Banana tip rot (125)

Photo 1. Black rots at the end stem end of banana fruits caused by banana tip or crown rot, *Colletotrichum musae*.

Common Name

Banana tip rot, banana crown rot

Scientific Name

Colletotrichum musae

Distribution

Worldwide. It is present in Australia, Cook Islands, Federates States of Micronesia, Fiji, Marchall Islands, Palau, Papua New Guinea, Samoa, Solomon Islands, and Tonga.

Hosts

Banana and plantain varieties.

Symptoms & Life Cycle

On the fruit: circular to oval, brown or black, sunken spots occur, and as they age pink spore masses occur in the centre of the spots. The spots may join together covering large areas of the fingers.

On the stem ends of the fruit: blackening and rotting of the cut or otherwise damaged ends of the fingers where they were previously attached to the crown of the bunch (Photo 1).

The fungus readily colonises dead and dying banana leaves and fruits, and spores are formed in large numbers; the spores are then spread in wind-driven rain or perhaps by insects onto bunches of green fruit, about 20-40 days after emergence. Here, infection takes place, but the fungus does not cause spots at this time; it is said to be "latent", meaning that it is dormant waiting for the right conditions for further development. Later, when the bunch starts to ripen, the fungus starts to grow once more and rots appear on the fruit.

Note, these symptoms should not be confused with ageing spots that develop on ripe fruit.

Impact

The fungus causes anthracnose[2] and black end rot of banana. The disease is a post-harvest problem affecting the fingers of the fruit. Symptoms do not occur on the leaves. The disease can be serious on overripe fruit, or on unripe fruit that is damaged by being badly handled and bruised after harvest.

Detection & inspection

Look for large, black, round, sunken spots on the fruit. Look for the pink spore masses of the fungus in the centres of the spots. Look for rots on the broken or cut ends of banana hands.

Management

CULTURAL CONTROL

- Bag bunches as soon as possible after the male bud has been removed to help prevent fruit infection; bags are usually applied when the fingers are horizontal.
- Reduce the number of fungal spores by removing old hanging leaves and the remains of flowers from the plantation.
- Handle banana bunches carefully after harvest to avoid bruising and wounding, both in the field and in the packing shed.
- Keep packing sheds clean. Remove the remains of leaves, flowers and rejected fruits.
- Trim the crown - the part attached to the bunch stem - with a knife so that the cut surface is smooth.

RESISTANT VARIETIES

No information.

CHEMICAL CONTROL

In commercial production, hands of bananas are treated with fungicides after harvest. Previously, benomly was used, but since the cancelation of its registration in many countries, other benzimidazole fungicides (e.g., thiobendazole) or sterol biosynthesis inhibitors are used in packing stations before the hands are put into boxes.

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Information (and Photo 1) *Diseases of fruit crops in Australia* (2009). Editors, Tony Cooke, Denis Persley, Susan House. CSIRO Publishing. [2]Anthracnose is the name given to diseases caused by *Colletotrichum* (and some other) fungi.

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