



ADAS TRIALS UNDERLINE OSR POD SHATTER RESISTANCE VALUE

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Seed losses of as much as 0.5t/ha can be saved in the normal run-up to oilseed rape harvesting with the genetic resistance to pod shattering shown in the latest trials at ADAS Rosemaund.

The replicated 2017 trials involved nine leading varieties in commercial use; seven DEKALB hybrids known to have pod shatter resistance and two shatter-susceptible varieties – one hybrid and one pure line.

Standard laboratory shattering tests were conducted with 50 pods of each variety on three separate occasions over a two week period from the end of June – at 10%, 50% and 90% pods ripe respectively – to quantify their shattering susceptibility.

In parallel to this, natural seed losses were measured using aluminium trays laid beneath the variety plots three weeks prior to planned harvest and removed just ahead of combining.

“The trials showed a good correlation between our laboratory shattering assessments and natural seed losses in the run-up to harvesting,” reported ADAS crop research consultant, Dr Christina Clarke responsible for the work.

Even at 10% of pods ripe, shattering was significantly higher in the susceptible varieties than in those with shatter resistance. These differences became more apparent with increasing pod maturity so that at 90% ripeness shattering in the resistant varieties was typically less than half that in the susceptible ones.

“We also recorded significant differences in natural pre-harvest losses,” said Dr Clarke. “The two shatter-susceptible varieties lost the equivalent of 0.23 t/ha and 0.57 t/ha respectively against the 0.1 t/ha or less lost by those with pod shatter resistance.”

As well as underlining the scale of seed losses that occur through shattering as a result of ordinary wind movement combined with crop wetting and drying, the ADAS trials show that laboratory assessments of pod shattering can be a good predictor of these in-field losses.

They also support the variety differences highlighted in previous John Innes Centre random impact testing and NIAB/TAG delayed harvest trials; the latter identifying a yield gap of 6-9% between shatter resistant and susceptible varieties of the same genetic potential with combining delays of 7-14 days.

“All the evidence clearly shows how valuable pod shatter resistance can be both as a risk management tool and in giving much-needed flexibility to the whole farming system,” pointed out DEKALB technical specialist, Will Vaughan-France.

“It offers a high level of natural protection against seed losses ahead of combining under normal circumstances, not to mention particularly heavy rain and hail storms. It allows harvesting to be timed to secure the highest OSR outputs from well-structured canopies at the least risk of losing seed from over-ripe upper pods. And it enables quality wheats to be prioritised for combining ahead of OSR without undue worry wherever the need arises.

“With the sheer range of our varieties now available with pod shatter resistance – all six of our main DEKALB EX’s, three Clearfields, two club root resistance varieties and a low biomass semi-dwarf – it’s not a matter of having to sacrifice anything to get the trait,” he stressed. “So I struggle to see why anyone wouldn’t want to make it a standard requirement.



“Pod stickers may be valuable with shatter-susceptible varieties and a useful belt-and-braces otherwise. But, just like disease protection, I always prefer to know my risk management is built into the crop rather than having to rely on spraying it on.”

