



Australia's National Science Agency

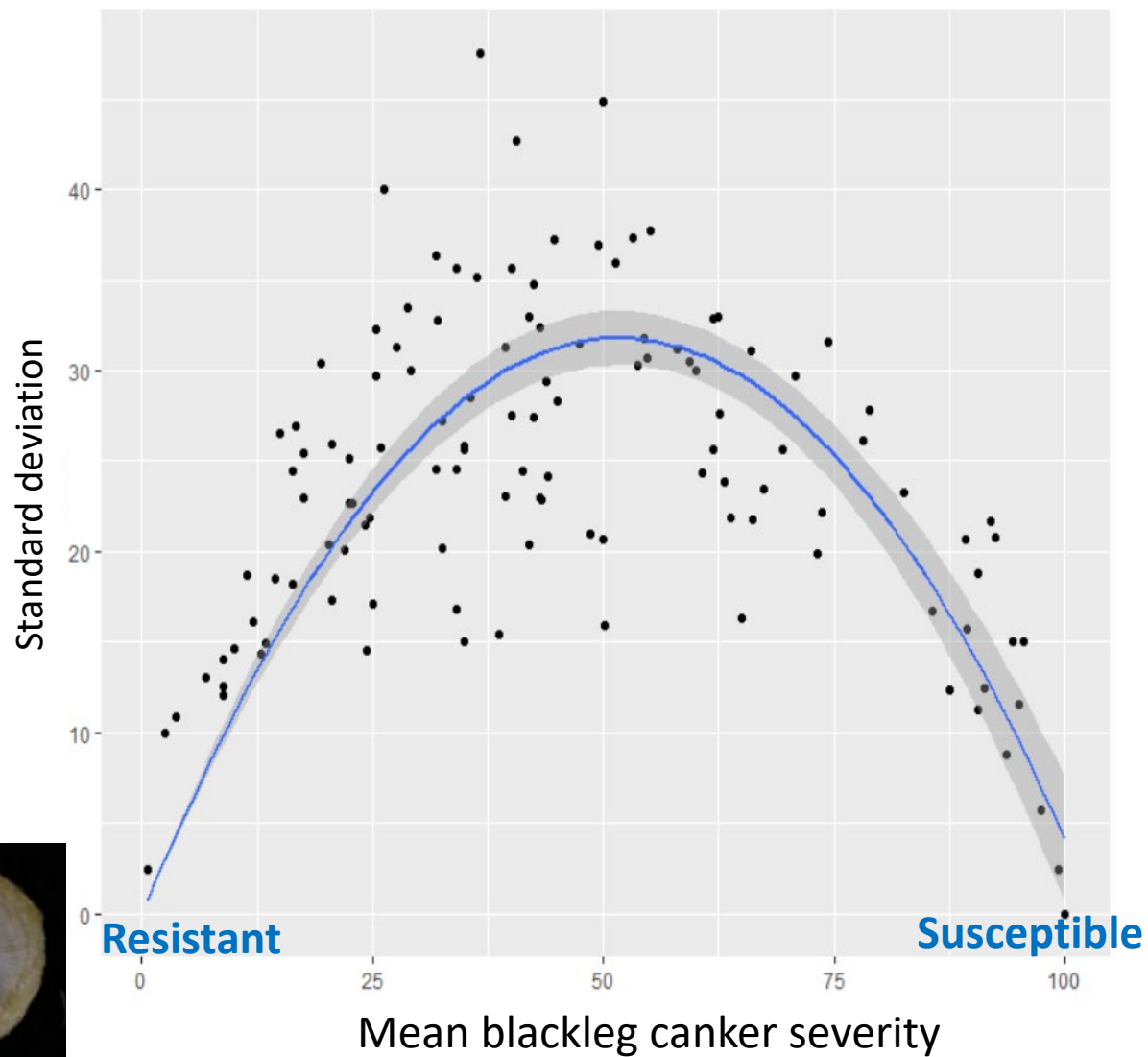
Factors affecting blackleg (*Leptosphaeria maculans*) phenotype in canola: implications for breeding and management

