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# Focus on the detail this spring

## Technical Oilseed rape

As spring programmes get underway in oilseed rape, a recent webinar with Agrii discussed the best approach for managing OSR this spring and beyond. *CPM* joined to find out more.

*By Charlotte Cunningham*

**As the evenings start to draw out and the temperature slowly starts to creep up, the focus for many oilseed rape growers is on spring nutrition.**

And according to Agrii's Jim Carswell, adopting a tailored approach could be incredibly beneficial this season.

But what exactly does this mean in practice?

“The first stage is assessing what state the crops are in. Quite simply, this means going to have a look at the crop, examining its size and checking for pigeon damage and/or larval numbers. Also think about the root systems — have they been compromised? Have they been sitting in water? And are there any signs of clubroot?”

“If any of the above are present, then it's likely that some early nitrogen will be required.”

### Good potential

According to Jim, the good news is that most crops this year look to have good potential. But while crops are generally well-established, it's important to consider how the wet weather has affected macro and micronutrient levels, he adds. “What we're aiming to do is optimise canopy size, health and nutrition. This means considering any organic manures, measuring soil nitrogen and targeting a Green Area Index (GAI) of 3.5 at flowering. Remember, leaves are the most efficient part of the canopy at using light energy, so we want to maximise that photosynthetic capability.”

Agrii use a tailored nutrition cycle which can aid decision making, he adds.

Looking specifically at nitrogen, Jim says there's a huge amount of variability in canopy size this season — with some very forward crops and others much less so.

Agrii assessed the GAI at some of its northern iFarms in January and across six sites, Ambassador — by LG seeds — had the greatest GAI, while Voltage had the least. But what does this actually mean in the field?

“Each GAI unit is worth 50kgN/ha, so Ambassador — with a GAI of 1.16 — already had 58kg N/ha present in it. In contrast, Voltage had half that amount with 31kg N/ha.”

As well as knowing the amount of N above ground, it's also important to think about what's going on in the soil, adds Jim. “In my view, N-Min testing is central to planning inputs to optimise nitrogen use



*Growers can easily send tissue to be analysed and the results can be hugely influential in planning nutrient inputs and benchmarking yield potential, says Jim Carswell.*



Looking at specific OSR characteristics, David Leaper says autumn and spring growth should be high on the priority list.

efficiency (NUE) and is incredibly valuable in ensuring economic and environmental sustainability.

"It's especially important in situations of N-retentive deep silts or deep clays, previous grass or high N input veg crops, organic soils with organic matter over 10%, and in situations where the history of the land is unknown."

The GAI along with the N-Min information can be entered into a nitrogen top dressing calculator to help growers get an accurate idea of exactly how much spring N needs to be applied. However, this isn't the end of the story, he notes. "This could vary depending on timing and whether or not there's a need for early N — which will also depend on soil N, crop structure and larval presence. Small canopies and those with larval damage are also more likely to need early N."

In terms of N source, Jim reckons that going forward the industry is likely to see more sustainable options being encouraged. "It's all about applying the right product, at the right time, and at the right rate."

And it's not just about getting nitrogen correct — phosphate, potash and sulphur can all play an important role in optimising crop nutrition. "Though some P

might have been applied in the seedbed to boost rooting, the plant has a high demand from mid-Feb and availability can be restricted by cold soils.

Applying a little fresh P in the spring can help to promote this rooting and uptake.

"K is essential for optimising N utilisation, and winter OSR has a huge demand for it as canopy size increases. From the Feb leaf sampling we've done on crops in our trials, all eight sites have shown to have K levels below the guideline, highlighting that the wet autumn and Jan has resulted in potash leaching. Therefore, it's worth adding a little more this spring.

**Sulphate leaching**

"Sulphur is also a key macronutrient, but only around 70% of crops are treated. Again, our analysis has shown that the wet autumn and Jan has resulted in sulphate leaching, so it's worth considering an application this spring. Remember, once a deficiency is seen, the yield has been compromised."

The next stage of the nutrition cycle is tissue analysis which helps decide foliar nutrition, explains Jim. "Tissue test reports from Feb this year looked at levels of boron, zinc, molybdenum and copper.

