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# Research to improve management of Rhizoctonia bare-patch and root lesion nematode in wheat

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## Key messages

Paddocks with a high root lesion nematode risk should be sown to non-host crops/pasture where possible. If planted to wheat, the current management practice for Rhizoctonia is to cultivate below the seed (~10cm) at the time of sowing and the use of a registered fungicide seed treatment

## Background

*Rhizoctonia solani* (Rhizoctonia bare-patch) and *Pratylenchus neglectus* (root lesion nematode; RLN) present a significant problem in many cereal growing regions in WA. Often they occur together in a paddock complicating the management and control of each disease. Currently Dividend® is the only fungicide available for either of these diseases; it is registered for suppression of *R. solani*, but it does not offer “complete” control. There is no registered chemical for the control of *P. neglectus* in broadacre crops. The most effective management options for a paddock infested with both pathogens are combinations of adequate nutrition, deep cultivation for rhizoctonia and rotation with non-host crops/pasture for RLN.

We are currently conducting research to determine the efficacy of current and potential management options, including in-furrow chemical options, to control Rhizoctonia and RLN in wheat.

A field trial was conducted in a farmer field at 30 km east of Wickiepin in 2010 using two wheat varieties Janz (susceptible/intolerant to *P. neglectus*) and Wyalkatchem (moderately resistant/tolerant to *P. neglectus*), fungicide treatments and tillage below the seed. Unfortunately, the growing season rainfall was very low and the crop was not harvested but disease measurement can still provide useful information.

## Results

- Root weight (dry) at anthesis was higher for the treatment with both Dividend® and deep cultivations for both wheat varieties (but especially for Wyalkatchem) compared to the Nil treatment. It is not known whether this result would have translated to a yield gain had the plots been harvested.
- There was no difference for any treatment in seedling emergence and disease on primary and crown roots at both the seedling and anthesis assessments.



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