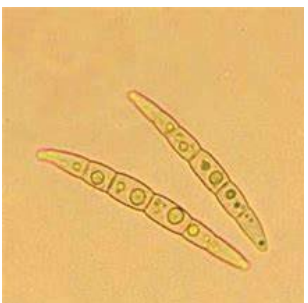
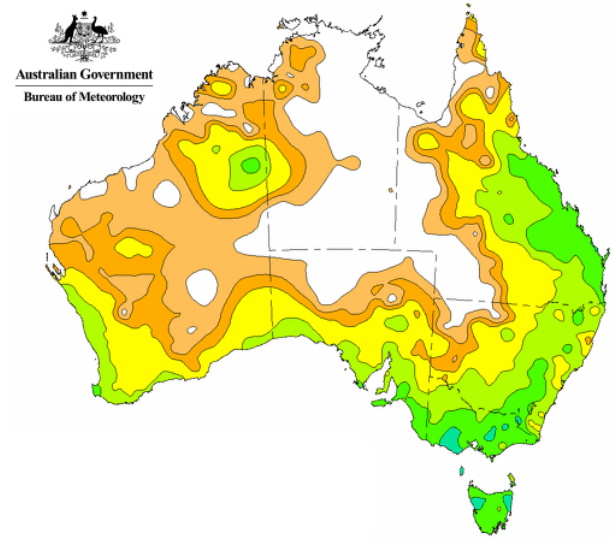
Susan Sprague, Luke Barrett, Angela van de Wouw, Steve Marcroft, Wendelin Schnippenkoetter
| Sept 2023

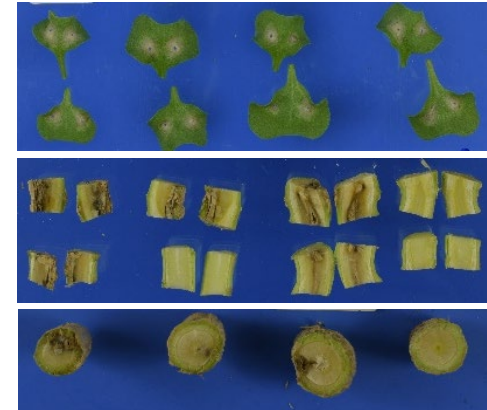
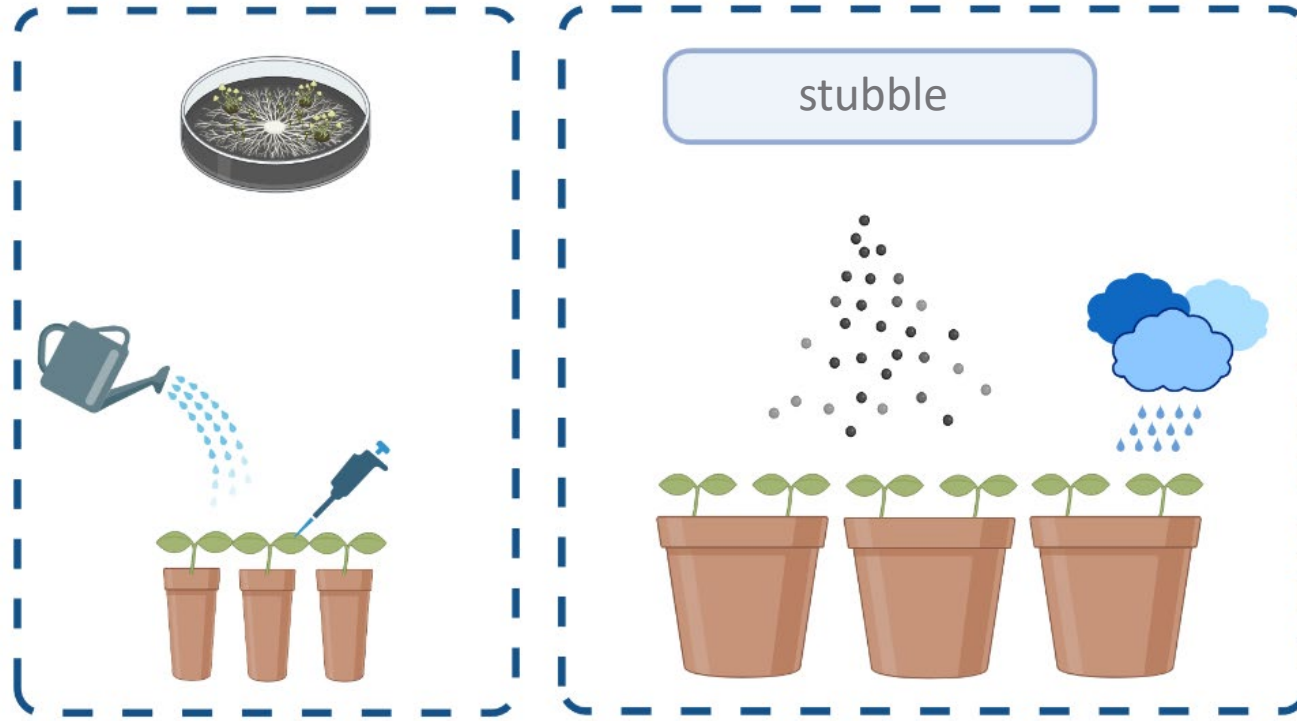




