# Kelly's citrus thrips

# Fact sheet

*Pezothrips kellyanus*

Jianhua Mo and Steven Falivene, NSW DPI
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Table 1. Risk and control periods for Kelly's citrus thrips activity.

| | | Flowering | | Fruit drop | | Golf ball | | | Colour break | | | Maturation |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Aug | Sep | Oct | Nov | Dec | Jan | Feb | Mar | Apr | May | Jun | Jul |
| | | | | | | | | | | | |

## Description

**Immature**: larvae are pale yellow (Figure 1) to bright orange and up to 2 mm long. It is difficult to tell the difference between Kelly's citrus thrips (KCT) larvae and the larvae of non-damaging thrips (e.g. plague thrips) without a microscope.

**Adults**: are black, 2 to 3 mm long, with black legs and dark parallel wings with a small clear band at the top.

## Similar pests

KCT is similar to tomato thrips, greenhouse thrips and predatory *Haplothrips*. However, KCT have black wings and black legs.

## Life cycle

KCT prefers to lay its eggs in flowers but can also lay them on fruit or leaves. There are 2 larval instar stages that feed on developing fruit. The second instar pupates in the upper 20 mm of soil. Each generation cycle lasts 2 weeks in mid-summer and up to 3 months in winter.

## Damage

Scurfing (surface wind-rub-like blemish; Figure 2) will appear around the calyx (halo scarring) or where fruit touch.

Threshold: 5% or more of fruit infested with larvae. Use a 10× hand lens.

Risk period: most of the damage caused by larvae occurs from petal fall (mid-October) through to calyx closure (mid–late November), but damage can occur through December, particularly if the weather is mild (Table 1).

## Monitoring

KCT are seen in flowers from petal fall to December (Table 1). Finding adult KCT at flowering indicates a potential risk of KCT infestation, but does not indicate the presence of larvae.

Larvae should be monitored from petal fall to calyx closure and up to December. Most damage is caused by larval stages under the calyx and where fruit touch during the first 4 to 5 weeks after petal fall.

**Traps**: using sticky traps for monitoring is not recommended because thrips collected from sticky traps easily lose hairs and other body parts that are essential for identification.

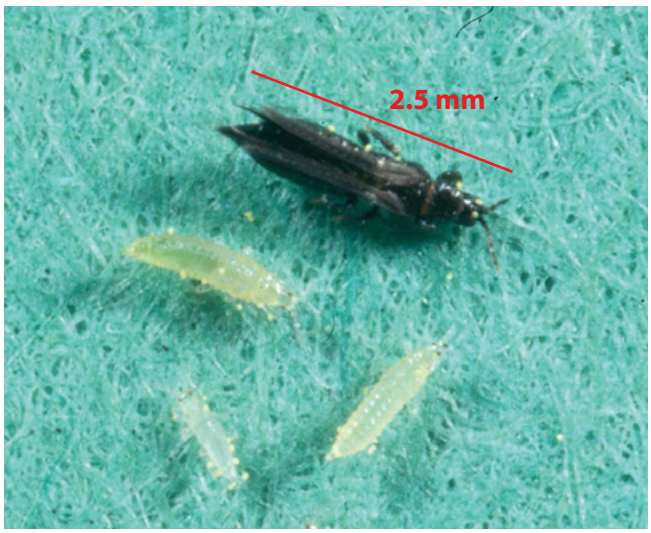


Figure 1. Kelly's citrus thrips adult (black) and various larvae stages. Photo: South Australian Research and Development Institute (SARDI).

Figure 2. The scurfing blemish left by Kelly's citrus thrips.

IPDM for the citrus industry

Hort Innovation Strategic levy investment | CITRUS FUND | NSW GOVERNMENT | Queensland Government | Department of Primary Industries and Regional Development | BIOLOGICAL SERVICES | RIVERINA IPM

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## Management and control

**Cultural**: building up soil organic matter content might boost beneficial mite populations and KCT mortality. Avoid broad-spectrum insecticides for other pests.

**Biological**: predatory mites are an important natural predator of KCT pupae in the soil. Other natural predators include predatory thrips, spiders and lacewing larvae.

**Chemical**: the key spray period is after petal fall and before calyx closure (3 to 4 week window). Good spray coverage and timing are essential.

