



Early sowing systems improve productivity and reduce risk for canola production in south-eastern Australia

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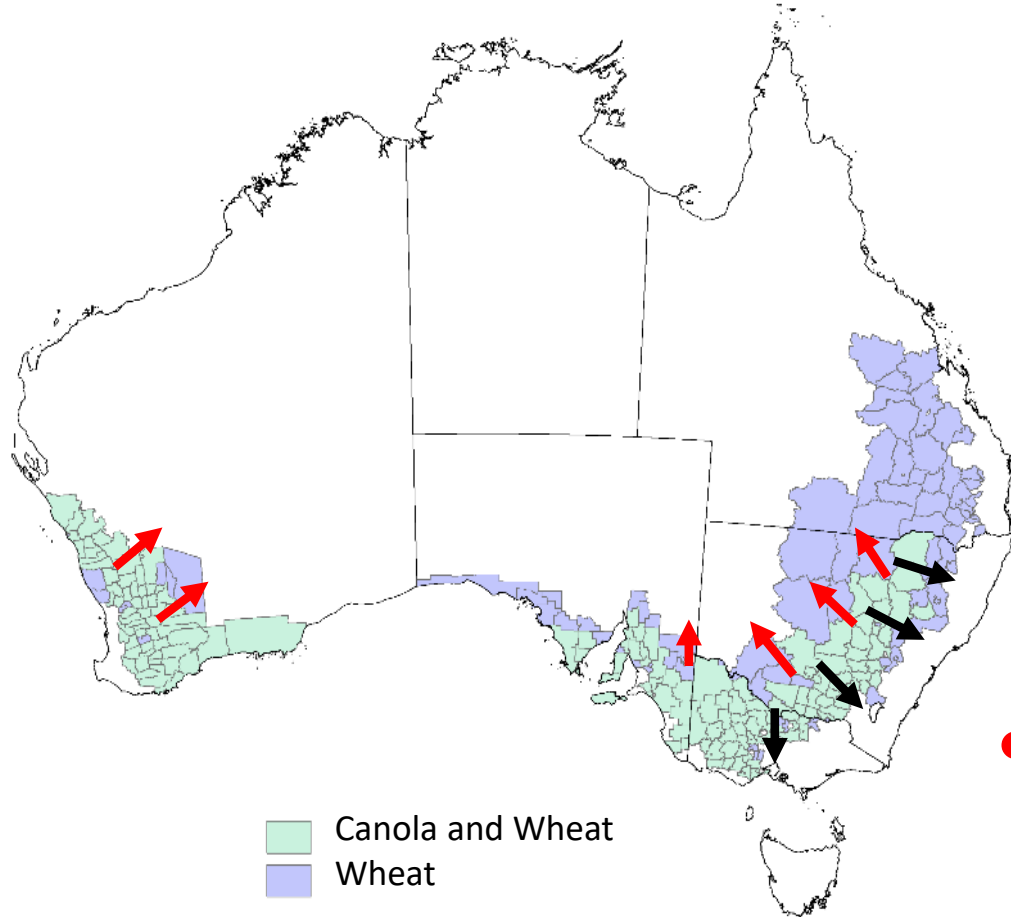


Australia's National Science Agency





Canola's new environments...



