

Mango Leafhoppers

(Idioscopus nitidulus)

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BACKGROUND

Mango leafhoppers occur in all mango growing areas in India and are widespread through South-East Asia and Papua New Guinea. They have been recorded in the Torres Strait since 1986 and in 1997 were detected in the northern suburbs of Darwin. Shortly after, they were found at Weipa in Queensland and quarantine restrictions were then placed on Northern Cape York Peninsula. They are now widely established in the Darwin suburbs, the Palmerston area, the Darwin rural area and, in 2005, they were detected in Pine Creek and Katherine. In some countries, leafhoppers have reduced mango yields by up to 50%.

Mango leafhoppers breed only on mangoes and there is overseas evidence that suggests some cultivars are affected more than others. In the Darwin area, leafhoppers have been recorded on Kensington Pride, Irwin and common varieties of mango.

APPEARANCE

Adult mango leafhoppers are golden-brown or dark brown, wedge-shaped insects about 4-5 mm in length which look rather like a small cicada. When disturbed, the adults jump off the plant with a clicking sound, fly a short distance and then quickly resetttle on the plant. The nymphs are greenish with black or brown markings, cannot fly and move rapidly on the plant.



Nymphs



Adults

The mango leafhopper should not be confused with several species of flatids or planthoppers which are found in smaller numbers on most mango trees in the Darwin and Katherine rural areas. Adults of these species (*Colgar* spp. and *Colgaroides* spp; Homoptera: Flatidae) are green or whitish-green in colour, triangular or 'tent' shaped and 10-15 mm long. The immature versions are smaller, are covered in whitish wax and when disturbed, spring away at right angles. These are often found lined up along the stalks of developing fruits.

LIFE CYCLE

Leafhoppers will breed all year round but females lay more eggs and nymphs develop faster during the flowering and fruiting period. Eggs hatch in two to three days and nymphs develop between 12 to 20 days.

SYMPTOMS AND DAMAGE

On non-flowering mango trees, leafhopper populations are quite low and rather difficult to detect. Mango leafhoppers feed on vegetative flush tissue by sucking the sap. They lay eggs into the underside of the mid ribs of young leaves. Feeding and egg laying cause curling and distortion of new flush and young leaves. In these situations, the insects are rarely seen. Presence of sooty mould on older leaves may also be an indication of infestation by leafhoppers but several other sucking pests can also cause these symptoms on mangoes in the Northern Territory.

These pests can build up very rapidly on flowering trees and cause damage by their numerous egg laying punctures to the flower stems which then wither and fail to set fruitlets. The leafhoppers suck the sap from the flowers and heavy production of honeydew associated with sooty mould growth may retard tree vigour and lead to fruit drop. If left untreated, leaves and flowers will be damaged and fruit production can be severely affected. On heavily infested trees, crop losses of 50% or more have been recorded.



Damage on young leaves



Damage to flowers

PEST MANAGEMENT

When necessary, infestations can be managed with the same chemical pest control practices applied just prior to flowering against redbanded thrips. Two cover sprays of either dimethoate or cabaryl applied seven days apart at the rate recommended on the product label has been shown to give effective control. If leafhoppers and redbanded thrips are controlled prior to the commencement of flowering, populations should not reach damaging levels or require further chemical treatment during the flowering period. Controlling leafhoppers prior to flowering reduces the risk of pesticides affecting pollinators and other beneficials. Native lacewing larvae and other predators may assist in controlling immature leafhoppers

For further information on this Agnote, contact Entomology at insectinfo.dpifm@nt.gov.au. Agnotes and fact sheets on other pests are available from www.entomology.nt.gov.au or www.primaryindustry.nt.gov.au

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