

EXPANDING THE SOWING WINDOW OF CANOLA

MARTIN HARRIES AND IMMA FARRE



GRDC
GRAINS RESEARCH
& DEVELOPMENT
CORPORATION



GOVERNMENT OF
WESTERN AUSTRALIA

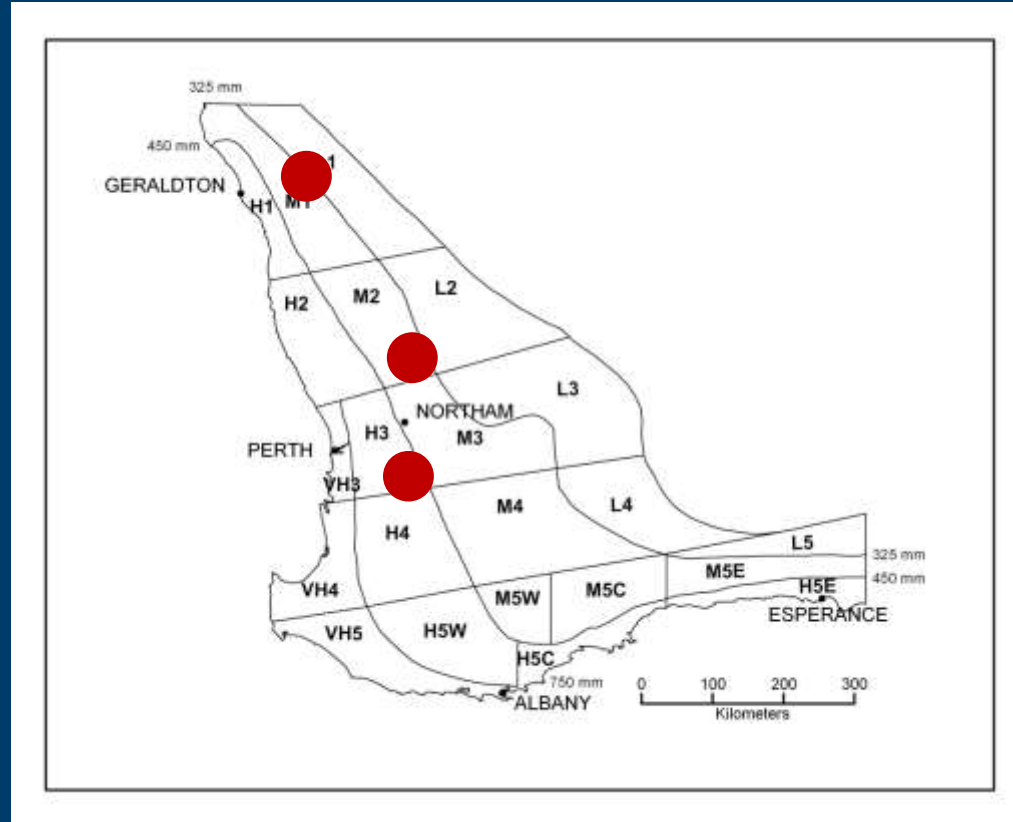
Department of
Primary Industries and
Regional Development

Background

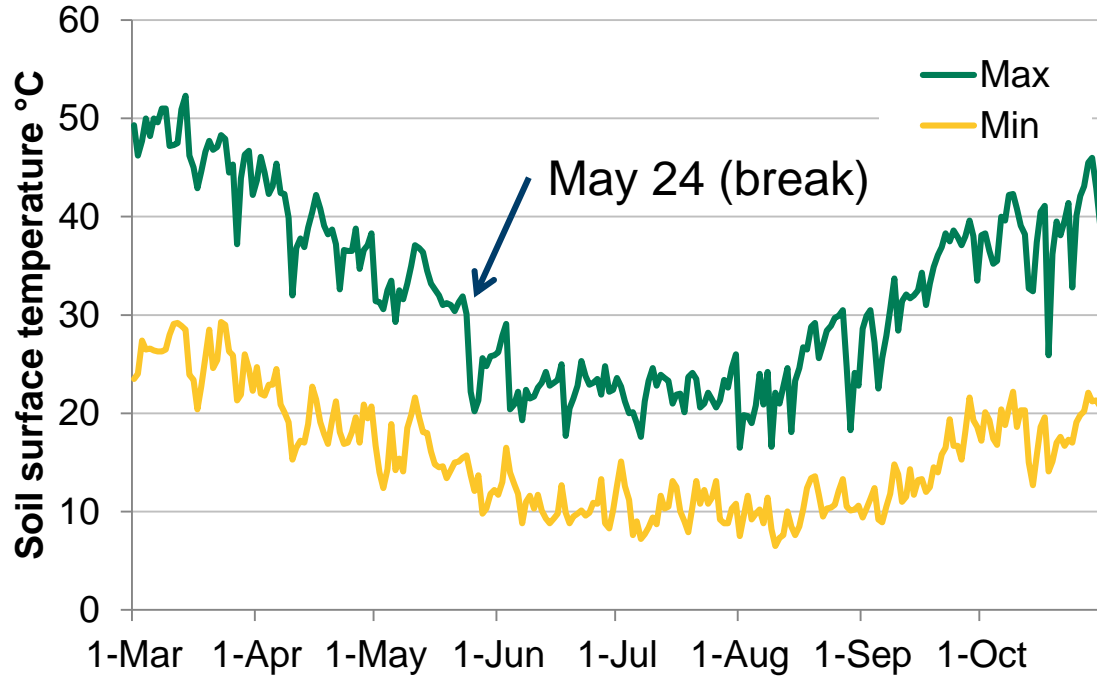
- Growers and agronomists have asked if opportunistic sowing of canola in March and early April will work?
- Also do we need to change varieties?
- Limited information around:
 - Binnu 40 kg/ha/day yield increase when sown mid April compared to late April
 - Wongan 10 kg/ha/day yield increase when sown late March compared to mid April
- Binnu no variety response to TOS, Wongan mid season varieties better from March sowing.