- **1. Medium rainfall (350-550mm)**

- early/flexible sowing system
- climate and management drivers

- **2. Low rainfall (<325 mm)**

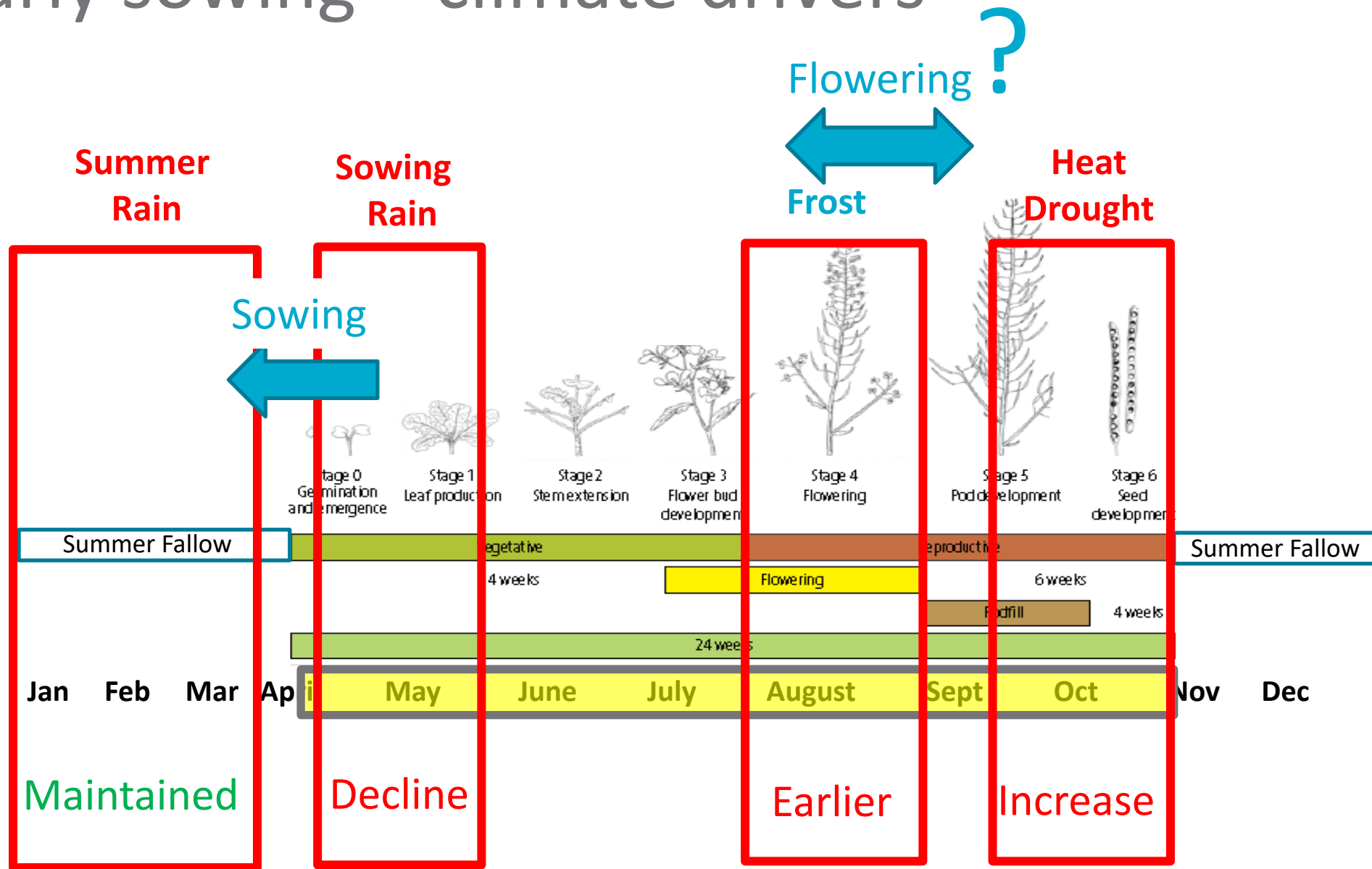
- managing risk

- **3. High rainfall (>550 mm)**

- winter canola
- grain and dual-purpose



Early sowing – climate drivers



Optimising canola profitability (2014-2019)

