



EARLY SOWING OF CANOLA. FIELD TRIALS AND CROP SIMULATION

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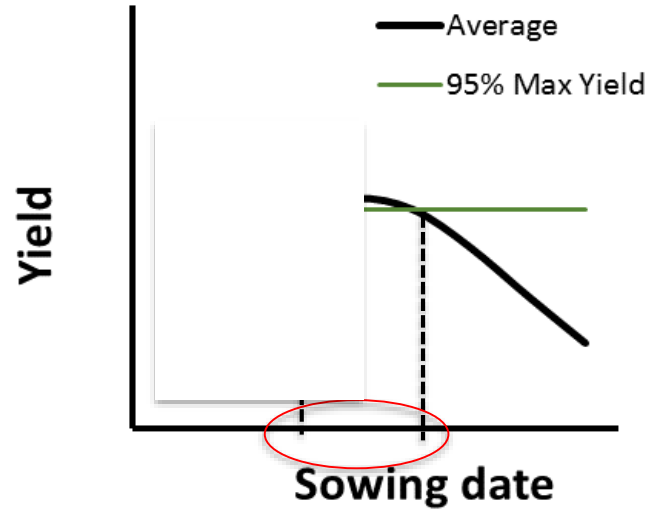


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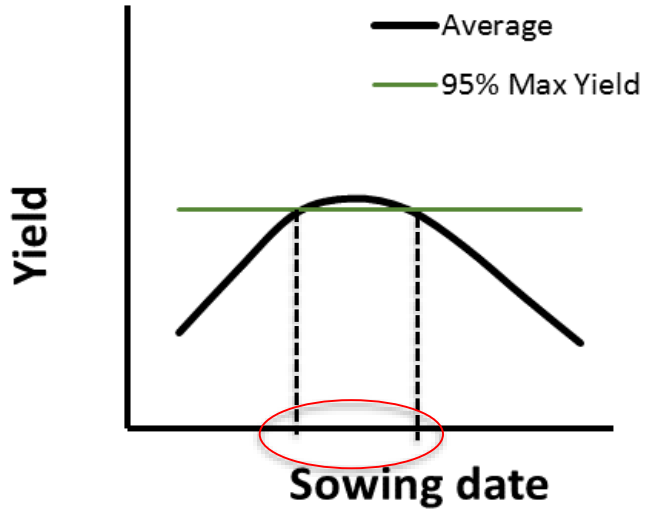
Optimum Sowing Window



Optimum Sowing Window



Optimum Sowing Window



OSW

For different locations
and cultivars

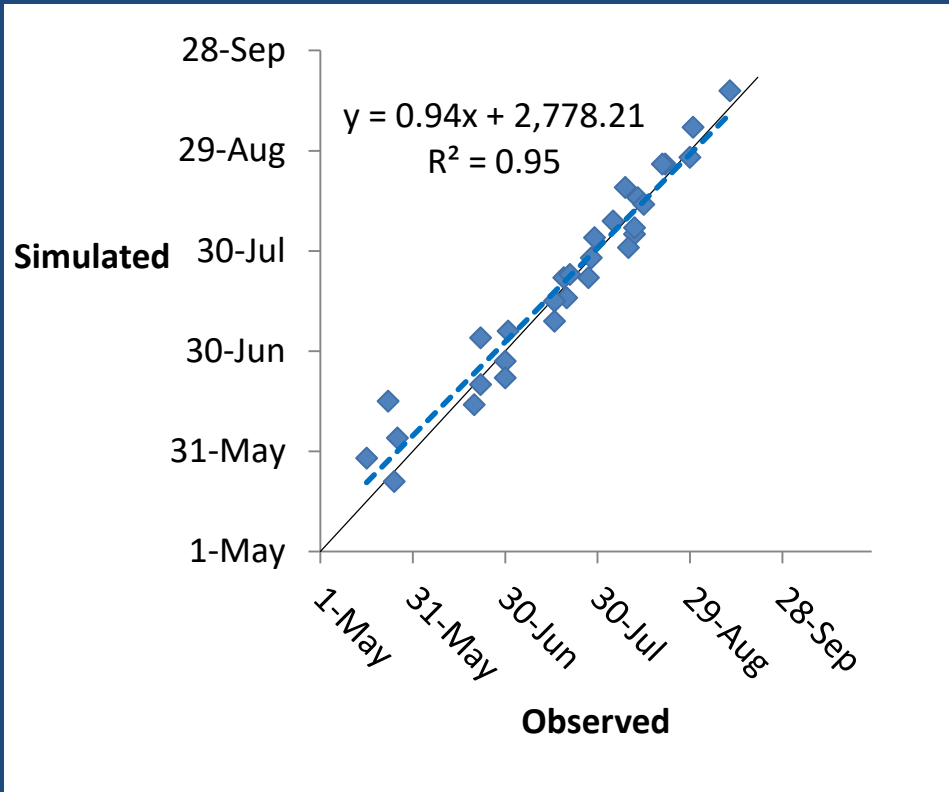
Duration
Start – End

Early opportunity ?