It is speculated that excessively using organophosphate (e.g. chlorpyrifos) insecticides exacerbates thrips problems because the chemicals interfere with predatory mites in the soil. There have also been reports of thrips resistance to organophosphates. Other more specific chemicals are registered for thrips control. Several insecticides are available with varying degrees of efficacy and effects on beneficial insects. Talk to your pest consultant about insecticide options.

## More information

Identification of thrips in citrus (NSW DPI)

Kelly's citrus thrips management (PIRSA)

Thrips in citrus (DPIRD)

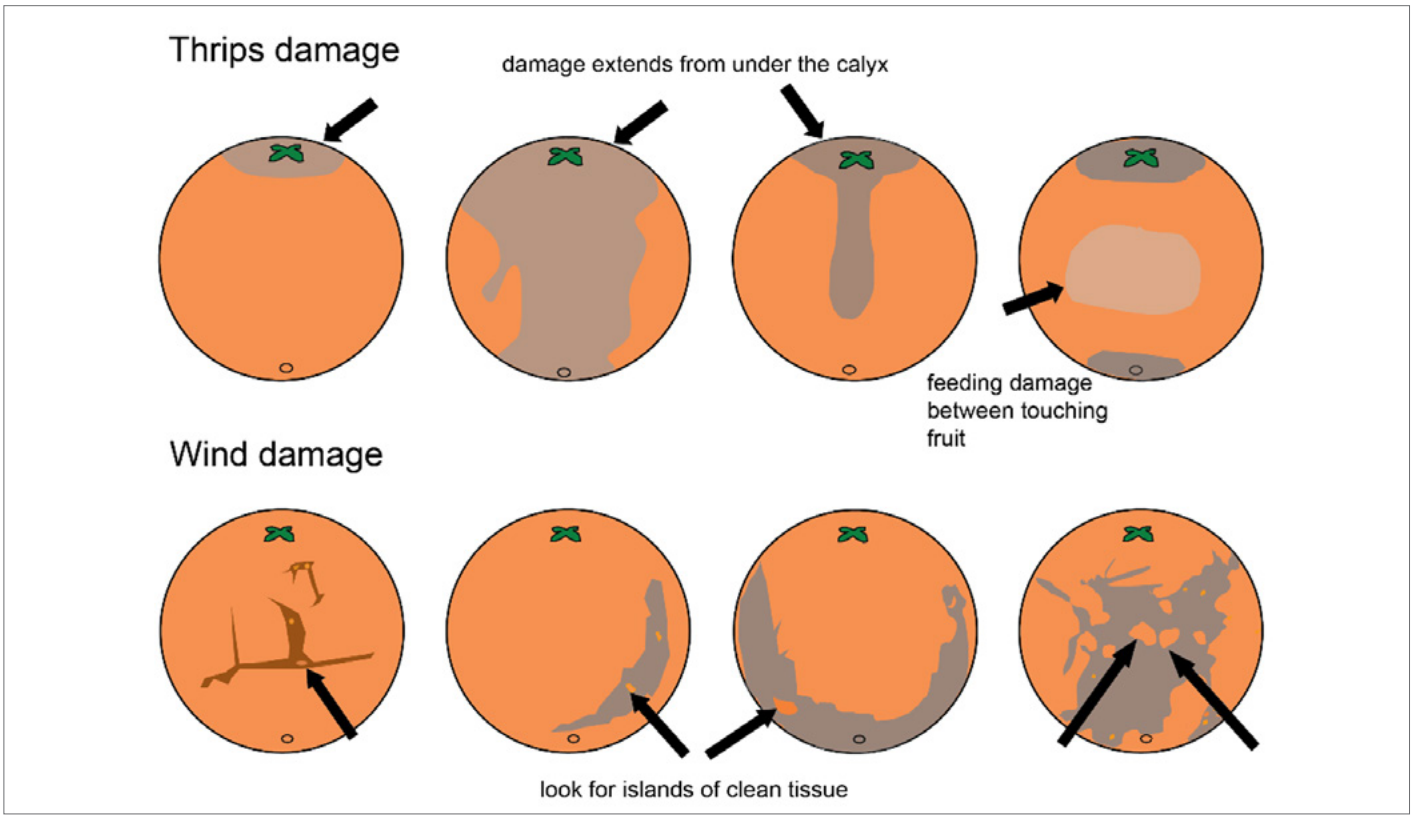


Figure 3. To prevent unnecessary spraying, determine if the cause of damage is thrips as wind damage can appear similar. Photo: Sonya Broughton, Department of Primary Industries and Regional Development, WA (DPIRD).



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