Phenology/physiology

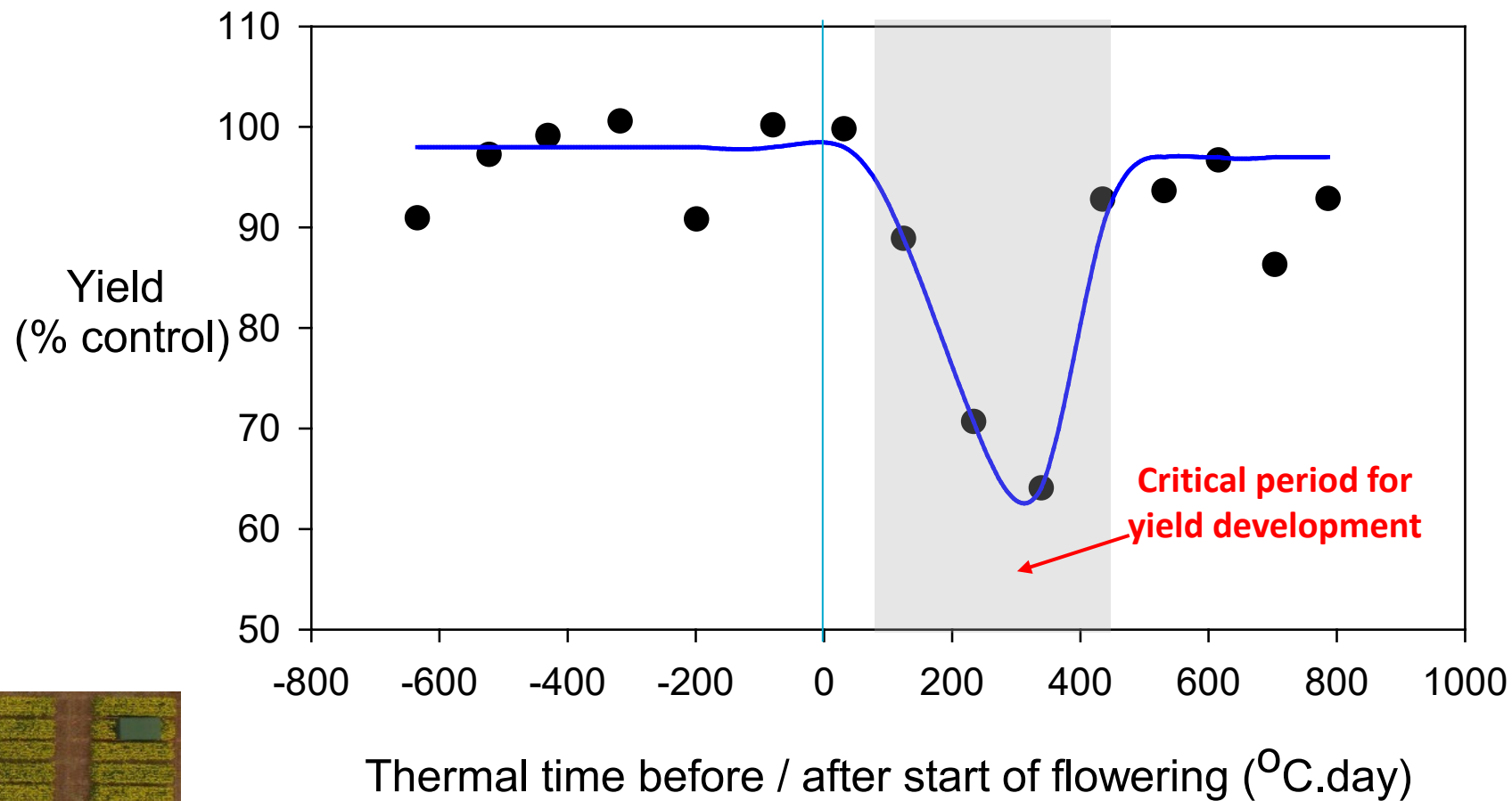
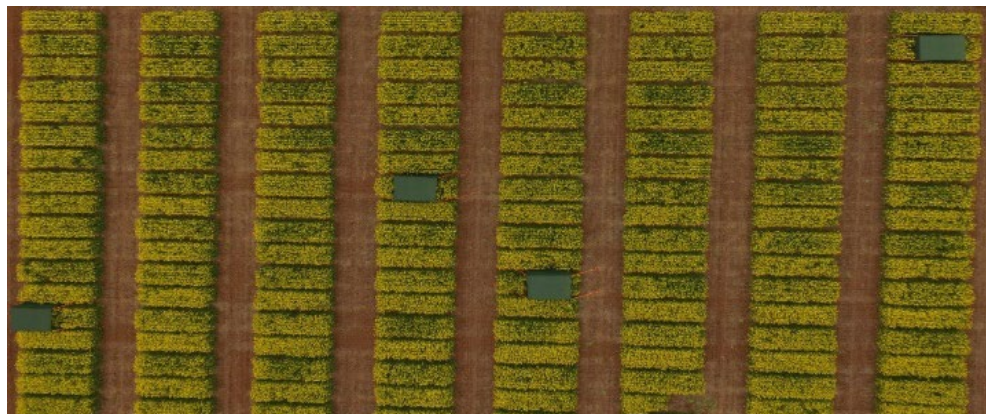