APSIM-Canola model

- Calibrated and validated in WA in early 2000's
 - old cultivars
 - classical sowing window
- New time of sowing trials (2018/2019) to calibrate and validate model
 - new cultivars
 - very early sowing dates
- Extend to many locations

2018 trials- Simulated vs Observed Flowering dates

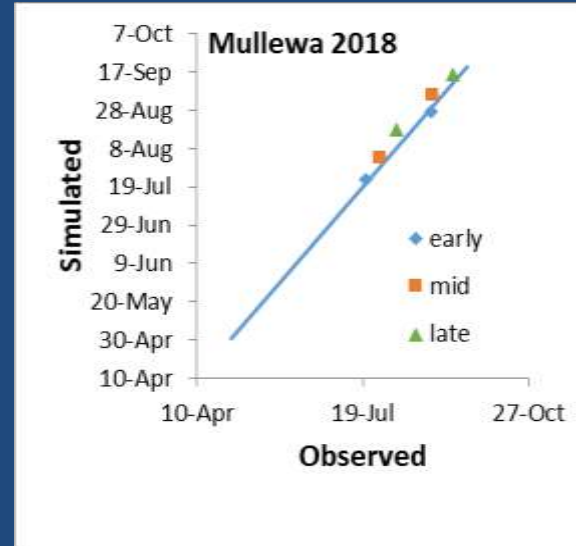
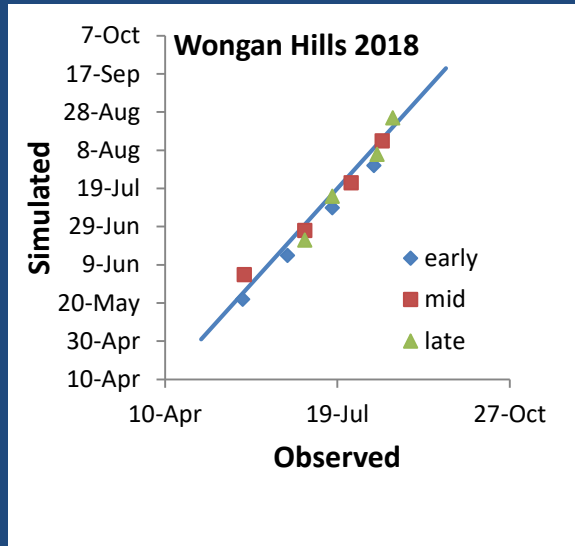
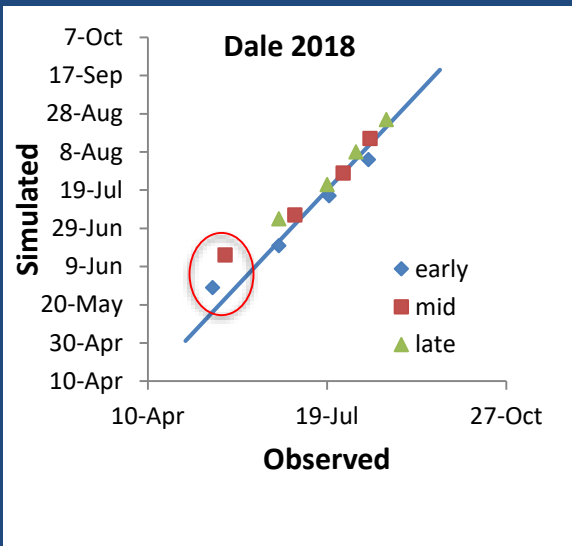


Wide range of flowering dates (May to Sept)