Variability in blackleg phenotype – why is it important?







METHODOLOGY

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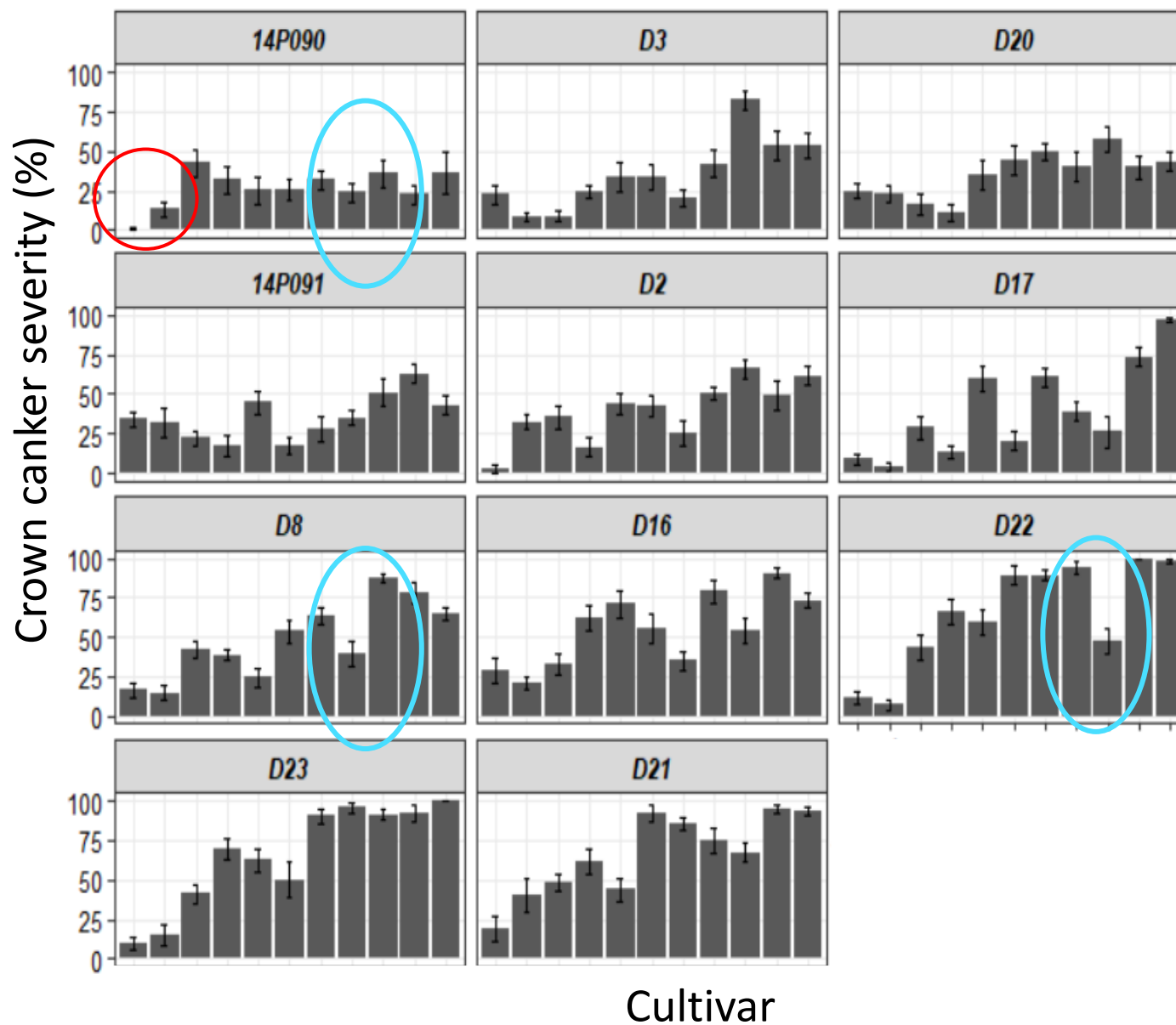
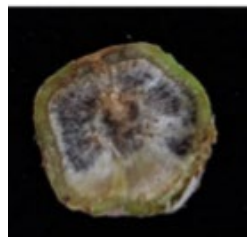


