



INTEGRATED MANAGEMENT OF THRIPS IN TOMATO



NAVCDP

NATIONAL AGRICULTURAL VALUE CHAIN
DEVELOPMENT PROJECT



Introduction

Thrips are small insect pests that are less than 1mm long with two pairs of long, narrow fringed wings. Adults are usually dark and habitually turn up the tip of their bodies while immature growth and development stages are yellowish in colour.



primarily on young leaves, buds, flowers and fruits. Infestation of flower buds causes floral abortion and affected fruits are of poor quality. Thrips also spread viral diseases such as the tomato spotted wilt virus resulting in severe damage on seedlings.

Damage on tomato crop

- They puncturing leaves, buds and fruits to suck the exuding sap.



Adult thrips feeding on succulent a tomato leaf

Source: KALRO E-mimea Plant Clinic

Their feeding is characterized by rubbing of plant surfaces causing small silvery spots. They feed

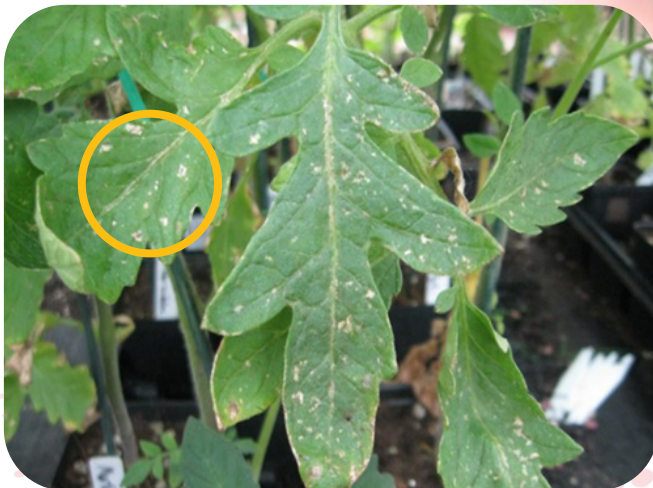
- Puncturing causes lesions
- Damaged buds, flowers and fruits

- Attacked leaves curl and have a silvery sheen and show small black spots (thrips excrements)
- Under heavy infestation attacked buds and flowers



Infested leaves with lesions

Source: Pestnet



Infested leaves with lesions

Source: Pestnet

- usually fall off
- Attacked fruits show speckling and small necrotic patches on the surface affecting fruit quality
 - Fruits may become deformed.
 - Heavy infestation can reduce stands of young seedlings in hot weather
 - Are vectors of various viruses such as the Spotted Wilt Virus

- Ploughing and harrowing before transplanting to expose pupae in the soil from previously infested crops to natural enemies and desiccation.
- Soil solarisation and flood irrigation

b) Biological control

- Natural enemies such as Predatory mites (eg.



Adult thrip (left) and Tomato fruit damage due to severe infestation by thrips (right) Source: KALRO E-mimea Plant Clinic and Pestnet

Management Strategies

a) Cultural practices

Destroy thrips pupae in the soil to reduce subsequent thrips populations by:-

Amblyseius sp.), anthocorid bugs (e.g. *Orius* spp.), and other predators such as ladybird beetles, lacewings and spiders, and the fungus *Entomophthora* are important in natural



Damaged leaves and flowers due to Tomato Spotted Wilt Virus transmitted by thrips. Source: Trifecta Natural



Tomato fruit damage due to Tomato Spotted Wilt Virus transmitted by thrips. Source: Pestnet

control of thrips.

- Conserve these natural enemies by maintaining natural vegetation around the tomato farms/gardens. Keep chemical sprays away from these areas by avoiding drift during spraying.

c) Bio-pesticides

- Use neem and other recommend plant extracts to control thrips
- Strictly observe the timing of bio - pesticide application for effective control
- Thrips are difficult to control with insecticides

due to their secretive inaccessibility habits (eggs are laid in plant tissue, the larvae and adult shelter in the flowers and larvae pupate in the soil).

CAUTION! High concentration of agrochemicals may cause harm to you (farmer), crop, consumers and the environment.



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