



Cereal Rust Report

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How to prepare samples for dispatch to the Australian Cereal Rust Survey

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

1. Collect good samples

The better the sample you send, the faster we can process it and the more likely it is that your sample will work. Poor sample material (only a few leaves with low infection or samples that are not fresh) often requires an extra step in the diagnostic process, in which the rust has to be multiplied on a susceptible variety to produce enough inoculum for a seedling assay. Poor material is also more likely to have lower spore germination and is more likely to fail.

Good sample material will have sufficient rust to allow inoculation straight onto a differential set. In the case of leaf rust and stripe rust, such a sample would be a 10 cm length of leaf that was completely covered by rust pustules. In the case of stem rust, this would be a 10 cm length of 100% infected flag leaf sheath or 5 x 10cm peduncles with 100% infection. Wherever possible, collect enough leaf or stem material to make the required sample size. For example, 10 leaves each with 10% stripe rust infection, 3 leaves with 30% infection. See Figure 1 for examples of good sample sizes. It is important that the sample material is actively sporulating. When you wipe over a leaf or stem with a clean white cloth, you should see yellow, brown or black dust-like smearing. Please collect material while the leaves and stems are dry.

2. Only use paper packaging

To help keep the sample as fresh as possible fold leaves infected with stripe rust or leaf rust in half from top to bottom so the rust is on the inside. Place folded

leaves or stems into paper envelopes (never use **ANY** plastic packaging). If you are sending multiple types of rust samples at once (stripe, leaf and stem) please place each in a separate paper envelope.

With every sample that is sent, please fill out the dispatch form that can be downloaded from: http://sydney.edu.au/agriculture/plant_breeding_institute/cereal_rust/reports_forms.shtml#df under the dispatch form heading or you can contact the ACRCP Annual Cereal Rust Survey and we will send you envelopes with the dispatch information required printed on the outside. Please include the cereal variety whenever it is known and geo-referencing that is as accurate as possible, preferably with latitude and longitude in decimal degrees. Knowing the variety helps us to monitor for new pathotypes more effectively. Precise geo-referencing helps to improve our mapping and epidemiological modelling.

Post your samples to the Survey as soon as possible. A sample that has been sitting on the dashboard of your vehicle for a week is likely to fail!

Send samples to:

ACRCP Annual Cereal Rust Survey
The University of Sydney
Plant Breeding Institute
Private Bag 4011
Narellan NSW 2567

Remember, the better the sample you send and the more information you provide on the dispatch form, the faster we can provide you with an answer and better serve the Australian grains industry.

3. Further information

For further information or to request dispatch envelopes contact:

Professor Robert Park	robert.park@sydney.edu.au	(02) 9351 8806
Dr Will Cuddy	will.cuddy@dpi.nsw.gov.au	(02) 9351 8871
Mr Keshab Kandel	keshab.kandel@sydney.edu.au	(02) 9351 8849

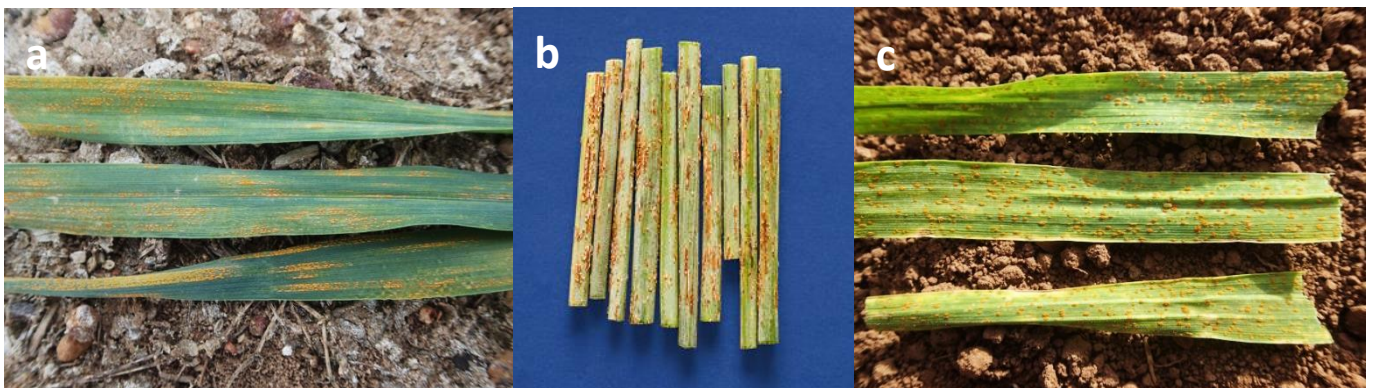


Figure 1. Examples of good rust-infected samples: (a) stripe rust (b) stem rust (c) leaf rust. Note how the pustules are actively sporulating. All leaves and stems are 10 cm long.

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.
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.