Comparison of non-subjective relative fungal biomass measurements to quantify the *Leptosphaeria maculans*—*Brassica napus* interaction

Wendelin Schnippenkoetter¹, Mohammad Hoque¹, Rebecca Maher¹, Angela Van de Wouw², Phillip Hands¹, Vivien Rolland¹, Luke Barrett¹ and Susan Sprague^{1*}

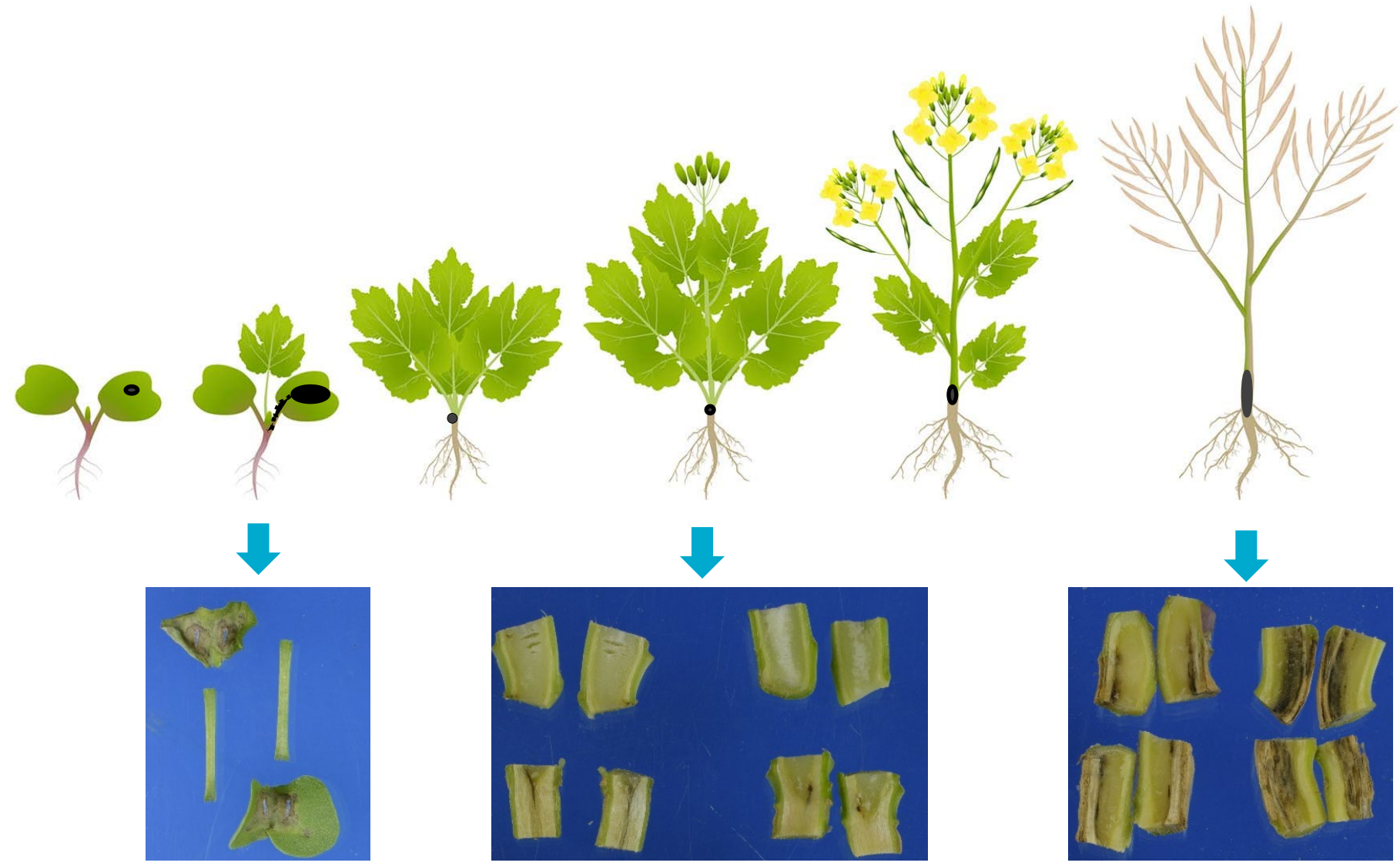
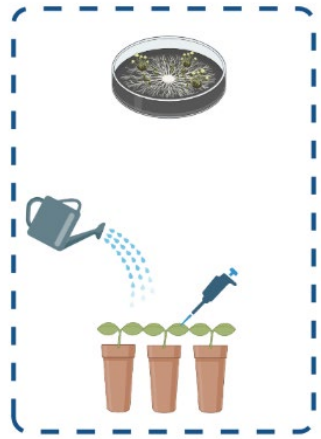


