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Plant Breeding Institute
Cereal Rust Laboratory

Cereal Rust Report Season 2008

First Reports of Cereal Rusts for 2008

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The first samples of rust for the 2008 winter cereal season have been received at the Cereal Rust Laboratory. One sample from Marombi wheat was infected with leaf rust, and a sample of stripe rust was taken from Tobruk triticale. These samples represent a very early occurrence of cereal rust for 2008, and this will raise industry wide concern for the potential for epidemic development and the need to consider and plan for control strategies.

Leaf rust

A well infected sample of leaf rust was received on 19th April 2008 from Marombi wheat growing in Dunedoo (northern NSW). The pathotype has not been determined, but is expected to be virulent on Lr37. The crop was sprayed with fungicide.

Stripe Rust

The first sample was received from Tobruk triticale (Young, southern NSW) on 16th May 2008. It was noted that infection was very sparse and there was a distinct possibility of Jackie volunteers in the field. The rust sample was cultured to recover viable spores and then tested on the differential set. Observations recorded in the greenhouse yesterday revealed the pathotype to be 134 E16 A+ J+, *ie* the 'Jackie' pathotype.

Another sample of stripe rust on triticale was received today from Lake George (southern NSW) from a field known to be infected with the 'Jackie' pathotype in 2007. The field was observed to have a high disease incidence which suggests that stripe rust could have been present from late April. The extent of infection on lower leaves is illustrated in Figure 1.

A third sample of stripe rust was received yesterday from an early sown crop of Ford wheat at Grenfell (southern NSW). The lower leaves were well infected in a hotspot zone, again suggesting the pathogen may have been present since early May. The crop will be treated with foliar fungicide

Implications for 2008

Several important issues arise from these initial reports of rust:

- This is a notably early occurrence for rust diseases in commercial fields. There was clearly significant over summer survival of these pathogens following favourable summer rains in regions of eastern Australia (see Cereal Rust Report Volume 6, Number 1, April 2008). Depending on favourable seasonal conditions for crop growth in 2008, it can be expected that the rusts will be widespread and potentially damaging.
- Crops now well established from early seeding will need to be inspected immediately. Foliar fungicides combined with strategic grazing should be considered, with due attention paid to with holding periods.
- Where possible, the use of fungicides at seeding for main season and late planted wheats will have distinct advantages in providing early crop protection.
- Varieties known to be vulnerable to rust will need to be monitored carefully throughout the season. Although, at the time of writing, the 'WA Yr17' pathotype has not been detected in the current season, it can be expected to survive and re-emerge. Varieties now vulnerable to this pathotype should be carefully monitored and foliar fungicides employed when appropriate.



Figure 1 Stripe rust infection on lower leaves of triticale plants collected from Lake George on 4th June 2008.

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

