



Unconventional OSR recipe pays dividends in Yorkshire

02-Feb-2017



Like many growers, Richard Wainwright was disappointed with his oilseed rape performance at Birch Farm, Oswaldkirk on the northern edge of Yorkshire's Howardian Hills last season.

Apart from virtually doubling his winter rape plantings to 128 ha in a rotational adjustment to nip a developing black-grass problem firmly on the head, though, he isn't managing this year's crop any differently. And, with an average delivered yield of 4.65t/ha from his 70 ha of mainly, DK Extrovert generating a 2016 margin over all input and operating costs of nearly £450/ha, why should he ?

Despite averaging well below the 5.46 t/ha of the 2015 crop of DK Expower which won him Dekalb's national lowest cost of production award last summer, indeed, this season's market recovery meant a good £150-200/t increase in overall earning power at November values.

"Last harvest was disappointing as our rape had come through the wet winter and late spring in such fantastic shape, promising us a second successive 5t/ha-plus average," said Richard.



“The dull summer just didn’t allow us to take full advantage of the well-branched and deeply-podded hybrid canopy we always concentrate on building. But we’d done everything we could and our crop was just where we wanted it to be. So we certainly haven’t been beating ourselves up or making significant changes as a result.

“Winter rape fits our six to seven year winter cereals-based rotation very well. We know it can deliver cracking yields from our loamy wold and heavy clay loam over gravel ground when we get enough sunlight. What’s more, it and the spring beans we also grow give us just the breaks we need to keep on top of grass weed problems, in particular.

“Ryedale’s long history of stubble turnip growing means we have more clubroot than we’d like in some fields,” Richard pointed out. “However, we’re keeping this at bay by growing tolerant varieties where we need them and treating all our known hotspots with Calciprills. “The ‘no-compromise’ emphasis we put on first class establishment and plant health are almost certainly paying dividends here, as well as in combatting phoma and light leaf spot – not to mention slugs, pigeons and flea beetles.”

At Birch Farm, Richard Wainwright’s winter OSR establishment recipe is far from conventional. It involves early to mid-August sowing after winter barley, with fast-developing hybrids at very low, variable seed rates following concentrated farmyard manure incorporation in what he calls ‘Max-till’.

Working closely with ProCam agronomist, Jim Calvert, he has perfected this approach over the years in pursuit of his primary target of crops with 30 cm of tap root by the end of November.

Once the barley straw is baled and removed – for the 1200 beef fatteners which form an important parallel enterprise in Richard’s family partnership with his brother-in-law, Peter Armitage and his father Ian – the regime involves intensive manure incorporation into the top soil layers with a Sumo Mixidisc.

“After around three passes with the Carrier we sow the OSR across the full width of our 3m Sumo Trio – from around August 12,” explained Richard. “We’ve experimented with sowing in strips behind the sub-soiler legs but find that spreading the seed after the discs and before the packer roller gives us more consistent results. We follow this up with a good Cambridge roll to ensure the best seed-to-soil contact.

“It’s gooseberry bushes we want. So we aren’t looking for more than 15 plants/m² in March and sow at an average 30 seeds/m². With all our ground conductivity scanned and mapped, though, we vary this by plus or minus 10 seeds/m², sowing as little as 20 seeds/m² in many places.

“Some people think this is far too risky,” he said. “But, by drilling reliable, fast-developing hybrids like DK Extrovert early into decent moisture and well-fissured soils with a nice manure mulch we can be sure of getting our crops away strongly enough to survive all the things that attack them.

“Max-till means we get big, leafy crops going into the winter with few, if any pigeon runways. Because the plants are deeply-rooted and well-spread out they produce thick, robust stems with excellent standing power.

“Reliably good establishment means we’re not tempted to add extra seed for the slugs or the pigeons. So we’re not getting in the way of our crops’ ability to produce the open, well-branched canopies they need for the most efficient sunlight and nutrient capture in seasons where pest pressures are lower than normal.”