2018 trials

- 3 sites:
- Mullewa, Wongan Hills and Dale
- 5 sow dates (March 15, April 5, April 26, May 17 & June 20)
- 11 varieties (all TT) 3 series to 7 series



Mullewa: April 6



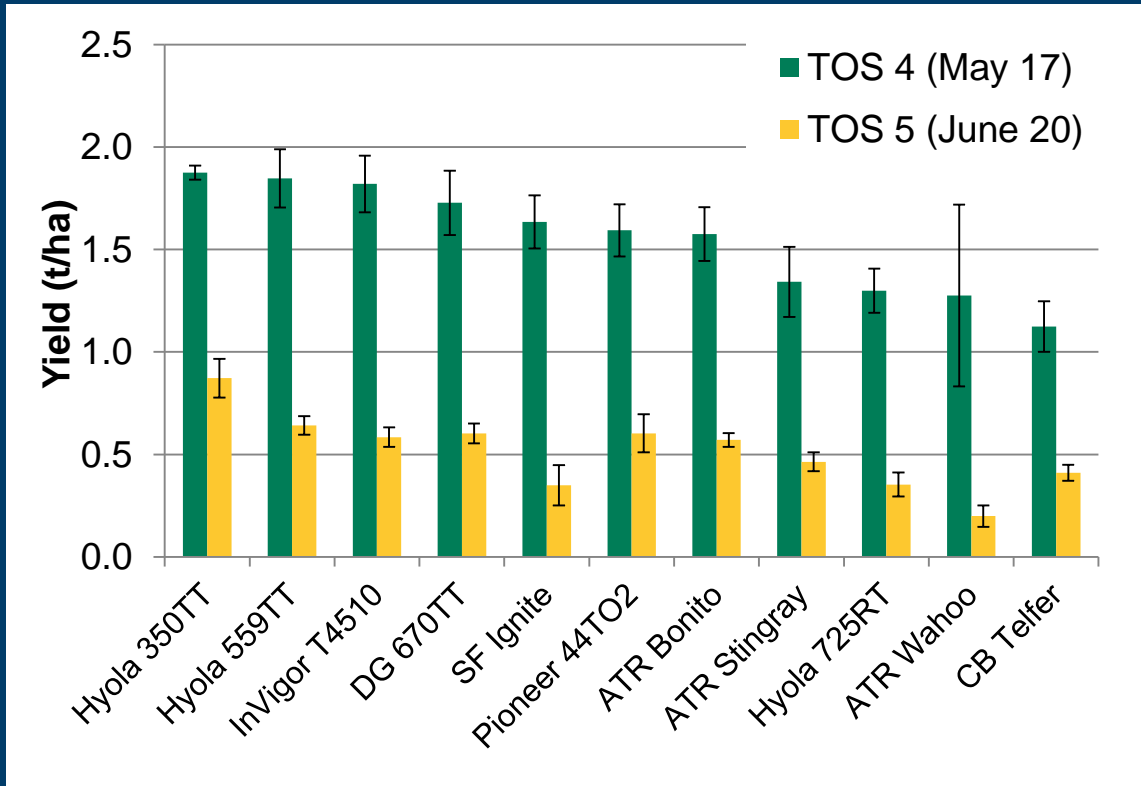
Observations

Seed did not emerge, despite irrigation & moisture at depth

Early break may be quite different

Perhaps try larger seeded break crop:
Lupin, chickpea?

Late sowing at Mullewa?



