

Tomato Yellow Leaf Curl Virus

Recognize the problem

Tomato Yellow Leaf Curl Virus (TYLCV) is a major problem on tomato, particularly in Tamil Nadu. Once the disease has occurred, it will spread fast and drastically reduce the yield. Symptoms of infection include stunted plants, reduced leaf size, upward cupping/curling of leaves, chlorosis on leaves and reduced fruit production. Leaves are often bent downward and may be thicker than normal leaves. Flowers may appear normal but can sometimes bear no fruit, or, can bear fruit but significantly reduced in size. Affected plants tend to be distributed in isolated patches. The new growth of plants with TYLCV can have reduced internodes, giving the plant a stunted appearance. This virus can cause significant yield losses from 80-100%

Tomato yellow leaf curl virus.
(Photo by AJ Cann, CC BY NC SA)



Background

TYLCV is known as the most destructive disease of tomato and can be found in tropical and subtropical regions, causing severe economic losses. TYLCV is transmitted through a vector and harboured inside infected plants; it is not transmitted through seed or soil. The disease is transmitted by white fly (*Bemisia tabaci*). The primary host for TYLCV is the tomato plant. Other plant hosts of TYLCV include eggplant, potato, tobacco, beans, and peppers. Due to the rapid spread of TYLCV in the last few decades, there is an increased focus in research trying to understand and control this disease.

Management

- Plant resistant variety Arka Ananya.
- Destroy old infested crop after harvest.
- Raise barrier crops – cereals (3 rows of sorghum, cumbu and maize) around the field.
- Plant marigold as border crop.
- Remove weeds as these may harbour the virus.
- Adopt polythene mulching technology during planting to control weed hosts.
- Physically protect the nursery from the vector, e.g. net house or green house.
- Keep yellow sticky traps @ 5/ac to monitor the white fly.
- Spray Imidacloprid 200 SL @ 0.4 ml / litre of water or Thimethoxam 25% WP @ 0.3 gram / lit or Acetamipride 20% SP @ 1 gram / lit or a combination of Acetamipride 20% SP @ 1 gram + Bifenthrin 10% EC @ 3.5 ml per lit or Diafeunthiuron 25% WP @ 2.5 gram per lit at the interval of 15, 25 and 45 days after planting to control the vector.

When using a pesticide, always wear protective clothing and follow the instructions on the product label, such as dosage, timing of application, and pre-harvest interval.

Scientific name(s) > *Tomato yellow leaf curl virus*

The recommendations in this factsheet are relevant to: India



Authors: R. Ramesh, S. Mathiyazhagan, K. Rajappan, M. Malarvannan
Krishi Vigyan Kendra, TRRI and MSSRF
tel: 9442320861 email: Rajaremesh189@gmail.com

Edited by Plantwise.