











Upper Canopy Infection

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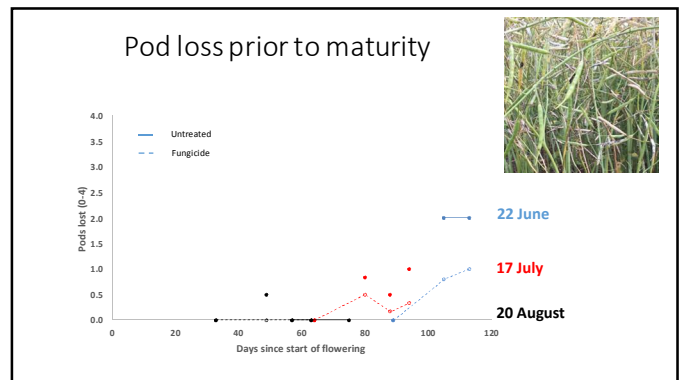
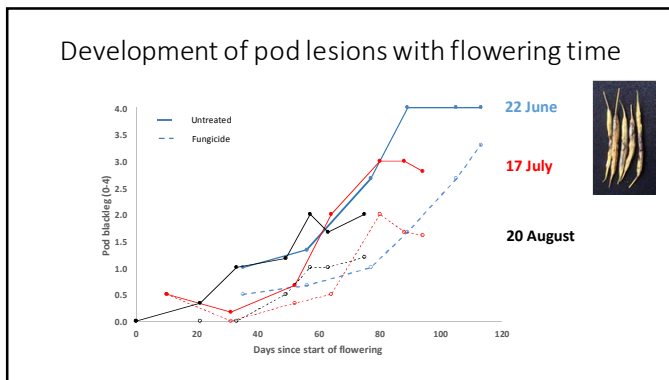
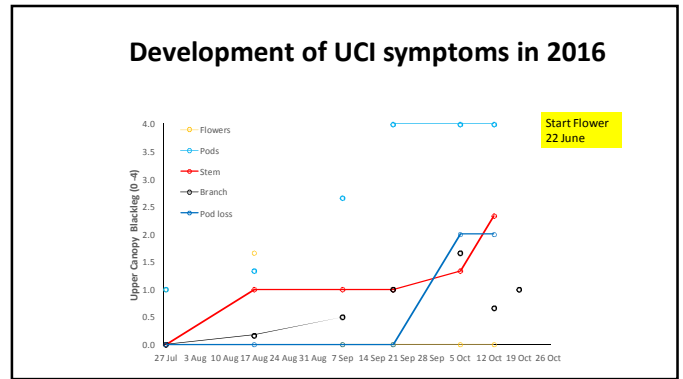
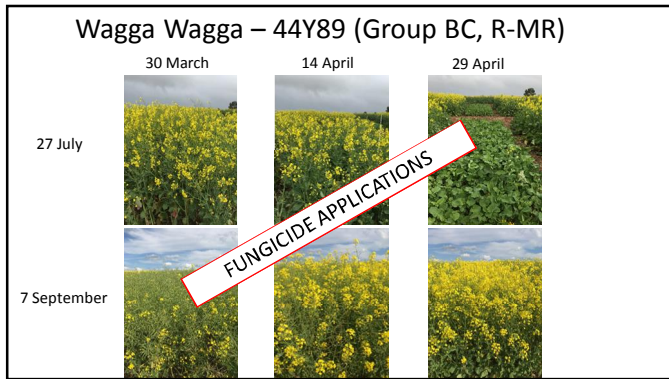
Upper canopy infection 2011-16 : Stingray