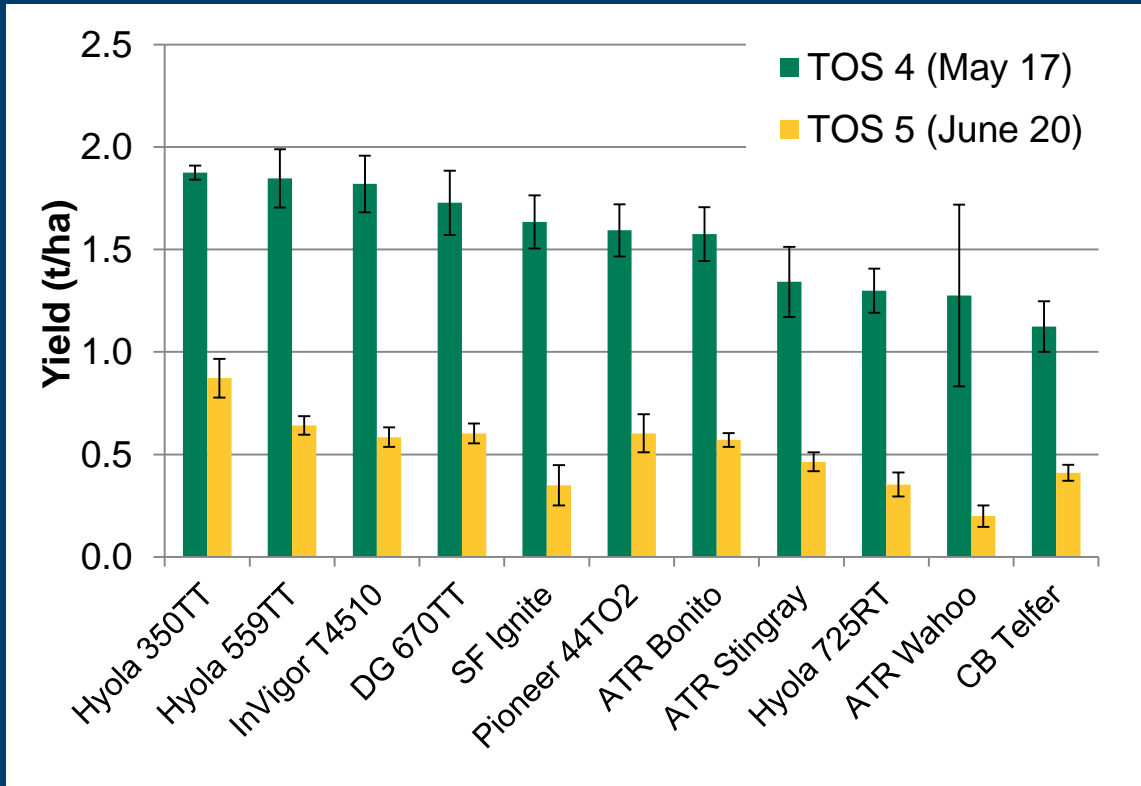
May 17; 1.5 t/ha

June 20; 0.5 t/ha

$P < 0.001$ TOS

$P < 0.001$ Var

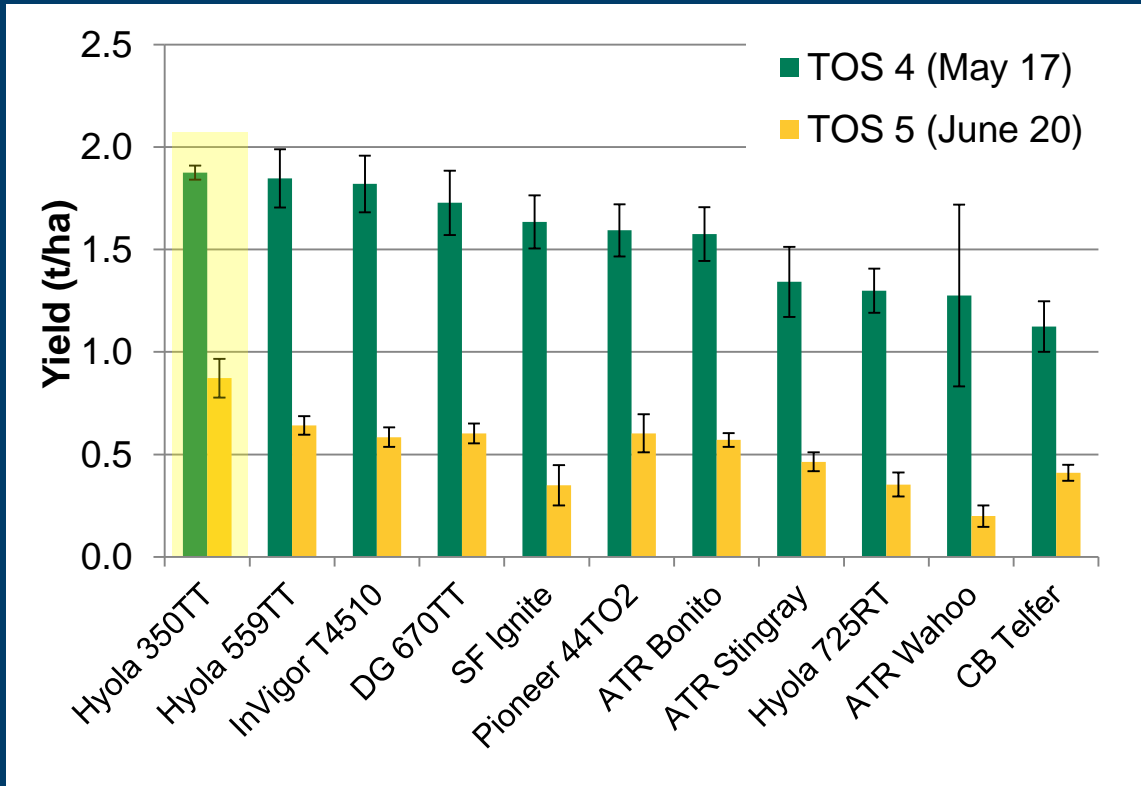
Late sowing at Mullewa?



