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OSR new season

A recipe for success

In a bid to retain valuable oilseed rape within rotations, growers and agronomists are devising multi-faceted ‘recipes’ to help improve the establishment success rate of the crop. CPM finds out more.

By Janine Adamson

Much like the alchemy involved in baking a successful sponge cake, growing a profitable oilseed rape crop in the UK is dependent on the interactions between a series of critical variables and inputs.

And where adjusting a specific management technique may help to mitigate one risk factor, it could also inadvertently foster another, explains Jim Farquarson of Eastbury Estates in Blandford Forum.

With that in mind, he’s been working with agronomist Todd Jex from Agrii to devise a multi-point ‘establishment recipe’ to help ensure the 480ha farm reaps the wider benefits of having OSR within the rotation.

“You might ask why bother, but we’re limited on break crops and OSR is a profitable option if grown well. Our other break is spring beans which we grow no more than one in four, but they’re not for everyone and this season has proven especially challenging to get them drilled,” says Jim.

The farm can also struggle with blackgrass, meaning OSR is critical in

achieving adequate grassweed clean-ups using clethodim (as in Centurion Max) and propyzamide (as in Kerb) both ahead of and after first cereals.

So what does the farm’s establishment recipe entail? According to Jim, the first ingredient should be a fast developing hybrid variety. “A crop has to develop quickly in order to grow away from cabbage stem flea beetle and also our two-legged pests – the game birds from our commercial shoot.”

Top performer

DK Exsteel is Eastbury’s current OSR variety of choice, which Agrii agronomist and Dorset iFarm trials coordinator, Jazzmyn Jex, says is one of the best hybrid varieties in her region’s iFarm trials.

“Using drone technology which filters out the buckwheat and weeds, we can see the percentage cover of each variety in our trials. That, paired with data collection in person looking at crop biomass and growth stages, we’re able to clearly see the vigour of each variety throughout the autumn.

“DK Exsteel has been consistently good in our trials since 2017 in terms of autumn vigour from October through to January – always being top of the table in comparison with other varieties (hybrid and conventional).

“This early vigour is so important, especially if you’re drilling later to avoid CSFB as slug pressure is increased with a later drilling slot. The plant has to grow quickly enough to withstand the slug damage.”

As for drilling date at Eastbury, which is another ingredient in the recipe, this usually takes place around the end of August into early September, depending on weather and seedbed conditions, explains Jim. “We’ve found this is our sweet-spot

in avoiding the peak CSFB migration, although we’d be open to drilling later if the right variety came along to support it.”

Furthermore, Todd highlights the problems associated with drilling too early, which could prove tempting for some in a bid to overcome CSFB. “As a result, you may end up using clethodim very early in the season leaving some robust, well-tillered blackgrass plants in the crop to overwinter.

“Then, because we’re experiencing fewer frosts which would ordinarily knock the weeds back ahead of Kerb applications, it’s providing difficult to get a handle of blackgrass in the spring. Drilling OSR too early also impacts PGR requirements,” he stresses.

Once conditions are conducive to establish the OSR crop, it’s sown using an inter-row drill and GPS at 50 seeds/m², including a starter fertiliser. Todd says not only does this give the crop an early boost, but it can prove vital due to the farm’s chalky soils.



A crop has to develop quickly to grow away from cabbage stem flea beetle and also two-legged pests, says Jim Farquarson. Pictured with Todd Jex (right).



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▶ “Even with good indices it doesn't mean those nutrients are available to the crop. This is because of the alkaline pH and high levels of calcium found in chalk soils; foliar nutrition is equally critical,” he explains.

But importantly, before drilling the OSR, a companion crop is sown into long cereal stubble (10-15cm) using a Moore Unidril in mid-August, as soon as the cereal straw from the previous crop is baled and removed. The aim is to provide a 10-14 day head-start prior to planting the OSR, says Jim.

“We've trialled a range of companion crops during the past 5-6 years including phacelia. Whereas it was very successful in controlling CSFB while attracting pollinators, a mild winter that year meant the phacelia performed too well and we took a hit on the OSR yield instead.”

Buckwheat preference

“Now we plant a mostly buckwheat-based companion which provides excellent green cover and masks the emerging OSR crop. We're also trialling fenugreek which emits a curry smell which neither CSFB or the game birds seem to enjoy,” he suggests.

