

Fungicide control strategies



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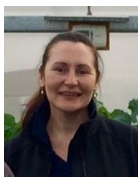
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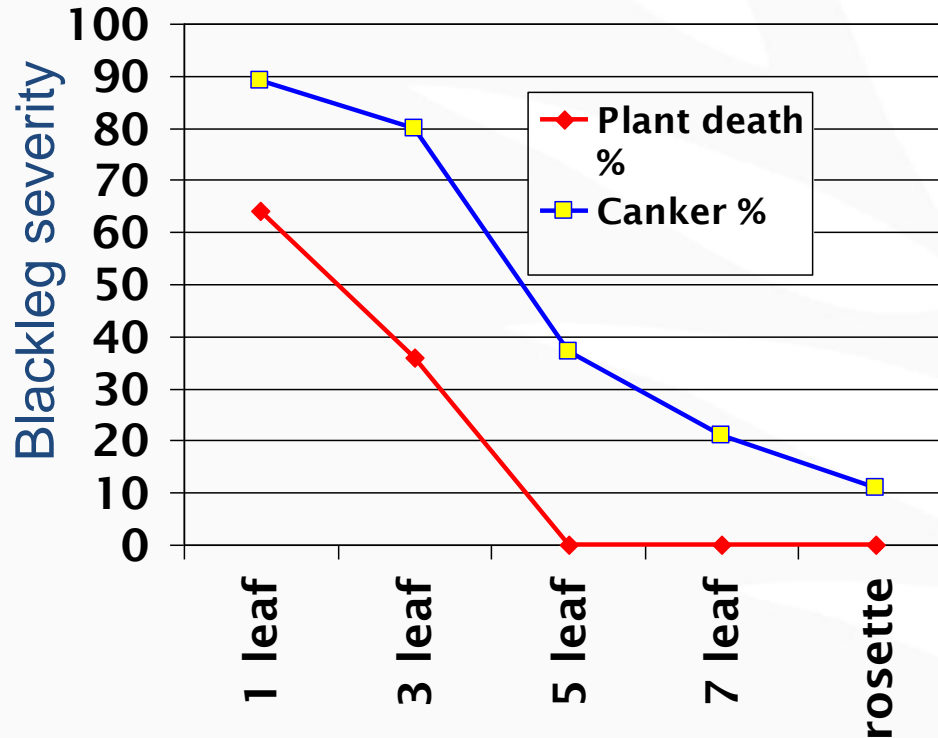


