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First Report of the 'WA Yr17' Pathotype in 2009

Colin Wellings

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)

The first confirmed sample of the 'WA Yr17' pathotype for the 2009 season was collected from a crop of Marombi wheat located at Coolah, northern NSW. The crop was sown for grazing in mid March; stripe rust was observed in early July and sampled for pathotype tests in mid July. Marombi has been popular for its dual purpose value in grazing and grain production in certain regions. However its seasonal vulnerability to stripe rust, leaf rust and wheat streak mosaic virus suggests that it should be replaced with alternative long season varieties.

Samples from Yr17 Wheats

As noted in the previous Cereal Rust Report (Volume 7, Issue 6, 3rd August 2009) a range of samples have been received from Yr17 carrying varieties in 2009. Most of these samples are still under examination. Three samples collected from Sunstate and Sunvale have been determined as the 'Jackie' pathotype. This is not unusual since the Yr17 resistance may still allow stripe rust symptom development with pathotypes avirulent for Yr17.

The first report of the 'WA Yr17' pathotype is an important alert to the industry since several Yr17 wheats are potentially at risk, should this pathotype spread and particularly if it establishes at early growth stages. Current Yr17 varieties most at risk to this pathotype include Barham, Camm, Derrimut, Fang, H46, Hornet, Mace, Marombi, Pugsley, QAL 2000, QAL Bis, Trident, Ventura, Yenda. For further details of expected variety response to stripe rust pathotypes,

see Cereal Rust Report Volume 7, Issue 3, March 2009.

However, there are several important points to note when considering the potential vulnerability of this group of wheats:

- The 'WA Yr17' pathotype has, in previous seasons, been of relatively low frequency – generally around 10-15%. In 2008, this pathotype was rare in the early season epidemic, but became more frequent in spring.
- Yr17 wheats perform very well to all pathogenic variations of stripe rust with the exception only of the 'WA Yr17' pathotype. For example, should the 'Jackie' pathotype continue to dominate the pathogen population, then Yr17 wheats will be expected to show very good resistance and should not require supplementary fungicide applications to protect yield.

- The pathotype situation is likely to be dynamic, and so sampling from crops will continue to be important.

Current Stripe Rust Distribution

In the week since the previous report, a further 33 samples have been received for analysis. The source of these samples indicates that stripe rust continues to be evident in crops from the Moree district (northern NSW), and with increasing samples now coming from

the Riverina (southern NSW). This suggests that at present, two distinct regions are affected by stripe rust within NSW. The first samples for the current season have also been received from locations in Victoria (Wimmera) and South Australia (mid North). There have been no samples of stripe rust from Western Australia.

The current distribution of pathotypes is illustrated in Figure 1.

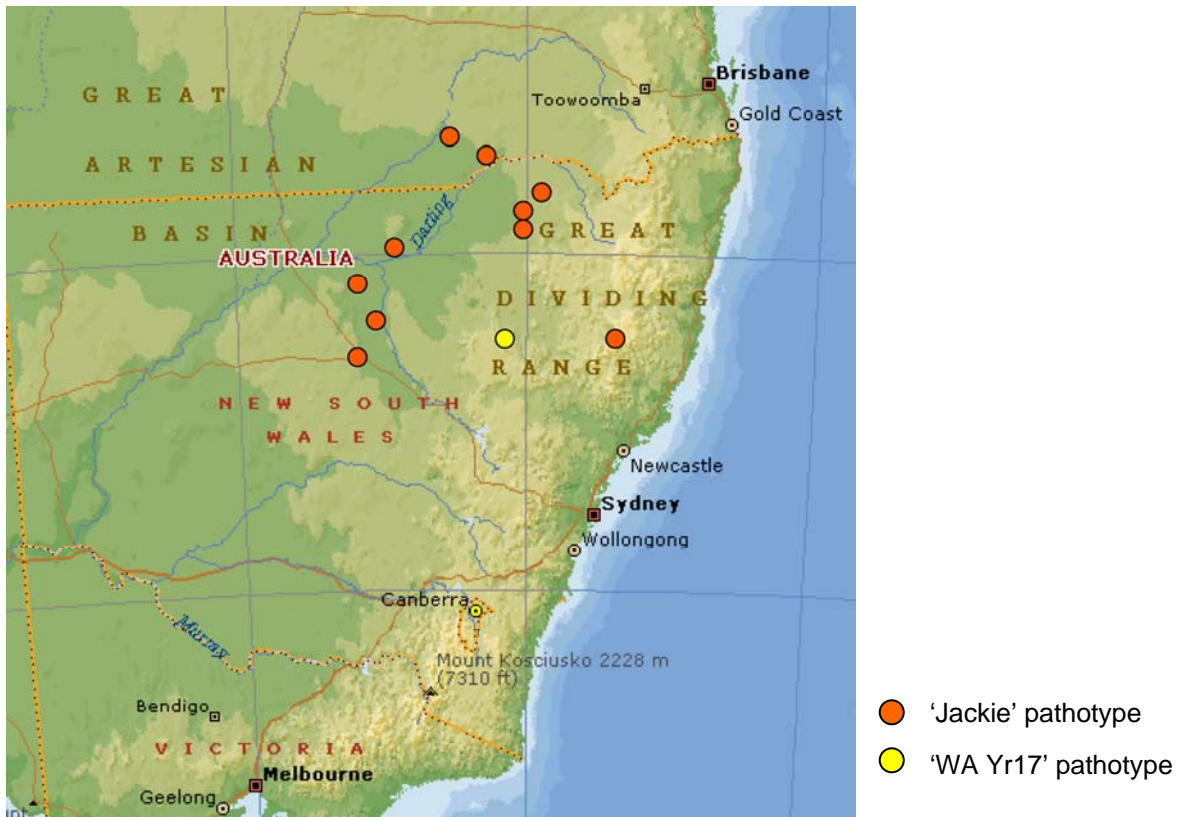


Figure 1. Distribution of stripe rust pathotypes as at 10th August 2009.

General enquiries:

Plant Breeding Institute
 Private Bag 4011
 Narellan NSW 2567

 107 Cobbitty Road
 Cobbitty NSW 2570
 Ph: 02-9351 8800 (Reception)
 Fax: 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

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