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Recommended Citation
Khan, T N. (1979) "Halo blight of barley confirmed in Western Australia," Journal of the Department of Agriculture, Western Australia, Series 4: Vol. 20 : No. 3 , Article 15.
Available at: https://researchlibrary.agric.wa.gov.au/journal_agriculture4/vol20/iss3/15

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Halo blight of barley confirmed in Western Australia

By T.N. Khan, Plant Pathology Branch

Halo blight on barley, caused by the fungus *Selenophoma donacis* (Pass) Sprague and Johnson, has been confirmed for the first time in Western Australia. There is also a record of this disease from South Australia. However, symptoms like halo blight have been seen before and this disease may have existed in this State for some time.

Halo blight symptoms are characterised by small (1 to 3 mm) square to rectangular lesions with buff centre and brown margins. It is possible that halo blight has been mistaken for scald (*Rhynchosporium secalis*) or leaf spot (*Drechslera verticillata*) because of similarity in appearance. However, halo blight can be easily distinguished from these diseases because it has black spots (pycnidia) in buff centres, and has smaller lesions.

Halo blight is spread by rain splash and survives during summer on stubbles and on infected seed. The fungus occurs on a wide variety of grass species including wheat, but studies in New South Wales showed that the fungus isolated from wheat was not able to infect any grasses or barley. The role of alternative host plants in carry-over is therefore still not clear.

The disease appears to prefer cool, moist weather and the high rainfall areas of the south-west and southern areas in years of high rainfall may be prone to epidemics. It is regarded as a minor disease overseas, but epidemics do occur. For example in Norway, it is regarded as the third most important disease of barley. Potentially, it can be a serious disease as it is particularly severe after heading, and extensive damage to leaf, glume and awns may result in poor grain filling. Yield losses up to 14 per cent have been shown in England under experimental conditions.

There is no immediate threat to barley production from this disease as both Dampier and Clipper show appreciable resistance. However, several breeding lines are extremely susceptible.