Blackleg severity across Australia and on Eyre Peninsula

SOUTH AUSTRALIAN RESEARCH & DEVELOPMENT INSTITUTE
PIRSA

Andrew Ware

Canola Pathology Workshop - 2014

PREMIUM FOOD AND WINE FROM OUR CLEAN ENVIRONMENT

GRDC Grains Research & Development Corporation

SOUTH AUSTRALIA

Government of South Australia

SARDI

Control of Blackleg, Sclerotinia and other diseases of canola

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2013Blackleg Resistance Group Monitoring Sites

Field blackleg monitoring

Cultivars grown in triplicate plots

20 plants assessed per plot
(60 plants in total)

2013 Western Australia

WA	A	B	C	D	E	G	S	
BADGINGARRA								Low blackleg severity in all groups.
CORRIGIN								Low blackleg severity in all groups.
GIBSON								Low blackleg severity in all groups.
KATANNING								Moderate blackleg severity in Groups A, B and S.
KENDENUP								Moderate blackleg severity in Groups B and S.
KOJONUP								Moderate blackleg severity in Groups B and S.
S. STIRLING								Moderate blackleg severity in Group S.
WILLIAMS								Moderate blackleg severity in Groups B and S.

	No data
	Low blackleg severity compared to national average – continue with current management techniques.
	Moderate blackleg severity compared to national average – Monitor crops for disease, see Blackleg management guide.
	High blackleg severity compared to national average – high risk of yield loss, see Blackleg management guide.

2013 Victoria

VIC	A	B	C	D	E	G	S	
CHARLTON								Low blackleg severity in all groups.
DIGGORA								Low blackleg severity in all groups.
HAMILTON								Low blackleg severity in all groups.
KANIVA								Low blackleg severity in all groups.
MINYIP								Low blackleg severity in all groups.
STREATHAM								Low blackleg severity in all groups.
WUNGHNU								High blackleg severity in Group B. Moderate in Groups C and S
YARRAWONGA								High blackleg severity in Groups A, B, D and G. Moderate in Group S

	No data
	Low blackleg severity compared to national average – continue with current management techniques.
	Moderate blackleg severity compared to national average – Monitor crops for disease, see Blackleg management guide.
	High blackleg severity compared to national average – high risk of yield loss, see Blackleg management guide.

2013 New South Wales

NSW	A	B	C	D	E	G	S	
BECKOM								High blackleg severity in groups A, B. Moderate in C, D.
BELLATA								Low blackleg severity in all groups.
COOTAMUNDRA								High blackleg severity in groups A, B. Moderate in group S.
CUDAL								High blackleg severity in groups A, B, C and D. Moderate in group S.
GEROGERY								Low blackleg severity in all groups.
GRENFELL								High blackleg severity in group A. Moderate in groups B and S.
LOCKHART								High blackleg severity in groups A and B. Moderate in groups D and S.
MULLALEY								Low blackleg severity in all groups.
PARKES								High blackleg severity in groups A and B. Moderate in groups C and S.
WAGGA WAGGA								High blackleg severity in groups A, B, C and D. Moderate in group S.

	No data
	Low blackleg severity compared to national average – continue with current management techniques.
	Moderate blackleg severity compared to national average – Monitor crops for disease, see Blackleg management guide.
	High blackleg severity compared to national average – high risk of yield loss, see Blackleg management guide.

2013 South Australia

SA	A	B	C	D	E	G	S	
ARTHURTON								Moderate blackleg severity in Group S.
BORDERTOWN								Moderate blackleg severity in Group S.
MT HOPE								High blackleg severity in Group D. Moderate in Group S.
RIVERTON								Moderate blackleg severity in Group S.
SPALDING								Moderate blackleg severity in Group S.
TURRETFIELD								High blackleg severity in group A. Moderate in Groups B and S.

	No data
	Moderate blackleg severity compared to national average – Monitor crops for disease, see Blackleg management guide.
	High blackleg severity compared to national average – high risk of yield loss, see Blackleg management guide.

2013 Blackleg monitoring sites – Mt Hope, SA

Background:

- Blackleg disease can be minimised by a number of factors including sowing cultivars with high blackleg resistance, avoid sowing canola in close proximity to last year's stubble and applying fungicides (see the current Blackleg Management Guide for details - www.grdc.com.au). An additional method for minimising disease is rotating cultivars with different resistance genes.
- All canola cultivars are classified into different resistance groups. Refer to the current Blackleg Management guide (www.grdc.com.au) for individual cultivar groups.
- Cultivars representing each of the resistance groups are sown at 32 National Variety Trial across Australia and monitored for levels of blackleg disease. These data indicate which resistance groups have higher levels of disease compared to the national average at each of the regionally based NVT canola yield sites.