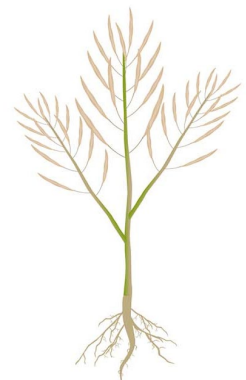
Host x isolate interaction



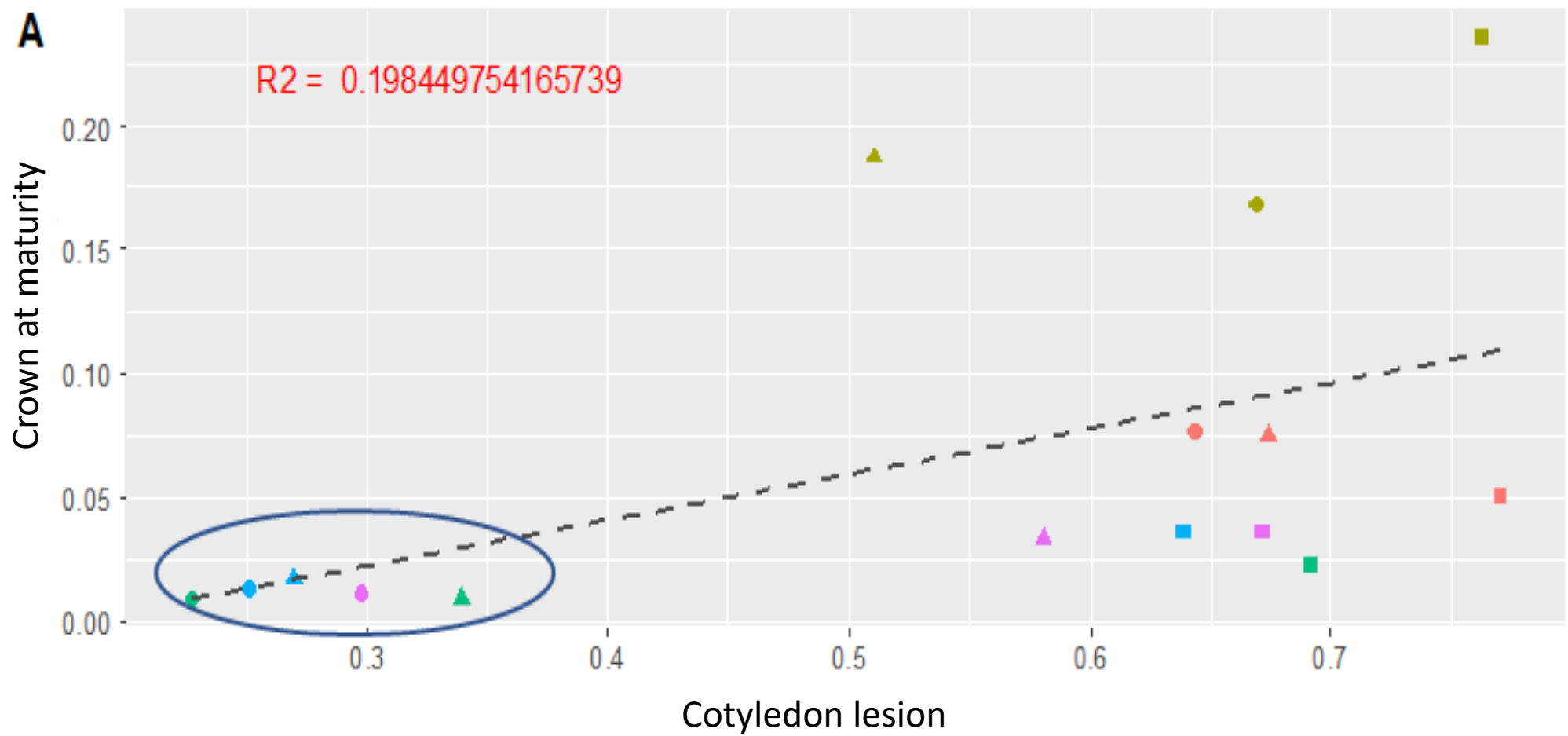


