



Cereal Rust Report

Season 2010

VOLUME 8 ISSUE 2
24 May 2010

Early Cereal Rust Reports for 2010

ROBERT PARK ¹, COLIN WELLINGS ^{1,4}, GRANT HOLLAWAY ² AND HUGH WALLWORK ³

¹ The University of Sydney, Plant Breeding Institute

² Department of Primary Industries, Horsham Victoria

³ SARDI, Waite Campus, Urrbrae, South Australia

⁴ on secondment from Industry & Investment NSW

Several rust samples have been received over the past weeks, and some of these represent important early records of cereal rust pathogens for 2010. The occurrence of wheat stem rust at two distinct separate locations, and a recent sample of wheat leaf rust, are notable early warnings to be alert for cereal rust diseases during crop establishment.

Wheat Leaf Rust (*Puccinia triticina*)

One sample has been received from an early sown crop of Marombi at Dunedoo in northern NSW. Marombi carries *Lr1* and *Lr37* and although the pathotype has not been determined, the sample is expected to yield pathotype 104-1,2,3,(6),(7),11 +*Lr37*, which has been recovered from this cultivar in this region in previous seasons. Marombi is vulnerable to this pathotype, and control options in situations where heavy infection is present include grazing and fungicide application. However, seek local advice for product choice and timing of application especially noting with holding periods for intended for grazing.

Wheat Stem Rust (*Puccinia graminis* f. sp. *tritici*)

Stem rust samples received from Glen Innes (northern tablelands NSW) were noted in Cereal Rust Report (Vol 8:2, April 2010). The rust was collected from an isolated summer triticale nursery, and so it was unsurprising to note that pathotype 34-2,12,13 (Satu triticale pathotype) was identified. It is presumed that this pathotype survived the summer period in northern NSW. The potential risk to this region is currently low because no reports have been received from crops or

old stubble re-growth situations. This pathotype is avirulent on many of the wheat cultivars grown in north eastern Australia, but can infect barley and triticale.

Two reports of wheat stem rust have been received from the Mallee region in South Australia (Jabuk) and from Wonwondah in the Wimmera of Victoria. The former was collected from stubble of variety Halberd, and the latter was collected from a Yitpi stubble re-growth situation north of Horsham. In both cases the infection was well established. Samples are currently being processed to determine the pathotype(s) present. Typical stubble re-growth and wheat stem rust symptoms are illustrated in Figures 1 and 2.

The unusually early occurrence of these samples reflects significant summer survival of wheat stem rust in this region. With a large area traditionally seeded to the stem rust susceptible variety Yitpi in the Mallee, these samples suggest that this region is at moderate risk of stem rust in 2010.



Figure 1 Self sown volunteer cereals emerging from a stubble field (Wimmera, Victoria). Photo: Grant Hollaway, DPI Victoria.



Figure 2 Wheat stem rust symptoms developing on the true stem. Photo: Grant Hollaway, DPI Victoria.

Miscellaneous Rusts

Leaf rust on *Phalaris tuberosa* continues to be received from co-operators in eastern Australia. This rust poses no threat to cereal crops. Oat crown rust (*Puccinia coronata*) has been received from several situations, some with heavy infection.

There have been no stripe rust samples received to date, despite above average conditions for green bridge survival in large areas of eastern Australia.

Suspected cereal rust samples should be collected and dispatched immediately for identification. Samples will be acknowledged with a preliminary pathogen diagnosis and then further tested for pathotype determination. Results will be reported to individual co-operators as pathotype data comes to hand.

Further information

Robert Park robert.park@sydney.edu.au
(02) 93518806

Colin Wellings colin.wellings@sydney.edu.au
(02) 93518826

Grant Hollaway Grant.Hollaway@dpi.vic.gov.au
(03) 5362 2111

Hugh Wallwork hugh.wallwork@sa.gov.au
(08) 83039382

GENERAL ENQUIRIES

Plant Breeding Institute
Private Bag 4011,
Narellan NSW 2567

107 Cobbitty Road
Cobbitty NSW 2570
T 02-9351 8800 (Reception)
F 02-9351 8875

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 4011, Narellan NSW 2567

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



Industry &
Investment