



GARDEN *pests* IN PERTH

How to Control Root Knot Nematode

Nematodes are tiny, worm-like animals that live in the soil. There are thousands and thousands of different species and most of them are beneficial. They are concentrated in the top few centimetres of the soil and around plant roots. They need water to move so they live in the thin films of water surrounding soil particles. They are almost invisible and very difficult to spot.

A few pest nematodes are plant parasitic and feed on plant roots. One of these is the root knot nematode. This species thrives in the sandy, unimproved soil that occurs in many gardens across Perth. It enters the plant's roots and forms knots or galls that prevent the plant taking up water and nutrients. It can also make the plant more susceptible to fungal infections.

Plants affected by root knot nematode generally fail to thrive, are stunted, wilt in hot weather, have yellowing (chlorosis) and gradually decline. The affected plants produce fewer and smaller fruit. The symptoms can be particularly severe when the plants are infected soon after planting.

The symptoms can be diagnosed as lack of nutrients and/or lack of water. If increased water and fertilising don't fix the problem, have a look at the root system of an affected plant. Dig up a section of the feeder root system to look for nodules and lumps. This evidence will confirm the root knot nematode as the cause of the problem.

Vegetable crops like tomato, beans, capsicum, carrot, and eggplant are very susceptible. If you catch an infestation early enough, you can prevent the spread to other areas.

Control Nematodes

- Be aware that the nematode can be spread by infected plants, soil, garden tools and footwear so follow strict hygiene practices if you suspect root knot nematodes.
- Encourage all the good nematodes, bacteria and fungi that feed on the pest varieties by adding plenty of organic matter.
- Rotate crop plantings as some species are selective in their choice of host plant.
- Weed regularly to remove a potential nematode breeding ground.
- In a large garden, leave a plot fallow to starve out the problem nematode.
- Cover crop with plants that release a toxic compound into the soil that repels the pest nematode. French Marigolds produce a chemical that inhibits the nematode eggs hatching. Mustard can be grown as a green manure crop then dug into the soil when it flowers. As it decomposes it fumigates the soil and kills off the nematodes.
- Solarize the soil. Water the area, then cover it with a layer of clear plastic. Leave it for two months over summer and the heat will kill the nematodes. Carefully remove and plant into the undisturbed soil.
- The best defence against nematode attack is healthy plants and healthy soil.

This is intended as general information only. Please ask one of our horticulturists for specific advice for your situation.