

FACT SHEET

Tomato Potato Psyllid

The Tomato Potato Psyllid is a small flying insect that is the size of a winged aphid. It has recently become established in Western Australia and has the potential to do significant harm to the tomato, capsicum and potato growing sectors. On its own the insect causes yield losses of over 50% but it can also carry a bacteria *Candidatus Liberibacter solanacearum* (CLSo) which causes zebra chip disease. The disease can be transmitted in a matter of hours between insect and plant and vice versa. It is important to be vigilant for early warning signs of this pest. This pamphlet is intended to identify signs of TPP.

EGG

Eggs are typically underneath and on or near the margins of leaves and are characteristically perched on a small filament. They are found in the lower parts of the plant.

NYMPH

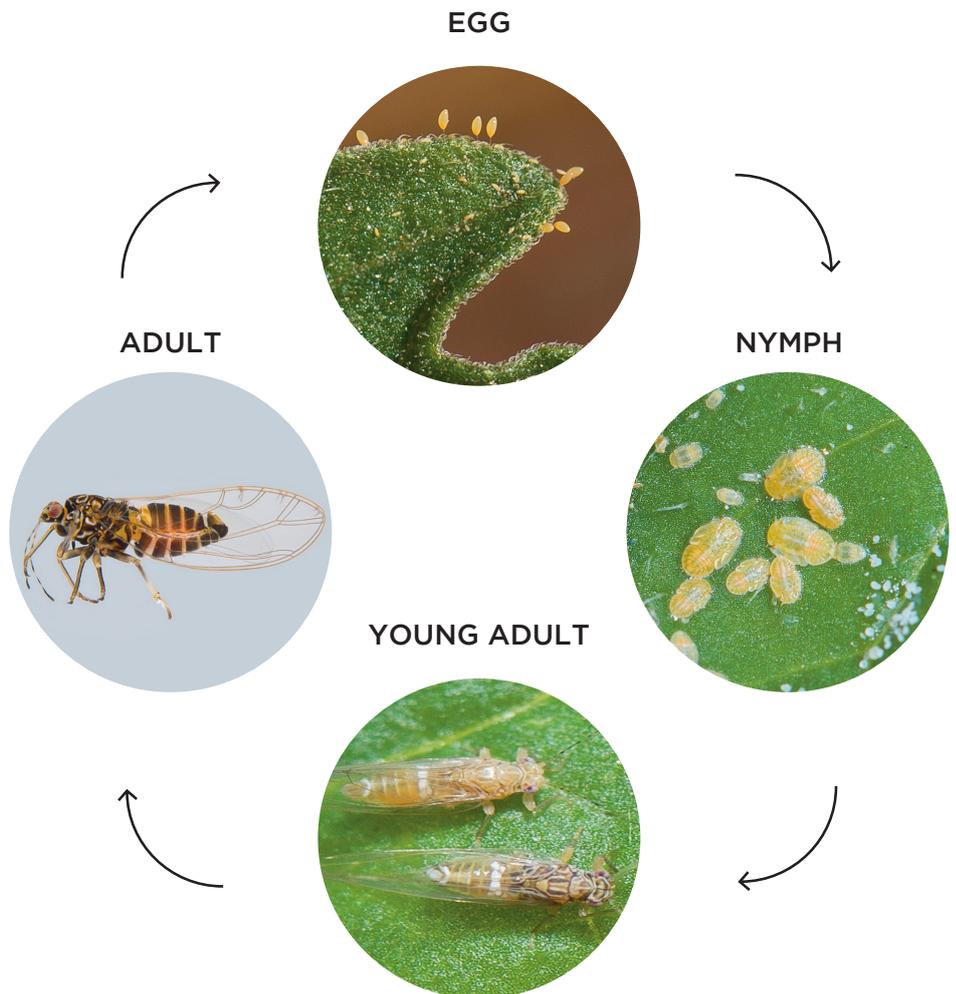
Nymphs favour the mid-lower parts of the plant. Nymphs appear as small discs on the underside of the leaf, resembling scale insects. They range from yellow to green and have red eyes. They can reach up to 2mm. In this image, the small crystals are psyllid sugars that are excreted by the insect and are a symptom of its presence.

YOUNG ADULT

Young adults favour the mid-lower parts of the plant. They are lighter in colour than fully developed adult Psyllids.

ADULT

Adults are small black flies and visible to the naked eye. They are 2mm long and upon close inspection have a distinctive white stripe across their back.



INSPECTING FOR PSYLLIDS

Adults and nymphs favour the mid-lower parts of the plant, it is therefore necessary to look at this region if Psyllids are suspected. To inspect; grasp the plant near crown and invert the stems towards one's self so that the underside of the plant is facing upwards. The adults will jump a short distance and quickly settle again. If nymphs are present they will appear as small discs on the underside of the leaf, similar in appearance to scale insects. Colour ranges from yellow to green.

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GENERAL SYMPTOMS

Paddock symptoms resemble those of many other potato disorders; yellowing of foliage, leaf cupping and narrowing often with a purplish hue are typical (Fig 1). Other features which may be present include aerial tubers, shortened internodes and regrowth from the base of the plant. This plant is not infected with CLso. (Fig 2) shows a close up image of foliage. Note yellowing, desiccated margins and cupping. Potato plants infected with CLso (Fig 3) typically have a flagged appearance with erect dead, dehydrated stems although this is not always the case and plants can also just collapse. This is typical and distinguishes disease from other diseases such as blackleg and *Verticillium* etc. where the stem lies on the ground (Fig 1. courtesy of Kevin Clayton-Greene. Fig 2. and Fig 3. courtesy of Frank Mulcahy).



FIGURE 1



FIGURE 2

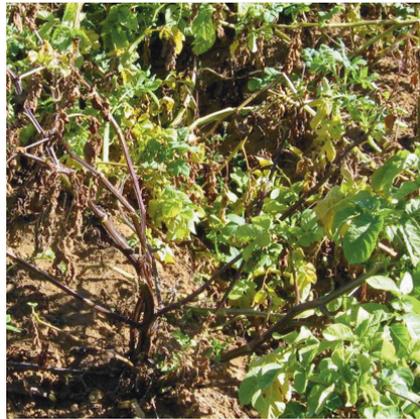


FIGURE 3



FIGURE 4

TUBER SYMPTOMS

Potatoes affected by Psyllids but without CLso infection show a number of symptoms including chaining (Fig 4) and some internal discolouration of the flesh, typically a browning of vascular ring and/or brownish streaks of the medullary rays. Tubers from plants infected with CLso show severe vascular discolouration and a characteristic pink blush at the stem end (Fig 5 & Fig 6). (Fig 4. courtesy of Kevin Clayton-Greene. Fig 5. and Fig 6. courtesy of Frank Mulcahy).



FIGURE 5



FIGURE 6

SUMMARY AND KEY SIGNS

Be vigilant, check out all apparent growth/disease issues (it may not be what you assume): yellowing/purpling of foliage, narrowing and cupping of leaves, dead 'flag' stems, aerial tubers, chaining tubers, greyish appearing 'whiteflies' that fly ahead of you when walking through crops, vascular discolouration of tubers.