Extension Fact Sheet 9: Mango Spots & Dieback

Common name: Mango flower blight

Scientific name: *Glomerella cingulata* (it also has the name of *Colletotrichum gloeosporioides*). *Glomerella* is the sexual stage of the fungus. The disease is often referred to as Anthracnose of mango. Another fungus also causes leaf spots: *Stigmina mangiferae* (see below).

Host: mango. Many other crops are hosts of this fungus, including avocado, coffee, eggplant, papaya, sweet pepper, tomato and yam. There are different strains, infecting different hosts.

Damage

The fungus causes severe damage during wet weather. It causes flower blight, leaf spots (photo, left), young shoot blight and fruit rot. In wet weather, flower blight results in low yield and shoot dieback. Young infected fruits develop black spots, shrivel and fall off. Infection of mature fruit leads to losses in storage (photo, right).

Biology and Life Cycle

Masses of spores occur in tiny dish-like structures in the spots; they are splashed by rain onto other leaves, flowers and shoots. They germinate, like a seed, infect and produce more spots and blights. Young leaves are most susceptible to infection.

At first, the spots are small, black and irregular, often expanding to form large dead areas that dry and fall out. On mature fruits, the fungus remains as pinpoint infections until the fruit ripens; then the infections form dark brown to black spots with pink spore masses.

Signs and Symptoms

Look for flower blights, and spots on young leaves and fruits in wet weather.

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However, it is not always easy to distinguish between diseases caused by *Glomerella* and *Stigmina*. Spots of *Glomerella* are usually larger on the leaves, whereas those of *Stigmina* are about 6 mm diameter, surrounded by a wide greenish zone.

Stigmina causes black spots on the leaves, which may merge to form large black areas. During wet weather the fungus can cause early leaf fall (photos, below).

Management

Under local conditions, there is little that can be done to prevent infection from these pathogens. Control requires trees to be pruned and sprayed with fungicide.

Cultural control:

It is important to prune trees to allow air to flow freely through the tree canopy to reduce humidity. Trees should be less than 4 m tall for easy management and harvesting. Diseased twigs should be removed and burnt along with fallen leaves.

Resistant varieties:

Indo-Chinese/Philippine varieties are said to have some resistance to the fungus and need to be tested in Solomon Islands. They have good flavour, and flesh with low-fibre. See MAL for information.

Chemical control:

Frequent and timely application of chemicals (e.g., copper oxychloride or mancozeb) is necessary to control *Glomerella* leaf and flower blight. Applications need to begin when the flowers first appear and continue at recommended intervals until the pre-harvest waiting period.

Post-harvest dips in fungicide (carbendazim)/hot water (5 minutes at 52°C) control fruit infections, preventing storage rots.

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