Within his variable rate sowing, Richard Wainwright does, however, always give his turning headlands 25% more seed to compensate for their inevitably lower productivity. His attention to headland establishment detail extends to extra pre-sowing subsoiling. And he also goes back with a slug peller to sow all the field corners that the length of his Trio set-up prevents him reaching. This results in truly edge-to-edge crops.

Particularly vigorous OSR establishment takes the pressure off early agronomy at Birch Farm and allows the most effective cost control. Last season's crop, for instance, was produced for a total input cost of under £400/ha – or less than £80/t.

Although slug control is an early management priority in the invariably wet autumn conditions of Ryedale, rapid and robust OSR rooting means a noticeably greater tolerance to pest damage. This and varieties with high levels of phoma stem canker resistance also give welcome autumn disease control flexibility.

As a result, only a single late-autumn fungicide is employed as a rule – mainly as an insurance against light leaf spot – and Richard sometimes even questions the need for this. A further stem extension spray in March completes the foliar disease programme.

Large, well-established crops and the nutrient buffering value of good organic matter levels take the pressure off spring fertilisation too. This is helped by the routine use of both autumn and spring trace element mixes to promote plant health and nutritional efficiency.

Overall nitrogen use is typically around 170-190 kg/ha. This is applied in three variable splits with the SoilSense system which is proving a real boon in evening-out canopy development for the most condensed and efficient flowering.

"If the crop is substantial enough we forget the final split," said Richard. "The fertility we've built into our ground helps here. As does the 10kg/ha of foliar N we always apply to support pod fill.

"Despite generally tall crops, we avoid using PGRs wherever we can," he added. "The thickness of their stems and the structure of their canopies means we're seldom worried over our crops' standing power. And PGRs only add stress to the plants – something we do everything we can to minimise.

"That's also why we give them the trace element and pesticide inputs they need precisely when they need them, rather than tank-mixing. With our own sprayer, the cost of another pass is really only my time, and it gives me an extra opportunity to inspect the crop and fine-tune our management.

"Unless we really have to use them, we're not big fans of insecticides in the run-up to flowering, either. Growing well-branched crops that come into full flower rapidly, we're prepared to lose a proportion of our flowers to pollen beetle to maximise the availability of the pollinators we depend upon for the best pod set.

"From here on, apart from guarding against sclerotinia and giving a little extra late nitrogen pod-filling boost, it's all a matter of how much sunlight we get to allow the efficient canopy we've established and nurtured to do its stuff. Which is out of our hands."

Having said that, Richard Wainwright has another couple of useful management tricks up his sleeve to make the most of his OSR.

Having been horrified by the rapeseed losses he saw to heavy rain locally 10-15 years ago, he is a firm advocate of both pod shatter resistant varieties and pod sealants applied in mid-June, up to four weeks before Roundup desiccation.



This belt and braces approach allows him to delay desiccation for as long as possible each summer to build the maximum yield and oil content. Desiccating on July 28 last season gave him two or three weeks more pod-filling time than many crops in the area, helping make-up for the month of growth he estimates most of his crops lost to the cold, wet spring.

“Too many people limit their rape performance massively by killing their crop too early,” he insisted. “Every day of seed filling lost reduces seed yield by 1-2% and has a major effect on oil content. In particular, we don’t want to waste the slightly later-maturing pods we have well down the canopy. And we can only have the confidence to wait for them if we know we’ve protected ourselves against losing the more mature seed from higher up.

“We find the combination shatter resistant varieties and the pod sealant we use so effective that even the pods chopped in half by the side knives on the combine don’t burst open. What’s more, last season we didn’t have any small or red seeds either.

“Our recipe certainly won’t suit everyone,” concluded Richard. “But, by getting the most each season allows us to achieve from robust, modern hybrids grown in a way that exploits as much of their potential as possible, it ensures OSR remains a vital earner and cereal break for us.”