

“The top performing OSR growers have a strategy for establishing their crops that adapts to the season.”

# Tip the OSR balance in your favour

## Technical Arable resilience

A deficit of European supply means prospects for oilseed rape look good, provided crops drilled this autumn get off to a good start. CPM seeks the key ingredients for success.

By Tom Allen-Stevens

**For growers looking to build resilience into their system, oilseed rape offers potential financial and rotational benefits, but crop management can be a tricky call, notes Frontier head of technical services, James Moldon.**

“At the moment, it’s a profitable crop — most can grow it for £300/t or less and the market price is easily the right side of that. The challenge comes when out of five fields you grow, three are good, one is average and one underperforms.”

Key to increasing the crop’s success is a good establishment, he says. “But it’s a false economy to do the bare minimum to get a crop in case it fails — you’ve potentially resigned yourself to losing the battle before it’s started. The top performing OSR growers have a strategy for establishing their crops that adapts to the season, using moisture levels as the indicator rather than calendar date.

“The secret is to tip the balance in your favour — understand the challenges you’ll face and build in the management practices that’ll guard against them.”

The first challenge to get to grips with is the market, which can be highly volatile, but offers UK growers some key opportunities, explains Frontier head of oilseed trading Philip Kimber. “Rapeseed is part of the oilseed complex, which is a truly global market place. It is driven largely by the predominance of soybeans with a global production of around 350M tonnes, add to that another 62M tonnes of canola, which we know as rapeseed. Both of these compete in vegetable oil and protein markets. Soybean production is heavily dominated by North and South America where the crops are more vulnerable to severe and extreme weather, making it a volatile and difficult to predict production.”

### Phenomenal growth

Soya in particular has enjoyed “phenomenal” growth over the decades, buoyed by changing diets in China and Asia spurring on demand. “I don’t see that changing any time soon, and the production volatility elsewhere plays nicely into the hands of UK growers where we enjoy a more stable climate for oilseed production.”

What’s more, Europe is in deficit on rapeseed, and imports around 3-4M tonnes annually. “Here in the UK, the area of crop for 2017 harvest is around 530,000ha, but we need around 650,000ha to fulfil crush capacity.”

Frontier’s parent company Cargill operates two large crushes in Liverpool and Hull, with ADM running the UK’s largest crush at Erith, A fourth, smaller crush at Stratford is currently under construction.

“There’s good domestic demand and processors far prefer a relatively well priced home-grown crop of known quality crop over imported rapeseed. But if our domestic market is constantly undersupplied, future investment in UK processing could look less certain” Philip Kimber warns.

So how can growers consistently benefit from supplying this market but guard against its volatile prices? “It’s always a good strategy to sell a percentage forward securing margins,” he advises. “For example, Frontier’s Harvest Plus contract allows growers to fix a minimum price, but still gain should there be a later market upturn.

“Then there are Frontier pools where you could get the benefit of sophisticated market intelligence and monitoring from a trading team who will work throughout the season to maximise their pool growers’ margins. ▶



*The secret for James Moldon is to understand the challenges you’ll face and build in the management practices that’ll guard against them.*

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Paul Cartwright's main tactic for overcoming flea beetle is fast, sure and vigorous establishment up to the four-leaf stage.

► Storage contracts are also available to allow swift harvest movement yet allow growers to remain in the market. With such volatility timing is certainly of prime

## Response of OSR to an early biostimulant



Source: Frontier 3D trials, Haywold 2016-17; cv InV1030; seed rate 60 seeds/m<sup>2</sup>, drilled 9 Sept.

importance," he advises.

So the market's there, it's prospects are good and there are ways you can protect against its volatility. But none of this information answers the question of whether

you should invest in the crop in the first place.

"What you can't afford to do is to put the crop in and expect it to fend for itself," advises Frontier crop production specialist Paul Cartwright. "If you invest in the crop in its ►

## Nutrition need at drilling

More than many other crops, nutrition plays a major role in OSR establishment, believes Frontier national crop nutrition technical manager Edward Downing.

"The challenge for the crop is that it's a very small seed, giving it limited energy reserves to push out roots and shoots. So once it germinates, it'll be dependent on what it can find in close proximity," he says.

Coupled with this is the flea beetle challenge. "Without a seed treatment, you have to stack everything in your favour, so anything that will encourage the plant to get away will be of benefit.

"So you must do something to feed the emerging crop, and most importantly, do it straight away, at or before drilling," he advises.

Nitrogen is needed, but more importantly phosphate in this early phase, he explains. "The OSR root goes down and then out. Key to its development is access to P — that's a nutrient that doesn't travel in the soil, so the root has to find it. For this reason, placement of P fertiliser can be very beneficial but this relies on the capabilities of the drill."