New seed treatments

Seedling infection results in crown canker in mature plants



Protecting seedlings will reduce stem canker

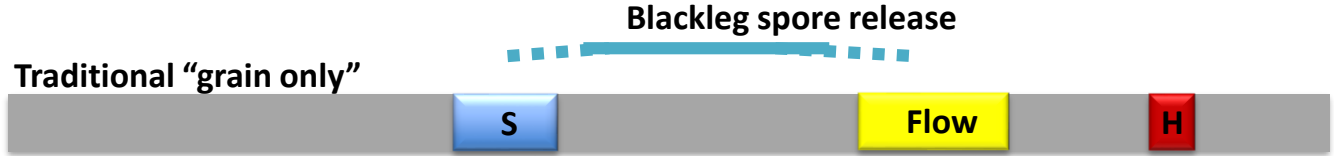


Changing farming systems

20 years ago

Production: 1.6 mt

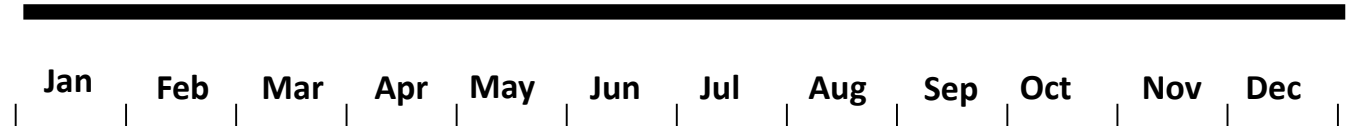
Area: 1.0 mha



2018

Production: 3.8 mt

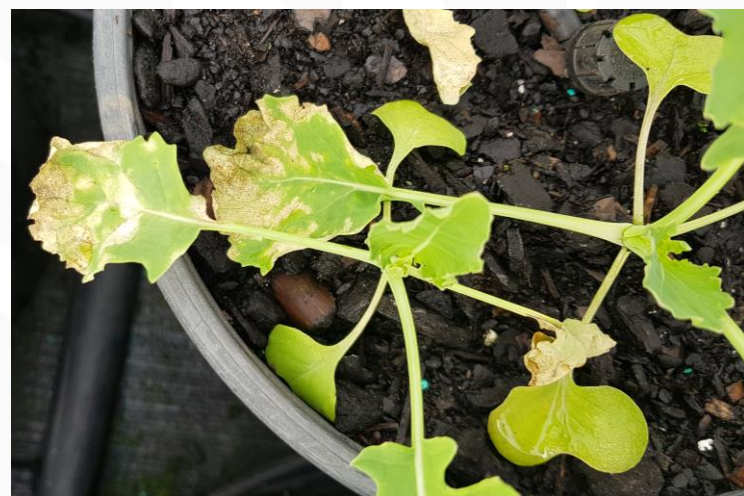
Area: 2.7 mha



2020 New SDHI seed treatments

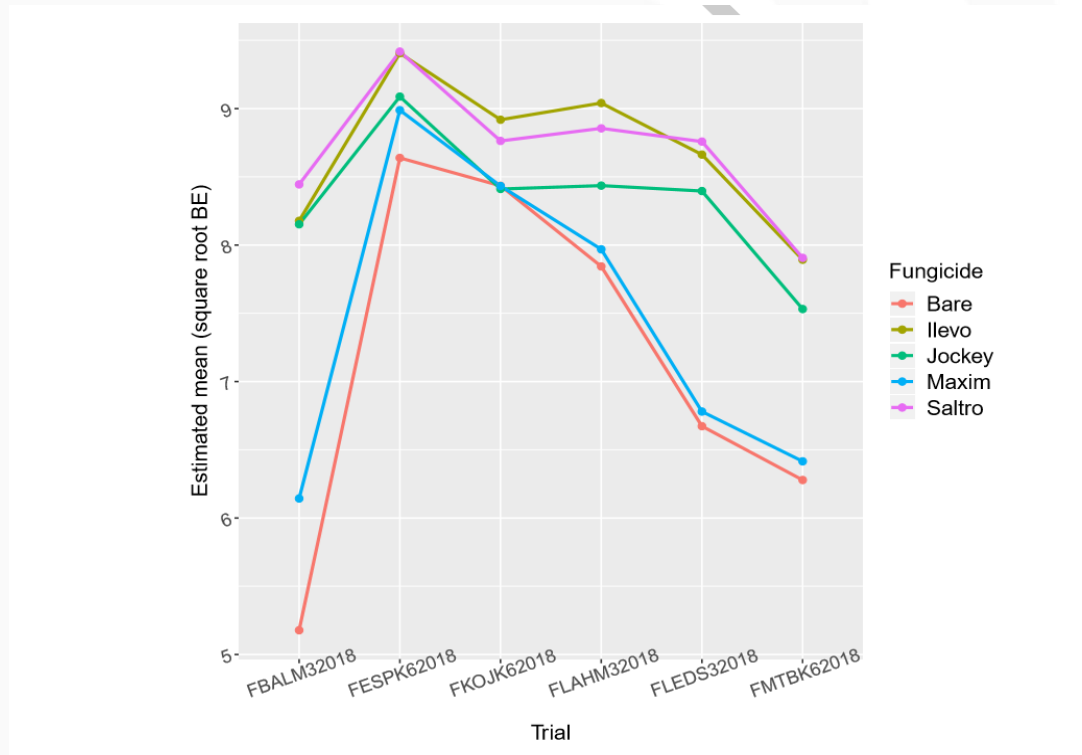
Commercially available in 2020

- Increased efficacy and longevity
- Improved seed safety
- No detected fungicide resistance in Australian blackleg populations
- May reduce need for early foliar fungicide applications



2018 Six blackleg nurseries in 2018

GRDC funded. Centre for Bioinformatics and Biometrics (CBB) Lauren Borg



SDHI

Agronomist management – less crown cankers & better fungicides

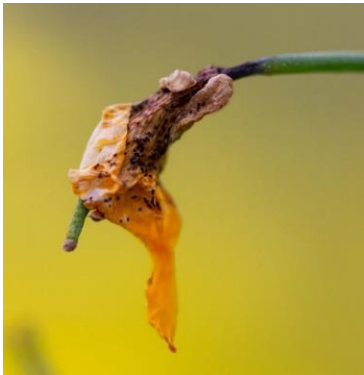
No seed treatment if sown early?

Jockey + 4-6 leaf Foliar

Compared to

SDHI + foliar at 30% bloom.

Upper canopy blackleg infection UCI update



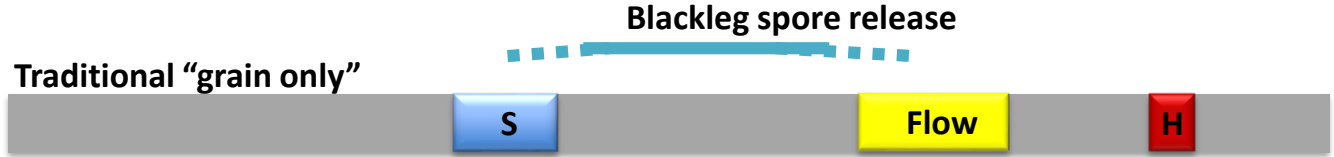


Changing farming systems

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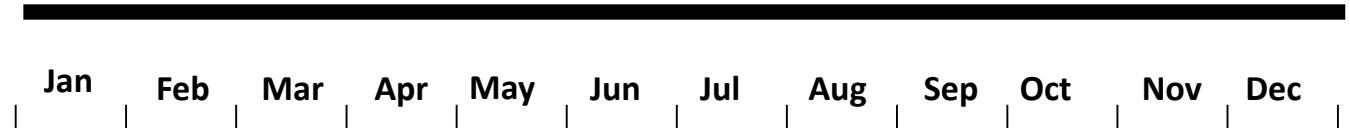
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2018

Production: 3.8 mt

Area: 2.7 mha



The Knowns

- Blackleg upper canopy infection causes significant yield loss
- Effective major gene resistance controls UCI
 - Ineffective major gene = complete susceptibility
- Delayed flowering until later in optimal period reduces risk in high disease areas
- Infection during early flowering leads to greatest yield reductions
 - Late pod infection (no control options – MRLs)
- No chemicals registered for blackleg UCI
- Application at 30% bloom for sclerotinia stem rot may provide protection in high disease risk areas



Will I get a yield response from fungicide????



