

# Cereal Rust Report

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## Cereal rust situation at late autumn 2014

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### Poor seed purity, and not a pathogen mutation, was the likely cause of observed wheat stripe rust infections of Spitfire crops in 2013

Higher than expected wheat stripe rust infections of adult Spitfire crops were reported across the Northern region in 2013. Several samples were received for pathotype analysis at the Plant Breeding Institute. Three different glasshouse trials have since been conducted to test whether the pathogen has mutated for virulence to any gene conferring adult plant resistance in the variety Spitfire. No virulence was detected.

Spitfire in AUSVAR nurseries across the Northern region in 2013 performed as expected and maintained its moderately resistant (MR) rating for wheat stripe rust. The level of infection observed on adult Spitfire in grower's fields was most likely due to poor seed purity.

Rusts can develop virulence to adult plant resistance genes in cereals. Whenever the field response of a variety is suspicious, samples should be submitted to the Australian Cereal Rust Survey for pathotype analysis.

### First report of wheat stripe rust

The first report of wheat stripe rust came from West of Griffith in NSW last week. Infection was found in a crop of EGA Wedgetail, though no sample has been received to confirm this report. The occurrence of wheat stripe rust this early in the season is unexpected due to the hot, dry conditions that

prevailed over summer. The mild autumn conditions in the eastern states will favour rust epidemic development. Where susceptible varieties are being grown, grazing and/or fungicide application will likely be required.

State variety guides should be consulted to check the rust resistance rating of the varieties being grown. It is also important to check the nature of a variety's resistance. Some varieties with good resistance ratings (MR or better), such as Spitfire and Suntop, are only protected by adult plant resistance. These varieties will be highly susceptible to wheat stripe rust during early growth stages. Grazing or fungicide applications on such varieties may be required to provide protection during early growth until adult plant resistance comes into effect. Local advice on disease ratings and management should be sought from pathologists and technical specialists.

### Wheat leaf rust reported in South Australia and northern NSW

Samples of wheat leaf rust were received from Quirindi in northern NSW on the 12<sup>th</sup> May and from Wharminda in South Australia on the 26<sup>th</sup> May. Infection was sampled from crops of Naparoo and Clearfield Stiletto, respectively.

### Barley leaf rust reported from Western Australia

Samples of barley leaf rust have been received from Woogenellup and South Stirling in Western Australia on the 15<sup>th</sup> and 23<sup>rd</sup> of April, respectively.

### Stem rust on barley reported from Queensland

A sample of stem rust was received from a crop of Shephard barley on the 30<sup>th</sup> April 2014. The infected crop was near Tannymorel in Queensland.

### Oat stem and crown rust reported from the Central Western Slopes of NSW

A sample of oat stem rust was received from Canowindra in NSW last week from a volunteer oat crop and Oat crown rust was sampled on wild oats near Eugowra in NSW at the same time.

### Conclusion

The widespread growth of volunteer cereals has combined with mild autumn conditions to enable earlier than expected infections of many cereal rusts. Cereal crops should be regularly monitored for rust diseases, starting immediately. The early detection of leaf rusts is of particular concern and will require special vigilance in spring.

The Australian Cereal Rust Survey is funded by the Grains Research & Development Corporation and provides free diagnostics of rust samples. Readers are encouraged to submit samples to confirm rust identity and for pathotype analysis. See below for instructions.

#### 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. If possible, include the  
latitude and longitude of the sample  
location.

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.

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