Pacific Pests, Pathogens, Weeds & Pesticides - Online edition

Yam tuber dry rot nematode (529)

Summary

- Widespread. NOT in Oceania.
- Major disease of cultivated and wild yams; alternative hosts: cowpea, melon, sesame. Similar to *Pratylenchus* (**see Fact sheet no. 8**). Impacts: yield, quality, planting stocks.
- On tubers: initially, creamy-yellowish shallow rots beneath skin, resulting in dark brown, dry, powdery, <2cm-deep rots, causing cracking and flaking. Rots continue in storage.
- Nematodes enter sets/tubers as roots/shoots emerge or through cracks in skin. Spear in mouth used for entry and feeding. Males and females live and breed (lays eggs) in tubers and soil.
- Spread: in surface and ground water, and in soil on footwear and machinery/vehicles. Long distance in tubers. Survival in stored tubers, and on roots of other crops and weeds.
- Biosecurity: risk from unofficial introductions, trade in yams, and possibility of different strains. Official movement of germplasm should always follow the FAO/IPBGR Technical Guidelines.
- Biocontrol: none.
- Cultural control: carefully inspect tubers when cutting sets – do not plant sets with rots; disinfect knives frequently with bleach; coat sets in ash; avoid planting where yams grown previous season; avoid planting after alternative hosts; provide optimum nutrients for rapid growth; weed; after harvest, collect and burn diseased tubers; ideally, plant after fallow or legume cover crop.
- Chemical control: hot-water treatment. Immerse yams before cutting in 51°C for 10 minutes (*use a thermometer*). *Test method on a few tubers, producing nematode-free planting material for next season's crop.*

Photo 1. Dry rot beneath the skin of yam, *Dioscorea cayennensis-rotundata*, caused by the nematode, *Scutellonema bradys*.

Photo 2. Damage by the nematode, *Scutellonema bradys*, on tubers of *Dioscorea cayenensis-rotundata*. Note, surface cracks in the skin of tubers in both heaps, plus rotting beneath the skin (left).

Photo 3. Damage by the nematode, *Scutellonema bradys*, on *Dioscorea cayenensis-rotundata*.

Common Name

Yam dry rot. It is also known as yam nematode, yam dry rot nematode.

Scientific Name

Scutellonema bradys.

Photo 4. Head of the nematode, *Scutellonema bradys*, showing the spear.

AUTHOR Grahame Jackson

Information from CABI (2021) Scutellonema bradys (yam nematode). Crops protection Compendium. (https://www.cabi.org/cpc/datasheet/49315); and Bridge J, *et al.* (2005) Nematode parasites in tropical root and tuber crops (excluding potatoes). In: Luc M, Silora RA, Bridge J (eds) Plant parasitic nematodes in subtropical and tropical agriculture (second edition). CABI Publishing, Wallingford, UK, pp 221-258. (http://books.google.com.au/books?id=GAdsEt6dEtwC&pg=PA250&lpg=PA250&dq=scutellonema+bradys+yam&source=bl&ots=hM7P6PcHyY&sig=RoHp8WUtDqAEunoy9quvOSG_xfA&hl=en&sa=X&ei=e7bgU_nlMoPq8AX_jIKIBQ&ved=0CBsQ6AEwADgK#v=onepage&q=scutellonema%20bradys%20yam&f=false); Brunt AA, *et al.* (1989) FAO/IBPGR Technical Guidelines for the Safe Movement of Yam Germplasm. Food and Agriculture Organization of the United Nations, Rome/International Board for Plant Genetic Resources, Rome. (http://ecoport.org/Resources/Refs/IPGRI/yam.pdf); and from Yam nematode (Scutellonema bradys). Plantwise Technical Factsheet. (http://www.plantwise.org/knowledgebank/datasheet.aspx?dsid=49315). Photo 1 Dry rot of yam. IITA. (http://bit.ly/1FV6y4g). Photos 2&4 John Bridge Damage symptoms on yam tubers. CABI. (https://www.cabi.org/cpc/datasheet/49315). Photo 3 Yam tuber infected with dry rot. IITA. (http://bit.ly/1LKoMgW).

Produced with support from the Australian Centre for International Agricultural Research under project HORT/2016/185: *Responding to emerging pest and disease threats to horticulture in the Pacific islands*, implemented by the University of Queensland, in association with the Pacific Community.

pestnet

Australian Government
Australian Centre for
International Agricultural Research

POWERED BY
LUCID®

Web edition hosted at https://apps.lucidcentral.org/pppw