Good agreement obs vs sim

Model error 6.5 days

2018 trials- flowering dates



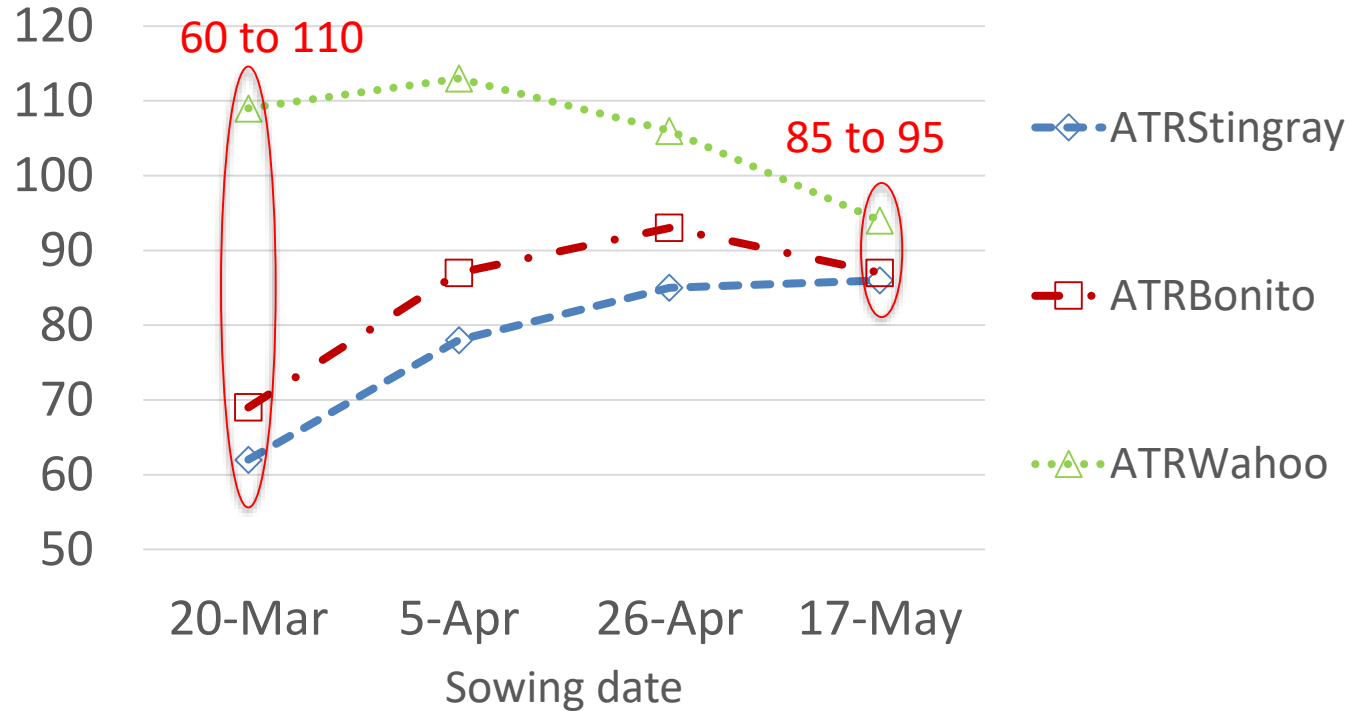
Best model performance:

