

## Researchers turn genetic corner in fight against devastating wheat disease

Researchers from the University of Sydney, CSIRO, the United Kingdom's John Innes Centre, Limagrain UK and the National Institute of Agricultural Botany (NIAB) have [isolated the first major resistance genes](#) against the detrimental stripe rust disease that is devastating wheat crops worldwide.

The discovery by the scientists, who have cloned three related [rust resistance genes](#) .... will enable these important genes to be accurately monitored and integrated into breeding programs in the fight against ever-changing pathogens that could kill about 70 percent or more of whole [wheat](#) crops at a time.

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Wheat is relied on by more than one-third of the world's population and one of the most economically important [staple] foods. Wheat rust is one of the most widespread and devastating diseases .... worldwide because it easily adapts to different climates and environments ....

Ph.D. candidate Jianping Zhang said that until recently, it would take many years to clone a resistance gene from wheat. "With the advances in mutational genomics, sequencing and cloning technologies, we were able to clone all three genes within a relatively short period of time," said Ms Zhang, who is a member of the Sydney Institute of Agriculture and the Plant Breeding Institute at Cobbitty .... "Now we have a thorough understanding of the gene structure and the relationships between these three important genes."

**Read full, original article:** [Scientists solve 30-year wheat rust genetics puzzle](#)