Tactical agronomy

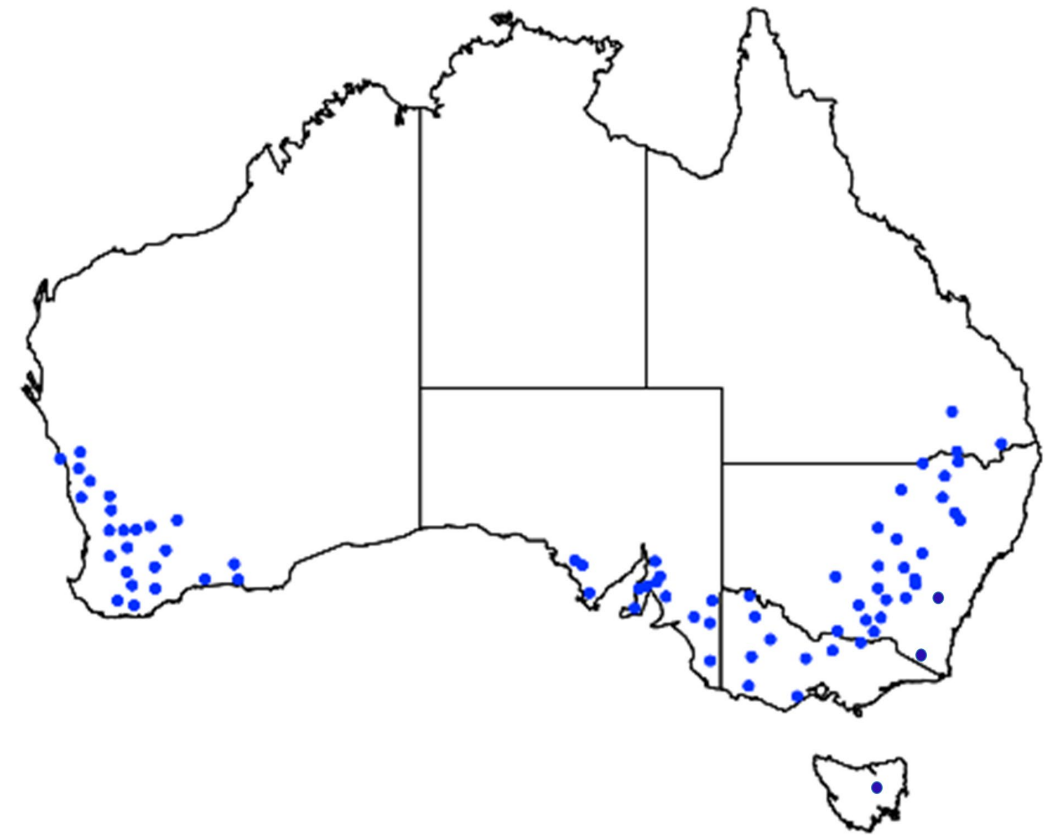
