

12.1 Background

Common root rot, caused by the fungus *Bipolaris sorokiniana*, has the potential to cause chronic yield loss in wheat and barley crops. Due to the often indistinct nature of symptoms it can frequently go undiagnosed causing consistently low levels of yield loss in paddocks. *B. sorokiniana* has been recorded in most soil types worldwide and occurs in all wheat growing regions in Australia.

IMPACT

- Yield losses of 0 to 40% have been reported in bread wheat, average long term losses are estimated to be about 10% annually.
- Disease severity is often higher in barley, but yield loss is generally lower than in bread wheat.

WHERE DAMAGE IS LIKELY

- Where cereal crops are grown consecutively.
- Yield losses are greater under low soil moisture conditions during grain-filling but can also occur in wetter years.
- Yield losses may be relatively low but consistent across seasons.
- Common root rot exacerbates losses when plants are also infected by other root and crown pathogens such as crown rot.
- Deep planting.

HOW RESULTS CAN BE USED

- To rank paddocks based on inoculum levels and therefore determine the potential risk of common root rot in the new season's crop.
- Monitor changes in inoculum load at different phases of the cropping sequence.
- To confirm diagnosis in-crop. Common root rot symptoms can be confused with crown rot and take-all.

Image shows: Common root rot, dark brown discoloration on sub-crown internodes and several crown roots.
(Image: Peter Whittle, formerly SA Department of Agriculture).



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