June yield as % of May

Hyola350TT	47
Pioneer 44TO2	38
Telfer	36
ATR Bonito	36
DG 670TT	35
Hyola559TT	35
ATR Stingray	35
InVigor 4510	32
Hyola725RT	27
SF Ignite	21
ATR Wahoo	16

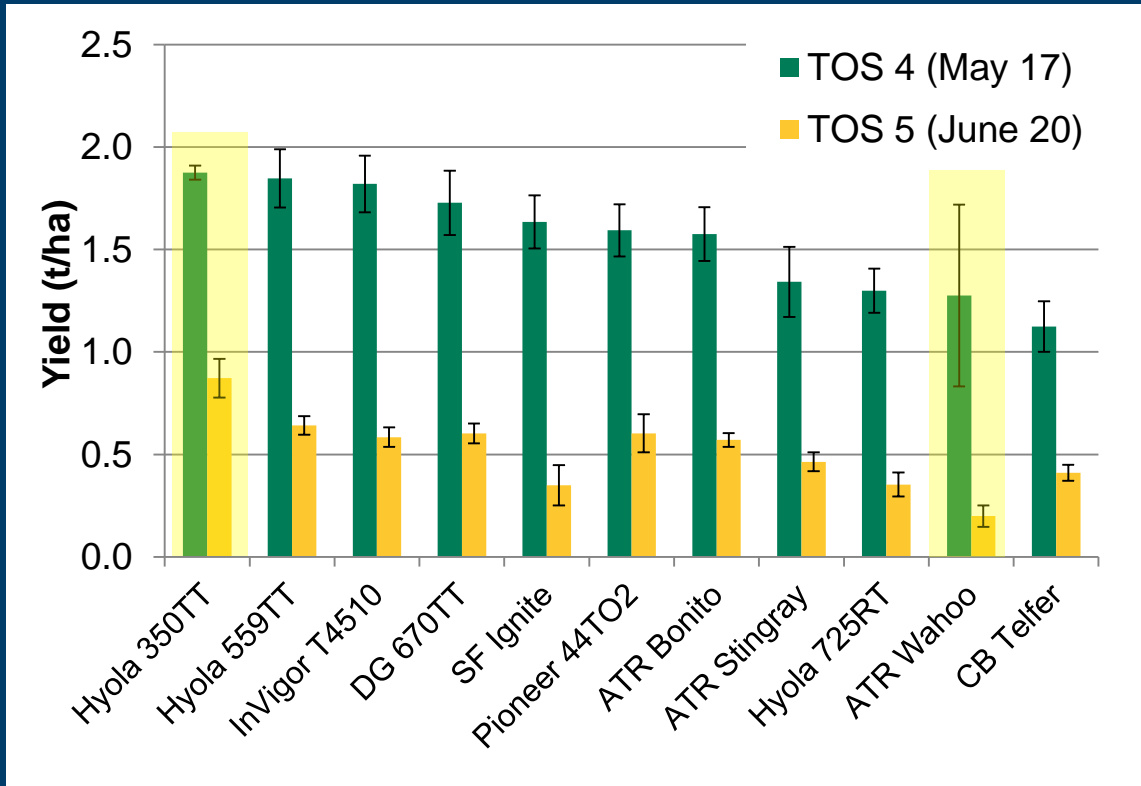
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Dale and Wongan Hills



Photo Kelly Ryan, June 9

Dale and Wongan Hills



TOS 2 (April 6)

TOS 4 (May 17)