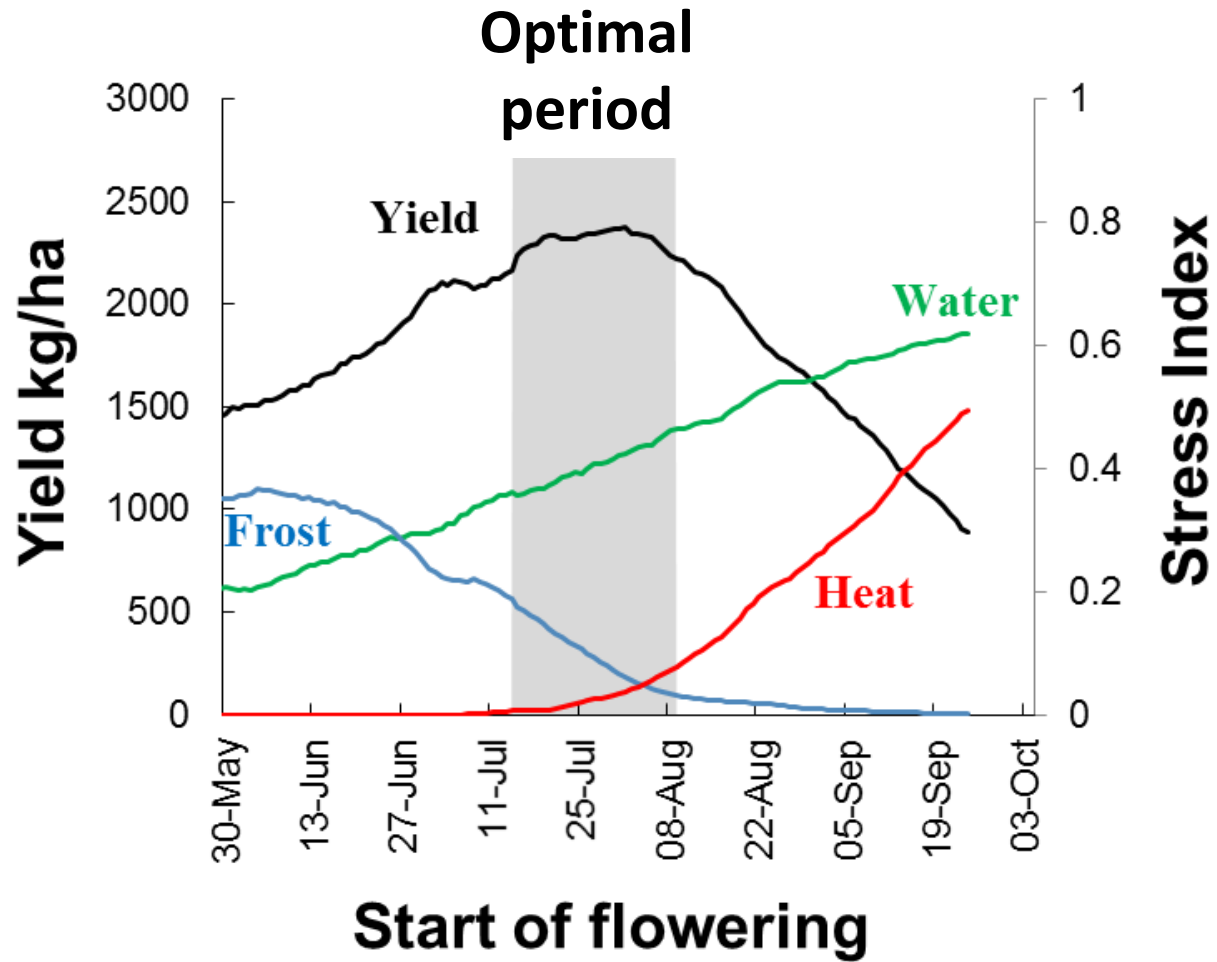




