Technical Battling the beetle

There's a whole host of measures currently surfacing that seem to help oilseed rape through those crucial early stages. *CPM* talks to two growers for whom it's not so much which, but how many of these are implemented that brings results.

By Tom Allen-Stevens and Rob Jones

For many oilseed rape growers 2020 harvest was a disappointing one, but for some this led to a determination to improve chances of a good crop this year. Finding a combination of measures and implementing them carefully looks as though it may pay off come harvest.

YEN-winning defiance

Last season was the first time Lincs grower, Mark Stubbs had any oilseed rape fail since his family partnership re-introduced it 10 years ago. But this certainly hasn't deterred the double Oilseeds YEN award winner from growing the crop.

Based at Marshchapel, Calcethorpe, on the Wolds near the coast, he grows the crop on a tight one-in-three or once every other year rotation with wheat and spring barley. It's a strategy he's sticking with, along with rejecting early drilling as a way to battle CSFB.

"Our establishment recipe saw last year's Marshchapel crop through alarming levels of flea beetle," explains Mark. "But harvesting delays meant we sowed later and into less good conditions than we like. Then it was overwhelmed by a combination of intense slug pressure and winter flooding on the heavy ground.

"We went out of OSR 20 years ago because our original plough-based regime wasn't performing. But almost every year since we've come back into the crop with modern hybrids and single-pass seeding, we've averaged 4.5t/ha or more across our farms. And, despite some early flea beetle damage, we took the bronze YEN award with 6.77t/ha from our DK Exclaim entry in 2019, going one better last season with V316OL averaging 6.71t/ha for the silver."

A&C Stubbs and Sons currently have 50ha of DK Exclaim and 160ha of HOLL — mainly the latest variety, V367OL in the ground. With fewer early pest or establishment pressures, the 2021 crops are looking especially promising, boding well for overall farm performance as well as further YEN success.

"We deliberately chose hybrids for our return to OSR growing, starting off with Excalibur and now DK Exclaim, together with high value HOLL-growing," Mark says. "Dekalb varieties have always suited us well for their consistent all-round strength and ability to crack on rapidly in the spring.

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"We're not fans of PGRs, so we don't want our crops over-growthy ahead of the winter. After the Proline (prothioconazole) they get with their Astrokerb (aminopyralid+ propyzamide) in late November we don't spray them again until mid-flowering. So, good light leaf spot resistance and stem strength are vital. We also really value the pod shatter resistance that allows us to hold-off on combining for the highest yields without added risk."

Keen not to have their OSR too forward too early, 12 August is the earliest date the Stubbs family are prepared to sow. They aim to finish before the final week of the month to get their crops established ahead of the early September peak of flea beetle migration.



Mark Stubbs received a YEN silver award for his 2020 oilseed crop and a bronze award in 2019.





Single-pass seeding, aim to finish drilling before the final week of August are among measures that ensure successful establishment at Marshchapel.

Taking care to preserve soil moisture and maximise seed-to-soil contact in their establishment, they are never afraid to drill when the soil surface is dry either, providing rain is forecast. That way they know the crop is ready to go as soon there's enough moisture for germination.

Their successful main defence against CSFB is crops that come through evenly and all at once, growing away rapidly to establish themselves strongly below ground more than above it.

Mark believes that building soil structure and health over the past 10 years has really helped. The least possible tillage in the rotation, winter covers ahead of spring cropping and regular organic manuring, has seen soil organic matters climb from around 2% to over 6%.

"We bale all our straw because we don't want it interfering with establishment or providing shelter for the slugs," he explains. "However, we leave 10-15cm of stubble to protect the soil surface from drying out and give our OSR seedlings the best micro-climate.

"Our one-pass modified Discordon works well, following the baler as closely as possible and sowing at 45 seeds/m² to deliver our target population of 20-25 plants/m². With the spring development ability of our preferred hybrids, this gives us the really thick-stemmed, well-branched canopies we know deliver best with our three-split, 210kgN/ha liquid fertiliser programme.

"We generally set the low disturbance legs at about 15cm but can go deeper to deal with any compaction. Dropping the seed behind the packer into the 25cm grooves created by the DD rings we've fitted ensures it goes in at a consistent 2-3 cm before being pressed firmly into place with the double set of DD rings we tow behind the machine.

"After extra consolidation and slug pelleting from the Cambridge roll within 24-48 hours, followed by 125kg/ha of DAP, we leave the crop to do what it does best. Falcon (propaguizafop) ensures we keep on top of cereal volunteers, with Centurion Max (clethodim) a key element in our programme ahead of the Astrokerb for the blackgrass control that's one of the main reasons we grow the crop. We only use an insecticide when we can't avoid it."

As the family have a good local source of poultry manure and application without incorporation is permitted after sowing, they're planning to try this instead of the DAP in the coming autumn for some extra CSFB deterrence.

Although large amounts of shot-holing are seldom apparent in them, Mark believes his policy of only spraying off OSR volunteers from his previous crops a week or so ahead of early October ►



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Battling the beetle



A trial field of DK Exsteel that performed twice as well as the rest of the 2020 crop convinced David Northway to stay with OSR.

► wheat drilling almost certainly helps to divert CSFB from his new seeds.

In addition to preventing canopy growth until he really wants it in the spring, not drilling in the first part of August also means few, if any problems with CSFB larvae; certainly none that are any threat to the well rooted and resilient stands achieved by his establishment regime.

Multiple measures

Like many growers, David Northway suffered heavy losses with his oilseed rape crop last year. So he's put in place a number of measures this year that he believes will see it through any CSFB damage.

