

## Mango Anthracnose

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Anthracnose is one of the most serious diseases of mangoes in many areas where the crop is grown. The most devastating effects of anthracnose occur in areas where it rains during the mango flowering and fruit set stages. Although it appears to be less of a problem in the NT because flowering and fruit set occur during the dry season, anthracnose can cause problems here under certain conditions.

Mango anthracnose is caused by the fungus *Colletotrichum gloeosporioides* var *minor* (also known by the name of its perfect stage *Glomerella cingulata* var *minor*). Spore production by this fungus is favoured by wet or humid weather. The dispersal of these spores is particularly favoured by rain and wind. This enables spread of the disease over relatively short distances.

In areas where rain is prevalent during flowering and fruit set, anthracnose can cause destruction of the inflorescences and infection and drop of young fruit. This can obviously lead to serious losses.



Under NT conditions anthracnose tends to manifest itself later in the season. It can occur either as leaf spots or as fruit anthracnose. Occasionally anthracnose lesions are seen in young green fruit, more commonly in larger green fruit but most commonly in ripening fruit. The anthracnose fungus has the ability to produce what are known as latent infections. This means that the fungus has the ability to penetrate green fruit where it may go into a dormant state until the fruit ripens. Then the anthracnose fungus can be re-activated in response to physiological changes associated with ripening, resulting in the development of lesions with subsequent spoilage of the fruit.

### SYMPTOMS

On leaves, spots form commonly towards the margins. They are tan to dark brown in colour, often with a darker border. Infection of young leaf flushes may occur when their emergence coincides with rainy weather. These infections often show up as lesions along the margins of the young bronze or pale green leaves, in which case they are semi-circular in shape.

In very humid weather new twigs may show a dark affected area from the tip backwards, sometimes with defoliation of the young shoots.

When newly formed fruit are affected the anthracnose shows as large, sunken, black lesions and the fruits so affected drop off. Medium to large green immature fruit affected with pre-harvest anthracnose show large lesions which are glossy, black and sunken. With these fruit, splits and oozing often occurs.

The most common fruit anthracnose results from latent infections (see above) and is seen as slightly depressed grey-black areas in the skin on ripening fruit. In time the typical pink to orange spore masses (acervuli) form on this tissue.

## **CONTROL**

Regular spraying of trees from flowering time onwards with mancozeb (at recommended label rates every 14 days) is useful to reduce the level of infection in the developing fruit. Do not use mancozeb within 14 days of harvest. If anthracnose becomes serious in green immature fruit it would be useful to give a couple of judicious sprays of prochloraz. It is important however not to overuse prochloraz as this may lead to development of resistant anthracnose strains. Copper sprays recommended for the control of mango scab will also control anthracnose with only a one day withholding period.

Post-harvest treatments are available for control of anthracnose in mango fruit. Prochloraz is used as a cold non-recirculating spray. Hot water dips used to control fruit flies will also control anthracnose and stem end rots. Hot benomyl dips will control anthracnose and are useful where stem end rots are a problem.

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Department of Primary Industry, Fisheries and Mines

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ISSN 0157-8243

Serial No. 604

Agdex No. 234/633

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