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MEDIA RELEASE

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Getting to the 'Hart' of barley head loss

Head loss remains one of the top three traits barley researchers and breeders would like to see a genetic solution for, but in the meantime, there are a number of factors growers can consider to reduce the risk.

That's the word from University of Adelaide associate professor Matthew Tucker (pictured) who will be presenting as part of the Hart Field Day rolling program on Tuesday, September 20.

Matthew and his team, in collaboration with Dr Kenton Porker at FAR (Field Applied Research) Australia and Dr Rhiannon Schilling at SARDI, have been undertaking eight South Australian Grains Industry Trust-funded field trials across South Australia, focussed on head loss in barley.



Their findings show that cultivar (variety) choice, historical observations and harvest-time factors, including the fire danger index, all provide useful indicators about the risk of head loss.

Matthew's trials have focussed specifically on head loss – where the barley peduncle breaks within the first 1-3 centimetres underneath the barley head, and usually at harvest-ripe or after harvest-ripe stage - as opposed to lodging (bending at the bottom of the plant) and brackling (bending in different directions at the base of the peduncle).

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"From our field trials across SA, from the South East right up to Yorke Peninsula, and including the Mallee and Mid North, I think the most important thing that growers need to consider is cultivar choice," he said.

"That's particularly important because there's some cultivars which are more likely to experience head loss in particular environments.

"The second thing is harvest timing. If you harvest on time, you've got a much greater likelihood of avoiding head loss.

"And the third thing is understanding that there are PGR (plant growth regulator) applications that will offer some protection against head loss based on the trials that we've done."

Matthew said early growth vigour was an indicator that a PGR may be needed to shorten the fillers and avoid head loss in barley crops.

"If growers can see significant biomass early in the season, particularly in higher rainfall zones, they should be thinking about applying a growth regulator around growth stage 37, which is the recommended timing for the protection against head loss," he said.

"Growers are always keen to know the cost of the PGR; we have certainly assessed this, and it is generally cost-effective for Compass-type cultivars.

"However, it does seem that cultivars like RGT Planet are less susceptible to head loss, and PGR application is unlikely to have a beneficial impact.

"I think this emphasises the need to develop better scoring protocols and risk assessments, in particular, by looking at the next batch of modern cultivars that are being released."

Matthew said historical data, collected at harvest time, could be critical for future season decisions when it comes to reducing the risk of barley head loss.

"We found, using a plant type like Compass which has a moderate susceptibility to head loss, that if you're looking approximately a week after harvest and you see about 25 heads per square metre, then you should have applied a PGR," he said.

"I know that's easy to say after harvest, but if you're noticing that in the previous season, then based on current costs, it would have been cost-effective to actually put a PGR on, so it's important to collect historical, reflective data."

Keeping an eye on the fire danger rating at harvest time also provides a good indicator that head loss may be more prevalent, and can assist in harvest timing decisions.

"We've found that there's quite a good correlation between the fire danger index and the likelihood of head loss events," Matthew said.

"Every time we see one of the catastrophic fire index days, the number of heads that is going to fall is significantly increased, and that correlates with high temperature and wind."

To hear more from Matthew, and ask any questions you might have about barley head loss on your farm, head along to one of the Managing Barley Head Loss sessions at Hart on Tuesday, September 20.

Gates open at 9am and an official opening at 10am. First sessions start at 10.30am sharp.



Admission is \$44 (students \$15), and includes access to all sessions, guest speakers, and the Hart Field Day Guide with articles and information from each of the sessions.

The Hart trial site is 10 kilometres north of Blyth, just off the Blyth to Brinkworth Road.

To purchase a ticket and view the day's program, head to the Hart Field-Site Group website www.hartfieldsite.org.au (look for Events/Hart Field Day in the main menu).

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