



NEM WISE

Nem Wise measures the numbers of different types of nematodes in your sample. Cyst (Heterodera spp.), Pin (Paratylenchus spp.), Stubby Root (Paratrichodorus spp.), Stunt (Tylenchorhynchus spp.), Root Lesion (Pratylenchus spp.), Root-knot (Meloidogyne spp.) and other plant-parasitic nematodes can all damage and distort roots as part of their normal feeding and reproductive behaviours. When they damage roots they also provide entry points for plant diseases, such as pathogenic fungi, thereby magnifying the deleterious effect of the nematodes alone. However, some species of nematodes ('free-living') do not harm plants, but rather live in the soil from organic residues and other soil microorganisms, such as bacteria and fungi. Free-living nematodes play an important role in soil nutrient cycles and can reduce the incidence of plant pathogens, such as plant pathogenic fungi. If you're serious about managing nematode problems, Nem Wise is for you.

Key features

- Plant-pathogenic nematodes
- Free-living nematodes (non-pathogenic)
- Diversity graph

Ideal For

- Indicating nematode problems
- Managing nematodes
- Troubleshooting crop growth problems

Info level*



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- Our **online product selector** will help you identify which tests you need
- Visit www.microbelabs.com.au/selector

COLOUR CODED RESULTS FOR EASY UNDERSTANDING

All results are colour coded based on guide values for easy recognition.

Key

Poor Fair Good

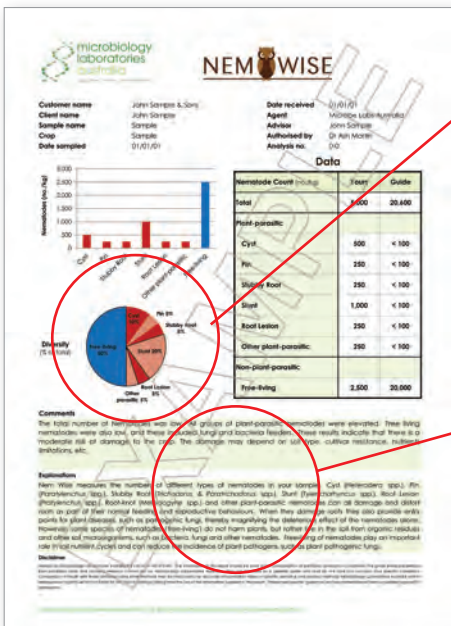
COMMENTS AND EXPLANATIONS

Each report comes with comments and explanations designed to help you understand your results.

MORE INFO?

Customised reports with detailed comments and recommendations are also available as an optional extra. See price list for more info.

INFO SHEET



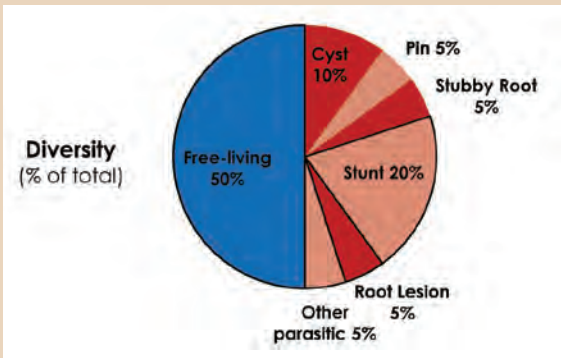
CONSIDER THESE GREAT VALUE PACKAGES AND ALTERNATIVE TESTS

- Soil Audit
- Soil Troubleshooter
- CropSaver[†]
- ID Wise[†]

All packages include a free Fill 'n' Go sampling kit with complimentary delivery and return express shipping to the lab. Visit www.microbelabs.com.au/soils today!

[†]CropSaver and ID Wise are individual tests. Others in list are packages.





For the technically-minded

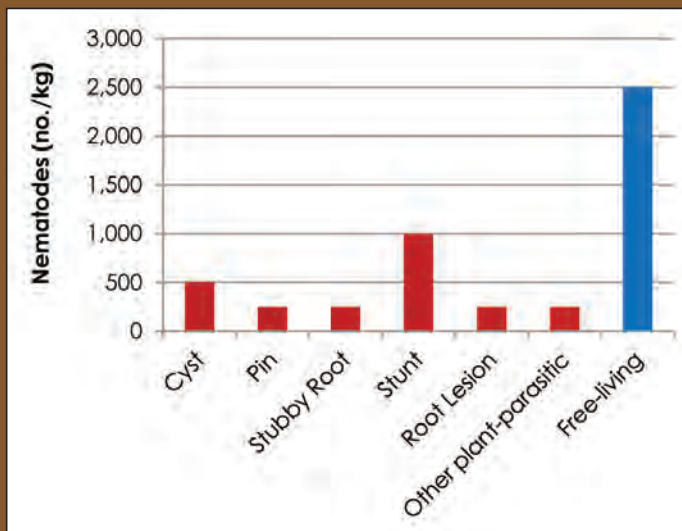
For further technical information see: soilquality.org.au, Fact Sheets, Nematodes – NSW; Grains Research & Development Corporation, Fact Sheet – Plant Parasitic Nematodes; Stirling et al. (2016), Soil health, soil biology, soilborne diseases and sustainable agriculture: a guide, CSIRO Publishing; Lambert & Bekal (2002), The Plant Health Instructor, DOI: 10.1094/PHI-I-2002-1218-01.

NEMATODES – WHAT ARE THEY AND WHAT DO THEY DO?

Nematodes (or eel worms) are very small false worms (≈ 0.5 mm long) that live mainly in soil, and feed on bacteria, fungi, other microorganisms and plant roots. There are many different species of nematodes, each playing a slightly different role in the soil ecological system. Nematodes that feed on plant roots (plant-parasitic nematodes) are a significant economic pest in agriculture and various types of nematodes affect every major agricultural crop. In general, plant-parasitic nematodes penetrate plant roots and extract nutrients through their mouthparts, causing distortion of roots in the process and providing entry points for other soilborne diseases, such as pathogenic fungi, to enter roots through the damaged areas. However, there are also other types of nematodes that do not parasitise plants (free-living nematodes), and help to regulate populations of plant-parasitic nematodes and other microorganisms, releasing nutrients into the soil as part of the process. From an agricultural viewpoint, these can be thought of as beneficial nematodes.

COMMON PROBLEMATIC NEMATODES

- **Cereal cyst** (*Heterodera avenae*) – Wheat, barley, oat & triticale
- **Pin** (*Paratylenchus* spp.) – Prunus spp., grapevine, citrus, horticulture
- **Stubby-root** (*Trichodrus* & *Paratrichodorus* spp.) – Prunus spp., grapevine, citrus, horticulture
- **Stunt** (*Tylenchorhynchus* spp.) – Wide range in broadacre, viticulture & horticulture
- **Root lesion** (*Pratylenchus* spp.) – Cereals, legumes, grapevines, horticulture
- **Root knot** (*Meloidogyne* spp.) – Wide range of horticultural plants
- **Citrus** (*Tylenchulus semipenetrans*) – Citrus and grapevine



For the technically-minded

For further technical information see: Jones et al. (2013), Mol Plant Pathol 14: 946-961; Stirling (2014), Biological control of plant-parasitic nematodes: soil ecosystem management in sustainable agriculture, CABI Publishing; Stirling (2008), Aust Plant Pathol 37: 1-18.

NEED HELP?

We have expert advisors available to help you understand and interpret your report, and provide advice and recommendations if you need them.

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