



New wheat leaf rust pathotype detected in northern NSW

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A NEW wheat leaf rust pathotype has been detected, prompting a warning from researchers to growers that they need to be vigilant in checking their crops for the disease and have any suspect samples tested.

The new pathotype was detected in northern NSW from samples collected in early August 2013.

It was found near Gragin and Graman, NSW, in the cultivar Naparoo. Three rust samples were sent to the University of Sydney Plant Breeding Institute for pathotype analysis.

Australian Cereal Rust Control Program Director Professor Robert Park says the new pathotype is a mutant of an existing pathotype with added virulence for the gene *Lr24*.

Prof Park says the frequency of mutant pathotypes appearing depends on how much rust inoculum is present in paddocks.

“This is the second mutation to virulence for *Lr24* in Australia, and the first pathotype in Australia to combine this virulence with virulence for other rust resistance genes, *Lr13* and *Lr37*,” he said.

“The new pathotype does not look any different to existing ones and will not spread any differently.

“The parent pathotype that gave rise to this new mutant is regarded as an exotic introduction and was first detected in Australia at Inverleigh, Victoria, in late 2006. It has since become widespread in Victoria, southern and northern NSW, South Australia and Tasmania, which gives an indication of the potential rate and range of this new pathotype’s spread.”

He says wheat varieties with the resistance gene combination *Lr37* and *Lr24* are being tested to assess the full impact of the new pathotype on them. These varieties include Carinya, EGA Jaegar, GBA Combat, Naparoo, QAL2000, QALBis and Sunvex.

“Farmers who are growing any of these seven cultivars should monitor crops closely, and forward samples of leaf rust detected to the University’s Plant Breeding Institute for pathotype analysis,” Prof Park said.



“Detecting new pathotypes depends upon how rigorous the sampling is – that is why we need people to look for rust and send samples to us for pathotyping.

“We do not know the full extent of how these varieties will be affected until they have been field tested but testing so far has indicated that all seven are susceptible at the seedling stage to the new pathotype.”

Prof Park says advanced breeding lines will be tested next year to see how they perform to help breeders avoid releasing anything that is highly vulnerable.

“It is likely we will not know the full impact of this new pathotype until more greenhouse seedling tests and field adult plant tests are undertaken,” he said.

Rusted plant samples can be mailed in paper envelopes, not plastic wrapping or plastic-lined packages, to Australia 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.

For more information...

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