Volume 2
Issue 4
9 December 2004

The University of Sydney

PBI

Plant Breeding Institute
Cereal Rust Laboratory

Cereal Rust Report
Season 2004

Wheat Variety Responses to Stripe Rust

Colin Wellings*, Harbans Bariana and Robert Park

The University of Sydney, Plant Breeding Institute
Email: colinw@camden.usyd.edu.au, Phone: 02-9351 8826
harbansb@camden.usyd.edu.au, Phone: 02-9351 8809
robertp@camden.usyd.edu.au, Phone: 02-9351 8806
*(on secondment from NSW Department of Primary Industries)

The stripe rust epidemic throughout the majority of Australian wheat growing regions in 2004 has prompted the question of variety reaction to the disease. Expected variety responses for eastern Australia wheats were circulated in several reports, the most recent being Cereal Rust Report Volume 1, Issue 5 (January 2004). In general, varieties have performed to expectation in 2004. The pathotype survey has, to date, shown no evidence of change in the pathogen population and in general, the relative rankings of variety response to stripe rust have not altered appreciably.

However, several varieties were considered to be under performing in the presence of heavy inoculum pressure resulting from early infection. For this reason, it was considered important to re-visit variety response in the light of data gathered from a range of trial sites throughout Australia. Following the circulation of this data, a teleconference brought together a representative group of pathologists / breeders in order to arrive at a consensus of opinion. Participants included Queensland (Emma Colsen, Greg Platz), NSW (Steve Simpfendorfer, Peter Martin, Andrew Milgate, Gordon Murray, Frank McRae), Victoria (Grant Hollaway), Western Australia (Robert Loughman, Manisha Shanka) and PBI Cobbitty (Colin Wellings, Harbans Bariana, Robert Park).
The scale used in these response categories is based on the assessment scale for stripe rust described in Cereal Rust Report Volume 2, Issue 2 (September 2004):

Score	Response
1	VR
2	R
3	R-MR
4	MR
5	MR-MS
6	MS
7	MS-S
8	S
9	VS

The response categories of VR and R require some explanation. Where effective major gene resistance is known to occur in a variety, the response is given as R. Where the variety shows a high level of resistance with no visible symptoms, the response is designated VR and this may well be the result of unknown major genes and gene combinations; VR is a rare response to the current pathotype.
.

© 2004 Information may be used with acknowledgement.

Response of Australian Varieties to Pathotypes of Wheat Stripe Rust (*Puccinia striiformis* f. sp. *tritici*)

Pathotype 134 E16 A+

Variety	Response
Arrivato (durum)	R
Batavia	R
Bowie	R
Braewood	R
Brennan	R
Camm	R
Dennis	R
EGA Gregory	R
EGA Hume	R
Ellison	R
GBA Hunter	R
GBA Ruby	R
GBA Shenton	R
Marombi	R
Pugsley	R
QAL 2000	R
QAL Bis	R
Rubric	R
Rudd	R
Strzelecki	R
Sunbri	R
Sunlin	R
Sunstate	R
Sunvale	R
Trident	R
Ventura	R
EGA Bellaroi (durum)	R-MR
Kalka (durum)	R-MR
Wilgoyne	R-MR
Wollaroi (durum)	R-MR
Cook	MR
Declic	MR
Kukri	MR
MacKellar	MR
Mira	MR
Mulgara	MR
Ouyen	MR
Paterson	MR
Tamaroi (durum)	MR
Tennant	MR
Yallaroi (durum)	MR
Banks	MR-MS
Blade	MR-MS
Currawong	MR-MS
Dollarbird	MR-MS
EGA Wedgetail	MR-MS
EGA Wylie	(MR-MS)*
Frame	MR-MS
Giles	MR-MS
Goldmark	MR-MS
Halberd	MR-MS
Janz	MR-MS
Kelalac	MR-MS
Kennedy	MR-MS
Pardalote	MR-MS
Petrel	MR-MS
Rosella	MR-MS
Snipe	MR-MS
Sunbrook	MR-MS
Yitpi	MR-MS

Pathotype 134 E16 A+

Variety	Response
Annuello	MS
Arnhem	MS
Baxter	MS
Clearfield Jnz	MS
Datatine	MS
Diamondbird	MS
Drysdale	MS
EGA 2248	MS
EGA Blanco	MS
EGA Jitarning	MS
EGA Wentworth	MS
Excalibur	MS
GBA Sapphire	MS
Glover	MS
Goroke	MS
Hartog	MS
Lang	MS
Leichhardt	MS
Meering	MS
Perenjori	MS
Rees	MS
Spear	MS
Stiletto	MS
Sunco	MS
Whistler	MS
Wyalkatchem	MS
Wylah	MS
Anlace	MS-S
Babbler	MS-S
Bowerbird	MS-S
Calingiri	MS-S
Carnamah	MS-S
Chara	MS-S
Clearfield Stl	MS-S
Cunningham	MS-S
EGA Castle Rock	MS-S
Lorikeet	MS-S
Machete	MS-S
Mitre	MS-S
Petrie	MS-S
Silverstar	MS-S
Tatiara	MS-S
Aroona	S
Arrino	S
Bindawarra	S
Cadoux	S
Cascades	S
Corrigin	S
EGA Bonnie Rock	S
Eradu	S
GBA Combat	S
Hybrid Mercury	S
Krichauff	S
Sunsoft 98	S
Tincurrin	S

Pathotype 134 E16 A+

Variety	Response
Ajana	VS
Amery	VS
Brookton	VS
BT. Schomburgk	VS
Cunderdin	VS
H45	VS
Harrismith	VS
Karlgarin	VS
Nyabing	VS
Schomburgk	VS
Westonia	VS

Pathotype 104 E137 A- Yr17+

Variety	Response
Sunstate	R
Braewood	MR
Rudd	MR
Sunbri	MR
Sunvale	MR
Ventura	MR
Bowie	MR-MS
Ellison	MR-MS
Marombi	MR-MS
QAL Bis	MR-MS
Sunlin	MR-MS
Pugsley	MS-S
Camm	S
Trident	S
QAL 2000	VS

* Response in brackets is preliminary and subject to confirmation.

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

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

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.

GRDC Grains Research & Development Corporation

© 2004 Information may be used with acknowledgement.