

# European Flower thrips (*Frankliniella intonsa*)

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## EXOTIC PEST DETECTION & SAMPLING GUIDE



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## Background

European flower thrips is an exotic pest species not found in Australia. It is a serious agricultural pest that can decimate crops by reducing crop quality, quantity and marketability. It is distributed throughout the Americas, including the United States, Europe and the Asia Pacific, including New Zealand. European flower thrips can act as vectors for tospoviruses, including tomato chlorotic spot virus, groundnut ringspot virus, impatiens necrotic spot orthotospovirus, and tomato spotted wilt virus.

## How would I identify European Flower thrips?

### Identification by morphology

Adults measure 2mm in size, are generally brown, have two wings and yellow abdominal segments. Males are smaller and paler than females in appearance. Larvae have no wings, are paler than adults and are difficult to spot on flowers. Eggs are approximately 0.2 mm in size.

A full lifecycle takes between 15-30 days, with adults surviving up to one month. Thrips species are generally differentiated by fine morphological details (sculptures on abdominal tergites), which requires a high-powered microscope, therefore field identification is difficult to achieve and support from a trained entomologist is necessary.

### Identification by damage

European flower thrips feed on flowers and fruit of many flowering plant species. Like other thrips, European flower thrips are sap feeders. Adult and larval feeding cause fruit scarring, shrivelling, discolouration, textural changes and bud deformities. Feeding can lead to premature fruit drop and reduced yields. Larval feeding is prominent around the petiole and main leaf vein where scarring, discolouration and silvering are frequently observed.

### How do I scout for European Flower thrips?

Flower thrips activity is highest around autumn when

average temperatures are mild. If an infestation is suspected, monitoring can be carried out using a visual inspection or with traps.

Before flowering, assess growing tips and flowers throughout the crop for thrips activity. Close attention should be given to closed or partially open flowers where thrips are likely to hide. Larvae are difficult to see due to their light colouring and smaller size. Flower thrips oviposit eggs on or within fruit and can be found in flowering organs.

When using a trapping approach, deploy white or blue sticky traps at crop height to catch incoming thrips, and also place traps in adjacent crops or shelterbelts. Research suggests that white or blue traps are most effective for flower thrip trapping, however if they are unavailable any available sticky trap should be deployed instead.

### Could it be confused with an endemic species?

In Australia Western flower thrips (*F. occidentalis*) infests many species of flowering plant. Overall lack of information and highly similar appearances of thrips species make it difficult to definitively identify them in the field, therefore, any unusual thrips and associated damage warrants investigation.

Figure 1. Flower thrips damage





# What should I do if I suspect European Flower thrips?

European flower thrips is a priority plant pest, exotic to Australia. If you notice an unusual thrips species call the **Exotic Plant Pest hotline on 1800 084 881**. The hotline will divert you to the appropriate state biosecurity agency, which will investigate the suspect detection further. To support an investigation you should take note of:

- The detection location (take a GPS coordinate using your phone);
- The host plant on which the suspect detection has been made;
- Damage symptoms (e.g. silverying); and
- A photo of all life stages observed (taking close-up photos of the same specimen from multiple angles is most useful for identification).

## Taking a sample

Taking a sample will also assist in a biosecurity investigation. If possible, collect grubs in a ziplock bag – double bagging of specimens is ideal. Label the bag with the date and collection location and keep in the fridge in case a larval sample is needed by the biosecurity agency.

Figure 2. Reporting decision making for European flower thrips (*Frankliniella intonsa*)

You have detected damage including scarring, shrivelling, discolouration, bud deformities, premature fruit drop and reduced yields in a wide range of crops. **Should you report it?**

If you answer yes to EITHER of the following question, it could be one of the exotic flower thrips, Florida flower thrips (*Frankliniella bispinosa*) or European Flower thrips (*Frankliniella intonsa*). Report it!



1

You check around the petiole and main leaf vein of leaves, particularly around growing tips, and see silverying damage.



2

During flowering, you thoroughly check inside flowers and find adult thrips about 1 mm long

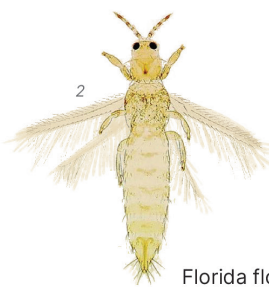


There are many species of thrips that attack flowering plants in Australia, so detection of any thrips or associated damage should be reported!

adults

larva

Additional possible signs



Florida flower thrips (*Frankliniella bispinosa*)



Larvae and eggs are much more difficult to see; larvae are yellow and wingless and often feed along petiole and main leaf veins; eggs are laid on or within fruits and flowering bodies

<sup>1</sup> Ronald Smith, Auburn University, Bugwood.org, CC BY 3.0

<sup>2</sup> Laurence A. Mound, Australian National Insect Collection

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### More information

[CABI, Flower thrips \(\*Frankliniella intonsa\*\)](#)