Todd points out the wider benefits of using buckwheat as a companion crop. “It appears to be the best solution for Eastbury in terms of CSFB control, but there are additional positive outcomes of planting this species too.

“Buckwheat's root exudates are aggressive and very effective at mining locked-up soil nutrients. So when the companion crop dies off later in the season, this provides an extra nutritional hit for the OSR in the form of rich organic matter.

“It's just important that the buckwheat is planted ahead of the OSR, not at the same time, otherwise it won't sufficiently mask the emerging crop,” he adds.



According to Jazzmyn Jex, DK Exsteel is consistently one of the best performing hybrid varieties in the Dorset iFarm trials.

Both the companion crop and OSR are planted with a view to disturbing the soil as little as possible, because Todd says significant cultivations seem to attract CSFB. “We regularly see this trend – flea beetle appear ready to graze on land which has been disturbed, although we're not wholly sure why this is,” he queries.

Jim agrees that he's also seen this phenomenon in practice at Eastbury, which is one of Agrii's iFarms. “I'd love to know why cultivated fields attract CSFB. Of course in avoiding disturbance to suppress the pest, this can foster slugs if the seedbed is cloddy. It's finding a balance,” he says.

But this is a balance he's keen to achieve in order to retain OSR in the farm's rotation. “We have an animal feed business, B&W Feeds, which is an outlet for rapeseed meal (a co-product of rapeseed oil production).

“In fact, we're in the process of building a crushing plant which will make it very circular,” explains Jim. “So building more resilience into OSR through our approach to establishment is key in supporting our whole business.” ■

Risk mitigation methods

Of the 10 management techniques most valued by UK growers in reducing the risks associated with growing oilseed rape, no less than nine involve decisions ahead of, or at, establishment.

This is the key finding from in-depth analysis of the past three years of Bayer benchmarking, which involves around 500 growers and 50,000ha of winter OSR.

All nine of the establishment-related techniques were rated 7.5 or more out of 10 by growers for their value and, where employed, led to averages of more than 80% of crops planted taken to harvest.

Bayer technical manager, Ellie Borthwick-North, says the study shows a close relationship between autumn establishment scores and the proportion of crops taken to harvest each year. "This is so close in fact, that regardless of any other seasonal effects, scoring OSR in October will give you a very good idea of how much of the crop is likely to be worth taking to harvest next summer," she continues.

Standing out at the top of the list is sowing the crop only when conditions are reasonable, followed by eliminating compaction ahead of drilling, seedbed fertilisation and choosing vigorous fast-developing hybrid varieties.

Next is employing pod shatter resistant varieties, organic manuring and minimising costs until the crop is sufficiently established, as well as prioritising varieties with all-round agronomic strength and earlier drilling.

Conversely, according to Ellie, the only valued technique which isn't an establishment-related decision, is maintaining the best disease control.

"Most growers shouldn't find our results surprising. The fact that the 10 most valued techniques stand out from a total of 26 scored, though, clearly points the way towards the greatest success with the crop," she adds.

"However, underlining the important role genetics have to play, is the fact three of the top 10 relate to variety choice."

Ellie says it's gratifying to see the



Scoring OSR in October will give a good idea of how much of the crop is likely to be worth taking to harvest, says Ellie Borthwick-North.

vigorous, fast-developing hybrids that have been a key trademark of Dekalb breeding proving valuable. "Vigorous establishment has long been recognised as a varietal essential, but remains of limited value without sufficiently rapid development from two true leaves to get the crop away from autumn challenges.

"The increasing value seen from the pod shatter resistance we've pioneered alongside all-round agronomic strength rather than just specific traits, is equally encouraging," she points out.

Further analysis of the benchmarking indicates hybrid varieties generally perform better than conventionally-bred lines in their establishment, cabbage stem flea beetle larval levels, ability to deal with greater CSFB challenges, and in proportion of plantings taken to harvest each year.

"Our Ex hybrids, which carry the most valued attributes, have been found to perform noticeably better than other mainstream double low hybrids in each case – a testament perhaps to their greater overall robustness allied to compensation abilities.

"We see few, if any, differences in OSR success between establishment techniques during the years, although the vast majority of growers are employing some form of reduced tillage," comments Ellie.

"And while earlier drilling is highly rated, this doesn't necessarily mean sowing super early. Indeed, the real advantage appears to be from drilling before late August and any benefit from reduced CSFB larval populations only seems to come from September drilling," she concludes.



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