Pacific Pests, Pathogens, Weeds & Pesticides - Online edition

Coconut basal trunk rot (484)

Common Name

Coconut basal trunk rot

Scientific Name

Marasmiellus albofuscus; previously known as *Marasmius albofuscus*, and possibly *Hemimycena longicystis*.

Distribution

The fungus is recorded widely: Asia (China, Indonesia), North (Hawaii, Florida) and South America (Argentina), the Caribbean (Cuba, Lesser Antilles), Oceania. The disease is recorded only from Solomon Islands.

Photo 1. Bole of coconut with cracks in the bark showing presence of *Marasmiellus albofuscus* growing from the trunk as well as from weeds.

Hosts

Coconut; mostly, the fungus is a saprophyte, i.e., it lives on dead or decaying organic matter.

Symptoms & Life Cycle

The fungus is associated with a superficial, brown, basal trunk rot of mature coconuts (Photos 1&2). The fungus grows from the base of the fronds into the trunk creating brown patches of rot in the cortex. The rots are often extensive, with pockets of white fungal growth, and causing cracks in the bark. Sporophores occur on the remains of the fronds; they are also found on grass and legume weeds at the base of coconut trunks.

Photo 2. Bole of coconut showing *Marasmiellus albofuscus* growing on the remains of a frond, and patches of rot in the cortex, presumably from previous invasions of fronds.

Marasmiellus albofuscus is also associated with non-germinating seednuts in coconut nurseries, and also on weeds and organic materials at the base of coconut palms. It is unknown if the fungus causes embryo rot similar to that of *Marasmiellus inoderma* (**see Fact Sheet no. 70**).

Sporophores of *Marasmiellus albofuscus* are small white mushrooms; caps are 4-8 mm diameter, with slightly depressed pale brown discs in the centre. Spores are oval..

Impact

A weak pathogen on trunks of coconuts and unlikely to cause structural damaged to the trunks of the palms, or affect yields. Rots in the cortex are shallow. The incidence of embryo rot of seednuts associated with *Marasmiellus albofuscus* is very low, much less than that caused by *Marasmiellus inoderma*.

Detection & inspection

Look for fruiting bodies on the basal trunks of coconuts, on grasses and legume weeds growing nearby. Look for sporophores of the fungus on seednuts in coconut nurseries where seednuts show symptoms of embryo rot. (Note, in most cases, the common fungus in those situations is *Marasmiellus inoderma*).

Management

BIOSECURITY

Although it is not yet proven that *Maramiellus albofuscus* is parasitic on coconut palms (or any other plant), the fact that it can inhabit seednuts is of concern and warrants attention. This is not the only marasmioid or other kind of fungus that grows in seednuts. There is evidence that *Marasmiellus cocophillus* (**see Fact Sheet no. 69**), *Marasmiellus inoderma* (**see Fact sheet no. 70**), *Maramius crinisequi* (**see Fact Sheet no. 05**), and *Rigidoporus zonalis,* enter seednuts either before or after nutfall. Because of this, the FAO/IBPGR *Technical Guidelines for the Safe Movement of Coconut Germplasm* should be followed when transfers of coconuts are made between countries: (https://www.bioversityinternational.org/fileadmin/_migrated/uploads/tx_news/Coconut_361.pdf/).

CONTROL

There is no recommended treatment; from present evidence it seems unlikely that it causes a disease of economic importance.

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Information from Kohler F, *et al.* (1997) Diseases of cultivated crops in Pacific Island countries. South Pacific Commission. Pirie Printers Pty Limited, Canberra, Australia; and from Jackson GVH & Firman ID (1982) Seedborne marasmioid fungi of coconuts. Plant Pathology 31: 187-188. Dr DN Pegler, Kew Botanic Gardens, UK, is thanked for identifying specimens of *Marasmiellus albofuscus* from coconuts of Solomon Islands.

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