

More than just a break crop



An industry-wide campaign which strives to reinvigorate home-grown oilseed rape, champion its benefits and reverse recent ill fortune, is well underway. **CPM** attended the initiative’s conference last month to hear the latest messaging.

By Janine Adamson

The rapid decline in UK oilseed rape hectareage has been deemed such a crisis that a national campaign was launched last year in a bid to seek solutions and ultimately reverse the crop’s increasingly negative reputation.

Known as OSR Reboot, the cross-sector initiative aims to reinstall confidence in the crop across the entire supply chain, including supporting new R&D projects, providing the latest management guidance to growers, and acting as a conduit to policymakers.

As such, more than 70 farmers, agronomists and industry stakeholders came together for the campaign’s flagship conference last month, entitled: A decade of challenges, a future of opportunities. Organised by campaign lead United Oilseeds with support

from AHDB, its purpose was to share the latest thoughts on the crop.

Opening the conference was United Oilseeds’ James Warner, who said a combination of higher risk, lower reward plus competition from SFI, meant the UK was facing the smallest OSR crop since 1983. “From an economic growth perspective, that equates to a £1Bn loss for UK PLC,” he stressed.

DOING THE SUMS

Among the invited speakers was United Oilseeds’ director Robert Sullivan, who’s also a director for land agency GSC Grays. He presented a comparison of winter OSR versus SFI actions CNUM3 (legume fallow @£593/ha) and CSAM3 (herbal ley @£382) – including different performance scenarios – to dig further into the economics at a farm level.

Modelling a 455ha virtual arable farm, he said assuming an average OSR yield of 3.28t/ha, the net profit and therefore economics of the crop successfully outweigh both a herbal ley and legume fallow, a trend which is consistent across three years. However, this shifts once OSR performance declines.

“Based on a poor performing crop of OSR with an average yield of 1.8t/ha, the economics suggest legume



Modelling exercise

United Oilseeds’ Robert Sullivan said assuming an average OSR yield of 3.28t/ha, the net profit for the crop successfully outweighs both a herbal ley and legume fallow.



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Combined factors

According to farmer Julian Gold, he's kept CSFB pressure down on his farm thanks to a wide rotation, ensuring good seedbed conditions and waiting for soil moisture to get the OSR going.

► fallow can out-perform in that situation. Taking this a step further, in a crop failure scenario, both the herbal ley and legume fallow are better options, financially-speaking.

"You can see why when faced with agronomic problems such as cabbage stem flea beetle, slugs and overall establishment challenges, why some growers are making the switch," he suggested.

To produce the calculations, Robert said the numbers take into account variable costs such as OSR seed, fertiliser, crop protection sprays and drying requirements but exclude labour. For the SFI options, this is the action payment minus any variable costs.

He then outlined the SFI options which are available to stack on top of the OSR crop itself. These include CIPM3 (companion crops @£55/

ha), CIPM4 (no insecticide @£45/ha) and SOH3 (summer cover cropping @£163/ha).

Running the same exercise but including the above, an average-yielding OSR crop's gross margin rises from £859/ha to £1085/ha, a poor yielding crop from £240/ha to £466/ha whereas, the legume fallow remains a consistent comparison of £468 (see table below).

"That's an additional £226/ha of income which means for a good crop of OSR, an already strong gross margin is amplified further. But to flip this on its head, it also means to break even with a legume fallow, an OSR crop has to yield at least 1.8t/ha plus those SFI options – so you have to ask yourself if this is realistic in your situation?" he queried.

To conclude, Robert raised the concept of post-OSR legacy effects which

Gross margin £/ha		
	Without stacked SFI	With stacked SFI
Average yielding OSR Based on 3.28t/ha	859	1085
Poor yielding OSR Based on 1.8t/ha	240	466
Legume fallow	468	-

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can be observed in the rotation, whether that be residual nitrogen, herbicide considerations or the impact on a following wheat crop. “A legume fallow is low risk but it’s also low reward – the choice is yours.”

To expand on the benefits of including OSR in a cropping rotation, United Oilseeds’ Nick Hobson took to the stage. His main message was that although the phrase ‘break crop’ is technically correct, the terminology is downplaying OSR’s value.

“OSR shouldn’t be an afterthought – labelling it a break crop is doing it a disservice because the numbers really can stack up. As the UK is producing only a third of its domestic demand, this means there’s always a market and a buyer for home-grown OSR – few commodities can be so liquid,” he said.

“Plus, the market drivers are very different to wheat and barley which means it’s easier to manage financial risk across a rotation because a grower can trade into different baskets.”

Nick stressed that he perceives OSR as the most important edible crop in the UK. “I really believe in this product, it’s one of the cleanest crops to grow and you’re not clearing forests as a consequence.”

Badging himself an ‘average’ OSR grower, Julian Gold, farm manager of the 750ha Hendred Farm Partnership in Oxfordshire, said he agrees with OSR being a fantastic crop.

With a wide rotation – growing the crop one in six or seven – he explained despite ups and downs, his current five-year rolling average is just over 3t/ha. “Even in poor years, OSR allows for high yielding following wheat crops, as a result, it contributes to our P&L (profit and loss) well.”

