

Western flower thrips

What are Western flower thrips?

Western flower thrips (*Franklinella occidentalis*; WFT) were introduced to Australia in the 1990s and have since impacted on vegetable production. They can attack a variety of field crops, but generally cause greater damage to greenhouse crops.

WFT is an efficient vector of Tomato spotted wilt virus (TSWV) and is harder to control than other thrips species in Australia.

What do they look like?

WFT are small flying insects (1-2 mm in length), which are yellow to brown in colour. Adults have tiny, narrow wings carried over their back. Nymphs are similar in shape, pale yellow-orange, wingless and smaller than adults.

Eggs are laid in slits in leaves and growing points. Nymphs and adults feed in flowers and growing tips.

What can they be confused with?

Due to their small size, thrips species cannot be distinguished with the naked eye. In particular, WFT cannot be easily distinguished from plague, tomato or onion thrips.

What should I look for?

Detection of WFT usually occurs through trapping the insects or detecting plant symptoms, rather than direct observation of the insects.

Infested crops can be damaged directly through feeding, which leads to leaf discolouration, deformed new growth and buds, and spotted foliage. However, the transmission of TSWV causes the greatest impact on vegetable crops. TSWV produces distinct symptoms in some hosts, such as ringspots, patterns, distortion of fruit and some leaf spots.



WFT are yellow or brown in colour with bodies 1-2 mm long

P.M.J. Ramakers, Applied Plant Research, Bugwood.org



Tomato fruit showing severe symptoms of Tomato spotted wilt virus, which is transmitted by WFT

William M. Brown Jr., Bugwood.org



Spotted foliage caused by WFT has a coarser pattern (left) than damage caused by *Thrips tabaci* (right)

P.M.J. Ramakers, Applied Plant Research, Bugwood.org



Look for TSWV symptom and thrips hotspots. Check population levels on yellow sticky traps and make routine examinations of leaves, flowers and fruit.

How does it spread?

Spread occurs primarily with infested plant material or contaminated equipment. Short distance movement can occur through WFT flight, especially when assisted by wind.

Where is it now?

WFT is native to North America but has now spread to most European countries, Japan, Kenya, South Africa, Hawaii, Costa Rica, Colombia, New Zealand and Australia.

How can I protect my farm from Western flower thrips?

Ensuring plant material is clean and appropriately disposing of crop debris will reduce the risk of WFT and TSWV impacting on your farm. Where possible, source planting material raised in a WFT and TSWV free area.

Maintaining high levels of farm hygiene, controlling weeds and using mesh and double door entries to greenhouses minimises the threats posed by these pests.

Monitor all crops routinely for the presence of pests and use yellow sticky traps where possible.



Eggs are laid in slits in the leaves

P.M.J. Ramakers, Applied Plant Research, Bugwood.org



Feeding on leaves can lead to leaf discoloration

Whitney Cranshaw, Colorado State University, Bugwood.org



Close-up of the leaflets with areas of purple/brown tissue due to infection with TSWV

George Kelley, University of Kentucky, Bugwood.org

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