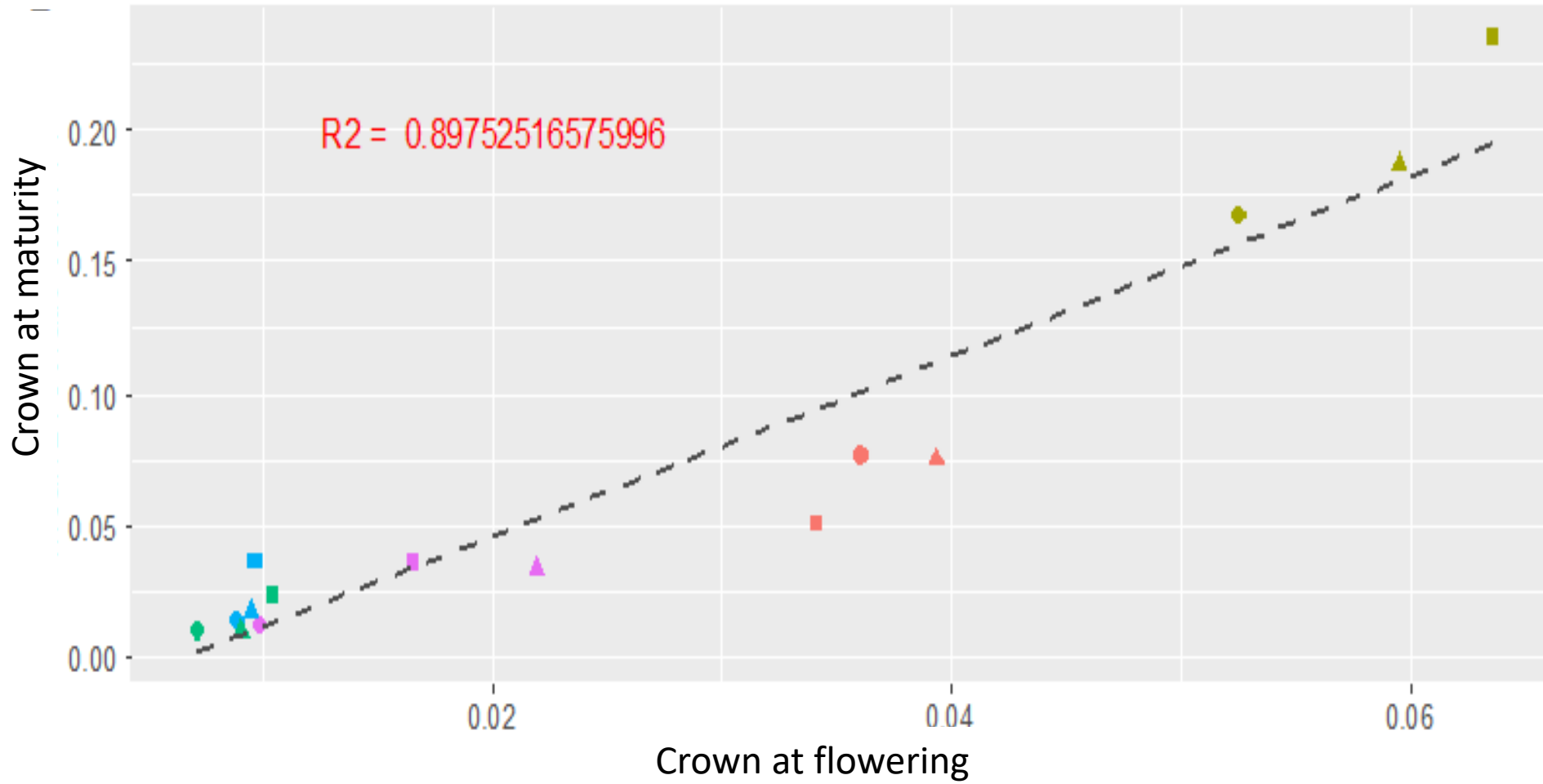
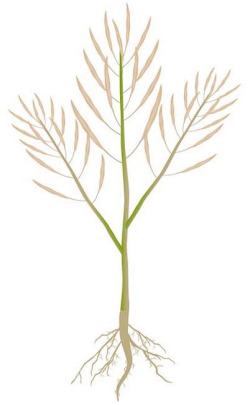
Quantitative resistance expression





