

Plain English Summary

Project Title:

GRDC Project No.:

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DAW00253

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Objectives

- Compare the yield responses of wheat and canola varieties sown at three sowing dates (9 April, 23 April and 12 May)
- Validate phenology and yield predictions of the Yield Prophet (YP) tool at very early sowing times.

Background

How early is too early to start sowing grain crops? This has been a question on the minds of many in the industry following significant rainfall at the beginning of 2015. However, there is little existing Western Australian field trial data around times of sowing earlier than April 25, the traditional start to crop planting in the state. The long-term, optimal sowing date for our current suite of wheat varieties is in May.

Research

In response to the seasonal conditions a series of trials were initiated and fast-tracked through the GRDC Cropping Solutions Networks (RCSN) initiative. Research compared the yield responses of wheat and canola varieties sown at three sowing dates (9 April, 23 April and 12 May).

Outcomes

The key messages from this research back up the findings from other research projects (eg DAW00249: Tactical Wheat Agronomy for the West)

- Highest wheat grain yields are not always achieved at the earliest sowing opportunity.
- Current commercial wheat varieties have good adaption for yield in WA but are more exposed to the risk of frost and other grain quality issues (staining and sprouting) when sown early.

However growers may not see a flat or reduced yield response to very early sowing as an issue. Instead, the early sowing window allows them to get crop out of the ground and reduce risks of dry spells leading to a lack of future sowing opportunities.

This project tested Yield Prophet® for the sowing times trialled and found both crop development predictions and yield predictions for very early sowing times to be inaccurate. Future research to increase the accuracy of Yield Prophet® (or other models) in predicting crop development and yield is essential to give growers a better indication of yield outcomes from very early sowing given the conditions present in the run in to each season.

Implications

This research project provided a platform for discussion at a regional and state level in Western Australia on the value of early sowing in the low rainfall. Growers provided feedback about the value of early sowing to the farming system at field days at Yuna and Pindar. Pros' of early seeding from a growers perspective included risk management and time and machinery efficiency. Cons' of early seeding include risk of false break, staggered emergence, crop bolting and lack of suitable varieties.

Publications

Zaicou C. (2015) Fast-tracked trial at Yuna/Pindar push sowing date boundaries for wheat/canola 2015 trial report agric.wa.gov.au/n/4552
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Williams M and Zaicou-Kunesch C (2016) Researchers scope early sowing options. GRDC Ground Cover #120 Jan Feb 2016

Zaicou-Kunesch (2016) Researchers scope early sowing options. GRDC All Ears #20 Feb 2016

Williams, M., Shackley, B. and Zaicou-Kunesch, C. (2016) Variety selection a key for very early sowing of wheat in WA, GRDC Paddock Practices March Fullwood, J, Zaicou-Kunesch C (2016) Early sowing. Science Network April

