

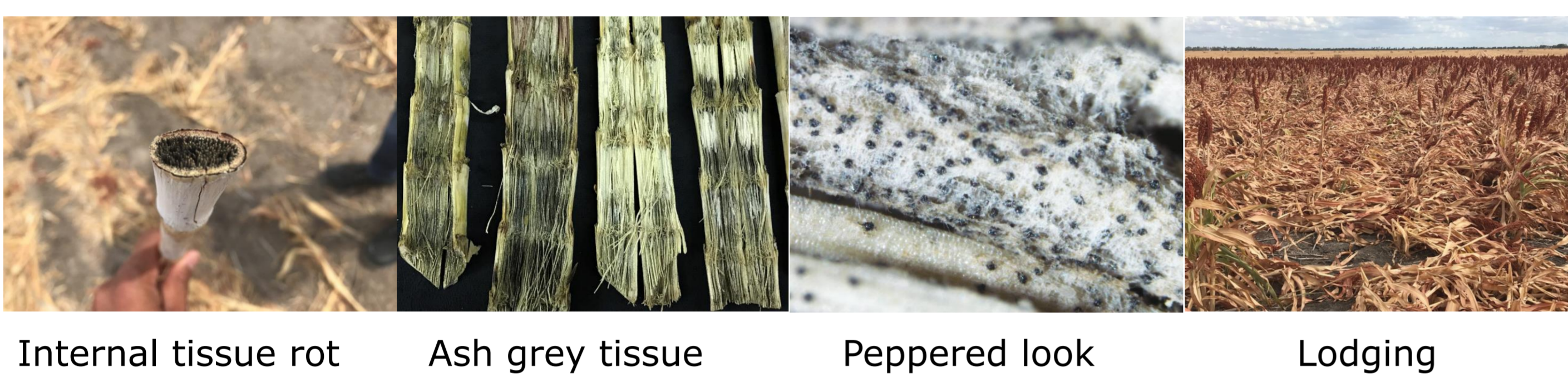
Pathogenicity and aggressiveness of *Macrophomina phaseolina* isolates to sorghum in Australia's northern grains region

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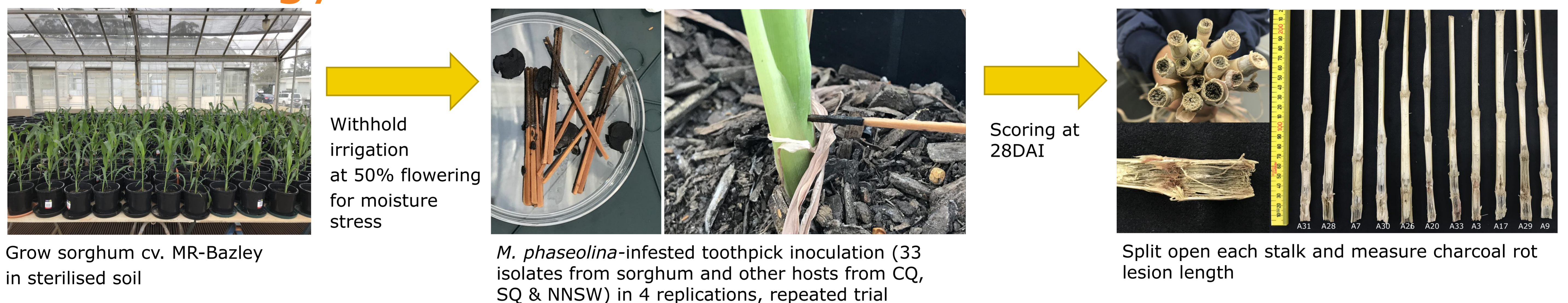
What's the issue?

- *M. phaseolina*, a soilborne pathogen, causing charcoal rot in more than 500 crop species
- Splitting sorghum stalks will show ash grey tissue or microsclerotia, the survival structure of the fungus, giving the internal stalk tissue a peppered look

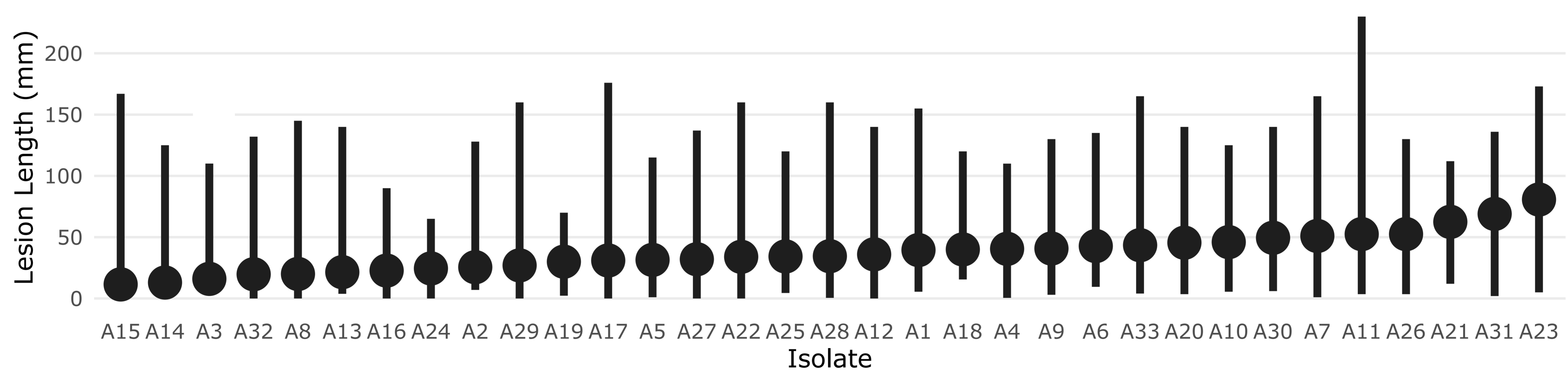
- Causes major sorghum stalk rotting, which can lead to plant lodging
- Common during seasons with prolonged hot, dry weather or when other unfavourable environmental conditions stress the plant.
- Despite the lack of formal quantification in Australia, significant yield losses have been associated to prevailing hot dry conditions resulting to widespread high incidences of charcoal rot and subsequent lodging
- The present work aims to compare pathogenicity and aggressiveness of isolates, from sorghum and other hosts from the northern region, to sorghum



