

14.1 Background

Yellow leaf spot (also known as yellow spot in WA and Qld) is a stubble-borne disease of bread and durum wheat varieties caused by the fungus *Pyrenophora tritici-repentis*. This fungus is a necrotrophic pathogen, which means it produces a toxin to kill host plant tissue before drawing nutrients from the dead cells.

IMPACT

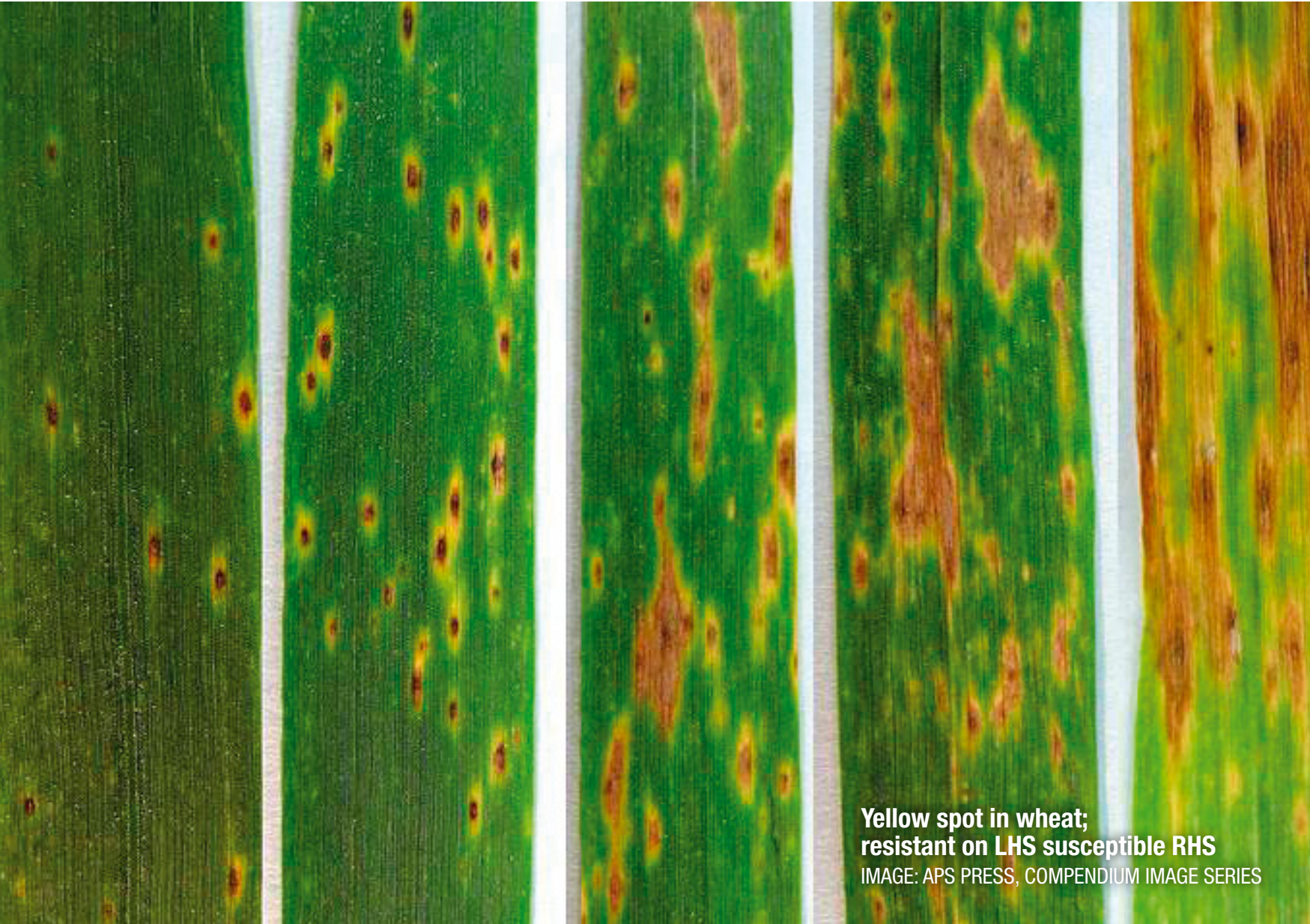
- Severity of yellow spot is a function of inoculum load, varietal susceptibility and environment (including mild temperatures plus frequent and/or prolonged leaf wetness).
- In most years, yellow spot infects lower leaves in the canopy only, resulting in limited yield losses. Research by Agriculture Victoria (Horsham) during 2013 to 2016 found in partially resistant (MR and MRMS) varieties yield loss was less than 5% and in susceptible varieties (S and SVS), it was around 15%.

WHERE DAMAGE IS MORE LIKELY

- Where susceptible wheat varieties are sown into infected wheat stubbles (i.e. wheat-on-wheat rotations with stubble retention farming systems).
- Regions and seasons with frequent rainfall during winter and spring.

HOW RESULTS CAN BE USED

- To rank paddocks based on inoculum levels and therefore determine the potential risk of yellow spot in the new season's crop.
- To select wheat varieties with levels of resistance adequate for the inoculum pressure they will encounter.
- Following wet seasons, determine if there has been saprophytic colonisation of cereal stubble, especially in unexpected situations (e.g. resistant variety where little yellow spot observed in-crop or barley).
- Monitor changes in inoculum load at different phases of the cropping sequence.
- To confirm diagnosis in-crop.
- Note: disease risk categories have yet to be developed for this test. Categories based on inoculum load are provided to benchmark levels in your paddock against those measured in other paddocks throughout Australia using PREDICTA B. We do not assign management strategies to specific levels of inoculum.



**Yellow spot in wheat;
resistant on LHS susceptible RHS**

IMAGE: APS PRESS, COMPENDIUM IMAGE SERIES

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