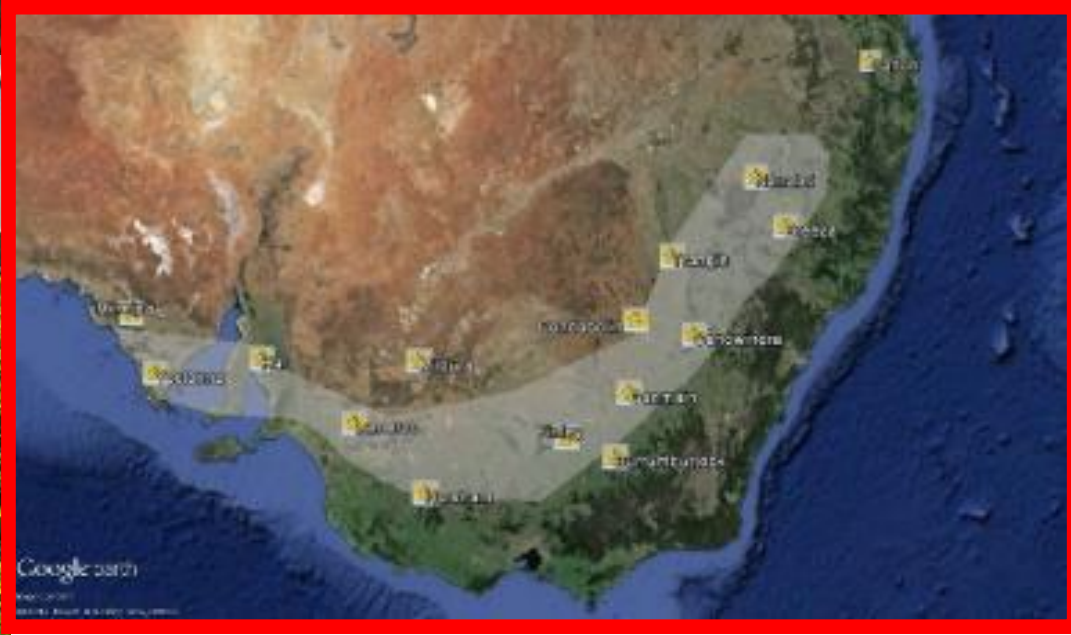
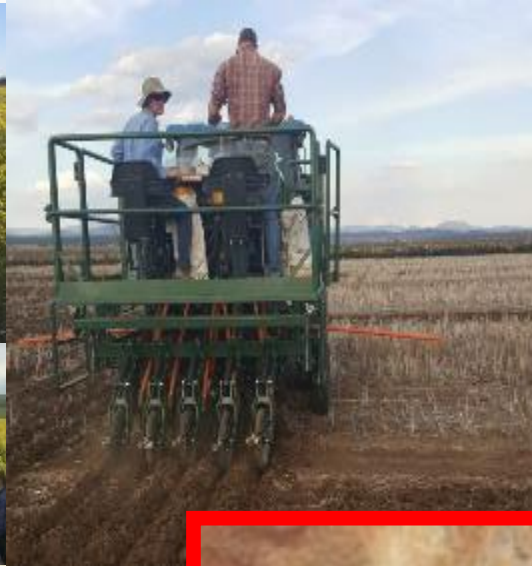
Identified the critical period for canola



