

Recently, Trevor was asked to present papers on some of his experimental work to a GRDC conference, below are brief outlines and links to the extended versions of these papers.

[Grain Sorghum: Starting soil water, variety choice, row configuration, plant population, yield expectation](#)

Take Home message

- Starting soil moisture more is better
- Estimating yield in grain sorghum from starting water is difficult due to rainfall and climate variability and sorghums ability to compensate for stress.
- Grain Sorghum is highly responsive to moisture timing
- Lower soil water increases risk, economic management is as important as agronomic
- Understanding crop growth and the environment are critical for managing risk
- Growers need to test for soil moisture and Nitrogen

[Making more profit from Irrigated Grain Sorghum](#)

Take Home Message

- By limiting stress and optimizing management; yield in grain sorghum is maximized. Which in this situation maximized the net return per ha. However total net profit on a farm basis would have been much higher, up to 60% higher, if the available water was spread across as much area as possible, as a pre-water treatment with optimized nitrogen.
- In situations where irrigation water supply is limiting and not land; full irrigation is not the most profitable irrigation strategy.

[Screening in Sorghum - can we avoid it?](#)

Take Home Message

- The major contributor to screenings in Sorghum is moisture stress from flowering to soft dough
 - The cause of screening in the 2007-08, was low starting moisture and very low rainfall after flowering
 - Planting sorghum on the Darling Downs on less than 120mm starting water significantly increases the risk of screenings and lodging
 - Planting early with lower populations slows the rate stored soil moisture usage through the vegetative period. Planting early also reduces the risk of heat damage.
 - Planting quicker varieties may maximize seed set, and yield, whilst increasing screenings.
 - Wide rows can improve screening and lodging, but carries significant yield loss in most years on the Darling Downs. Wide rows reduce cover and fallow efficiency.