

Thrips and hydroponic lettuce

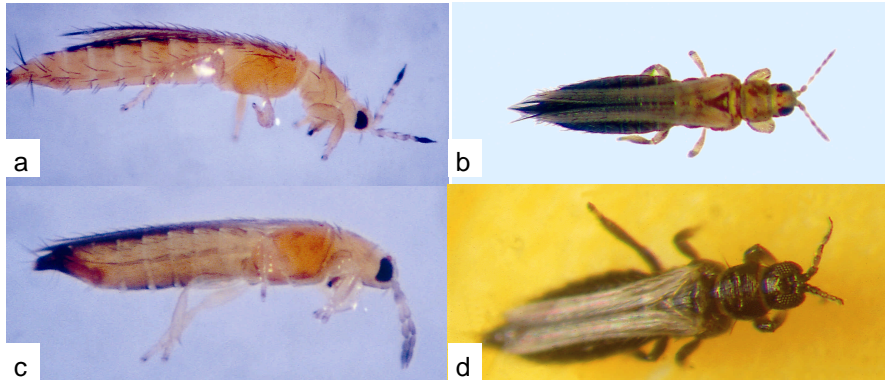
Thrips that commonly feed on lettuce:

Western flower thrips (WFT) - *Frankliniella occidentalis*

Onion thrips – *Thrips palmi*

Plague thrips – *Thrips imaginis*

Tomato thrips – *Frankliniella schultzei*



Thrips that commonly feed on lettuce: a) WFT, b) plague thrips, c) onion thrips, d) tomato thrips.

Identifying Thrips:

- ◆ Thrips are difficult to tell apart.
- ◆ It is best to consult with your local Department of Agriculture or IPM consultant for help with identifying thrips.
- ◆ Colour and size are not reliable characters to use in identifying thrips. Both can change with temperature, location and the crop they are feeding on.
- ◆ Control methods for WFT are different to other thrips so it is important to identify which thrips are in your crop.

Damage

Thrips feeding on lettuce can cause curled leaves and silvering and wilting.

Some species of thrips, including WFT and onion thrips can transmit tomato spotted wilt virus (TSWV) to lettuce. TSWV causes wilting of leaves and a distinct russetting of leaves.



Lettuce showing symptoms of TSWV which is transmitted by some thrips.

Thrips usually feed in the more sheltered parts of the plant, look for them in the centre of lettuce plants.

Thrips particularly like warm dry weather – be on the lookout for thrips at these times.

Tips for managing thrips in hydroponic lettuce crops:

- ◆ Control any weeds in and around your crop
- ◆ If growing from transplants, buy from a nursery that tests for WFT & TSWV
- ◆ If growing in a greenhouse use thrips proof netting. Be careful that ventilation is still adequate.
- ◆ Try not to plant sequentially. Thrips prefer young lettuce plants, if trays are arranged in order of age the thrips will simply move from tray to tray.
- ◆ Remove any old or unwanted plants immediately, they can be havens for thrips.
- ◆ Remove any plants showing symptoms of TSWV.
- ◆ Monitor for thrips with yellow sticky cards. When numbers are high chemical sprays may be needed to avoid damage.



Horticulture Australia

Produced by the National Strategy
for the Management of Western
Flower Thrips and Tomato Spotted
Wilt Virus.



Chemicals and thrips

- ◆ It is important to identify which species of thrips are in your crop to enable appropriate chemical treatments.
- ◆ Monitoring for thrips tells you when numbers of thrips in your crop are at an economically damaging level and if you should take action.
- ◆ Thrips usually live in sheltered places on plants, be sure when applying chemicals that thorough coverage is achieved.
- ◆ Chemicals registered for use against thrips in lettuce are listed in Table 1. This list is a guide only and you should consult and follow the label before using any product.
- ◆ WFT develops resistance to chemicals very quickly and is already resistant to a number of chemicals. For this reason an insecticide management plan for lettuce has been developed.
- ◆ Further information on chemicals approved for off-label use against WFT are available from Alison Medhurst (Ph: 03 9210 9246) or Alison Anderson (Ph: 0409 383 003).

Table 1: Chemicals registered for use against thrips in lettuce (source PubCris database, APVMA, April 2003).

Chemical Group	Trade Name	Active ingredient	WHP
Organophosphate	Hy-mal Insecticide	Maldison	3 days
	BASF Perfekthion EC 400 Systemic Insecticide	Dimethoate	7 days
	Nufarm Dimethoate Systemic Insecticide	Dimethoate	7 days
	Farmoz Dimethoate 400 Systemic Insecticide	Dimethoate	7 days
	Rotam Romethoate Systemic Insecticide	Dimethoate	7 days
	Dimethomax Systemic Insecticide	Dimethoate	7 days
	Chemag Dimethoate Insecticide	Dimethoate	7 days
	Sipcam Rogor Systemic Insecticide	Dimethoate	7 days
	Agcare Biotech Dimethoate 400 EC Systemic Insecticide	Dimethoate	7 days
	4Farmers Dimethoate 400 Systemic Insecticide	Dimethoate	7 days
	Superway Dimethoate 400 Systemic Insecticide	Dimethoate	7 days
	Conquest Dimethoate 400 Systemic Insecticide	Dimethoate	7 days
	United Farmers Unidime 400 Insecticide	Dimethoate	7 days

The advice provided in this publication is intended as a source of information only. Always read the label before using any of the products mentioned. The State of Victoria and its employees do not guarantee that the publication is without flaw of any kind, or is wholly appropriate for your particular purposes and therefore, disclaims all liability for any error, loss or other consequence that may arise from you relying on any information in this publication