

Cereal Rust Report

2016

VOLUME 14 ISSUE 7

19th September



THE UNIVERSITY OF
SYDNEY

Cereal rust situation, September 2016

DR WILLIAM CUDDY

Co-located at the NSW Department of Primary Industries, Elizabeth Macarthur Agricultural Institute, Menangle and The University of Sydney, Plant Breeding Institute, Cobbitty
Email: will.cuddy@dpi.nsw.gov.au Phone: 02-9351 8871

PROFESSOR ROBERT PARK

The University of Sydney, Plant Breeding Institute, Cobbitty
Email: robert.park@sydney.edu.au Phone: 02-9351 8806

DR DAVINDER SINGH

The University of Sydney, Plant Breeding Institute, Cobbitty
Email: davinder.singh@sydney.edu.au Phone: 02-9351 8828

Samples of cereal rusts have been received in 2016 at the Australian Cereal Rust Survey at the University of Sydney's Plant Breeding Institute. No samples have yet been received from Tasmania. Details on the current reported distributions are provided as are pathotype details where known. Wheat leaf rust, barley leaf rust, oat crown rust and oat stem rust are all being detected across a wide area of Western Australia. Reports on wheat leaf rust, barley leaf rust and wheat stripe rust in the eastern states suggest that these diseases are starting to gain momentum in crops. Recent weather conditions across large areas of the cereal growing regions are likely to favour rust development. Monitoring of crops for all cereal rusts is advised and samples of all rusts observed in cereal crops should be submitted for pathotype analysis to the Australian Cereal Rust Survey.

Wheat leaf rust

Samples of wheat leaf rust have been received from all wheat growing states except Tasmania (Figure 1). Since the last Issue, a further sample of wheat leaf rust has been received from Lismore in Victoria but no further samples have been received from the state. Samples from South Australia have been received from Port Neill off the variety Mace, and off other wheats from Paskeville and Roseworthy in late August and early September.

In the northern region, samples of wheat leaf rust off Sunzell were received from Millmerran and Mirabooka in Queensland in mid- and late-August respectively. Pathotype identifications for these two samples are underway. Since then samples have been received from Warwick, Gatton, and Emerald. A total of five of the 11 samples have had their pathotype determined so far and all have been found to be pathotype 104-1,3,4,6,7,8,10,12+Lr37.

Samples of wheat leaf rust off Mace from Western Australia were received in mid-July from Coomalbidgup; late August from Grass Patch; and early September from Nabawa. Pathotype identifications are underway.

Wheat stripe rust

Pathotype analysis of the wheat stripe rust samples reported from NSW and Queensland in Issue 6 are continuing. Since Issue 6, further samples have been received from Boree Creek in NSW, sampled off Corack; and from Gatton in Queensland, sampled off a susceptible wheat spreader. The first samples have also been received from Victoria including a sample off Derrimut from Nullawil and a sample off Scepter from Rupanyup. Stripe rust has been reported by Dr Hugh Wallwork around the Northern Yorke Peninsula in South Australia, but no samples have yet been received to confirm its presence.

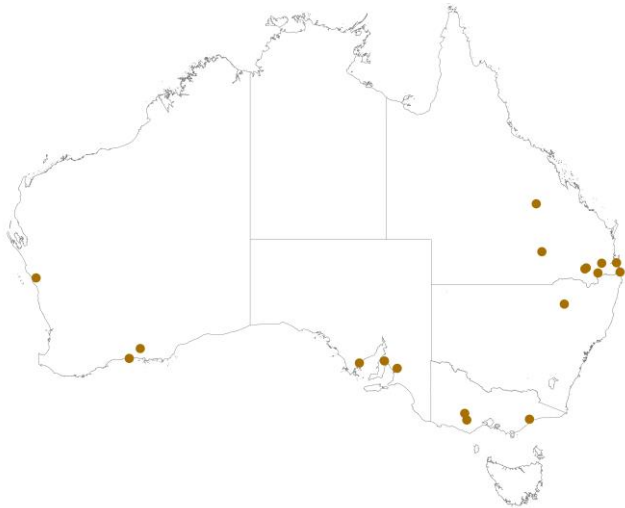


Figure 1. Reported detections of wheat leaf rust in 2016.

Barley leaf rust

Samples of barley leaf rust continue to be received from Western Australia. Pathotype analysis of 27 of 34 samples has been completed and to date all samples have been confirmed to be pathotype 5457 P-. The current distribution of barley leaf rust in Western Australia is shown in Figure 2.

Samples of barley leaf rust have been received in September from Queensland, Victoria and South Australia. The Queensland samples were from Toowoomba, sampled off an unidentified barley variety; and Clifton, sampled off Dictator. The Victorian samples were from Warracknabeal, sampled off an unidentified barley variety; and Horsham, sampled off Compass. The samples from South Australia were both sampled off the variety Compass at Elliston and Moorlands.