State	Site*	Year					
		2011	2012	2013	2014	2015	2016 ^b
	Beckom (1)	1	0	1	1	2	1
	Cootamundra (2)	0	0	0	1	2	0
New South Wales	Cudal (3)	0	0	1	0	0	1
	Geregeny (4)	0	0	0	2	0	1
	Grenfell (5)	0	0	0	3	0	1
	Lockhart (6)	0	0	0	2	1	0
	Parkes (7)	0	0	0	3	4	1
	Wagga Wagga (8)	0	0	0	3	0	1
	Arthurton (9)	0	0	0	1	1	1
	Bordertown (10)	0	0	0	1	0	1
	Frances (11)	0	0	n.a.	1	1	n.a.
South Australia	Mount Hope (12)	0	0	1	1	2	2
	Riverton (13)	0	0	0	0	1	1
	Spalding (14)	0	0	2	2	0	1
	Turretfield (15)	0	0	0	1	1	1
	Yeelanna (16)	0	0	0	0	1	1
	Diggora (17)	0	0	0	0	0	1
	Hamilton (18)	0	0	1	0	0	1
	Kaniva (19)	0	0	0	2	1	1
Victoria	Streatham (20)	0	0	0	0	1	1
	Minyip (21)	0	0	2	0	0	1
	Wunghnu (22)	0	0	1	0	1	1
	Yarrawonga (23)	0	0	0	1	0	1

What drives expression of upper canopy infection?

- ~ Severe Upper Canopy Infection in 2014/15
- ~ Severe flower & pod infection in 2016 with little stem/branch infection
- ~ Dry springs = stressed plants in 2014/15

Site	Treatment	Stem infection (0-4)		Branch infection (0-4)	
		Maturity	4 weeks post-maturity	Maturity	4 weeks post-maturity
Kaniva, VIC	Untreated	0.1	0.7	0.4	2.2
Wagga Wagga, NSW	Untreated	1.0	2.3	1.0	2.7
	2 x Prosaro	1	1.7	1.2	2



Flowering time and yield

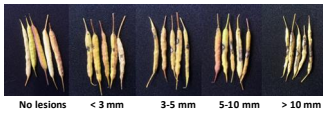
Flowering date	Treatment	Yield (t/ha)
22 June	Untreated	2.88
17 July	Untreated	2.99
18 Aug	Untreated	2.91

Flowering time and disease-related yield loss

Flowering date	Treatment	Yield (t/ha)	Yield loss due to pod infection (t/ha [%])
22 June	Untreated	2.88	
	Full fungicide	3.87	0.99 (26%)
17 July	Untreated	2.99	
	Full fungicide	3.57	0.29 (8%)*
18 Aug	Untreated	2.91	
	Full fungicide	3.01	n.s.

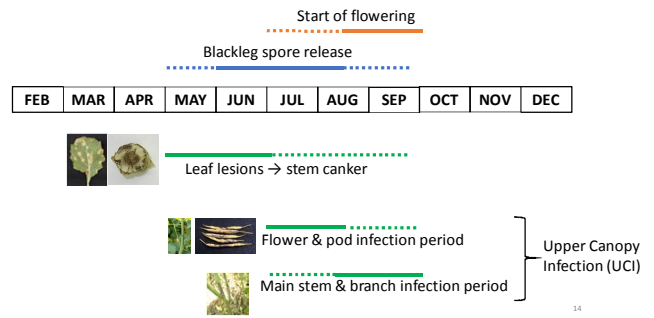
* Excludes 0.29 t/ha yield advantage by the addition of fungicides to seed, fertiliser and vegetative growth

Yield loss from pod lesions



Pod blackleg severity	Canowindra			Wagga Wagga		
	TGW (g)	% Reduction	Seeds/pod	TGW (g)	% Reduction	Seeds/pod
No lesions - 0mm	3.68a	-	19.3	3.43a	-	23.4a
Lesions <3mm	3.57b	3	19.8	3.26ab	5	21.7b
Lesions 3-5mm	3.45c	6	19.0	3.26ab	5	21.4b
Lesions 5-10mm	3.37cd	8	19.3	3.20bc	7	20.4c
Lesions >10mm	3.17d	14	18.5	3.06d	11	18.8d
LSD	0.11***		n.s.	0.17**		0.94***

Blackleg infection periods



Acknowledgements:

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