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Thrips & Botrytis Research Campaign

The Challenges of Controlling Thrips

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Thrips are the most common and difficult to control greenhouse pest in floriculture crops. Western flower thrips are common thrips found among floriculture crops. Thrips control is challenging because of pesticide resistance and limited product registration in some countries.

Problem with Thrips

Thrips are problematic in several ways:

- Host range spans over 500 plant species
- Thrips have piercing and sucking mouthparts and a unique punch and suck feeding strategy whereby they feed on plant cells.
- Feeding damages plant foliage and flowers.
- Damage is characterized as silvery spots surrounded by dark green coloration and growth deformities.

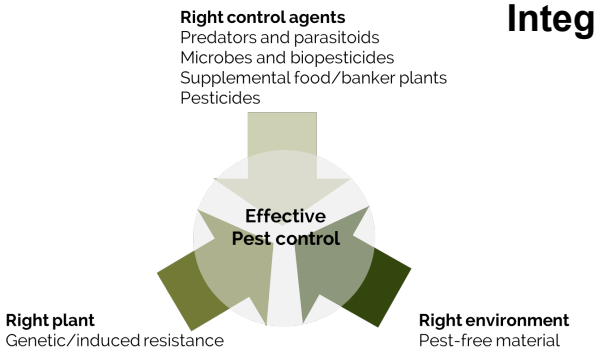
Thrips as Vectors

- Western flower thrips vector at least 7 species of tospovirus, but vectors only if they acquire the virus as first or early second instar larvae.
- The most common in floriculture crops are Tomato spotted wilt tospovirus (TSWV) and Impatiens necrotic spot tospovirus (INSV).
- Tospovirus transmission to other plants is mostly done by young adult thrips.
- Male thrips feed less intense but facilitate viral infection.
- Virus infection can lead to total crop loss.

Difficult to Control

- When unchecked, thrips populations can increase very rapidly.
- A thrips female lays about 7 eggs per day and can easily produce over 200 offspring in a month.
- Young thrips mature quickly and can reproduce in 9 to 13 days at temperatures around 77 to 86°F (25 to 30°C), thus a population can go from 1 to 6,000 thrips in about 42 days.
- There are at least 175 documented cases of insecticide resistance in western flower thrips from around the world, involving at least 8 different mode of action groups.

Integrated Pest Management Approach



At the basis of every integrated pest management program is the right plant, ideally resistant or not susceptible to pests, not stressed and not over fertilized.

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