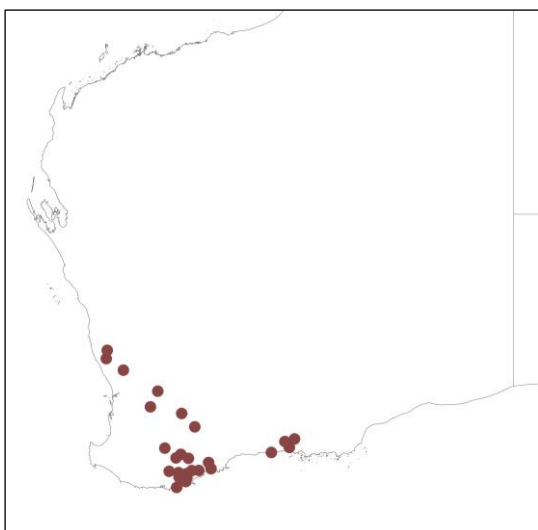


Figure 2. Reported detections of barley leaf rust in Western Australia in 2016.

Oat crown rust

Oat crown rust has been reported from Queensland and Western Australia (Figure 3). Samples from Junabee and Gatton in Queensland have been arriving during late August and early September and have been sampled off cultivated oats including the varieties Volta, Graza 85 and Graza 53. Pathotype analysis has confirmed the presence of 1307-1,5,6,7,10,12 +Warrego +Nugene +Gwydir +Genie +Drover +Aladdin, 0307-1,3,4,5,6,7,10,12 +Warrego +Volta +Genie and 1107-1,4,6,7,10,12 +Warrego +Nugene +Gwydir +Genie +Drover +Aladdin in Queensland. Pathotype analysis of the most recent samples is continuing.

Samples of oat crown rust have been received from a wide area in Western Australia (Figure 3). Many samples have been received off Wild oat, though there have also been samples off the varieties Williams, Carrolup, and Wandering. Confirmed pathotypes for Western Australia so far include: 0000-2; 0011-2,4; 0011-2,9; and 0011-2,4,9.

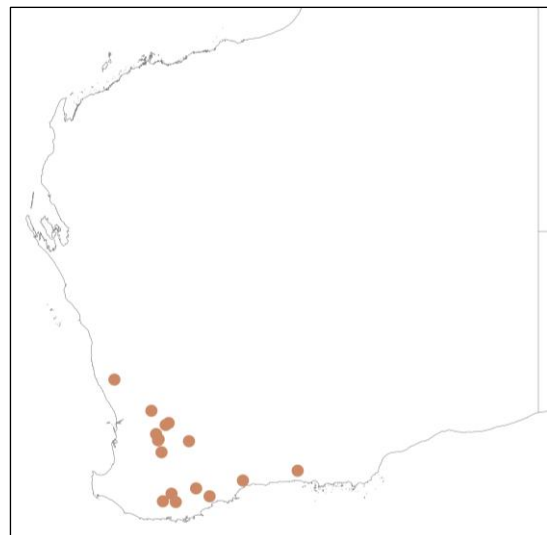


Figure 3. Reported detections of oat crown rust in Western Australia in 2016.

Oat stem rust

Samples of oat stem rust have been received from Queensland and Western Australia. The first sample of oat stem rust from Queensland was received in late May from Junabee off the oat variety Drover and was identified as pathotype 94-1,2. A second sample from Junabee was received in early September off Volta.

Samples from Western Australia have been received since early June. Initial samples were from Narrogin, Gnowangerup, Cranbrook and Cuballing from early to late June. A sample was received in late July off Wild Oat from Katanning. Pathoytpe analysis has been

completed for these samples and the following pathotypes have been found in Western Australia to date: 24-0, 94-0, and 94-1,2. In late August further samples were received from North Lake Grace off Carrolup; and from Kendenup off the variety Williams. A map of the current reported distribution of oat stem rust in Western Australia is shown in Figure 4.

Rye leaf rust

A sample of Rye leaf rust was received from Borrika in South Australia in late July.

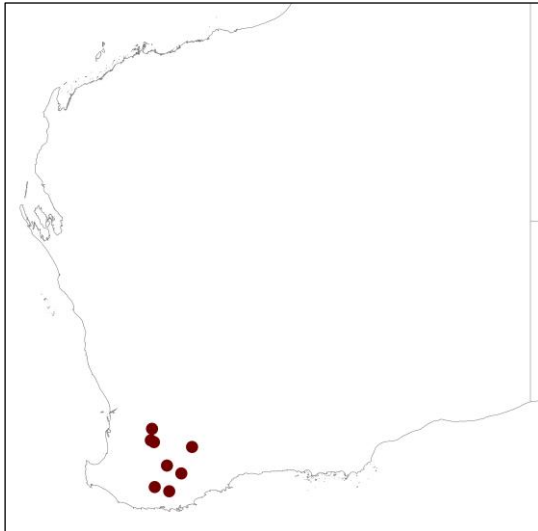


Figure 4. Reported detections of oat stem rust in Western Australia in 2016.

GENERAL ENQUIRIES

Mr Keshab Kandel
Rust Surveillance Technician
Plant Breeding Institute
Private Bag 4011,
Narellan NSW 2567

T 02-9351 8849
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:
University of Sydney
Australian Rust Survey
Reply Paid 88076
Narellan NSW 2567

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