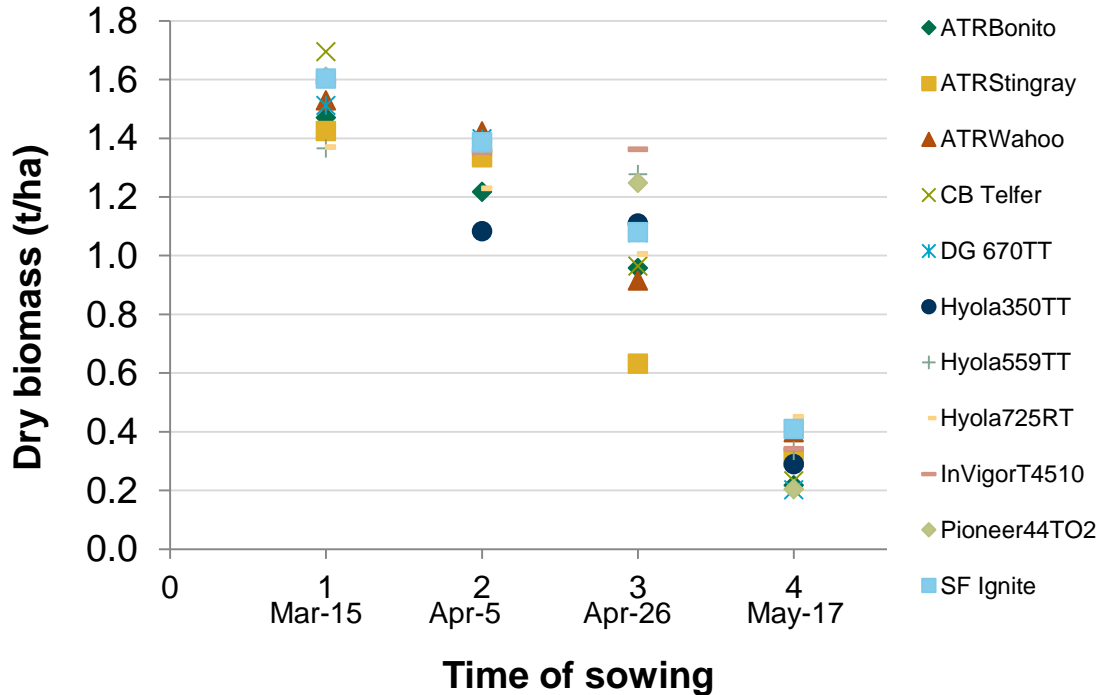
TOS 1 (March 15)

TOS 3 (April 26)