Optimal Start of Flowering

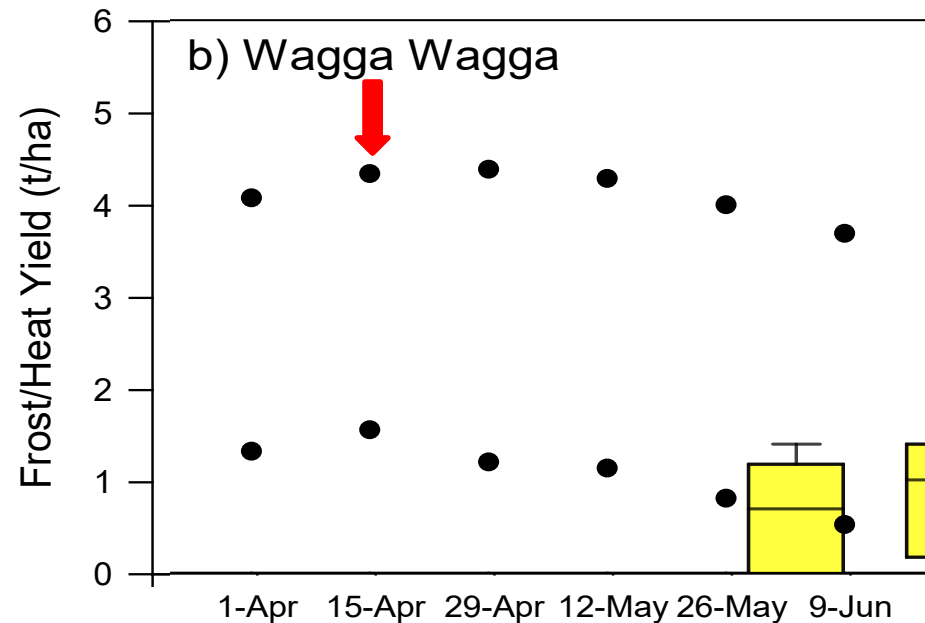
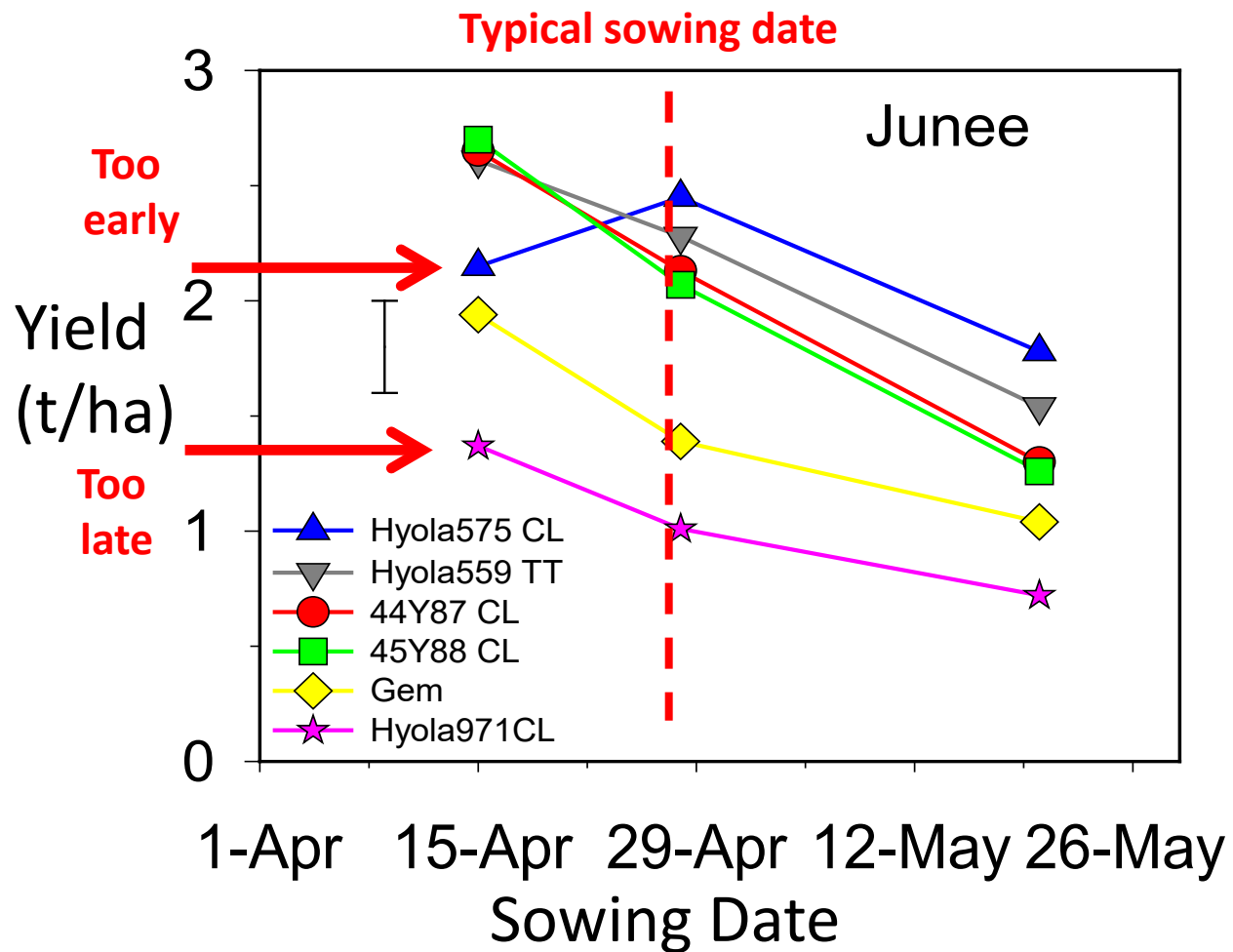


