Pacific Pests, Pathogens & Weeds - Mini Fact Sheet Edition

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Celery root knot nematode (254)

Photo 1. Gall on the roots of *Phaseolus* bean, caused by *Meloidogyne* species.

Photo 2. Severe infestation of root knot nematode, *Meloidogyne* species, on tomato.

Photo 3. Yellowing and browning at margins of celery leaves, caused by root-knot nematode, *Meloidogyne* species.

Photo 4. Yellowing of celery leaves caused by root-knot nematode, *Meloidogyne* species.

Photo 5. Plant in Photo 2 showing below ground symptoms: swollen roots and galls caused by root-knot nematode, *Meloidogyne* species.

Summary

- Worldwide distribution. In tropics and sub-tropics. Apart from celery, common vegetable hosts are beans, capsicum, carrot, cucumber, eggplant, ginger, lettuce, potato, tomato, and yam; common fruit crop hosts are melon, papaya, and pineapple, and many ornamentals. An important nematode disease.
- Above ground, leaves yellow with brown margins, wilt and die early; below ground, galls on roots.
- Eggs in soil hatch, young larvae enter root behind the tip, and cause cells to swell and galls to form.
- Cultural control: important - pasteurise nursery soil or use soil-less mixes; add organic matter; solarise soil for 4-6 weeks under black plastic; keep soil well watered and use mulch; collect and burn trash after harvest; fallow land for 4-6 months; rotate with e.g., more tolerant maize, peanuts, onions, brassicas, chilli, sweetpotato, or sorghum x Sudan grass hybrids, green panic grass, or grow marigold cover crops.
- Chemical control: none recommended.

Common Name

Root knot nematode. General account of root knot nematodes (**see Fact Sheet no. 127**).

Scientific Name

Meloidogyne species. *Meloidogyne hapla*, *Meloidogyne incognita*, and *Meloidogyne javanica* all attack celery.

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Information (and Photo 2) *Diseases of vegetable crops in Australia* (2010). Editors, Denis Persley, Tony Cooke, Susan House. CSIRO Publishing. Photo 1 Gerlach WWP (1988) *Plant diseases of Western Samoa.* Samoan German Crop Protection Project, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) Gmbh, Germany.

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