

Tomato Potato Psyllid

*Bactericera
cockerelli*

**CHECK
YOUR CROPS**
REPORT SUSPECTED
SIGHTINGS



**Monitoring
Guide**

What does the psyllid do?

Tomato Potato Psyllid (TPP) is an exotic pest with a wide host range, including tomatoes, potatoes, capsicums, chillies, eggplants, tamarillos and sweet potatoes. TPP causes a disease called Psyllid Yellows. It can also transmit the bacterium *Candidatus Liberibacter solanacearum*, which is associated with Zebra Chip disease in potatoes.

Where to look and what to look for

TPP is a tiny sap-sucking insect with three lifecycle stages – egg, nymphs and adult. All stages are very small (less than 3mm) but can be seen with the naked eye. Infestations are usually found on the undersides of leaves.

The psyllid tends to establish first on edge plants in field crops or near doorways, vents and walkways in protected crops. This is where scouting attention should be focused.

Sticky traps can be used to monitor TPP but they only pick up winged adults (not eggs or nymphs). The absence of psyllids on sticky traps is not enough to rule out an incursion of this pest, so direct searching is essential.

Check plants for eggs, nymphs and adults, and look out for other signs of an infestation. This is the best and most reliable way to detect the arrival and establishment of TPP in your crop.

Signs and symptoms of a TPP infestation:

- adult psyllids jumping from foliage when disturbed
- stunting and yellowing of growth tips
- yellowing or purpling of leaf margins
- ‘cupping’ or upward curling of leaves
- severe wilting of plants
- ‘psyllid sugars’ (small white granules) deposited on leaves by adults and nymphs, which can attract ants and lead to growth of sooty mould

What does the psyllid look like?

Adult TPP are about 3mm long and resemble cicadas and winged aphids. They have dark bodies with white markings and transparent wings. Newly emerged adults have lighter colouring. Adults often wiggle their abdomen and will jump or take flight when disturbed.

Photo: TPP adults ©
Western Australian
Agriculture Authority
(Department of
Agriculture and Food
WA)



TPP eggs are about 0.5mm long. They are yellow, oval shaped, and attached to the plant by a short vertical stalk. They are usually laid on the undersides of leaves or along leaf margins.

Photo: TPP eggs © New Zealand Institute for Plant & Food Research

TPP goes through five nymphal stages. The nymphs increase in size each time they moult, reaching up to 2mm in the final stage. They have a flattened scale-like appearance, similar to whitefly nymphs. Young TPP nymphs are yellow with a pair of red eyes. Older nymphs are greenish, fringed with hairs and have visible wing buds.

Photo: A large nymph with wing buds (left), a smaller nymph (right) and white 'psyllid sugars' © New Zealand Institute for Plant & Food Research



Background image: TPP nymphs, adults and empty nymph cases on the underside of a tomato leaf © Western Australian Agriculture Authority (Department of Agriculture and Food WA)

Insects that may be confused with the psyllid

Green lacewing eggs look similar to TPP eggs, but they are pale green, grey or white (rather than yellow) and the stalks that attach them to foliage are much longer.

Photo: Green lacewing eggs
© Denis Crawford, Graphic Science



Winged aphids are similar in size and shape to TPP adults, but they do not have the same distinctive white markings or cicada-like body shape.

Photo: A winged aphid
© Scott Bauer, United States Department of Agriculture, Agricultural Research Service



Whitefly nymphs (of various species) look similar to TPP nymphs, but they do not develop wing buds.

Photo: Whitefly nymphs
© Denis Crawford, Graphic Science



Report suspected sightings

TPP was first detected in Australia in 2017 (in Western Australia). This pest can cause significant losses in host crops and is considered a major biosecurity threat. Both commercial vegetable growers and backyard gardeners are urged to check for signs of TPP and report suspected sightings by calling the Exotic Plant Pest Hotline on **1800 084 881**.

Acknowledgements

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To learn about the National Potato and Onion IPM Extension Program and management options for TPP visit

www.ipmtechnologies.com.au/projects/potato-onion-ipm-extension/

Cover photo: TPP adults and empty nymph case © Western Australian Agriculture Authority (Department of Agriculture and Food WA)

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