Organic manures fit in nicely. "They're fantastic for OSR, providing readily available P and N as well as organic nutrients that will become available as the season progresses," he says.

"You need to incorporate manures to avoid

ammonia loss, but note that ploughing them down may put the nutrients out of reach of the young roots in the important early establishment phase. Be careful that poultry manure, anaerobic digestate and slurry aren't applied at excessive rates, but biosolids often work well. Also watch for compaction at application — you'll undo all the good if you restrict taproot growth."

Mineral applications must be made before, at or immediately after drilling, he says. "Again, focus on getting the P as close to the seed as you can. We've done plenty of trials work looking at autumn nutrition and the different ways to apply it, and while kit on the drill can be very effective, the overriding factor is to get the timing right.

"Diammonium phosphate (DAP) is the product of choice — an application of 166kg/ha delivers 30kgN/ha and 76kg/ha of P2O5. If this can be placed at drilling, great but if not an overall application immediately after drilling can still be very effective (see chart opposite). If shallow cultivating, consider doing this before drilling so it's incorporated into the germination zone by the drill."

Some drills can't cope with true granular fertiliser, he notes, only being able to apply micro-granules or even liquid products. "But these can be just as effective as DAP in the establishment phase although note the total P applied will be lower when managing



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crop offtakes."

OSR plants will suffer if magnesium levels are low, so these should be checked and rectified with an early spring application of Kieserite fertiliser (magnesium sulphate). Growers might also want to consider an early foliar treatment if soil levels are low. Boron is also essential for bud formation, which takes place pre-Christmas, and helps winter hardiness. So again, an autumn foliar application can be beneficial, notes Edward Downing.

"Potash isn't needed in great quantities until early spring, so immediately post-Christmas is the best time to apply it. And as you go into the spring, manage the canopy, but the story that's often lost here is total N need. Just because the canopy is large, don't assume you can cut back on total dose. You can't deliver high yields on low N rates, so the trick to canopy management is timing the dose correctly," he concludes.

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## Field-condition focus for a successful crop

For Essex grower Alan Black, based at Grange Farm, Tendring, success with oilseed rape is all about ensuring the seed is sown in the right conditions.

"I go by conditions on the day, not calendar date," he explains. "Last autumn, we waited until we knew there'd be enough rain, which didn't happen until 9 Sept, which is when we drilled. Many other crops in the area had already failed by then."

His OSR crop not only pulled through, but is one of the best crops looked after by Frontier agronomist Marcus Mann. "It's a late drilled crop, but Alan has generally avoided large amounts of cabbage stem flea beetle damage. I believe that's down to how the crop's managed in those early stages."

The farm has 200ha of arable on medium loam soils, with OSR the main break after two wheats. "We always try to put OSR behind Gallant because the straw chops to dust, which helps establishment," says Alan Black.

The ground isn't touched until a single pass with a 3m He-Va Combi-Lift and KRM seeder unit that places the seed behind the six subsoiler legs. "You can put the discs in or out as necessary to

cover the slots, but the crucial bit is the packer roller.

"We then follow immediately with a 6m Farmforce Double Press, towing a set of Dalbo Cambridge rolls, and if conditions allow, we'll make another pass with the 12m Dalbo Cambridge rolls. The Double Press does the most good, bringing up moisture from further down which helps get the seed germinating."

Last autumn, 32ha of conventional varieties Ovation and Picto were drilled at 70 seeds/m<sup>2</sup>, aiming for a final population of 35 plants/m<sup>2</sup>. "I've trialled hybrids, but I reckon there's no noticeable difference in vigour. The speed of emergence is down to how long the seed is sitting around waiting for moisture."

Diammonium phosphate was applied at 166kg/ha at cotyledon stage to feed the young plant, reports Marcus Mann. "It should go on immediately after drilling but there is the concern to spend on the crop until we can see it's emerged."

The same goes for the herbicide — Elk (metazachlor+ quinmerac+ dimethenamid-p) was applied at the two-leaf stage. This was allowed up with Astrokerb (aminopyralid+



*Alan Black chooses drilling date by conditions on the day, not calendar date, and carefully manages the early stages.*

propyzamide) in Nov. "Blackgrass and especially ryegrass are a problem on this farm, and we'll often use an early Crawler (carbetamide) or Centurion Max (clethodim) application to keep them in check. But the key to grassweed control is to get the crop established and away early on.

"We try to avoid pyrethroids and instead aim to give the young crop growth stimulants, so we'll use Radix or Tauron at the 2-3 true-leaf stage. Refinzar (penthiopyrad+ picoxystrobin) at 0.5 l/ha was applied to keep phoma out and for root enhancement, but again the main defence here is to ensure it grows away well."