In terms of his approach

to crop management, he shared that experience has told him aiming for better quality plants through lower hybrid seed rates, is the way forward. He added that the results have been better rooting with less apical dominance in the crop.

Julian also reminded of the importance of ensuring good seed-to-soil contact, which is something he achieves by rolling at least 2-3 times post drilling. A consequence seems to be lower CSFB pressure, he suggested.

“We don’t have a massive flea beetle problem at the moment which I believe is down to a range of factors: our wide rotation, ensuring good seedbed conditions and waiting for soil moisture to get the crop going.

“We only observe populations when we sow adjacent to a previously planted OSR area, or next to a field of winter bird food SFI option.”

CULTURAL CONTROL

To provide a researcher’s perspective, AHDB’s Dr Sacha White presented cultural approaches to CSFB control for both adults and larvae. He said in terms of adults, sowing date is most impactful to help mitigate shot-holing.

“This is either going early so the crop has a chance to establish well and bounce back from subsequent feeding, or, planting later so the OSR emerges after the CSFB adult migration has largely finished so beetles are likely to be elsewhere.” Whereas for larvae, the later the crop is sown the better, he added.

Sacha pointed out that despite researchers having a good handle of individual cultural control methods, there remain significant knowledge gaps for the industry to address. For one, growers desperately require a new



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Cultivation control

Based on research which indicates the majority of adult CSFB are present at the end of September, there should be an opportunity to control the pest using cultivations, suggested Niab's Colin Peters.

responsive treatment to gap fill the loss of insecticides, he stressed.

"Then, we lack understanding of how best to stack all of the

available cultural control measures for the optimum outcome."

Sacha then highlighted the role of decision support systems. "These have the potential to predict pest pressure, guide treatments and methods.

"But ultimately, if we can improve our knowledge exchange coupled with robust research, we should be able to achieve reliable CSFB control in the future," he said.

The final presenter at the conference was Niab's Colin Peters who shared findings on post-harvest cultivation trials. He said based on research which indicates a large proportion of adult CSFB are present at the end of September, there should be an opportunity to control using cultivations.

"So we looked at cultivating immediately after a mid-July harvest using discs at 50mm deep. What we found was we reduced the adult flea beetle emerging from the ground by 68% until the end of September,

compared with uncultivated."

This led to Niab looking at exactly where the pupae are within the soil profile, he continued. "Soil samples were taken at 30mm, 60mm, 90mm and 150mm depths, which were then floated to extract the pupae.

"We discovered the majority of them were in the top 30mm which is useful because whatever we're achieving – whether it's crushing, exposing to predation, drying out or whatever – it's a shallow depth which is important."

He said more work is required to further understand the lifecycle of CSFB because clearly this method works, but knowing how it works will unlock whether cultivations can be useful, plus the impact of soil type and machinery choice on its effectiveness.

Colin's parting message was to encourage farmers and agronomists to conduct simple larvae counts to help understand potential CSFB pressure on a per-farm basis. ●

When crush comes to shove

With crushing plants importing significant quantities of OSR to meet UK demand, what impact is that having on the processing side of production?

According to ADM Crush General Manager, Rory Blacklock, the current decline in UK OSR crop is compounded further following a decade of external challenges. "We've had Brexit, Covid-19 and the war in Ukraine which have made for a host of supply chain disruptions.

"What the situation in Eastern Europe has highlighted, is the UK's over-reliance on imports being sourced from one particular area. The issues we experienced in getting OSR out of Ukraine in the early days really emphasised the importance of having a bigger UK crop, if only to prevent us from running out of seed," explained Rory.

From ADM's perspective, these externalities have driven up costs in the form of energy price hikes and shipping, while creating a pinch point in terms of sourcing adequate labour.

To provide further context, he shared that in 2018 the UK was importing just over 200,000t of rapeseed while now, the figure for 2025 is expected to be more like 1.3M tonnes. "That's never been done before with some plants having advantages over others. But

our plant was built in the early 1900s, so the infrastructure simply isn't there to handle such significant quantities of imported seed," he warned.

Rory also reminded of the environmental consequences. "Not only are we outsourcing the neonicotinoid burden, but shipping rapeseed from Australia, for example, is driving significant amounts of carbon into our supply chain."

On a more positive note, he said the demand for UK rapeseed oil is rising, attributing the upward trajectory to population growth and the fact it's an ingredient in many products which are consumed daily. "There's a shift towards more sustainable options such as rapeseed oil, to move away from those like palm oil which are produced in areas at risk of deforestation.

"This highlights that if we continue to lose OSR area in the UK, that's putting us at significant risk of off-shoring environmental concerns."

UK rapeseed meal demand is also on the up, he said, mainly as part of the move away from imported animal feed proteins which can come with significant carbon footprints and



Sustainability benefits of OSR

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high environmental consequences.

To conclude, Rory said he still believes there's a future of opportunity for crushing plants. "But supply chain security is fundamental as it allows us to be more certain in terms of crush rates – that we'll have continuity of supply in the face of any global challenges.

"That then supports crush margins which should encourage investment in our industry so we can continue to offer customers the sustainable solutions they desire."