Photo Kelly Ryan, June 9

Dale

Growth 47 days after sowing

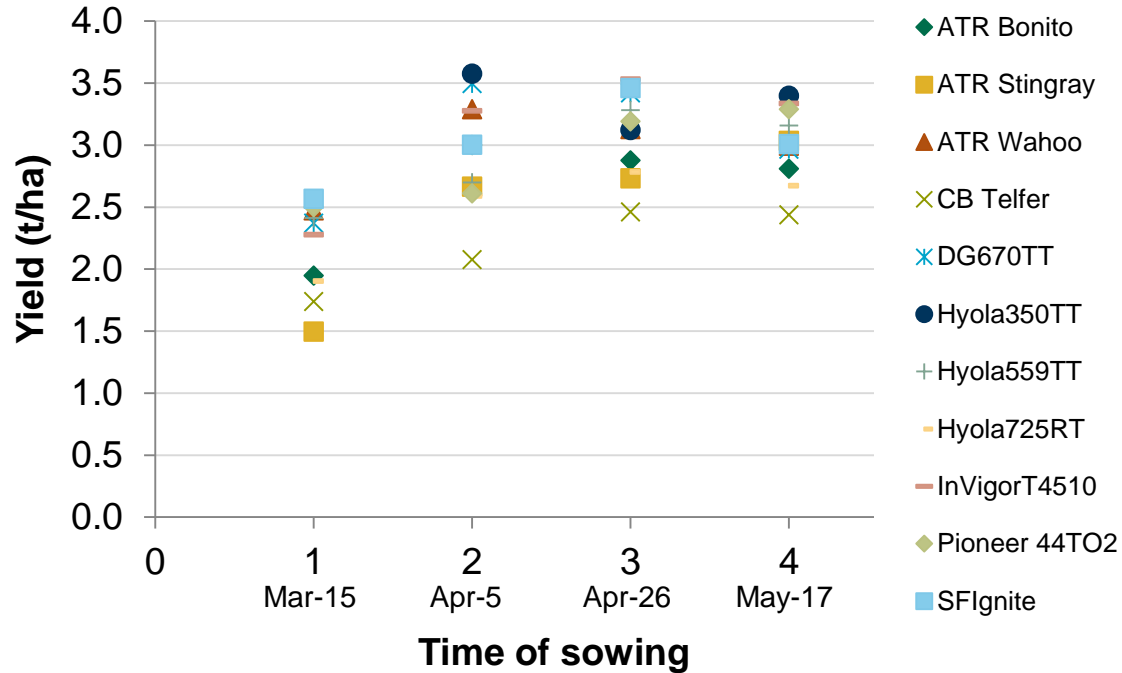


Early sown = faster growth rate $P < 0.05$

Could be an advantage in cooler climates

Var x TOS response $P < 0.05$

Dale yield

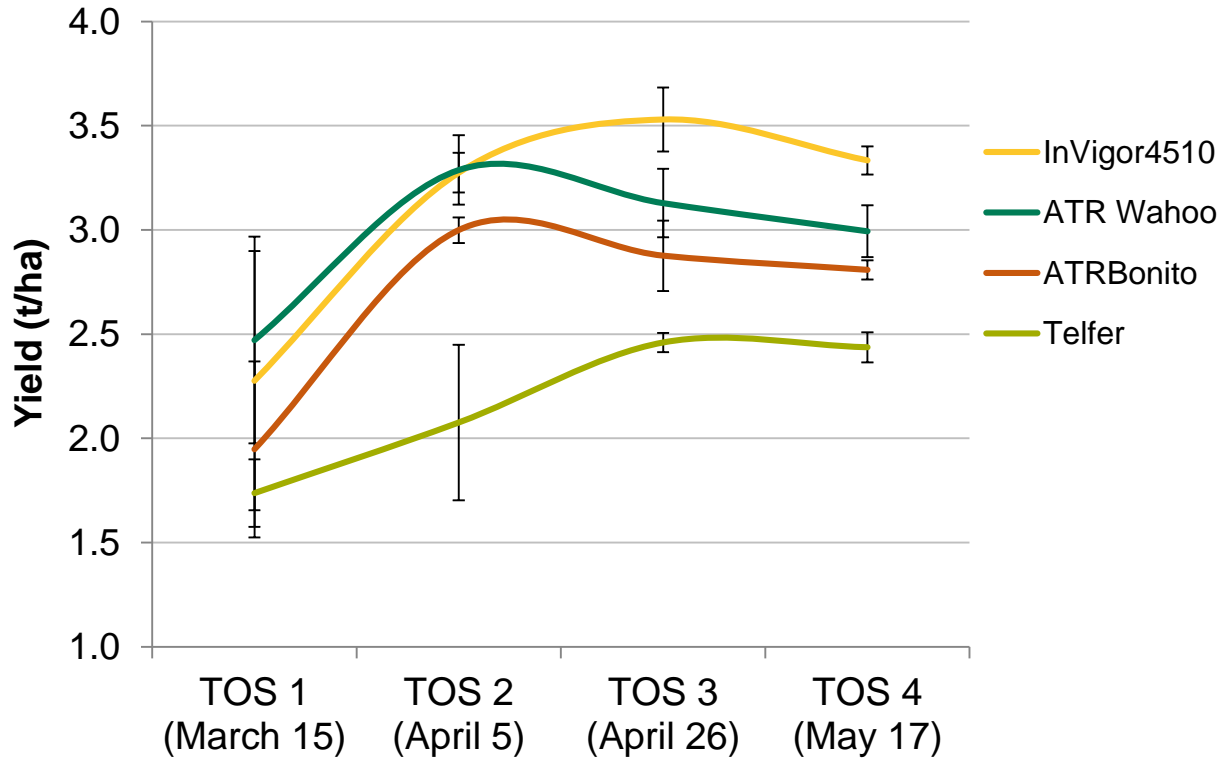


TOS 1: 2.2 t/ha
 TOS 2: 2.9 t/ha
 TOS 3: 3.1 t/ha
 TOS 4: 3.0 t/ha

TOS NS

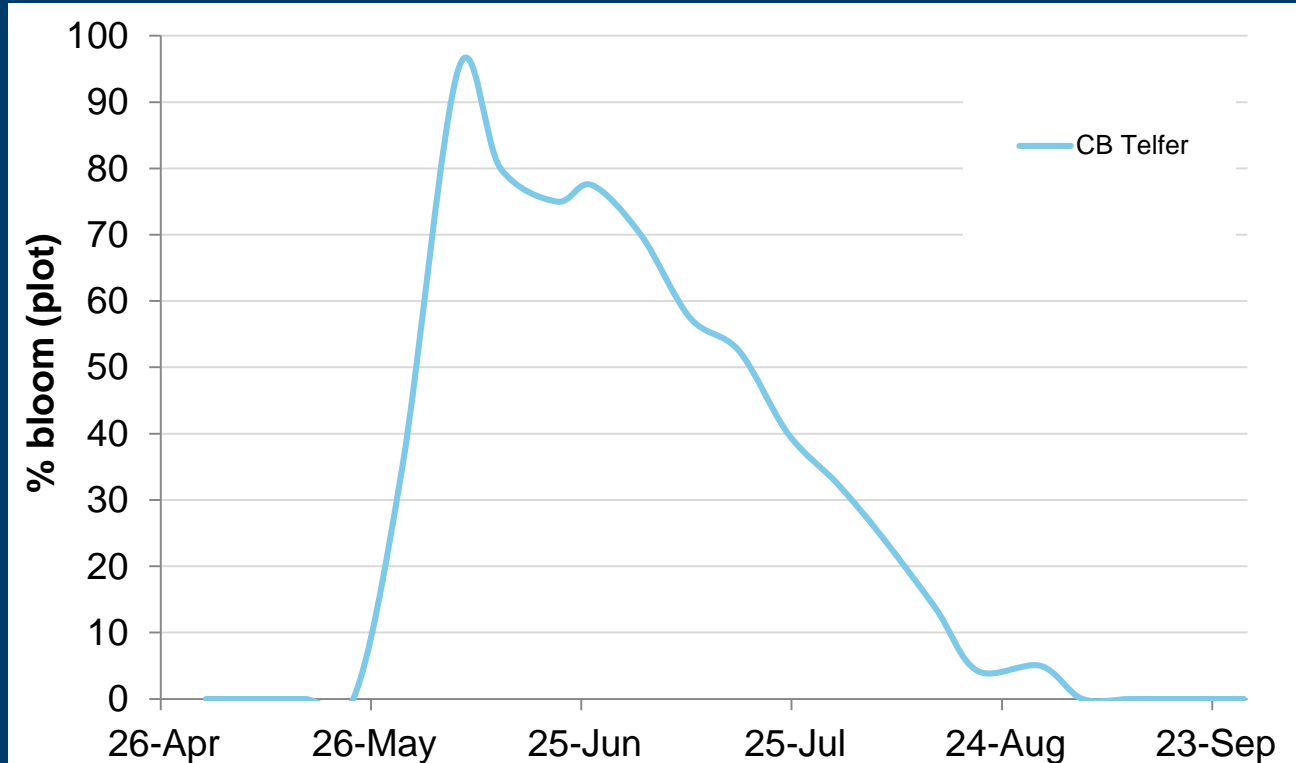
Var sig

Dale yield