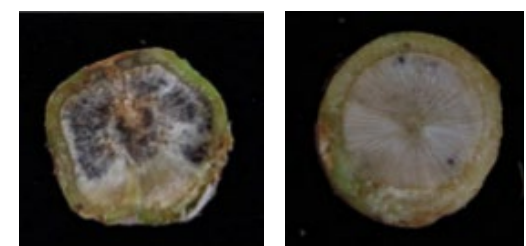
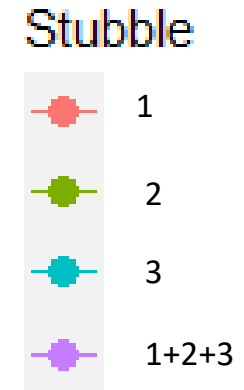
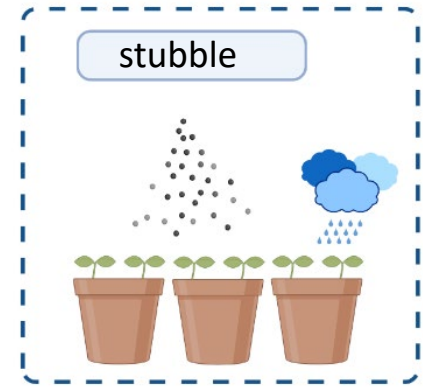
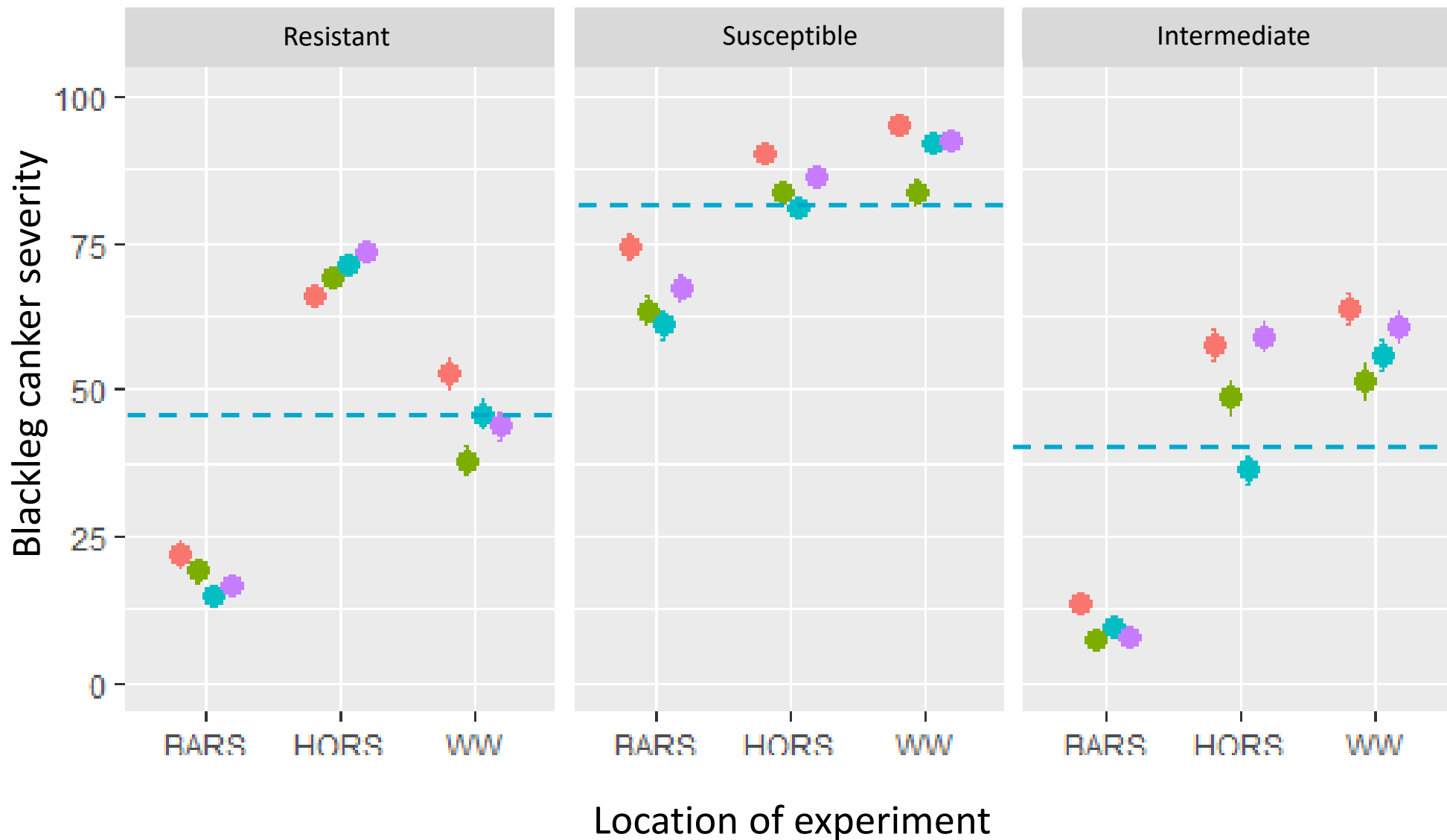
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Host x environment x population interaction





Summary

- *L. maculans* disease is complex in influenced by interactions between host, pathogen and environment
- Significant implications for breeding quantitative resistance
 - single isolates and/or population inoculum requires consideration
 - High phenotypic variability requires development of higher throughput tools
- Large environmental effects (and interactions)
 - crucial to understand for breeding and disease management (climate change)

