

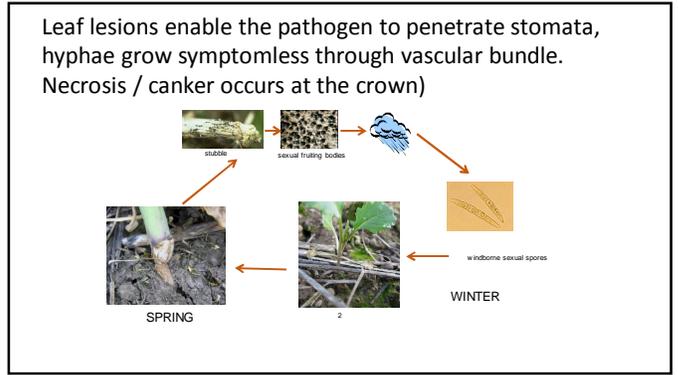
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GRAINS PATHOLOGY

**THE UNIVERSITY OF
MELBOURNE**

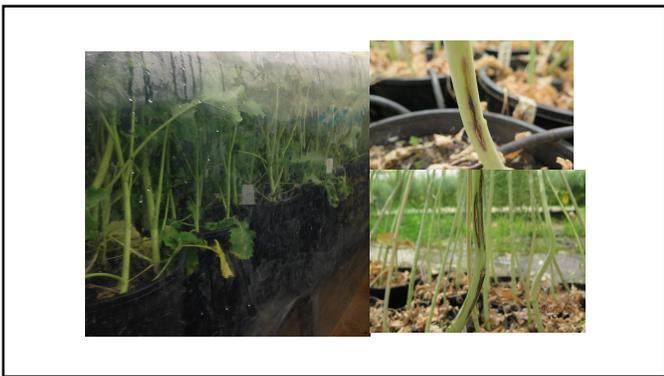
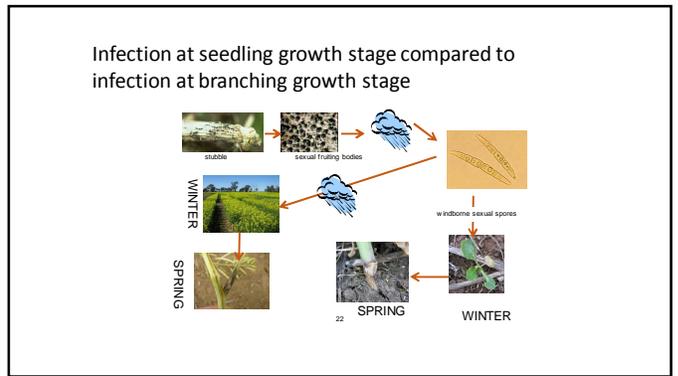
Stem and branch blackleg infection
-preliminary findings
-plans for 2016

National Canola Pathology Program
CSIRO Canola Agronomy Project









Fungicide application effect on Canker in the branch incidence.

Fungicide Treatment	Incidence of plants with a branch/stem lesion
Untreated	58%
Range of Foliar fungicide Pre inoculation	0-33%

Sowing date effect on Branch infection

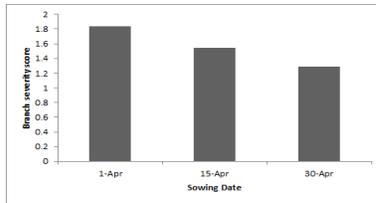
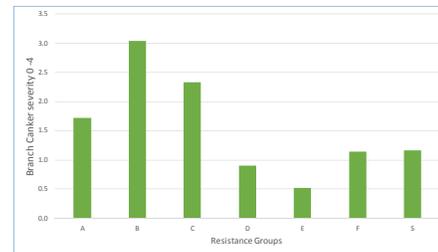


Figure 2. The effect of time of sowing on the severity of blackleg branch infection ($p=0.07$, l.s.d. = 0.46). Plants scored on a 0-4 scale (0 being no infection).

Resistance Group effect on branch canker severity

-Blackleg monitoring sites 0-4 visual score (7 sites)



Possible management

- ~ Make sure canola flowers in the normal flowering window.
- ~ Cultivars choice –cultivars with effective major gene resistance had less stem/branch infection.
- ~ Foliar fungicide application?

Variation request to GRDC

Need to identify causes

Assess potential control strategies

Pot experiment

1. Plants sown in pots at different times to get large range in crop development.
2. Different R genes to determine effect of major gene resistance.
3. Range of spray timings.
4. Inoculate directly with stubble.
5. Record: disease severity, disease control, yield.

Field trials

1. Cultivars with a range of maturity sown in each state (early to winter type), record development of stem/branch infection.
2. Range of spray timing.
3. Record: disease severity, disease control, yield.

Discussion

- ~ Why is this now an issue for nearly every canola paddock across Australia?
- ~ It has got worse each year, will this trend continue? We had early sown crops in the past, were we just not looking?
- ~ Is it due to early sowing, early flowering cultivars due to dry springs?
- ~ Have we worked too hard at controlling crown canker and inadvertently selected for later infecting blackleg isolates?
- ~ Minor gene resistance and current fungicide use have no effect on stem / branch infection. Are we a sitting duck???