



The  
University  
of Sydney

# PBI

Plant Breeding Institute  
Cereal Rust Laboratory

Volume 7  
Issue 1  
23 February 2009

## Cereal Rust Report Season 2009

### Responses of Australian Triticales to Stripe Rust

Colin Wellings<sup>1\*</sup>, Grant Hollaway<sup>2</sup>, Hugh Wallwork<sup>3</sup>

<sup>1</sup> The University of Sydney, Plant Breeding Institute  
\*Email: colinw@camden.usyd.edu.au, Phone: 02-9351 8826  
(on secondment from NSW Department of Primary Industries)

<sup>2</sup> Department of Primary Industries Victoria, Horsham

<sup>3</sup> South Australian Research and Development Institute, Waite Campus, Adelaide

A revision of stripe rust responses on current triticale cultivars is presented in order to provide information arising from nursery data and commercial experience in 2008. These responses generally reflect those first circulated in Cereal Rust Report Vol. 5 Number 4 (December 2007) that was issued in response to the first available data for the 'Jackie' pathotype.

The summarized data are presented in Table 1. These responses were based on data from six sites and over 500 data points. Points to note from Table 1:

1. Several cultivars have been revised down in their response to the 'Jackie' pathotype. Among these are Breakwell, Jackie and Koscuizsko, which are very susceptible and will be expected to sustain serious losses if stripe rust develops unchecked. Similarly, cultivars Credit and Everest are now regarded as more vulnerable than previously rated. The responses for Tobruk, Hawkeye and Jaywick have changed slightly to reflect observed stripe rust in 2008, but the MR response indicates that these cultivars will remain resistant and should perform well under commercial conditions.
2. Two recently released cultivars, Bogong and Canobolas, have preliminary responses based on limited data in 2008.
3. Some cultivars in nursery situations were noted to have plants exhibiting a more susceptible response. This may reflect seed source for particular nurseries, or inherent features of stripe rust variation in certain cultivars. Further observations are required.

Stripe rust control options for triticale in 2009 will need to consider the following:

1. Select resistant varieties, and avoid where possible the more extreme susceptible types such as Jackie, Breakwell, Kosciuszko, Speedee.
2. Take great care in managing early sown dual purpose varieties. The possibility for disease build up on vulnerable early sown varieties is a real and constant danger, given the experiences in 2007 and especially in 2008. The 2008 season serves to remind us that when disease occurs early, pathogen

inoculum will increase and represent a major threat to main season wheat and triticale varieties.

3. Consider fungicide strategies for the 2009 season. Early sown triticales can be protected with seed and fertilizer applied fungicide. Foliar sprays may also be required and these can in certain circumstances be tank mixed with broad leaf herbicide applications after stock are removed from grazed fields.

However, there are two important issues:

- (i) be careful to observe product registration labels. Registered chemicals and permits to use chemicals may vary from state to state; consult local advice before application.

- (ii) when applying fungicide to fields where grazing is intended, take careful note of withholding periods.

4. Grazing can be a very helpful option to reduce canopy density and so minimise the infection opportunities for the pathogen. Ideally, heavy grazing with sheep is preferred in order to remove as much of the infected foliage as possible. However susceptible varieties such as Jackie and Breakwell can be expected to remain vulnerable, even in situations where the canopy has been significantly reduced.

Copies of previous Cereal Rust Reports can be viewed and downloaded from:

[http://www.agric.usyd.edu.au:8888/pbi/cereal\\_rust\\_reports\\_crr.htm](http://www.agric.usyd.edu.au:8888/pbi/cereal_rust_reports_crr.htm)

**Table 1. Responses of Australian Triticale Cultivars to Major Stripe Rust Pathotypes**

Long-season Dual Purpose	WA Pathotype	Jackie Pathotype	
Breakwell	R-MR	S	
Crackerjack	R-MR	MR	
Endeavour	R-MR	R	
Jackie	MR	VS	
Tobruk	R-MR	MR	
Grain Only			
Abacus	MR	MS	
Bogong - H127	MR	MR	a, b
Canobolas - H418	-	MR-MS	b
Credit	MR-MS	MS-S	
Everest	MR-MS	MS	
Hawkeye	R	MR	a
Jaywick	R	MR	a
Kosciuszko	MS	S-VS	
Muir	MR	S	
Prime322	MR	MR-MS	
Rufus	R	MR	a
Speedee	MS	S	
Tahara	R	MR	
Tickit	MR	MR	
Treat	MR	MR	
Yukuri	-	R	

(a) evidence for mixed response with some plants more susceptible

(b) provisional data; more susceptible at one location

**General enquiries:**

Plant Breeding Institute  
Private Bag 11  
Camden NSW 2570

107 Cobbitty Road  
Cobbitty NSW 2570

Ph: 02-9351 8800 (Reception)

Fax: 02-9351 8875

Web: [www.agric.usyd.edu.au:8888/pbi](http://www.agric.usyd.edu.au:8888/pbi)

**Rusted plant samples** can be mailed in paper envelopes; do not use plastic wrapping or plastic lined packages. Direct samples to:

Australian Cereal Rust Survey  
Plant Breeding Institute  
Private Bag 11, Camden NSW 2570

The Australian Cereal Rust Control Program is supported by growers through the Grains Research & Development Corporation.