► early stages, you're more likely to reap the rewards later on."

OSR establishment has come under scrutiny through years of Frontier's 3D trials. These have honed management advice, he says, and highlighted some key ingredients that will stack the odds in your favour and deliver a crop cover into the winter you can rely on.

"Much of it comes down to how you manage your rotation and your system. The crucial aspect is to drill when you know the crop will grow straight away. That means it needs moisture and good seed-to-soil contact."

You can't predict when the moisture will come, but you can ensure your system has the flexibility to respond to the weather

windows when they offer themselves. "It's a busy time of year, but OSR drilling needs to be prioritised. And a good entry in the rotation, such as winter barley, rather than late maturing wheat or a spring crop, allows you to prepare the ground."

Regarding pests, the number one nemesis is cabbage stem flea beetle, and Paul Cartwright's main tactic for overcoming

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it is fast, sure and vigorous establishment up to the four-leaf stage. "Much of the vigour will come from the variety, so match conditions to the variety you choose."

Drilling date is a key factor, with early being first half of Aug, mid to late Aug about average and late once it gets into Sept. "At the mid to late drilling dates, vigour becomes more important."

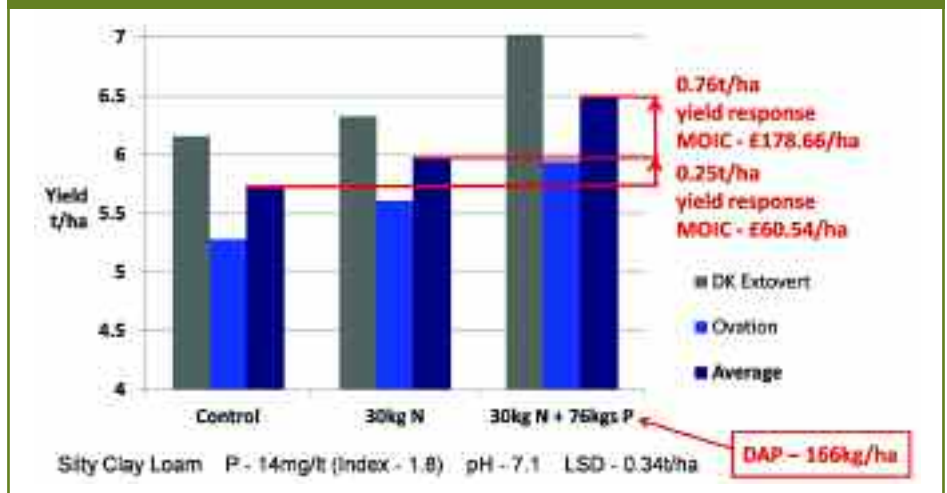
Grassweeds will be an issue for many, and Paul Cartwright advises growers with a serious blackgrass issue to consider whether it's wise to put those fields into OSR. "Are you in a get-fit phase or keep-fit phase of dealing with blackgrass? If the former, spring breaks may be the better option."

Once in the ground, nutrition is the key ingredient (see panel on p26). "But will the crop pick it up? Give it every encouragement to put out its roots, especially the taproot — any compacted layer will hinder crop development."

There are other ways to encourage root growth, and Paul Cartwright picks out one or two products that have done well in Frontier trials. "A phosphite seed coating is a good way to promote root growth. Then the plant benefits from a top-up at the two-leaf stage — we've found Tauron applied with the early herbicide or insecticide helps stimulate growth. This contains zinc ammonium acetate that alters the hormone levels in the young plant, stimulating root growth. Until it gets to the four-leaf stage, the plant is at its most vulnerable."

Autumn is the time for phoma control and to start light leaf spot protection, he notes. "The right variety will help here, and a big plant early on will reduce the potential damage from phoma infections."

## Yield responses to phosphate



Source: Frontier 3D trials.

But all of this advice comes with a caveat. "It'll be a nice problem to have, but you may end up with a crop that's too big. Be

prepared to apply a fungicide with a growth regulatory effect or Caryx (metconazole+ mepiquat-chloride) before winter sets in." ■

## Arable resilience

UK Farming is facing changing times which will bring both new challenges and opportunities. Whatever happens, businesses that adapt and have a resilient strategy in place will be better placed to weather the changes and emerge fitter and stronger, ready to take advantage of what lies ahead. But what does that mean on farm?

In this sponsored series, CPM has teamed up with experts from Frontier to examine the everyday management decisions and explore what separates a resilient strategy from one that

leaves a business exposed. From rotations, nutrition and precision techniques, through seed choice, genetics and markets to soil and plant health, the aim is to highlight the elements that ensure the arable business thrives.



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