Mt Hope 2013 NVT trial site blackleg monitoring results:

- The Group D blackleg monitoring cultivar at the Mt Hope National Variety Trial (NVT) site had high levels of blackleg infection compared to the national average. The Group S blackleg monitoring cultivar had moderate levels of blackleg infection compared to the national average. The monitoring cultivars in all other groups (A B C E G) displayed no high levels of blackleg infection compared to the national average.
- These data reflect the **virulence profile** of the blackleg fungal population at the **Mt Hope NVT yield site ONLY** and may be different to the blackleg populations on your farm. The level of blackleg in your crop is influenced by the cultivars that you and your neighbours have sown over the past 3 years.
- If you have grown Group D cultivars for three or more years, consider switching to a cultivar belonging to a different resistance group to reduce your risk of disease. To confirm whether your farm is at risk of high levels of blackleg disease you must monitor your crop as described in the Blackleg Management Guide.
- If you plan to continue sowing Group D or S cultivars in 2014 it is crucial to monitor the level of blackleg infection to determine if you need to switch to a different group in 2015.
- The level of blackleg control in Group D or S cultivars can still be increased by avoiding the corresponding stubble and using fungicides.
- Consult the current Blackleg Management Guide for further information on monitoring your own crops, cultural practices, cultivar resistance ratings and resistance groups www.grdc.com.au).

2012 Eyre Peninsula on Group D stubble

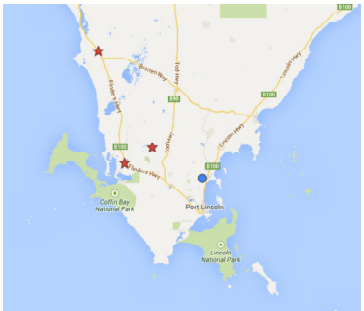
Resistance management Boom-Bust-Recovery

Sylvestris-derived resistance

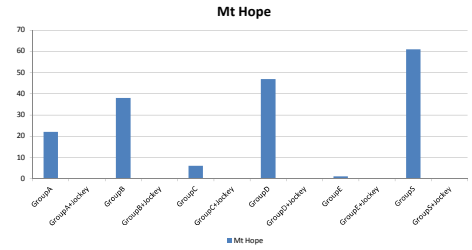
2002 2003 2005

marcroft GRAINS PATHOLOGY

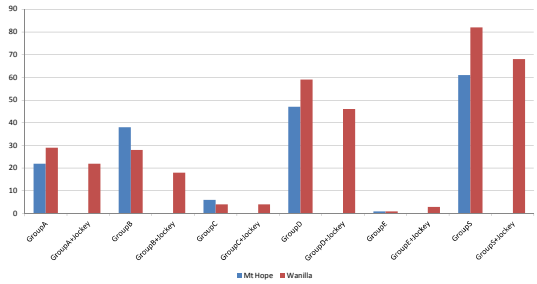
2013 Group D Recovery Sites



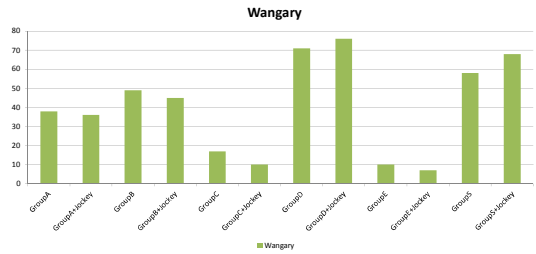
2013 Group D Recovery Sites – Mt Hope



2013 Group D Recovery Sites – Mt Hope & Wanilla



2013 Group D Recovery Sites – Wangary



South Australia 2013 Blackleg severity

The first sign of blackleg in Group E cultivars

In 2013, 8 sites were monitored for blackleg severity. Each site contained each of the 6 blackleg resistance groups, Groups A, B, C, D, E and G. Overall blackleg severity has not increased in recent years.

In SA Group D resistance cultivars are still susceptible on the Eyre Peninsula. However the level of infection in Group D cultivars has not increased in the monitoring sites in other regions of SA.

In 2013 the Group E resistant cultivar ThumperTT was observed to have higher than average levels of blackleg infection in one site on the Eyre Peninsula. The area surrounding the site where this was established had been planted to high concentrations of Group E cultivars in 2011 and 2012. Group E is still immune to blackleg in all other sites and regions across Australia. This is the same situation as occurred with Group D cultivars in 2010 on the Eyre Peninsula. If the same pattern of increased infection occurs, the level of blackleg infection in Group E cultivars will increase in 2014 and then may become severe in 2015.

If you are on the lower Eyre Peninsula and have grown Group E cultivars over the past 2 years disease severity may increase. In 2014 do not sow Group E cultivars adjacent to Group E stubble from your 2013 crop. Monitoring Group E cultivars in 2014 to determine if yield loss is likely in 2015.

For individual site results consult the NVTonline website.

Background:

- The fungal disease Blackleg can be minimised by a number of factors including sowing cultivars with high blackleg resistance, avoiding last year's stubble and applying fungicides (see 2014 Blackleg Management Guide for details - www.grdc.com.au). An additional method for minimising disease is rotating cultivars with different resistance genes.
- All canola cultivars are classified into different resistance groups. Refer to the current Blackleg Management guide (www.grdc.com.au) for individual cultivar groups.
- Cultivars representing each of the resistance groups are sown at 32 National Variety Trial across Australia and monitored for levels of blackleg development. These data indicate which resistance groups have higher levels of disease compared to the national average at each of the regionally based NVT canola yield sites.
- It is important to note that blackleg monitoring sites are sown without any fungicide protection to seed or fertiliser and do not receive any foliar fungicide applications.

2013 Blackleg Pod Infection

2014 ARAB Conference

Novotel Barossa Valley Resort

Golf Links Road I Barossa Valley SA 5352

29th Sept – Arrival Mixer from 6pm

30th Sept – 1st Oct Conference

2nd Oct Field Tour

Accommodation available on site

To book: Tel (08) 85240000

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