



Cereal rust situation update, October 2014

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Wheat stem rust

The first sample of stem rust was received on the 30th April from a crop of Shephard barley near Tannymoreland in Queensland. It was determined to be the Scabrum +Sr21 pathotype. Since then, stem rust has been sampled from trials in Roseworthy and Kingsford in South Australia.

Wheat leaf rust

Samples of wheat leaf rust have been received from across the eastern grains belt (Figure 1). So far all samples received from South Australia have included at least trace amounts of the new wheat leaf rust pathotype, 104-1,3,4,6,7,8,9,10,12+Lr37. Although widely distributed across South Australia, this pathotype has not yet been detected in other states. Other pathotypes of wheat leaf rust sampled from South Australia include 76-1,3,5,7,9,10,12+Lr37 and 104-1,2,3,(6),(7),11+Lr37.

No pathotypes have yet been determined for recently submitted samples from Inverleigh in Victoria or locations in southern New South Wales. The pathotypes 76-1,3,5,7,9,10,12,13+Lr37 and/or 76-3,5,7,9,10,12,13+Lr37 have been present in all samples received from northern New South Wales and southern Queensland.

Wheat stripe rust

Samples of wheat stripe rust have been received from across the eastern grains belt (Figure 2). Samples analysed thus far have shown that the 'WA Yr17' pathotype continues to dominate the wheat stripe rust population. Samples of the 'WA Yr17+Yr27' pathotype have been found in New South Wales and Queensland. This year, the spread of the 'WA Yr17'

pathotype started from both southern New South Wales and South Australia.

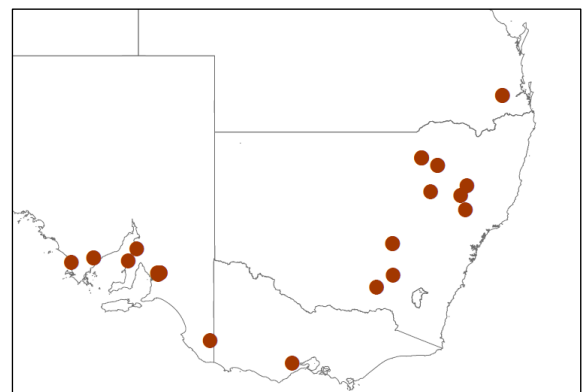


Figure 1. Distribution of wheat leaf rust samples in 2014.

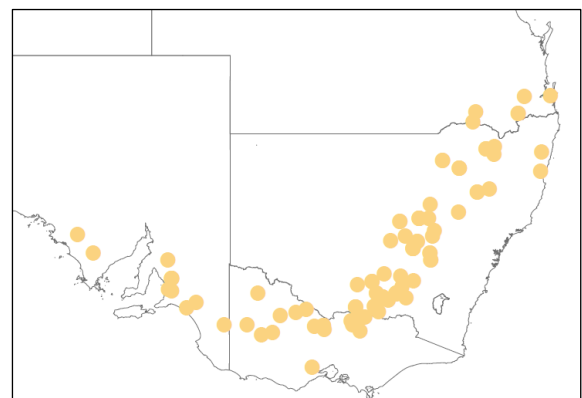


Figure 2. Distribution of wheat stripe rust samples in 2014.

Barley grass stripe rust

Only four rust samples from barley grass have been received so far this year. Samples were from Coomandook and Kingsford in South Australia and

Wagga Wagga and Cowra in New South Wales. The Cowra sample has been confirmed to be barley grass stripe rust. It is important to remember that some barley grass can also be infected by wheat stripe rust and samples should be submitted for pathotype confirmation when encountered.

Barley leaf rust

Samples of barley leaf rust have been received from both the eastern and western grain belts (Figure 4). In Western Australia, samples were received from Woogenellup and South Stirling on the 15th and 23rd April, respectively. Since then, samples have been received from across the southern section of the Western Australian grain belt. The dominant pathotype is 5457P-, with pathotype 5453P+ mixed with one sample.

In South Australia, samples have been received from Port Clinton, Kingsford and Turretfield. The sample from Port Clinton was from a crop of Navigator and was a mixed sample of pathotypes 5652P+ and 220P+. Further east, a sample of barley leaf rust was sampled from regrowth of Hindmarsh near Old Junee in New South Wales and was a mixture of pathotypes 5652P+, 220P+ and 5453P+. A sample from Grout collected near Toobeah in Queensland has also been received.

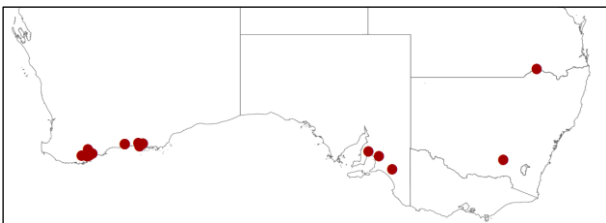


Figure 3. Distribution of barley leaf rust samples in 2014.

Oat crown rust

Oat crown rust has been sampled off wild and cultivated oats in the eastern grain belt (Figure 4). Early season samples from Eugowra and Wagga Wagga were, respectively, pathotypes 0001-0 and a mixture of pathotypes 0001-0 and 0000-2,9. Pathotype analysis of the remaining samples is underway.

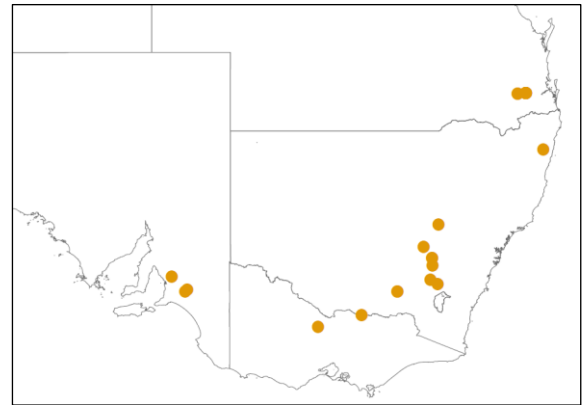


Figure 4. Distribution of oat crown rust samples in 2014.

Oat stem rust

An early season sample of oat stem rust that was received from Canowindra in New South Wales was determined to be pathotype 30-1,2. Since then, samples have been received from Jamestown and Kingsford in South Australia; Kamarooka, Colbinabbin and Bundalong in Victoria; Wagga Wagga in New South Wales; and Kingsthorpe, Gatton and Toowoomba in Queensland. The sample from Jamestown was pathotype 30-1,2 and the samples from Kamarooka in Victoria and Kingsthorpe in Queensland were pathotype 94-2,3,4.

Conclusion

The widespread growth of volunteer cereals enabled earlier than expected infections of many cereal rusts this season. It is recommended that Victorian growers carefully monitor crops for the new wheat leaf rust pathotype.

The Australian Cereal Rust Survey provides free diagnostics of rust samples. Readers are encouraged to submit samples to confirm rust identity and for pathotype analysis. See overleaf for instructions.

GENERAL ENQUIRIES

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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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