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### Watch crops closely this winter

Grain growers are being urged to closely monitor winter crops this season for signs of cereal rust, particularly on rust-resistant varieties.

Greg Fraser, Plant Health Australia (PHA) chief executive officer says Australia's growers play a vital part in farm biosecurity and should make crop monitoring a regular part of farm management.

Mr Fraser says established cereal rust strains and virulent strains - such as Ug99 rust and barley stripe rust which have not yet reached Australia's shores - are ever-present threats.

A stripe rust incursion in 2002 is estimated to have cost Australian wheat growers \$40-90 million a year in control costs.

"Ensure you are familiar with what rust looks like and be on the lookout for any signs of disease, especially on varieties which are supposed to be resistant - these are vital biosecurity measures," Mr Fraser says.

He says growers travelling overseas or hosting international visitors should ensure clothing and footwear is, at the very least, washed thoroughly before and after visiting farms.

More information on farm biosecurity measures can be obtained through PHAs Grain Farm Biosecurity Program, which has Grains Biosecurity Officers based in Western Australia, South Australia, Victoria, New South Wales and Queensland.

Professor Robert Park, University of Sydney Australian Cereal Rust Program, was recently involved in the first hands-on-capacity building program on wheat rust surveillance and monitoring in India.

Professor Park says biosecurity and breeding (to incorporate resistance genes in varieties) are the keys to protecting the Australian cereal industry.

He says stem rust and leaf rust epidemics have caused serious damage in Australia since European settlement.



For more information on Farm Biosecurity visit [www.farmbiosecurity.com.au](http://www.farmbiosecurity.com.au)

“Estimates of national losses range from \$100-200 million due to the 1973 stem rust epidemic, and an estimated \$8 million cost of chemical application for stripe rust control in NSW during the 1983 epidemic,” Professor Park says.

“An analysis of losses due to a range of wheat diseases in Australia estimates that the annual value of control strategies for stem, stripe and leaf rust is \$124m, \$139m and \$26m respectively.

“These represent the annual national benefits derived primarily from resistance breeding activities directed towards the control of wheat rusts.”

Individual crop losses are also staggering with estimates of crop losses varying from 30 per cent in leaf rust susceptible cultivars to 55 pc in wheats susceptible to both stem and leaf rust.

A widespread leaf rust epidemic in Western Australia in 1992 caused yield losses of up to 37 pc in susceptible cultivars with average losses of 15 pc across many paddocks.

Australian researchers have taken up the mantle of renowned United States scientist, the late Dr Norman Bourlag, and are working at the front line defence against the Ug99 stem rust pathogen.

Australian grower and government funds are working to halt the spread of rust and via the Grains Research and Development Corporation (GRDC)-supported CIMMYT research collaboration abroad and Australian Cereal Rust Control Program at home.

To view the progress of the Ug99 pathogen across the globe, see CIMMYT’s Rust Mapper on Google Earth at [www.cimmyt.org/gis/rustmapper/RustMapper\\_Web.html](http://www.cimmyt.org/gis/rustmapper/RustMapper_Web.html).

*For more information on biosecurity, visit [www.farmbiosecurity.com.au](http://www.farmbiosecurity.com.au). For contact details for Grains Biosecurity Officers or to download a copy of the Grains Farm Biosecurity Manual visit [www.planthealthaustralia.com.au/biosecurity/grains](http://www.planthealthaustralia.com.au/biosecurity/grains).*

*If you see anything unusual on your property call the Exotic Plant Pest Hotline on 1800 084 881 or the Emergency Animal Disease Watch Hotline on 1800 675 888.*

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Photo captions: Ug99 is a race of the stem rust pathogen that can overcome the resistance genes in many modern wheat cultivars. Stem rust (pictured) can cause total crop failure in susceptible varieties.

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