

Tomato yellow leaf curl virus (TYLCV)

Tomato infectious chlorosis virus (TICV)

Begomovirus coheni, Crinivirus contagichlorosis

Crops affected: Capsicum, Chilli, Cucumber, Eggplant, Tomato

What are they?

TYLCV and TICV are both whitefly transmitted viruses and affect vegetable hosts including, **capsicum, chilli, cucumber, eggplant and tomato.**

What should I look for?

Infection by TYLCV and TICV produces similar symptoms. On tomato, early-stage infection causes severe stunting; smaller and abnormal-shaped leaflets, reduced plant vigour, fruit fails to develop, and less fruit is produced. Late-stage infection leads to the developing leaves becoming chlorotic and deformed, and leaf curl (Fig 1-5). Additional fruit fails to set but fruit already present ripens normally. Flower symptoms are not observed but flower drop is common.

On capsicum, symptoms vary between varieties, ranging from mild to increased yellowing, leaf curling, cupping, twisting, and mottling. Some varieties are symptomless.

Symptoms of TICV infection are yellowing of leaves, stunting, and dieback.

How are they transmitted?

TYLCV and TICV are transmitted by whiteflies. Long distance spread is by the movement of infected plants or non-host plants carrying whiteflies. Seed transmission of TYLCV is possible but is not proven.

Why are they important?

Tomatoes are the primary host of TYLCV. Early infection affects plant vigour and fruit fails to develop, reducing the number of fruit produced and affecting yield causing heavy economic losses.

Where are they present?

TYLCV originated in the Middle East and is now present throughout Asia, Middle East, Northern and Western Africa, Southern Europe and Mediterranean, North and Central America, Venezuela and the Caribbean. In the Pacific it is present in French Polynesia, New Caledonia, and Australia.

TICV is present in USA, Mexico, Japan, Taiwan, and Indonesia and countries bordering the Mediterranean including Greece, Bulgaria, Italy, France, Jordan and Tunisia.

How can I protect my industry?

Check your production site frequently for the presence of new pests and unusual symptoms. Make sure you are familiar with common pests of your industry so you can recognise something different.



**COVERED
CROPPING**
NEW ZEALAND



Fig 1. TYLCV symptoms on greenhouse tomato plants. Photo credit: Don Ferrin, Louisiana State University Agricultural Center, Bugwood.org



Fig 2. TYLCV-infected leaves (left) and healthy leaves (right). Photo credit: Central Science Laboratory, York (GB) - British Crown



Fig 3. TYLCV symptoms on tomato plant. Photo credit: Florida Division of Plant Industry, FDACS, Bugwood.org



Fig 4. TYLCV-infected tomato plant. Photo credit: NPPO, Netherlands, Bugwood.org



Fig 5. TYLCV symptoms on tomato leaves. Photo credit: Salvatore Davino (EPPO).