



Pacific Pests, Pathogens & Weeds - Fact Sheets

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Mango leafhoppers (263)



Photo 1. Adult mango leafhoppers, *Idioscopus nitidulus*.



Photo 2. Nymphs of the mango leafhopper, *Idioscopus nitidulus*.



Photo 3. Sooty mould on leaves growing on honeydew deposited by the mango leafhopper, *Idioscopus nitidulus*.



Photo 4. Sooty mould on leaves and fruit growing on honeydew deposited by the mango leafhopper, *Idioscopus nitidulus*.

Common Name

Mango leafhoppers

Scientific Name

Idioscopus nitidulus and *Idioscopus clypealis*

Distribution

Narrow. Southeast Asia, Oceania. *Idioscopus nitidulus* is recorded from Papua New Guinea and Palau, and this species and *Idioscopus clypealis* are recorded from Australia.

Hosts

Mango

Symptoms & Life Cycle

The leafhoppers are wedge-shaped, with broad, rounded heads. The adults are golden or dark brown, about 4-5 mm long (Photo 1); the nymphs are yellow-brown, with red eyes (Photo 2). The leafhoppers move quickly.

Idioscopus nitidulus breeds in the flowers and new flushes of leaves, whereas *Idioscopus clypealis* breeds only in the flowers. Each female lays between 100-200 eggs singly into the mid-rib on the underside of the leaves and/or the flowers.

Spread over short distances occurs by adults making short flights, and longer distances on nursery plants.

Impact

Mango leafhoppers occur in large numbers on the flowers and leaves, and cause crop losses of up to 50%. These losses are brought about in two ways: (i) the leafhoppers feed on sap, and their feeding and egg-laying cause the flowers to turn brown and dry, reducing fruit set and production; and (ii) as they feed, they excrete fluid known as "honeydew" which is sticky; honeydew settles on the leaves and fruit and becomes colonised by sooty mould fungi, turning the leaves black and reducing photosynthesis (Photos 3&4).

In India and the Philippines, economic injury can occur with 4-5 adult insects per flower branch (in botanical terms a "panicle") when the fruit is still small.

Detection & inspection

Look for small wedged-shaped leafhoppers on the flowers or leaf flushes with relatively large rounded heads. If disturbed, the leafhoppers take flight with a loud clicking sound.

Management

In Southeast Asia, parasitoids (mainly chalcid wasps) and predators (spiders, ladybird beetles and lacewing larvae), and fungal pathogens are reported, but none have been exploited to control the leafhoppers. Varietal resistance has not been used to control these leafhoppers.

CHEMICAL CONTROL

Use synthetic pyrethroids or dimethoate, if a systemic insecticide is preferred. Dimethoate can be sprayed or injected into the trunk. In Australia, two sprays, 7 days apart, are recommended before the beginning of flowering. Spraying before flowering reduces the risk of killing pollinators. In Australia, dimethoate has been under review since mid-2015. It is no longer allowed for home-garden use.

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Information from CABI (2015) *Idioscopus nitidulus* (mango leafhopper) and *Idioscopus chrysealis* (mango leafhopper) Crop Protection Compendium. (www.cabi.org/cpc). Photos 1-4 Joel Miles, National Invasive Species Coordinator, Bureau of Agriculture, Ministry of Natural Resources, Environment & Tourism, Republic of Palau.

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