

Anthracnose management in mangoes

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Checklist:

- Pruning
- Fertilisers
- Watering
- Field sprays
- Post harvest treatment
- Cold storage during transportation

Introduction:

Anthracnose is a major disease of mangoes in the Top End- particularly in wet years, when there is a late harvest coupled with rain events. As yet there is no silver bullet for the very wet years, however there are a number of things that, combined together, can minimise the damage.

Steps:

1. When pruning:
 - Thin out trees to increase airflow- Anthracnose likes moist closed canopies.
 - Remove dead branches, flowers and fruit- dead plant material is a potential source for re-infecting your trees.
 - Solarise prunings in inter-row- don't leave them under the trees to reinfect. The sun and heat will help to kill spores of any anthracnose left in the material. If in doubt you can always incinerate the clippings instead.
 - Pruning not only removes dead tissues but also allows more effective spray coverage.
 - Stressed trees more susceptible.

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2. Fertilising:

- A healthy plant is less susceptible to disease.
- Excessive Nitrogen increases Anthracnose- levels above 292g per tree can significantly increase Anthracnose levels
- Manage your Calcium- it can strengthen your fruit.

3. Watering:

- Use under tree irrigation to reduce moisture build-up in the canopy

4. Field spray options:

- Mancozeb- regular spraying of trees from flowering time onwards (at recommended label rates) every 14 days in wet weather and 28 days in dry weather can reduce the level of infection in the developing fruit. Do not use Mancozeb within 14 days of harvest.
- Octave (Prochloraz)- should be used after a rain event. It can be re-applied after 3- 4 weeks. It is not recommended for use on developing fruit green prior to harvest. Do not overuse it, as it may lead to resistant anthracnose strains.
- Copper- controls Mango Scab and can be used as an alternative to Mancozeb, DO NOT USE DURING FLOWERING. It has a one day withholding period.
- ☆ Pilot studies in both QLD and the NT have shown Amistar to be very effective in reducing anthracnose - use two sprays, one at the end of flowering or early fruit set and one or two at 21 days and/or 3-7 days before harvest. Do not overuse it, as it may lead to resistant anthracnose strains.

5. Post harvest treatment options:

- Sporetak (Prochloraz)- can be used as a cold non-recirculating spray. Although it is not effective against stem end rot.
- Hot water- at 52- 55°C for 5 minutes. TEMPERATURES OVER 55°C WILL DAMAGE FRUIT.
- Hot Spinflo (Carbendazim) dip- is an alternative to Sporetak if you need to control fruit flies. Use at 52°C for 5 minutes –it will also control stem end rots. TEMPERATURES OVER 55°C WILL DAMAGE FRUIT.
- Thiabendazole or Benomyl is also effective as a post-harvest use.

6. Cold storage during transportation

- Store fruit at 22°C during transportation, or alternatively at 15°C for transport and 22°C for ripening. TEMPERATURES BELOW 13°C WILL CAUSE CHILLING INJURY.

Other:

If you have a small orchard, wrapping developing fruits in paper bags can also reduce anthracnose.