"The results showed that boron levels were below guidelines at seven out of our eight sites — this is no surprise as we know it leaches easily. Moving onto zinc, and these levels were also below guidelines at five of the sites, three had suboptimal molybdenum levels and six were below par for copper.

"We also did a similar experiment last autumn that showed all but zinc were lower than usual.

"Growers can easily send tissue to be analysed and the results can be hugely influential in planning nutrient inputs and benchmarking yield potential," he points out.

Though this can seem like ▶



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Research has shown that high biomass varieties offer the best chance of offsetting CSFB issues.

► more hassle than gain, Agrii has proved this attention to detail works. “We did some work last year looking at the benefits of fine-tuning foliar micronutrition programmes using tissue analysis. The ‘standard’ farm programme cost £38.25/ha and resulted in a positive yield response and a return on investment of £274.55/ha,” explains Jim.

“When this was fine-tuned using leaf analysis, the cost per ha went up to £63.85, however, the ROI was also £42.40/ha more than the standard programme.”

For those who are sticking with OSR for the foreseeable future, it's never too early to start thinking about what you're going to put in the ground next season.

Looking at specific characteristics, David Leaper says autumn and spring growth should be high on the priority list. “We're routinely assessing the growth of OSR — growth habit is really important, and we do see big differences between varieties. Specifically, we see noticeable variations between hybrids and conventionals — a 10% difference between the fastest hybrid and the fastest conventional.”

## High biomass varieties

This can be used to the advantage of growers, however, as high biomass varieties offer the best chance of offsetting cabbage stem flea beetle issues, says David. “As well as this, if we have bigger plants, they're more likely to be able to cope better with abiotic stress such as wet conditions and spring droughts — which have become a regular part

of recent growing seasons.”

Last year, Agrii looked at autumn vigour in a range of varieties across five sites and scored them from 1-9 — with 9 representing the best vigour.

These vigour scores were then looked at in relation to CSFB damage, he adds. “Here, we looked at the correlation between CSFB larval damage and the speed of development/biomass in the autumn.

“This was based on an assessment in the spring which looked at the stunting effect caused by the larvae, rather than numbers of larvae as such, but there's evidence to suggest that strong autumn growth generally reduces larval damage in the spring.” ■

Some of the varieties that came out on top in the trials included:

- Acacia
- Aardvark
- Croozer
- Anastasia
- DK Expedient
- DK Exalte
- Campus
- DK Exsteel
- Ambassador
- Aurelia

## High vigour variety from DSV

Adding to the options available to growers is DSV's new variety, Duplo, which has the highest vigour rating of all the company's new triple layered varieties, says DSV's Sarah Hawthorne.

Added to the AHDB Candidate List for 2021, DSV Duplo features an oil content of 46.8% and a yield of 109% for the East and West region



DSV's new variety, Duplo, has the highest vigour rating of all the company's new triple layered varieties.

plus RLM7+ multi-gene phoma stem canker resistance, turnip yellow virus (TUYV) resistance and pod shatter resistance, she says.

“A direct result of our breeding policy following the neonicotinoid ban and the need to move towards less intensive and more environmentally-friendly production methods, DSV Duplo is a strong, high yielding variety suitable for all areas of the UK.

“It's the perfect variety for modern production with real ‘get up and go’ in both the autumn and spring for the strongest competition against weed and pest threats, allied to an unbeatable agronomic package and yield potential.

“It's proved itself to be a very robust variety in all conditions across Europe and is a first choice for growers in less-than-ideal growing circumstances.

“As well as its high yield and oil content, DSV Duplo's other stand-out figures include a 9 for stem canker resistance and 8s for lodging resistance and stem stiffness.”

DSV Duplo has also performed exceptionally well in the firm's new non-inversion tillage trials, Sarah adds.

“These trials, which also include no-till, aim to identify varieties that produce strong



DSV Duplo is a strong, high yielding variety suitable for all areas of the UK, says Sarah Hawthorne.

establishment, exceptional performance and consistent gross output delivery in reduced cultivation systems and Duplo has more than proved itself in these.

“The variety has also been bred for maximum N-efficiency delivering the highest possible response to nitrogen fertilisers, so every kg N applied works as hard as possible to produce yield with minimum waste.”