Methodology



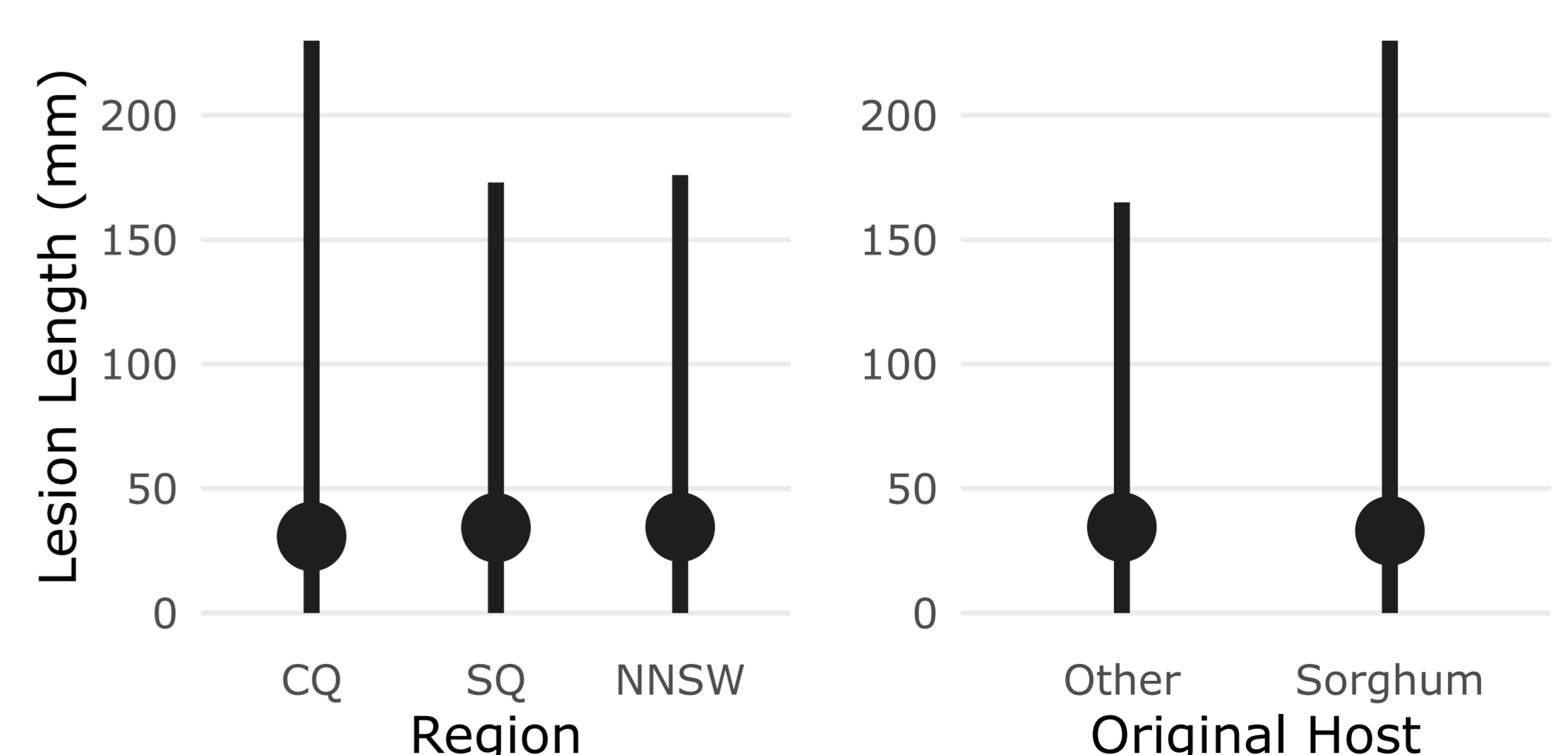
Results



Summary

- In both trials, all isolates were pathogenic and capable of causing disease.
- In both trials, there are no statistically detectable differences in lesion length due to the **effects of**:
 - **Isolate**,
 - **Region** that the isolate originates from, or
 - **Host** that the isolate originates from.

This result has implications in the identification of sources of resistance to the charcoal rot disease, as well as in crop rotation decision-making in an integrated disease management programme.



Acknowledgements

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