Warm locations

Traditional sowing dates

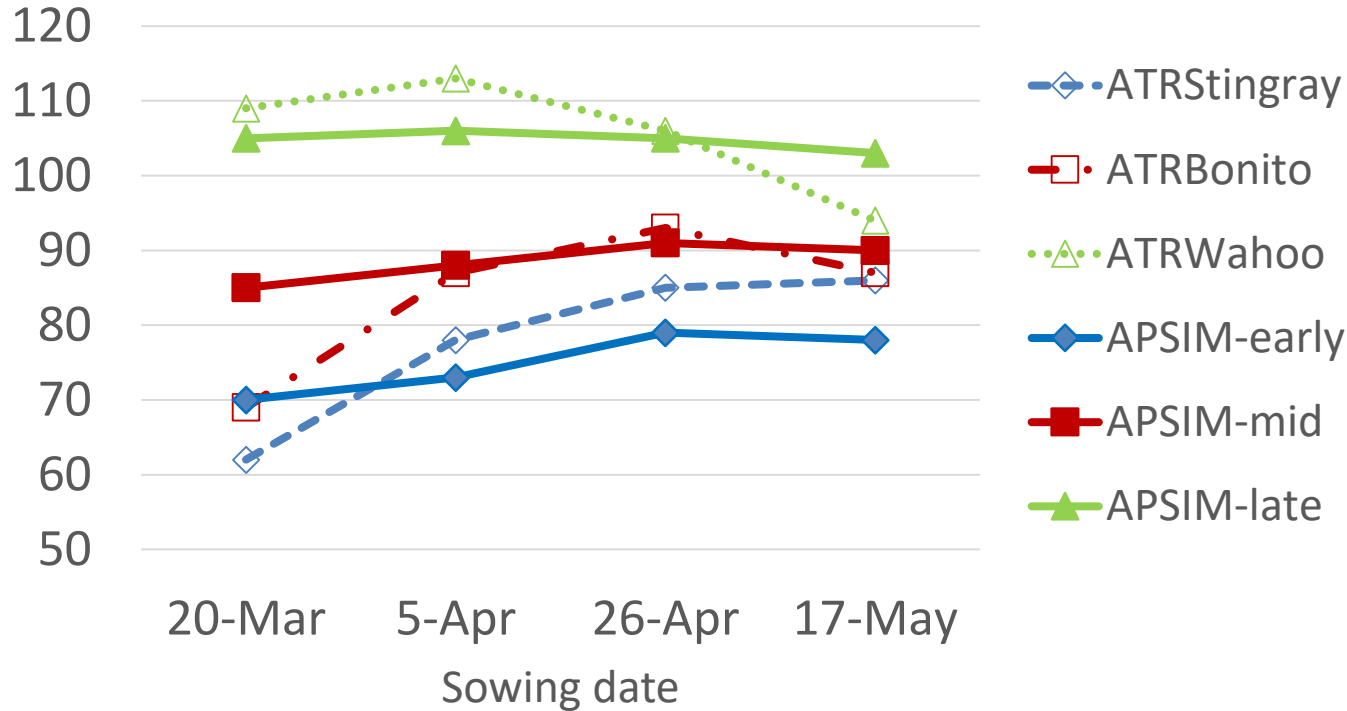
Dale 2018-Flowering

Flowering (DAS)



Dale 2018-Flowering

Flowering (DAS)



Better model performance at traditional sowing dates

Response to vernalisation for late sowings

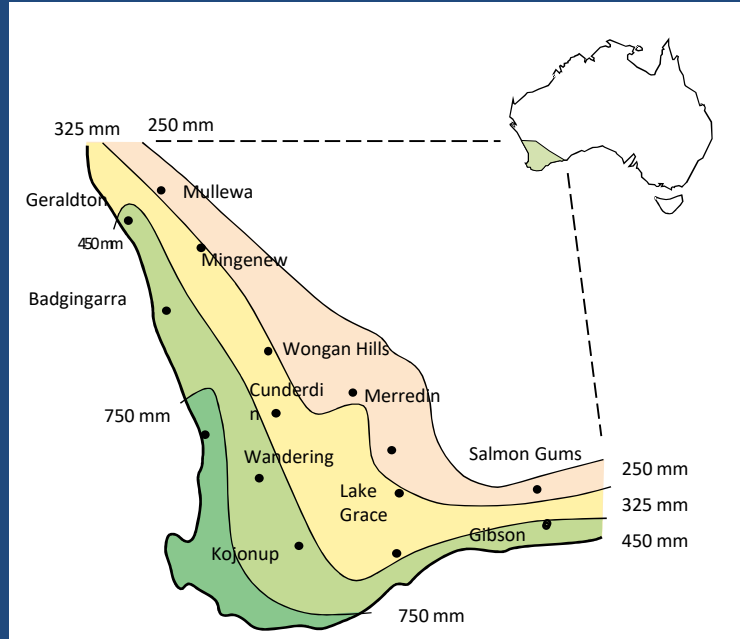
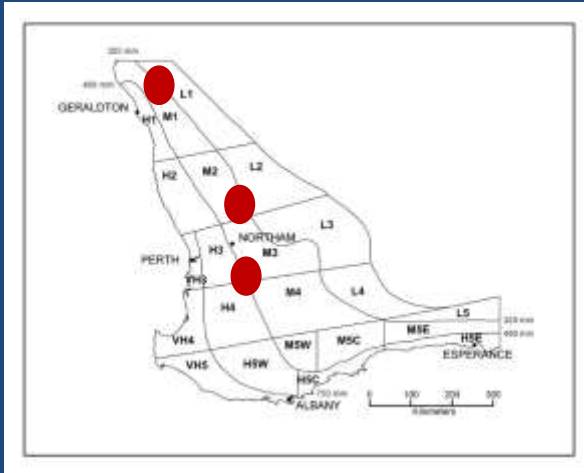
Need trials to further validate model

Combine field trials with crop simulation

Trials: Few years
Few locations



Simulation: Many years
Many location



Simulation
Locations
Soil types
Cultivars
Sowing dates
Long term climate

Optimum Sowing Window

Location	Medium cultivar	Duration (days)
Geraldton	14 Apr - 14 May	31
Mullewa	8 Apr - 3 May	25
Mingenew	10 Apr - 9 May	29
Wongan Hills	8 Apr - 6 May	28
Merredin	3 Apr - 27 Apr	24
Lake Grace	4 Apr - 27 Apr	23
Kojonup	31 Mar - 8 May	38
Mount Barker	8 Apr - 30 May	52
Salmon Gums	26 Mar - 25 Apr	30
Gibson	2 Apr - 8 May	36

With current APSIM model

Wide variation in OSW
23 to 52 days

Short season loc = short OSW

APSIM predict lower yield
< 30 March sowing

short

Long

Conclusions

- Difficult to establish canola in hot conditions
- More TOS trials needed
- Further calibration and validation of ASPIM-Canola model needed for newer cultivars and very early sowing dates
- We don't have yet the answer to how far we can extend the sowing window
- New GRDC- DPIRD project will fund 2019 trials

Acknowledgements

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Project technical staff

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DPRID Frost project team

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Thank you

Visit dpird.wa.gov.au

Important disclaimer

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