

Prosaro® 420SC- commercial demonstration of Blackleg control in Cobbler TT and Jardee HT® canola

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Purpose:	To demonstrate the crop safety and efficacy of Prosaro 420SC applied by grower machinery for the control of Blackleg in Canola.
Location:	Coorow-Green Head Rd, Warradarge
Soil Type:	Gravelly sandy loam
Rotation:	2010 Wheat
GSR:	470.3 mm

BACKGROUND

- Blackleg is the most serious disease in canola in Western Australia.
- Prosaro 420 SC will have a registered use rate of 375-450 mL/ha depending on disease severity. Application is recommended between the crop stages 2 leaf and Green bud with a maximum of 2 applications per season.
- At the time of publication Prosaro is not registered for use in canola. An application for the registration of Prosaro for Blackleg suppression has been made and is expected to be registered prior to the 2012 season.

TRIAL DESIGN

Plot size: 25 m x paddock width

Repetitions: Single spray blocks of 5 ha per variety

Crop details: Cobbler TT @ 6kg/ha, Jardee HT canola @ 2.7kg/ha on 1 May 2011

Fertiliser: Agstar Xtra @ 110 kg/ha, Urea top-dressed @ 65 kg/ha, MOP @ 35 kg/ha, SOA @ 200 kg/ha

Seed treatments: Jardee only: Jockey® Stayer + Gaucho® 350

Herbicide: **Pre:** Roundup® CT, Trifluralin, Atrazine @ 1.5 L/ha

Post: Select @ 400 mL/ha (26 July)

Sprayer: Boom width: 25 m grower's machinery

Water Rate & Speed: 60 L/ha, 16 km/h

Nozzle type & pressure: FF 11002's @ 3 bar

Fungicide: Prosaro® 420SC @ 450 mL/ha (tank mix with Select) on 26 July @ 8 leaf

SITE COMMENTS

- At application the canola was growing well although there were blackleg lesions on the older leaves across both varieties in the paddock which was the reason the 450 mL/ha rate was selected.
- There had been no canola grown in the trial paddock in recent history with the only canola grown on farm back in 2009 in a paddock located ~ 2 km to the North West.
- With both varieties rated as MS or moderately susceptible to Blackleg and given the seasonal conditions with a High blackleg disease risk an application of Prosaro would be beneficial.

- The advantage of using a seed treatment under these conditions can be seen with the Jardee HT treated with Jockey Stayer not having as severe infection early and losing the plant stand. This can be seen in the differences between Prosaro treated Cobbler and untreated with a much bigger yield increase (see below).

RESULTS

Crop Effects

- Prosaro was safe to Cobbler and Jardee canola in this commercial trial.

Yield

Table 1: Yield t/ha and return on investment (\$ROI) from Cobbler TT and Jardee canola, 6/11/11.

Cobbler TT – MS blackleg					Jardee TT – MS blackleg		
	Cost/ha	Yield t/ha	\$ Gross Margin /ha	\$ ROI above untr.	Yield t/ha	\$ Gross Margin /ha	\$ ROI above untr.
untreated	\$0.00	1.30	\$728.00		2.05	\$1,076.25	
Prosaro 450 mL/ha	\$29.70	2.08	\$1,164.80	\$402.10	2.25	\$1,181.25	\$70.30
Application cost	\$5.00						
Canola Price	\$525.00						

*Pricing based on AWB contract pricing delivered to Fremantle port zone, CS01-A = \$525 16/11/2011

- The yields presented were taken from the yield monitor in the grower's header.
- Based on this in Cobbler canola with no seed treatment Prosaro recorded a 780 kg/ha yield response and \$402.10 over the untreated.
- For Jardee treated with Jockey Stayer and Gaucho Prosaro recorded a 200 kg/ha yield increase and \$70.30 above the untreated after fungicide and application costs were removed.

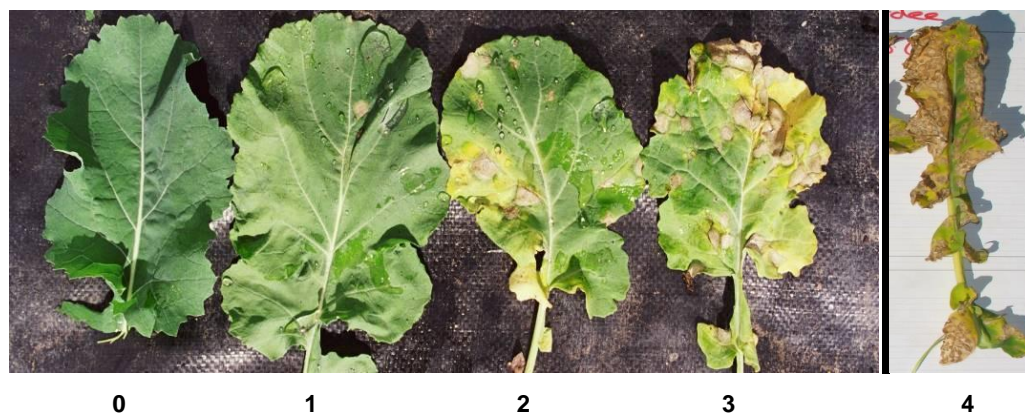


Figure 1: Leaf Disease Score index- (0-4)

Table 2: Mean leaf disease severity score, 26/8/11, 31 days after application (DAA)

Leaf Severity Score			Leaf Severity Score		
Cobbler TT	Untreated	Prosaro	Jardee HT	Untreated	Prosaro
Mean	3.4 a	1.4 b	Mean	3.2 a	1.2 b
LSD	0.52		LSD	0.56	
CV	0.49		CV	0.58	

Values followed by the same letter do not significantly differ ($P=0.05$).

- At 31 DAA the oldest non senesced leaf on each plant was removed from 20 plants per treatment. Each leaf was rated using the leaf disease score index above.

- Prosaro (1.4 and 1.2) recorded a significant reduction ($P \leq 5\%$) in leaf lesions and necrosis (Leaf disease score) compared to the untreated (3.4 and 3.2) in both Cobbler and Jardee.



Figure 2: Jardee HT, 10 leaves, Prosaro 450 mL/ha (r) Untreated (l), 31DAA

Table 3: Mean Crown % infected in Cobbler and Jardee canola, 13/10/11, 73 DAA

Crown % infected			Crown % infected		
Cobbler TT	Untreated	Prosaro	Jardee HT	Untreated	Prosaro
Mean	5.6 a	0.7 b	Mean	4.9 a	1.2 b
LSD	1.88		LSD	2.05	
CV	1.92		CV	2.21	

Values followed by the same letter do not significantly differ ($P = 0.05$).

- At 73 DAA 20 plants were removed from each treatment. A stem cut was made about 2 cm from the base and the % of blackleg infection was rated.
- Prosaro (0.7% and 1.2%) recorded a significant reduction ($P \leq 5\%$) in the % of the crown infected with blackleg compared to the untreated (5.6 and 4.9) in both Cobbler and Jardee.



Figure 3: Cobbler, 20 stems, Untreated (r) Prosaro 450 mL/ha (l), 73DAA

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REVIEWED: Craig White, Technical advisor southern WA, Bayer CropScience

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