Low Biomass OSR Set For Growing Success With New Generation Varieties

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Low biomass oilseed rape that is consistently more reliable to grow, easier to manage and very much faster to harvest is set to become increasingly popular across the country with the advent of a new generation of high yielding varieties with first class agronomics.

This was the view of industry specialists speaking at their official launch at the Dekalb OSR Technology Centre at Saltby on the Leicestershire/Lincolnshire border near Melton Mowbray.

Alexandra Cadet, European technical development manager with the leading breeder stressed that true low biomass rape with the semi-dwarf character has come a long way since their original variety, DK Secure came on to the Recommended List in 2009/10.

The first of the company's new generation varieties, DK Secret joins the RL this season with an East & West Region treated gross output fully 0.8 t/ha ahead of its predecessor from a much higher yield and oil content. Not only this but it stands head and shoulders above the only other variety of its type on the List (Troy) in performance terms, has the highest phoma stem canker and light leaf spot resistance ratings of any Listed variety and is one of the earliest to mature.

"While they are an average 30-40 cm shorter than conventional height varieties, the latest studies show our new generation low biomass varieties have root systems every bit as extensive as the best modern hybrids," Alex Cadet pointed out. "What is more, their autumn development above and below ground has proved equal to our hybrids and significantly better than pure line controls.

"Unsurprisingly perhaps, combined with a growing point close to the ground throughout the winter, this particularly strong early root development is making them a firm favourite in central Europe where robust establishment and winter hardiness are key priorities.

"The fact that they are always much shorter than varieties without the low biomass trait even on high fertility sites, with high plant populations and at high nitrogen inputs makes canopy management much easier and less risky too," she noted.

"More even flowering over a more compact period also means considerably easier sclerotinia management together with the most efficient light interception for more consistent performance; especially, we find, after adverse spring weather. And last, but by no means least, our latest varieties typically give a 35-40% improvement in combining speed.

"Alongside first class foliar disease resistance and the pod shatter resistance standard in our varieties, these advantages give growers the opportunity to substantially reduce their production risks and improve their management flexibility.

"DK Secret and the extensive pipeline of next generation low biomass varieties behind it clearly offer solutions to many of today's biggest OSR concerns," said Alex Cadet. "That's why we see them becoming increasing popular over the next few years."

Hutchinsons' technical manager, Dick Neale, who has more UK experience with growing varieties with the semi-dwarf character in the field than almost anyone, is equally enthusiastic over the potential for the latest varieties.

Working with true low biomass varieties – as distinct from those which tend to be shorter but do not have the semi-dwarf trait – for almost a decade now in trials and commercial practice, he sees no reason for most growers in the country not to grow them these days.

“Up to now, the popularity of these varieties has been limited by two main things,” he explained. “Firstly the perception that they were off-the-pace from standard height varieties both in performance terms and agronomically. And secondly, a lack of understanding about their growth habit, the benefits it offers and how best to manage it.

“DK Secret is certainly up there with the best of varieties performance-wise. A gross output rating of 100 on the East & West RL puts it 6% above Troy and not statistically different from the likes of SY Harnas, Popular and Fencer. This is if you assume that RL trials do inherently shorter varieties justice, which our trials and field studies which deliberately avoid shading effects show they really do not.

“Indeed, our latest technology centre work shows no real difference between the performance of the Dekalb low biomass varieties we’ve been evaluating and the vast majority of today’s standard height hybrids and pure lines.”

Understanding how to deal with their very different growth habit is something Dick Neale feels can only come with experience. And in his experience far too many people have been getting the wrong advice in this respect to date.

“The only real difference between these and standard height varieties is around 18” of stem,” he insisted. “This makes a huge difference to the standing ability of the crop, the flexibility to apply fertilisers and sprays with farm equipment after stem extension and, most importantly, the speed of harvesting and ease of combine setting for minimal seed loss and reduced crop residues in the following seedbed.

“We’ve seen work rates of up to 7.5 ha/hr with a 12m header in 6.5 t/ha crops, giving a 40% advantage in combine output. As well as better diesel consumption, this means a much shorter rape harvest and less need to invest in a larger combine – or even a second one – to minimise farm harvesting risks. Far less trash on the ground also means fewer first wheat slug problems and easier cultivations.

“It’s in the winter and spring that the different growth habit of varieties with the semi-dwarf character really needs to be understood,” Dick Neale continued. “The best varieties are clearly as vigorous as any others, have very similar GAIs through the season and give better light interception from flowering onwards.

“However, they stay far closer to the ground in the winter and only go into stem extension relatively late in the spring – after all, they’ve far less growth to put on. So they cause obvious concerns with pigeons and weeds on the one hand and ‘regrowth anxiety’ on the other.

“The solution to the early winter concern is simple in my experience. It’s just a matter of increasing the seed rate to say, 65-75 seeds/m2 rather than 50-60 seeds to minimise the risk from pest losses.

“The great thing here, of course, is that if you escape much in the way of losses, over-thick crops won’t give you problems with lodging. We had one site with 164 kg/ha of available N in the soil, courtesy of plenty of pig muck, which had enough extra spring nitrogen applied to put every variety, with the notable exception the one with the semi-dwarf character, flat.”

As far as ‘regrowth anxiety’ is concerned, Dick Neale’s solution is equally pragmatic; understand that the true low biomass varieties are actually at exactly the same growth stage as conventional height ones shooting upwards alongside them; and have faith in their abilities.

“Once you discover how they actually grow for yourself you won’t have a problem,” he said. “You’ll find the canopy expands with branching from ground level, the flowering is even and compact and the crop knits well together for harvesting. In addition to all the harvestability advantages you get from this, the lack of unnecessary stem means the best connection between root and pod which is what really counts in OSR performance.

“You need to appreciate too that nothing is hidden with an inherently short variety. So you’re likely to see any black grass growth above the canopy, rather than being concealed by it as you’ve been used to with taller types. This tells you the truth, though, allowing you to make better weed control decisions for the future.

“The only other thing you need to appreciate is that varieties with the semi-dwarf character should be managed in exactly the same way as any other winter rapes,” Dick Neale concluded. “They need the same disease and pest control. They have the same nutrient requirements. And they respond equally well to PGRs for canopy management.

“With the sort of performance potential and excellent all-round agronomics we’re seeing in the latest Dekalb low biomass varieties, I can only see them growing in popularity on anything but the thinnest, brashiest sites where I would seriously question the wisdom of growing OSR anyway.”

Click here to view our Low Biomass Variety; ***DK Secret***