??????

22nd of August , 2019 Horsham



2:20 82%
Marcroft Grains Patholo...
184 Tweets

Tweets Tweets & replies Media Likes



4,542 views
2 39 95

Marcroft Grains Pathol... · 15 Aug 19
Crop at 30% bloom. 20 open flowers and pods on the main stem. Ideal for Sclerotinia and upper canopy blackleg (aerial blackleg) fungicide application timing if warranted.



1 24 72

Marcroft Grains Pathol... · 13 Aug 19

Go for it!



Tweets Tweets & replies Media Likes



Marcroft Grains Pathol... · 22 Aug 19

This short video explains the symptoms of upper canopy infection of blackleg and how you can spot it in your field.



4,542 views

2 39 95



Marcroft Grains Pathol... · 15 Aug 19

Crop at 30% bloom. 20 open flowers and pods for Sclerotinia and upper canopy bla (aerial blackleg) fungicide applic timing if warranted.



Tweets Tweets & replies Media Likes



Marcroft Grains Pathol... · 22 Aug 19

If you are seeing symptoms of upper canopy infection, here is a short clip about making spray decisions for controlling it.



1,971 views

5 23 46



Marcroft Grains Pathol... · 22 Aug 19

This short video explains the symptoms of upper canopy infection of blackleg and how you can spot it in your

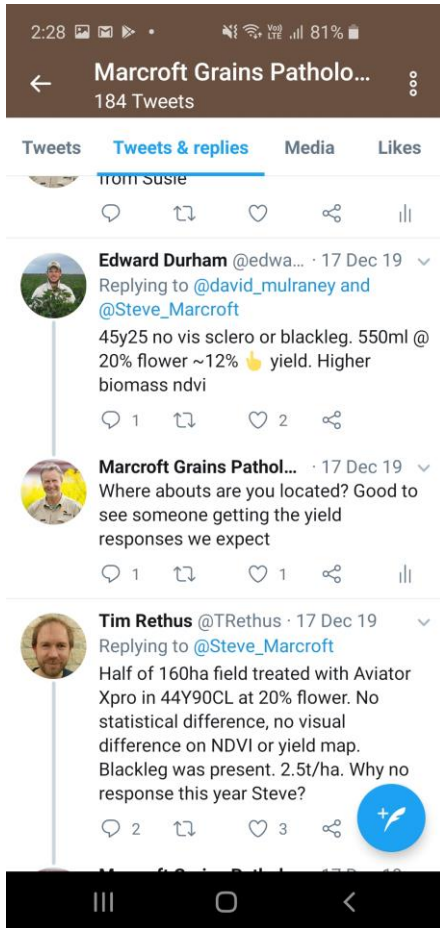


Marcroft Grains Pathology @Steve_Marcroft



A quick update on the progression of blackleg upper canopy infection. The symptoms we are seeing at Lake Bolac suggest our recommendations were on point and the season is progressing as expected.





Often get big yield responses, but not always-Why?

GRDC funded UCI screening





Effect of time of year on UCI

Artificial inoculations

Experiment location	Time of sowing	Inoculated at 30% bloom	Days from 30% bloom inoculation to plant maturity	External lesion length (mm) Average	Internal pith colonisation (mm) Average
Glasshouse lab inoculation	21-Mar	10-Jun	102	38	134
Glasshouse lab inoculation	3-Jun	21-Aug	56	12	5

Hey Susie - can
we add thermal
growing degree
day to make yield
loss predictions
more
predictable?



Definitely
worth doing
more work



UCI score (0-4) on yield

2019 Vic data 0 = no damage, 4 branch premature branch senescence

Plant Severity score	Yield (g/8plants)	% yield loss
0	18.1 a	-
1	11.1 b	38.7
2	12.5 b	31.3
3	10.2 bc	43.8
4	8.1 c	55.4













NEW FINDING FROM 2019

UCI

- Small visible external lesions can result in severe internal infection reducing water and nutrient flow within stems / branches. SAME AS TRADITIONAL CROWN CANKERS.
- The pathogen requires sufficient time for the initial infection to cause the blockage of vascular tissue. Time of year may also be a crucial factor. SAME AS TRADITIONAL CROWN CANKERS.
 - Therefore – can get perfect conditions for blackleg in late August (lots of lesions). But results in limited yield loss.
- 30% bloom fungicide will not reliably control pod lesions.