

CITRUS BIOSECURITY THREAT: Asian Citrus Psyllid (ACP): Fact Sheet



The insect

ACP adults is the most efficient vector of the most destructive citrus disease in the world, Huanglongbing (HLB), associated with the bacterium '*Candidatus Liberibacter asiaticus*'.

ACP can also transmit African greening '*Ca. Liberibacter africanus*' (Claf), as well as '*Ca. Liberibacter americanus*'.

The combined presence of ACP and HLB poses the greatest threat to citrus production worldwide.

Description

ACP adults are about 3-4 mm long and 1 mm wide, with a light brown head, yellow-brown, mottled body, green-brown or pink-brown abdomen, and grey-brown legs.

The wings are transparent, mottled with white and light brown spots and a broad dark brown band extending around the periphery of the outer half of the wing, slightly interrupted near the apex.

The terminal segments of the antennae are black, with two darker segments in the middle of the antennae.



ACP adult



ACP nymphs with long white waxy secretions (left) and adults (right)

Signs of presence

Eggs are laid on tips of young, tender twigs and flush, and on or between unfurling leaves in buds and leaf axils. Immature stages (nymphs and eggs) are bright yellow/orange in colour.



Orange psyllid eggs (left) and nymphs (right)

Nymphs feed on young tender leaf growth and cause the new leaf tips to die back. Affected shoots can become stunted and twisted, causing the growing tips to appear rosetted. Infestation causes curling of leaves, notching and premature leaf drop. Adults and nymphs produce honeydew, causing black sooty mould to grow. Heavy infestations can cause blossom and fruitlet drop.

However, their main danger is the spread of HLB.



Possible confusion with

ACP can easily be confused with indigenous *Diaphorina* species that are morphologically similar. Distinction of ACP amongst these look-alikes requires expert identification.

Adult psyllids could also be confused with aphids, but are highly active and jump at the slightest disturbance, compared to aphids which are less active. Psyllid nymphs can be confused with soft scale insects (such as soft brown scale), but the psyllid nymphs have clear body parts, compared with scales, and can excrete waxy filaments.

Host range

Mainly plants in the family Rutaceae, including:

- All *Citrus* spp.
- Orange jasmine (*Murraya paniculata*)
- Curry leaf (*Berbera koenigii*)

Current distribution

- America (North, Central & South)
- Asia
- Benin
- Cyprus (under eradication)
- Ethiopia
- Israel (under eradication)
- Kenya
- Mauritius
- Middle East
- Nigeria
- Oceania
- Réunion
- Tanzania
- Zanzibar

Method of spread

- **Natural flight**

ACP has substantial flight capacity, being able to disperse over distances of at least 2 km within 12 days, when suitable young host material for feeding and oviposition is scarce.

- **Infested plant material**

Eggs and nymphs can be transported over long distances on citrus plant material (budwood, trees, rootstock seedlings) and branches and foliage of other host plants, in particular orange jasmine (*M. paniculata*) and curry leaf (*B. koenigii*).

- **Fruit**

Spreading via fruit without leaves, after the packing process, is highly unlikely.

Preventative actions

- Quarantine procedures for importation of citrus propagation material and other hosts
- Surveillance at borders and on farm with yellow or lime-green sticky traps
- Plant certified disease-free citrus trees
- Awareness and surveillance to ensure early detection and rapid implementation of control measures
- Do not bring illegal plant material into South Africa and onto your farm!



For more information on this disease, or if you find anything unusual, contact Wayne Kirkman from CRI's Biosecurity Division: waynek@cri.co.za, 084 458 0349

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