

MEDIA RELEASE

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Hart's 'dry season' sessions go back to basics with new research to help decision-making

There is no denying it has been a challenging start to the 2024 growing season.

With that in mind, the Hart Field Day program for September 17 features a series of sessions looking at the impact of seasonal conditions and how a low rainfall year affects the management and effectiveness of herbicides and crop establishment.

Hart research and extension manager Rebekah Allen (pictured below) said with so many decisions to make on-farm, the sessions aim to help growers make informed choices using some of the latest local research observations and data.



"While we had some stored soil moisture, it was a marginal summer period with little rain, and the break didn't come until the last week of May, with crops then not emerging until early June," she said.

"It made it difficult for farmers and really challenged their decision-making about times of sowing and pre-emergence herbicide selection and application.

"Given the season, we have included some sessions on the field day program to really go back to basics and understand things like herbicide selections and how much rainfall we need to germinate a crop on our soil types.

"Hopefully it will enable growers to be more confident in their decision-making, regardless of wet or dry conditions, by understanding the outcomes."

Hart Field Day's rolling program of 20 sessions caters to a broad range of topics, however three sessions included on this year's program particularly relevant to a low rainfall season include:

- *Crop establishment after a dry start* – with Kaidy Morgan, Hart (field evaluation of canola, wheat and lentil).
- *Emergence and rainfall; getting to the basics* – Dr Glenn McDonald, University of Adelaide (pot experiments; how much water do we need for germination?)



- *Pre-emergent herbicides; selection and application* – Dr Chris Preston, University of Adelaide (pre-emergent herbicides; environmental impacts, time of sowing, sowing speed).

Hart technical officer Kaidy Morgan's session will include information from a new trial that was born specifically from feedback from growers and consultants at last year's field day.

"Kaidy will be touching on a new trial that will really push the boundaries on low canola establishment," Rebekah said.

"One of the perceived risks around dry or early sowing is that low establishment means low crop yield and profitability.

"But in that trial, we're looking at a range of different canola densities – from 5-60 plants per square metre.

"Some of that came from feedback from last year's field day where growers and advisors were asking what density is the minimum baseline – is this five plants per square metre or is it, say, 10 before yields are reduced?"

"The trial is pushing the boundary on how low you can go, particularly if it's a dry year and you've got poor establishment, do growers need to go and re-sow or can they still expect a good yield or outcome if it's up early in the season?"

The University of Adelaide's Dr Glenn McDonald says his session will also strip things back to look at water requirements for seed germination, emergence and the impact of different soil types.

"I'll be covering some of the basics of what is required for establishment and some of the implications of variable plant establishment on the yields of crops," he said.

"This year, the variation in soil type is coming up as being quite important where we've got intermittent rainfall.

"Some of the issues we can consider include, how long can seeds stay in dry soil without deteriorating in quality and emergence?"

"Most crops were probably dry sown this year – either intentionally or unintentionally – and a lot of that seed stayed in the ground for four, five, six weeks.

"We found that in many cases, that seed can be quite resilient, so it can stay under dry conditions for quite a long time."

Dr McDonald said soil type was a major factor of consideration in a dry year, and variation of soil within a paddock was something to keep in mind.

"Soil type can have an influence on plant establishment, mainly the texture of the soil," he said.

"For example, the amount of clay that is in the soil, because essentially the amount of clay or the amount of sand will influence just how well the soil can give up its moisture.

"So, some soils will hold onto moisture very tightly and others will give it up more freely.

"Lighter textured soils, like sand and sandy loams, are a lot more forgiving in that respect, whereas when we go into clay loams and clays we actually need much more rainfall to wet up the soil enough to allow emergence to occur."



Dr McDonald will also touch on the importance of depth of sowing and its impact, and variation between different crop types, and overall, he aims to provide growers with some key, local data for confident decision-making.

"Canola, for example, can be quite a sensitive crop because it's a small seed," he said.

"The aim is to try and provide growers with a greater understanding of how seeds germinate in the soil under variable moisture and the importance of moisture conditions at sowing on establishment, and what potential implications there are on variable establishment on yields of crops."

The Hart Field Day will be held on Tuesday, September 17.

Tickets are on sale now, and early purchase is encouraged.

Sales will remain open online until lunchtime on the 17th, so sign up before you arrive and fast track your way through the gate.

For tickets, or for more information head to the Hart Field-Site Group website www.hartfieldsite.org.au (look for Events/Hart Field Day in the main menu), or contact Sandy Kimber on 0427 423 154, or email admin@hartfieldsite.org.au

Media contact: Hart Field-Site Group media Gabrielle Hall 0408 991 058.