Based at Topps Farm on the 550ha Breamore Estate near Fordingbridge, Hants, David's no stranger to predatory damage in his OSR crop. "We have a lot of pheasants who can graze it down to nothing in places. So I'm used to putting in place inventive measures to ensure a good establishment," he says.

"The difference with CSFB is that it's over the whole field, rather than just the margins. But just as with pheasants, you can't afford to start off the season on the back foot."

Last year, he had 109ha in the ground, in a rotation that includes winter wheat, winter and spring barley, linseed and spring oats, with occasional poppies. The soil type overlying chalk is mostly medium loam with some gravel and a little clay.

"There were lots of reasons why autumn 2019 was a poor year for the crop. Over most of the area it yielded just 2t/ha. But we had one trial field of DK Exsteel. It wasn't in the best place, drilled into north-facing white chalk, but it performed head and shoulders better than the rest and came off the field at 4.1t/ha.

"That convinced us it was worth staying with the crop, so we put the whole 52.5ha into Exsteel this year, although it's not just the variety that makes the difference — it's everything you do around it."

In autumn 2020, the crop was drilled on 22 August. "The variety fits with our system as it's an early developer, puts



Varieties with pod shatter resistance allow combining of the Marshchapel crop to be held off for the highest yields without added risk.

on growth quickly in the spring, with a medium harvest," notes David. "We drilled at 40 seeds/m², aiming for an established crop of 30 plants/m². Most of the crop was direct-drilled and we tried to leave a long stubble as we think that helps, too."

David believes a consistent seed depth is important, and this is an aspect he struggles to achieve with the farm's 6m Amazone Cayena drill. "The two banks of tines don't work independently, so you do need a level seedbed. We subsoiled a fifth of the area which, although it established with more vigour, appeared to thin out more from CSFB.

"An interesting factor this season was the cover crop, established right next door to the OSR about ten days later and containing two types of radish and brown mustard. I think the CSFB were

National study confirms far less CSFB damage this season

Early results from the 2021 National Cabbage Stem Flea Beetle Management Study confirm a marked reduction in crop damage from the pest so far this season.

Growers across the country, sowing almost 12,000ha of winter OSR last autumn, report a re-drilling rate of just 4% in the benchmarking study run by Bayer with ADAS and NIAB in late March/early April. This compares with 14% dentified in the almost identical study undertaken at the same time last spring.

What's more, 90% of this season's crops survived to the spring and all are being taken through to harvest, against 67% and 61% respectively in 2020 (see chart right).

"This much improved position results from a combination of

noticeably lower autumn CSFB pressure as well as much better soil moisture conditions at drilling," observes Bayer study co-ordinator, Lizzie Carr-Archer.

"Less than 20% of the 187 crops in our initial data were judged to have suffered an intense or substantial challenge from flea beetle last autumn against more than 50% in 2019. At the same time, only around 15% of this season's crops had to deal with low or very low soil moisture conditions at establishment compared with nearly 40% last I season.

"For the second year in a row, earlier August drillings gave higher levels of crop survival," she notes. "The differences between these and later drillings was far less than in 2019, though. "Unfortunately, as ever, some growers have clearly suffered more than most. However, it's really heartening to see how markedly the national position seems to have improved. And even where they are carrying significant larval burdens, many crops appear to be sufficiently well-established and vigorous enough to deal with them."

National winter OSR crop position



Source: Bayer National CSFB Management Studies 2020 and 2021

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Building on our well-received 2020 series with leading UK researchers and advisers, *CPM* and Bayer are working together again this season to share the latest experience in combatting cabbage stem flea beetle — this time with growers up and down the country who are successfully doing so.

This is part of Bayer's role in providing trusted support to OSR growers and their agronomists that goes well beyond the most

drawn into the radish by preference because it was at just the right stage when they were migrating," he says.

The seed was dressed with Integral Pro and the seedbed received 195kg/ha of Agrii-Start OSR, delivering 46kgN/ha and 61kg/ha P_2O_5 . "I've had comments locally about how well the crop established," says David.

"In the spring, the quick growth is really important for us — our soils are not the best, particularly when it's cold and dry, so the quicker the crop pulls away the better. A 300kg/ha application in late Feb of Origin Enhanced-N (OEN) with Polysulphate put 69kgN/ha, 21kg/ha K₂O and 72kg/ha of SO₃ into the crop. The OEN is slow release, which should help make N available to the crop as it needs it. This was followed a month later with 180kg/ha of Single Top (49kgN/ha + 22kg/ha SO₃)," he adds.

With the crop now in mid flower, there are plans next year to increase the OSR area back up to around 100ha. "We've had quite a few Dekalb varieties over the years, and they seem to have it about right — I like the pod shatter plus double phoma resistance and the way they go through the growth stages



Plenty of pheasant grazing at Breamore leads to a number of inventive measures put in place to ensure a good establishment.

robust and dependable varieties that have always been the Dekalb trademark. We hope this helps everyone take advantage of the opportunities offering them the greatest value.

By doing so we are confident the UK can effectively minimise the threat CSFB presents, restoring faith in winter OSR as the best cereal break even amongst those who have been worst hit by the pest.



seems to suit our soil. So we'll probably stick with Exsteel.

"But I can't hand on heart say there was any one factor that's given us a crop with potential this year. It's the combination of



DK Exsteel fits with the farm as it's an early developer, puts on growth quickly in the spring, with a medium harvest.

measures we've undertaken — the more robust the plant, the better it survives, while the quicker it grows, the more potential it'll have," David concludes. ■





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