

# Resistance of northern grain region weeds to root-lesion nematodes

Kirsty Owen and John Thompson, Centre for Crop Health, University of Southern Queensland, Toowoomba

**Email:** [Kirsty.Owen@usq.edu.au](mailto:Kirsty.Owen@usq.edu.au)

## Take home messages

### *Pratylenchus thornei*

Feathertop Rhodes grass, Windmill grass, Liverseed grass, Sowthistle and Bladder Ketmia were **resistant** to *Pratylenchus thornei*. Climbing buckwheat and African Turnip weed were **moderately susceptible**. The impact of environmental factors, such as day length most likely influenced a change in ratings for Awnless barnyard grass and Wild oats which were resistant and moderately resistant respectively in the first experiment and moderately susceptible in the second experiment.

### *Pratylenchus neglectus*

Feathertop Rhodes grass, Windmill grass, Wild oats, Awnless barnyard grass, Sowthistle and African turnip weed were **resistant** to **moderately resistant** to *P. neglectus*. Environmental factors may have influenced the rating of Liverseed grass which was rated as moderately resistant-moderately susceptible in the first experiment and resistant in the second experiment.

## What did we do?

We were funded by the Northern Grower Alliance to test the resistance of common weeds of the northern grain region to the root-lesion nematodes, *Pratylenchus thornei* and *P. neglectus*. The DAFQ Weeds team provided seed and advice about growing weeds. Weeds were grown in the glasshouse and harvested 16 weeks after inoculation with the nematodes. Two sets of replicated experiments (planted in July and August) were completed for each nematode species. See attached report for details.

## Recommendations

- Experiments need to be repeated, for example, National Variety Trials of resistance to root-lesion nematodes in wheat are tested at least four times before publication of non-provisional results.
- Determine the impact of planting date and season because of the sensitivity of many weeds to day length.
- Determine if there are differences in resistance levels between weed populations collected from areas within the northern grain region and test a broader range of winter and summer weeds, particularly broad leaf weeds including Fleabane, both species of Wild oats and Wire weed species.