Field experiments





Experiments and simulation



Whole-farm benefits



Optimising early sowing

- Sufficient biomass to achieve yield potential (cost-effectively)

- sowing date
- sowing density
- crop type (hybrid / OP)
- N rate and timing



Sown 15 April



Sown 28 April



Sown 21 May

- Rapid soil coverage, less E, higher TE
- Deeper roots access more water





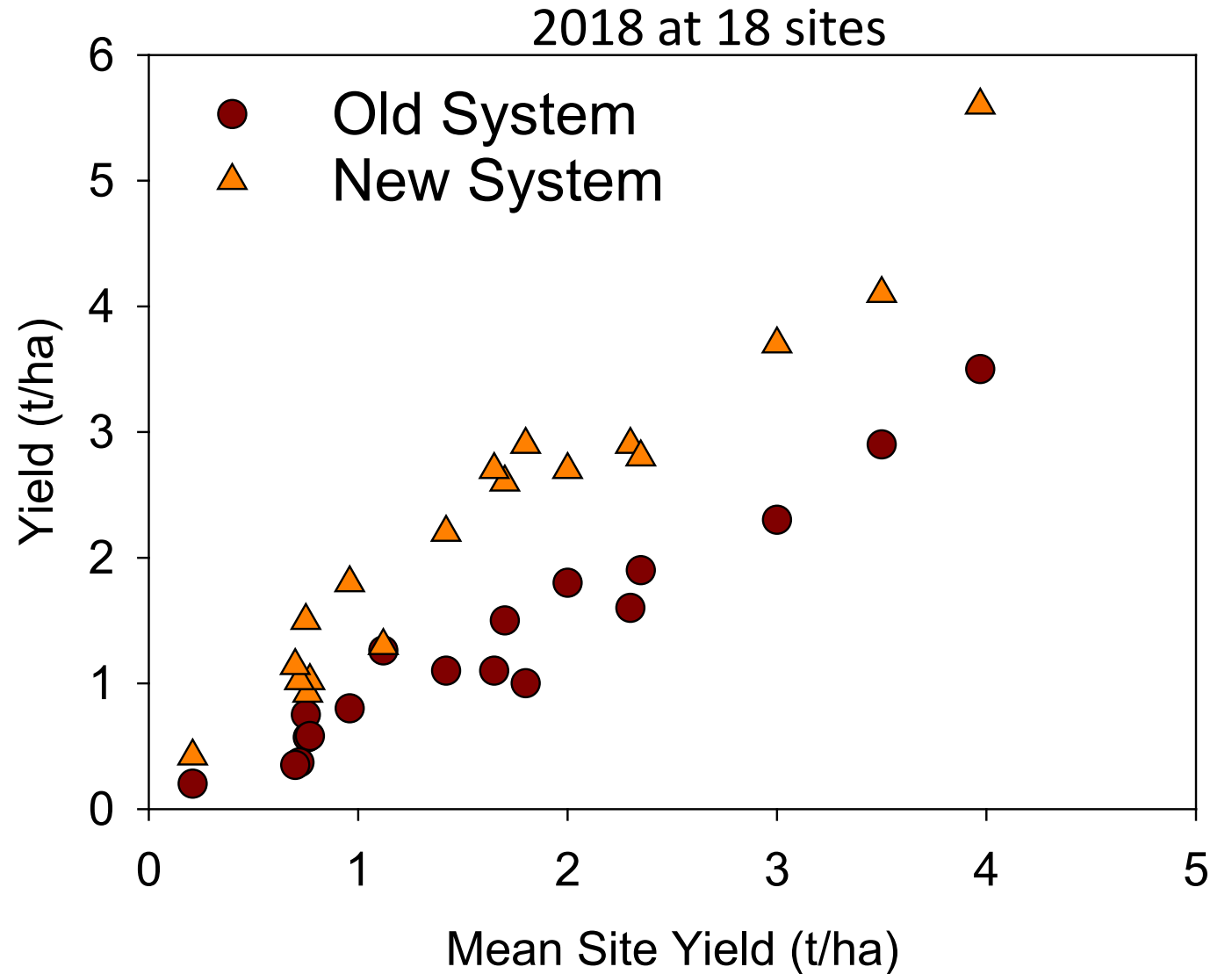
Early sowing system

“Old” system

- Sow in late April or early May
- Open pollinated, TT cultivars
- Use moderate N rate (Decile 3 to 5)

“New” system

- Sow from early April to flower in OSF
- Matched phenology
- Hybrid
- Use robust N rates



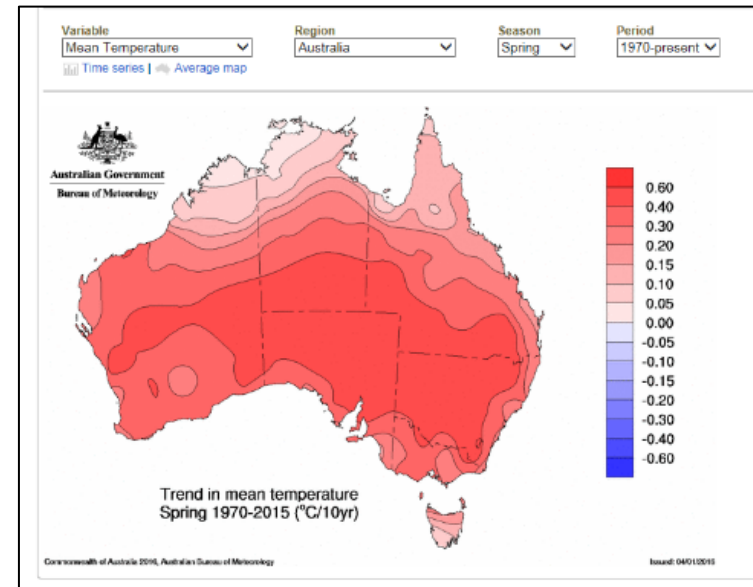


Summary



“We now finish (rather than start) sowing canola at the end of April and its worth about 0.3 t/ha on average to our clients.....”

*Greg Condon, Consultant Junee
(manages around 10,000 ha of canola)*





Thank you

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