

Thrips & TSWV

The warm dry weather currently being experienced in most growing districts has encouraged an increase in thrip numbers. Thrips seem to be continually flying in as winter crops and pastures dry off. In many districts, control is proving difficult and possibly an impossible task. The increase in thrip numbers has resulted in an increase in the incidence of tomato spotted wilt virus (TSWV). This is due to thrips being the vector for TSWV which means they are the insects responsible for the spread of the disease.

Young lettuce plants are particularly attractive to thrips with TSWV having a greater impact on a lettuce patch the earlier the plants are infected. TSWV symptoms include yellowing, which is often associated with brown spotting on the leaves. The central leaves can be distorted and heart formation may be incomplete.



Managing thrips and TSWV

- TSWV has a large number of weed hosts. Control weeds in and around crops to help prevent the initial virus movement with thrips.
- Monitor young crops for thrips by inspecting plants and using yellow sticky traps. Not all thrips transmit TSWV. The key thrips that transmit the virus are onion thrips, tomato thrips and western flower thrips (WFT)
- Spray for thrips if necessary
- Chipping out virus infected plants may help slow the virus spread
- Plough in lettuce patches, as soon as possible after harvest, that had TSWV.



Tomato thrips (actual size 2mm)

In normal years you can't stop initial virus infection from immigrating thrips, but you can manage spread within the crop by controlling thrips. Juvenile thrips need to develop on infected plants to then transmit the virus.

Information on managing thrips, TSWV and the latest WFT insecticide management plan for lettuce can be found on the DNRE web site at:

www.nre.vic.gov.au/farming/horticulture/wft

Endosulfan

The registration of all endosulfan products in lettuce has been suspended. This includes all lettuce varieties. The suspension has been effective since 24th of September 2002. The decision has come after an in depth review of endosulfan by the National Registration Authority for Agricultural and Veterinary Chemicals (NRA). It was found that the use of endosulfan products on lettuce resulted in some plants having endosulfan traces exceeding the permitted levels. Details of the suspension can be found at www.nra.gov.au.

Trial update from project VG1028

NSW Agriculture recently evaluated five insecticides for efficacy against aphids in lettuce. The insecticides included Natrasoap[®], Azamax[®] + Eco-oil[®], dimethoate, Bio oil[®] and Calypso[®]. Results showed that after one day, dimethoate performed the best, followed by Calypso[®]. Results were similar seven and fourteen days after the spraying, with Calypso[®] performing equally well. On all of the three sampling dates Natrasoap[®], Azamax[®] + Eco-oil[®] and Bio oil[®] gave no aphid control.

Another trial looked at Surround WP[®] as a crop protectant against aphids. Surround WP[®] is a clay based product, which leaves a white film on the young lettuce. Under the high aphid pressure in the trial, the mineral-based particle film did not inhibit aphids from infesting the lettuce.

Current trials are looking at the efficacy of soil drenches prior to planting against sap sucking insects. Preliminary results are indicating that some of the treatments are having an impact on aphids and thrips numbers.

(Thanks to Boomaroo nurseries for donating the lettuce seedlings for the aphid trials).

A trial to evaluate the use of Gemstar[®] is planned for the autumn crop at Cowra. The Gemstar[®] will be applied at regular intervals through the overhead irrigation system. Five newer chemistries will also be evaluated at this time in an efficacy trial at Hay.

Thrips & TSWV

In an Australian first, a sea container of head lettuce was exported to Malaysia in bulk crates. The consignment arrived in excellent condition and was shredded by a processing company. Factors that contributed to the successful shipment were the crate design, in field lettuce handling and on farm pre-cooling. The unique airflow design of the non-returnable crates kept temperatures close to the optimum over the six-day voyage. Subsequent shipments will help develop the bulk shipping concept further.

For more information contact:
Dennis Phillips Tel 08 9368 3319
Department of Agriculture Western Australia

Report on Lettuce Aphid Advisory Group – Victoria

A meeting was held on Friday October 4 of lettuce growers and other industry members to discuss the potential for the outbreak of the lettuce aphid in Australia and to prepare for the eventuality. It is thought that the aphid may well have entered NZ as eggs on illegal currant or gooseberry cuttings as these are the primary host. Some of the outcomes of the meeting were:

- Rijk Zwaan have commenced field scale trials of aphid resistant cultivars.
- Crop Protection Approvals will approach Ausveg to extend trials to establish MRL's for Confidor® in lettuce for pre-transplant application.
- DNRE to check currant and gooseberry crops for aphids.

Lettuce Aphid Survey

In late October, a number of currant and gooseberry farms in Silvan and at Hoddles Creek were surveyed by Slobodan Vujovic and Violeta Trajceviski and in all cases the farms were clear of any lettuce aphid presence.

Heliothis Pressure Victoria

H punctigera (native budworm) have been active in Werribee since the end of October and in the Cranbourne area since early November while to date there has been little *H armigera* activity. In East Gippsland *H punctigera* has also been active during late October and there has also been some *H armigera* activity since the end of October. While this has been slightly higher than normal for this time of the year, pressure is still low.

There has also been aphid and thrip activity in crops in East Gippsland but to counter that there is significant activity from Ladybirds, predatory wasps, spiders and other beneficials.

For more information contact:
robert.dimsey@nre.vic.gov.au
DNRE Bairnsdale Tel: (03) 5152 0600

What is that voracious ladybeetle?

There has been a lot of ladybeetle activity in some of the lettuce crops this year. It is not known how it got to Australia, but records suggest the ladybeetle, *Hippodamia variegata* arrived in south-east Queensland two years ago. The ladybeetle has now been recorded as far south as Adelaide.



The preferred food of *H. variegata* is aphids. It is also a generalist predator and has been recorded feeding on moth larvae and leafhoppers.

Although this new ladybird is proving useful as a predator in IPM systems, its arrival may have some drawbacks. It will probably be detrimental to native ladybeetle populations. Some growers have had consignments of lettuce rejected because of ladybeetle contamination.

Regional Updates

Queensland

Lettuce growers have finished for the season in the Lockyer valley. The dry conditions have made it difficult for growers in the Stanthorpe region, as water has become an issue.

New South Wales

Most commercial spring lettuce crops have finished in the Windsor area, however there are still some lettuce in the Camden district. Thrips populations are currently high, and there is some tomato spotted wilt virus (TSWV) around the district. Lady beetles are present in unusually high numbers and they appear to be keeping the aphid and heliothis pests in check.

At Cowra there has been very little heliothis pressure to date. Early in the season there were many winged aphid flights and there has been high thrips pressure. As a result there is a higher than normal incidence of TSWV and mosaic viruses.

South Australia

The field lettuce crops have fared quite well to the windy, dry conditions. Early crops had some hail damage. WFT pressure has started to build up in the glass house crops and as the weather warms up the pressure is expected to increase in the field lettuce situation.

Western Australia

After the unprecedented high prices over the winter, October and November has seen a glut of lettuce from the Perth-metro area. The mild spring weather, with regular bouts of rain, favoured lettuce growth. The planted area may have also been up compared to previous springs. Current WFT numbers are very high with more TSWV seen than in previous years.

For further information contact: Andrew Creek, NSW Agriculture, Ph (02) 6951 2653, Fax (02) 6951 2692
or - Slobodan Vujovic, DPI Knoxfield, Ph (03) 9210 9222, Fax (03) 9800 3521
www.agric.nsw.gov.au/reader/veg-lettuce or www.nre.vic.gov.au/agvic/ihd/projects/lettuce.htm