

ROOT LESION NEMATODES

Species: *Pratylenchus penetrans* & *P. neglectus*

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Root lesion nematodes are microscopic vermiform or round shaped worms. RLN are migratory endoparasitic nematodes that destructively feed on plant cells, causing massive root tissue necrosis and are linked to the spread of pathogens.



#3 RANKED FOR GREATEST ECONOMIC IMPACT WORLDWIDE

Detected in ~90% fields sampled in Idaho, Montana, Oregon, & Washington and ~96% of fields sampled in Michigan.

Smiley, Richard W. "Root-Lesion Nematodes Affecting Dryland Cereals in the Semiarid Pacific Northwest U.S.A." Plant Disease, vol. 105, no. 11, 2021

Prevention IS THE BEST MANAGEMENT

- Find diagnostic support and test soil samples from fields regularly
- Sanitize equipment to prevent the spread of soil infestations
- Plant only clean, certified seed



>350 HOST PLANTS

Including potatoes, wheat, and small grain cereals.

RLN is distributed widely, mainly found in temperate regions and sandy soils.



WHAT DO THEY DO?

RLN uses its stylet to puncture and feed on roots.

RLN develop intracellularly and its migration through the root cells cause necrosis and leads to black lesions forming on roots.

Infected fields can experience chlorosis (yellowing), stunted development, and/or low marketable yields.



(Quintanilla lab)

RLN CHARACTERISTICS:

- Migratory endoparasitic (penetrate the root and migrate within root cells)
- Dark and defined stylet
- Adults are 300-900µm and relatively stout
- "Lip" region is flat and blackened
- *Pratylenchus penetrans* can develop a synergistic relationship with the soil-borne fungus *Verticillium dahliae*

RLN IS AN INDUSTRY WIDE PROBLEM

- Little resistance in commercial varieties
- Lack of damage thresholds, molecular diagnostics
- Few nematicides are available

READY TO LEARN MORE?



Visit www.potatonematodes.com for more information and diagnostic support.

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