in wheat you have to focus on yield, improved agronomic characteristics and all-round quality. This is in combination with our established BYDV-resistance mechanism found in the Genserus range.

"But we want to be a bigger player and it's encouraging to see quality, robust options coming through for the Group 4 hard wheats. But undoubtedly, the jewel in the crown this season is RGT Goldfinch, a new bread-making variety that's resistant to both BYDV and orange wheat blossom midge," he concludes.

Read more about Goldfinch on page 32. ■