



**NORTHERN**

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# SAFFLOWER

**SECTION 8**

**NEMATODE MANAGEMENT**

# Nematode management

Although safflower is resistant to the two common species of root-lesion nematode (RLN; *Pratylenchus thornei* and *P. neglectus*), testing of paddocks and knowledge of RLN status is useful when selecting areas suitable for safflower.

Safflower may be a better choice in soils with high RLN infestation than other, more susceptible crops (Table 1) and can be used as a break to reduce RLN populations and manage affected paddocks.<sup>1</sup>

**Table 1:** Comparison of crops for risk of *Pratylenchus thornei* build-up and frequency of significant variety differences within crop types.

Crop	Pt build-up risk	Variety differences
Sorghum	Low	None observed
Cotton	Low	None observed
Sunflower <sup>A</sup>	Low	None observed
Linseed <sup>A</sup>	Low	–
Canola <sup>A</sup>	Low to medium	None observed
Field peas <sup>A</sup>	Low to medium	Low
Durum wheat	Low to medium	Moderate
Barley	Low to medium	Moderate
Bread wheat	Low, medium to high	Large
Chickpeas	Medium to high	Moderate to large
Faba beans	Medium to high	Low
Mungbean <sup>A</sup>	Medium to high	Moderate to large

For crops with a range of build-up risk but a dominant category, the dominant category is in bold type; for bread wheat, varieties are in all categories but most are in the medium–high risk categories. See more at: Impact of crop varieties on RLN multiplication  
 A Data from only one or two field trial locations for these crops.

## MORE INFORMATION

[Root lesion nematodes](#)

In the northern grain region, RLN are found throughout northern NSW and Queensland. *Pratylenchus thornei* is more widespread and generally occurs in higher population numbers than *P. neglectus*. Results from 600 samples tested in 2010–13 showed that 50% of paddocks had populations >2 nematodes/g soil.

A recent survey in Central Queensland found that 28% of paddocks had RLN, with 26% of those paddocks containing *P. thornei*. Populations were generally low, but in the Dawson–Callide region of Central Queensland, 5% of samples had populations >2 nematodes/g soil.

At planting, damaging populations of RLN can be found deep in the soil. In some soils, peak numbers occur as deep as 60 cm. This happens because the hot, dry conditions of the surface soil can cause nematode death, and RLN can migrate down the soil profile where cooler, moist conditions favour survival. Therefore, be aware that RLN populations in surface soil may not give a full picture of the population density at depth threatening crops, particularly after a long fallow. However, if RLN are detected in the surface soil, start actively managing for RLN.<sup>2</sup>

<sup>1</sup> B Burton (2015) Impact of crop varieties on RLN multiplication. GRDC Update Papers, 1 March 2015, <http://grdc.com.au/Research-and-Development/GRDC-Update-Papers/2015/03/Impact-of-crop-varieties-on-RLN-multiplication>

<sup>2</sup> GRDC (2015) Root lesion nematodes. GRDC Tips and Tactics, 3 March 2015, <http://www.grdc.com.au/TT-RootLesionNematodes>