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## Cereal Rust Report Season 2007

### Responses of Australian Wheat Varieties to Stripe Rust

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Variety response to disease can be expected to show local and regional variation governed by a range of factors including crop vigour, time of disease onset and the nature of pathogen populations. A revision of stripe rust response among current Australian wheat varieties is presented in reaction to a change in pathotype in *P. striiformis*. This information represents a collaborative effort among national pathologists and breeders concerned with the need to provide the best available information to the industry.

The occurrence of a new pathotype of the wheat stripe rust pathogen (*Puccinia striiformis* f.sp. *tritici*) in late 2006 has resulted in the need to revise the expected disease response among varieties and particularly those that carry the resistance gene *Yr17*. A teleconference was held in late November 2007 among state cereal plant pathologists to consider the available data and to arrive at conclusions on the expected responses of current Australian wheats to the new "Pugsley" pathotype 134 E16 A+ *Yr17*+. The meeting was attended by Peter Wilkinson (Queensland), Andrew Milgate (NSW), Grant Hollaway (Victoria), Hugh Wallwork (South Australia), Robert Loughman (Western Australia) and Harbans Bariana and Colin Wellings (Plant Breeding Institute). The data and conclusions from this meeting were then circulated for comment among wheat breeding companies currently operating in Australia, and so the outcome of this consultative process now represents a set of stripe rust disease responses that has broad agreement for the wheat industry.

The response of wheat varieties to stripe rust can be measured by a variety of methods and assessment scales. Some of these have been described in previous Cereal Rust Reports ( Vol 2, Issue 2, September 2004) available from the PBI website ([http://www.agric.usyd.edu.au:8888/pbi/cereal\\_rust\\_reports\\_crV1\\_2.htm](http://www.agric.usyd.edu.au:8888/pbi/cereal_rust_reports_crV1_2.htm), or on request via email from Ms Beate Wildner: [beate.wildner@usyd.edu.au](mailto:beate.wildner@usyd.edu.au)). The choice of method or scale will reflect the intended application of the data. For the purpose of communicating to the wheat industry the alphabet descriptions of responses have been used. These descriptors can then be adapted to the various state and regional publications for variety recommendation in 2008.

The attached table lists varieties in alphabetical order. Varieties shaded grey indicate those that carry *Yr17* and these show varying levels of contrast in response to the new "Pugsley" pathotype. In general, varieties not carrying *Yr17* show a similar disease response to both pathotypes, although there are some minor variations.

Variety	WA-Pathotype 134 E16 A+	Pugsley Pathotype 134 E16 A+ Yr17+
AGTScythe	MS-S	MS-S
Annuello	MS	MS
Axe	MR	MR
Babbler	MS-S	MS-S
Banks	MR-MS	MR-MS
Barham	R	MS
Baxter	MS	MS
Binnu	R	MR-MS
Bolac	R	R
Bowerbird	MS-S	MS-S
Bowie	R	S
Braewood	R	MR
Brennan	R	R
Calingiri	MS-S	MS-S
Camm	R	MS-S
Carinya	R	MR-MS*
Carnamah	MS-S	MS-S
Catalina	MR-MS	MR-MS
Chara	MS-S	MS-S
Clearfield JNZ	MS	MS
Cook	MR	MR
Correll	MR-MS	MR-MS
Crusader	R	MR-MS
Cunningham	MS-S	MS
Currawong	MR-MS	MR-MS
Dakota	MR-MS	MR-MS
Dennis	R	R
Derrimut	R	MR-MS*
Diamondbird	MS	MS
Drysdale	MS	MS
EGA Bonnie Rock	S	S
EGA Bounty	R	R
EGA Burke	MR-MS	MR-MS*
EGA Eaglehawk	R	MR-MS*
EGA Eagle Rock	MS	MS
EGA Gregory	R	R-MR
EGA Hume	R	R
EGA Jaeger	R	MR*
EGA Stampede	MR	MR
EGA Wedgetail	MR-MS	MR-MS
EGA Wentworth	MS	MR-MS
EGA Wills	MR	MR
EGA Wylie	MR-MS	MR-MS
Ellison	R	MR-MS
Frame	MR-MS	MR-MS
GBA Combat	S	S
GBA Hunter	R	R
GBA Ruby	R	R-MR
GBA Sapphire	MS	MS
Giles	MR-MS	MR-MS
Gladius	R	MR-MS
Goldmark	MR-MS	MR-MS
Goroke	MS	MS
Guardian	MS	MS

Variety	WA-Pathotype 134 E16 A+	Pugsley Pathotype 134 E16 A+ Yr17+
H45	VS	VS
H46	MS	VS
Hartog	MS	MR-MS
Hornet	R	MS-S*
Hybrid Mercury	S	S
Janz	MR-MS	MR-MS
Kelalac	MR-MS	MR-MS
Kennedy	MR-MS	MR-MS
Krichauff	S	S
Kukri	MR-MS	MR-MS
Lang	MR-MS*	MR-MS*
Leichhardt	MS	MS
Lincoln	R-MR	R-MR
Livingston	R	R-MR
Lorikeet	MS-S	MS-S
Machete	MS-S	MS-S
Mackellar	MR	R
Magenta	MS	MS
Marombi	R	MS*
Meering	MS	MS
Merinda	R	R-MR*
Mira	MR	MR
Mitre	MS-S	MS-S
Naparoo	R	R
Ouyen	MR	MR
Pardalote	MR-MS	MR-MS
Peake	MR-MS	MR-MS*
Petrel	MR-MS	MR-MS
Petrie	MS-S	MS-S
Pugsley	R	S
QAL 2000	R	VS
QAL Bis	R	S
Rees	MS	MS
Rosella	MR-MS	MR-MS
Rubic	R	R-MR
Rudd	R	R
Sentinel	R-MR	R-MR
Silverstar	MS	MS
Snipe	MR-MS	MR-MS
Strzelecki	R	R
Sunbri	R	MR
Sunco	MR-MS*	MR-MS*
Sunlin	R	MR
Sunsoft 98	S	S
Sunstate	R	MS
Sunvale	R	MR
Sunzell	R	MR-MS*
Tammarin Rock	MS-S	MS-S
Tennant	MR	MR
Thornbill	MR-MS	MR-MS
Trident	R	S
Ventura	R	MS*
Westonia	VS	VS

Variety	WA-Pathotype 134 E16 A+	Pugsley Pathotype 134 E16 A+ Yr17+
Whistler	MS	MS
Wyalkatchem	MS*	MS*
Wylah	MS	MS
Yandanooka	MS	MS
Yenda	R	MS-S
Yitpi	MR-MS	MR-MS
Young	R, MS	MS
<b>Durums</b>		
Arrivato	R	R
EGA Bellaroi	MR	MR
Jandaroi	MR	MR
Kalka	MR	MR
Tamaroi	MR	MR
Wollaroi	MR	MR
Yallaroi	MR	MR

Variety	WA-Pathotype 134 E16 A+	Pugsley Pathotype 134 E16 A+ Yr17+
<b>Unnamed Lines</b>		
LPB 03-1109		MR-MS
LPB 03-0684		MS
QT7853		MR
WAWHT2784		MS*
WAWHT2793		MR-MS
WAWHT2836		MS
WAWHT2885		MR-MS
WAWHT2886		MR-MS
RAC1263		MR-MS
RAC1400		MS-S
VR1128		MR-MS

\* These varieties can be expected to show more rusting in certain situations, such as above average moisture, high fertility and early disease onset.

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**Cereal rust samples** may be collected and posted in paper envelopes to the following address:

Australian Cereal Rust Survey  
Plant Breeding Institute  
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