



Stress Tolerance Underpins Modern OSR Variety Development

27-Apr-2016

Stress tolerance is as important as output in modern oilseed rape varieties if growers are to cope with today's economic and environmental challenges, insists leading European breeder, Laurent Verdier.



Speaking at the unveiling of six new DEKALB varieties for the coming season, Monsanto's winter OSR breeding lead stressed that, alongside high output potential under the best conditions, the future increasingly lies with varieties that also perform well at lower inputs and under more challenging conditions.

"In dealing with disappointing rapeseed values as well as increasing legislative restrictions, pesticide resistance and climatic uncertainty, growers need varieties that give them management flexibility and, above all, ones that won't let them down," he argued. "Varieties that are better able to tolerate the many establishment, disease, pest, weed, nutrient and harvest stresses they face during nearly 12 months in the ground.

"This means characters like disease resistance, vigorous establishment, rapid autumn development, nitrogen efficiency and pod shatter resistance that used to be 'nice to haves' have become essential.

"To breed the highest levels of tolerance to such stresses into DEKALB hybrids we select and test under the harshest conditions.

"Employing no fungicides on sites with the greatest disease pressures, for instance, has been our key to developing the most robust phoma and light leaf spot resistance. Drilling later than normal and into difficult seedbeds has allowed us to identify the most vigorous-establishing and fast-developing lines. Delaying harvesting on exposed sites has been vital in



securing strong resistance to pod shattering. And testing varieties widely at nitrogen inputs of just 120 kg/ha as well as standard levels is leading to the development of high yielding varieties which lose less performance when nitrogen supply is restricted.

The first new variety to emerge from DEKALB's restricted N development programme is DK Exception. A leading candidate for 2017/18 Recommendation with a gross output rating of 108% of controls in NIAB-TAG Trials, the variety is proving popular throughout Europe for its exceptional performance under a wide range of conditions, explained UK technical specialist, Will Vaughan-France.



"DK Exception also carries double phoma resistance together with strong resistance to light leaf spot and pod shatter resistance," he said. "Its rapid-medium autumn growth habit is well-suited to earlier drilling as well as the main drilling window.

"Our second RL candidate, DK Exclaim also suits all but the latest drilling slots. Performing on a par with DK Exception in NIAB-TAG trials, NL testing suggests a slightly higher gross output potential, together with even better light leaf spot resistance. The variety also brings double phoma and pod shatter resistance and the same high lodging resistance and stem stiffness scores as DK Exception.

"Another current candidate for Recommendation is the variety we see as heralding a step change in future UK winter OSR production. With the highest merit rating of all varieties in the national testing system, DK Secret is our latest low biomass hybrid.

"Alongside a gross output that would put it in the middle of the current RL, it scores an 8 for both phoma and light leaf spot resistance, a 9 for lodging resistance and is pod shatter resistant. All of which makes for the easiest possible management. Add to this notably less prostrate autumn growth habit and earlier flowering than traditional semi-dwarfs and DK Secret has wide appeal on many fronts."

The three other varieties officially launched by DEKALB for this season were V324OL which joins V316OL as the second HOLL on the Northern RL; the first standard height and highest output Clearfield variety to be described on the List, DK Imagis CL; and the company's first UK club root tolerant variety, DK Platinum.



“This extension to our portfolio underlines the progress we are making across the whole range of winter OSR types,” noted DEKALB UK breeder, Matthew Clarke.



“DK Exception and DK Exclaim complement DK Extrovert and DK Exalte nicely in the core standard height, double low sector. DK Imagis CL moves the Clearfield opportunity in this sector significantly into the mainstream in both output and agronomy. And with DK Platinum we’re introducing clubroot tolerance at a DK Expower performance level as the first in a very strong pipeline with the character.

“With V324OL we’re confirming the developing ‘beyond double low’ industry opportunity we see for high oleic, low linolenic (HOLL) rapeseed, and with DK Secret we’re reinforcing the credentials of the low biomass sector which we firmly believe represents the future for an increasing number of growers.

“In all these developments, our emphasis is on producing the most robust, stress tolerant hybrids which will reliably deliver the goods in commercial practice, allowing the crop to be profitable even at £165/t,” he concluded.

“While we find the best performing varieties in difficult environments are invariably also the best performers under good conditions, this is most emphatically not the case the other way round. So we are confident growers will see even greater advantages from DEKALB varieties under the sort of disease pressures being experienced this season and wherever they are looking for the greatest input economies through variety-specific agronomy.”



Copyright © 2016 - Monsanto Company

DEKALB® is a registered trademark of Monsanto Technology LLC

Site intended for professionals



All information given orally or in writing by Monsanto or its employees or agents, including the information in this article, is given in good faith, but is not to be taken as a representation or warranty by Monsanto as to the performance or suitability of products, which may depend on local climatic conditions and other factors. Monsanto assumes no liability for any such information. This information shall not form part of any contract with Monsanto unless otherwise specified in writing.