Improving fungicide resistance detection from field samples

Centre for Crop and Disease Management

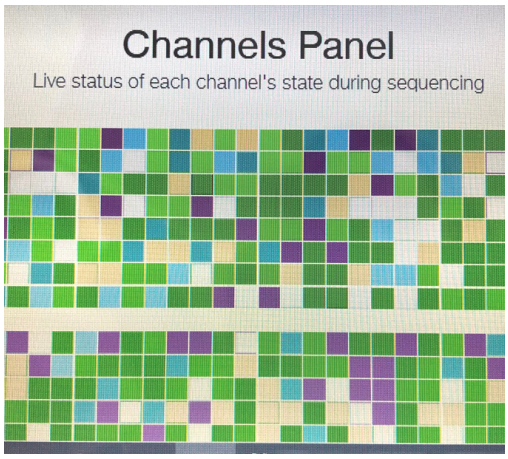
GRDC GRAINS RESEARCH & DEVELOPMENT CORPORATION

Curtin University

Project description

Fungicide resistance reduces fungicide effectiveness and is an important ongoing concern for growers in Australia and around the world. The resistance landscape in Australia is complex and rapidly evolving. This requires rapid and effective detection technologies that can keep us one step ahead.

This project expands on our previous work to adapt the latest sequencing technologies to discover, detect and monitor genetic changes associated with fungicide resistance in economically important crop pathogens. Our researchers aim to improve sequence-based diagnostics by developing a method for detecting fungicide resistance directly from field samples, increasing the industry's capability for fast reliable detection of fungicide resistance in economically important crops.

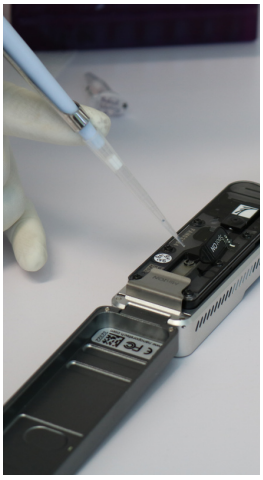


Key achievements

Developed a sequencing-based method for detecting fungicide resistance mutations in net blotch, an economically important pathogen of barley.

Successfully demonstrated direct detection of resistance mutations from infected leaf samples from Western Australian paddocks.

Whole genome sequencing of fungicide resistant pathogens using the latest sequencing technologies to uncover the molecular mechanisms of resistance.



Our team

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