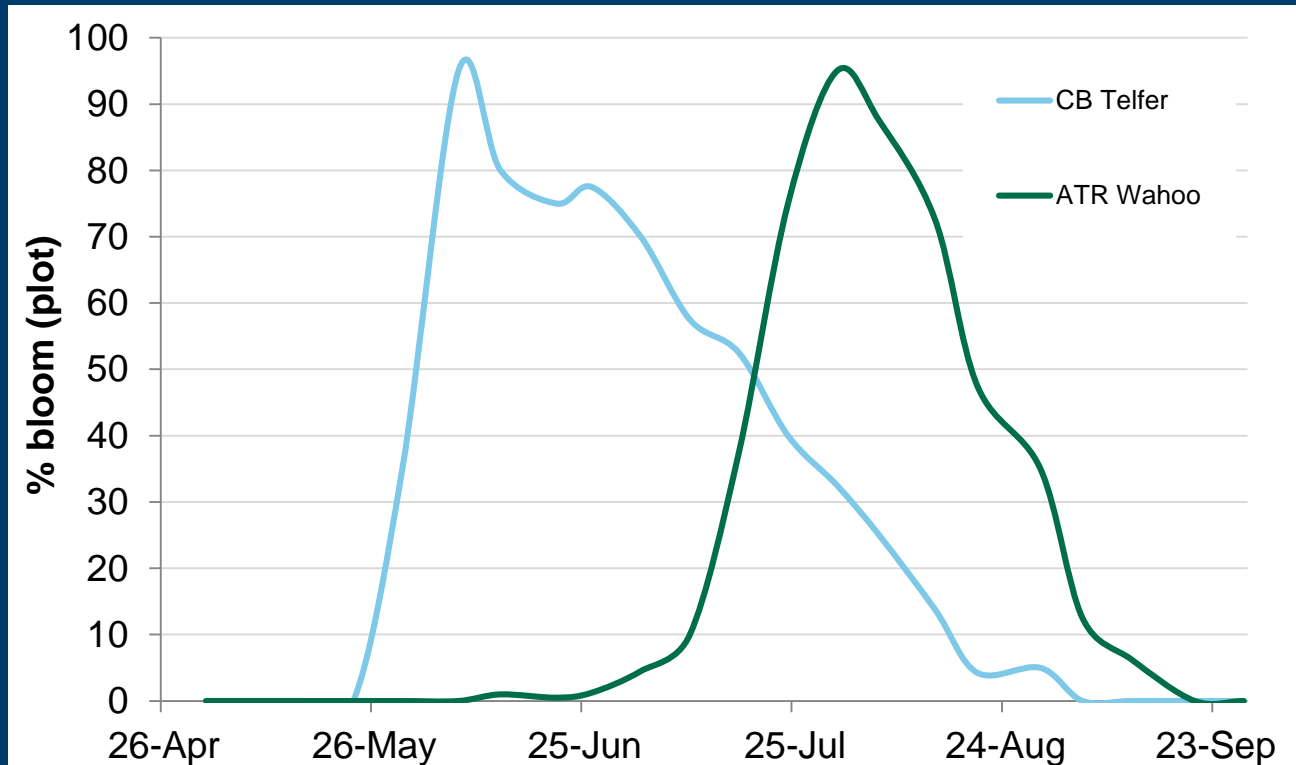


Some varieties well adapted across wide sowing time

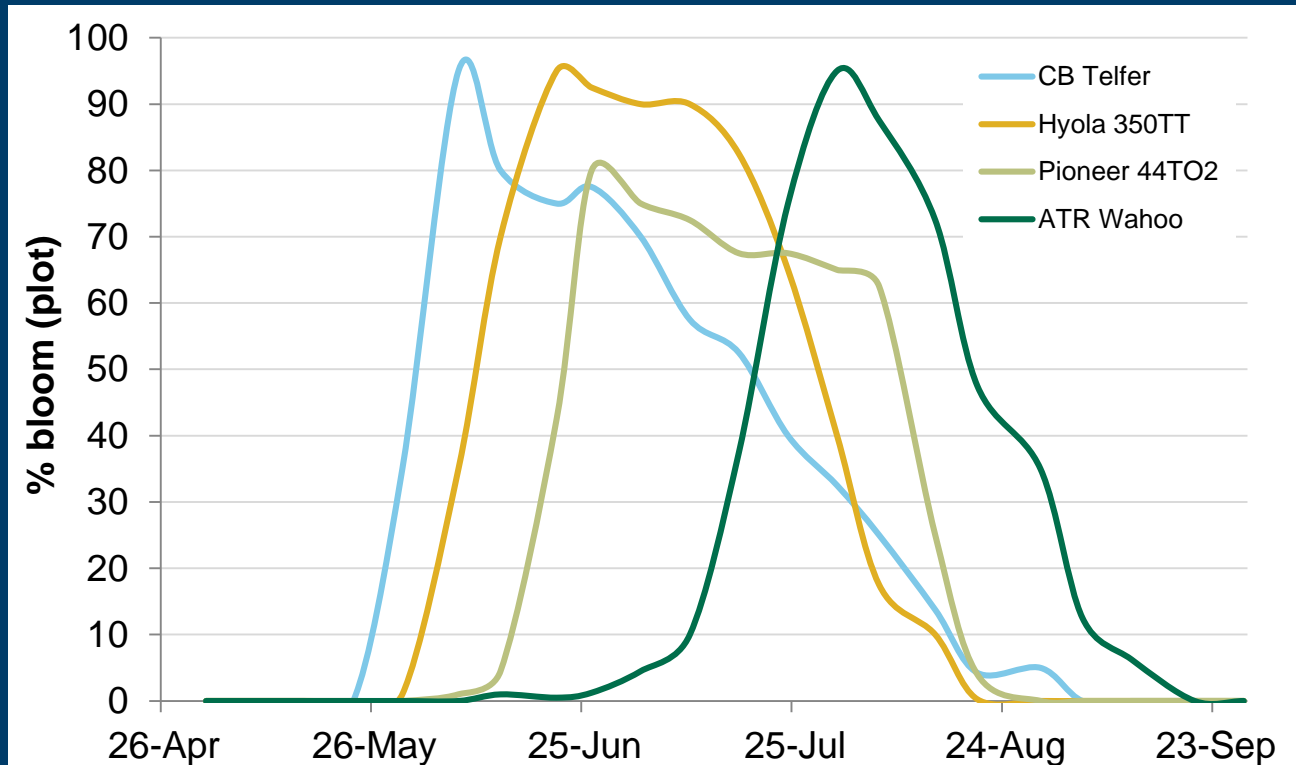
Dale flowering duration (TOS 2, Apr-6)



Dale flowering duration (TOS 2, Apr-6)



Dale flowering duration (TOS 2, Apr-6)



Mid season varieties are quite adaptable

A few varieties may cover a wide sowing window

Some preliminary conclusions from agronomy

- Early sowing may be limited in northern areas, try another deeper seeded species.
- The hotter early conditions may be a benefit further south.
- Short season hybrids = early flowering and long flower duration.
less risky with later sowing/dry sowing?
- Substantial plasticity may mean varieties can be used across a reasonably wide sowing period.
- I think we can expand the sowing window but at which end may depend on the environment.