Pacific Pests, Pathogens and Weeds - Online edition

Taro Hirschmanniella nematode (010)

Summary

- Narrow distribution. In Papua New Guinea, Solomon Islands and Taiwan, in dry land and swamps. An important nematode disease.
- The nematodes attack roots causing wilts, and invades corms from the base, causing brown, crumbling rots. Healthy parts turn red.
- Spread short distances by swimming or being moved in ground water. Long distance movement in planting pieces ('tops').
- Cultural control: remove roots from the tops, and inspect corm piece; do not plant down slope from previously infected fields; use hot water (51°C for 10 minutes) to establish source of disease-free plants.
- Chemical control: none recommended.

Common Name

Mitimiti disease, Mitimiti corm rot

Scientific Name

Hirschmanniella miticausa

Photo 1. Early infection of a corm by mitimiti nematode, *Hirschmanniella*. At this stage, decay is mostly in the outer parts of the corm.

Photo 2. Late symptoms of mitimiti; infection by the nematode, and secondary rot-causing organisms, has caused complete decay of the corm.

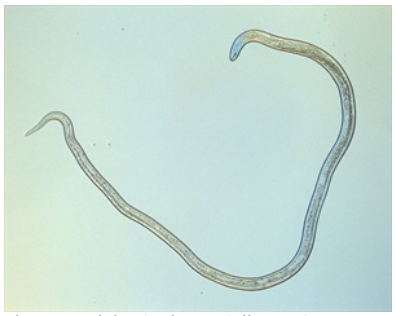

Photo 3. Adult *Hirschmanniella* species.

Photo 4. Stunted taro growing on the atoll of Ontong Java, Solomon Islands. Taro was a major crop in the atoll before the introduction of *Hirschmanniella*.

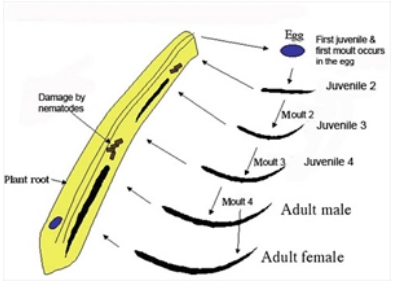

Diagram. Life cycle of *Hirschmanniella*.

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Information from Carmichael A, *et al.* (2008) TaroPest: an illustrated guide to pests and diseases of taro in the South Pacific. ACIAR Monograph No. 132, 76 pp. (https://lrd.spc.int/about-lrd/lrd-project-partners/taropest); and from Bridge J, *et al.* (1983) *Hirschmanniella miticausa* n. sp. (Nematoda : Pratylenchidae) and its pathogenicity on taro *(Colocasia esculenta)*. Revue Nematol 6(2): 285-290. (https://horizon.documentation.ird.fr/exl-doc/pleins_textes/pleins_textes_5/pt5/nemato/15584.pdf). Photo 3 Hanny van Megen, Wageningen UR. (www.wgeningenur.nl). Diagram Sailaja K Nematode biology, Physiology and Ecology.

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