Thrip Control in Greenhouses

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Tomato spotted wilt virus (TSWV) can infect a wide range of host plants, including most ornamental plants and many perennial weeds.

The vectors for TSWV are nine species of thrips, including onion thrips (Thrips tabaci) western flower thrips (Frankliniella occidentalis) and tobacco thrips (F. fusca). The western flower thrip is the chief vector in Minnesota greenhouses. Thrips can move into greenhouses via infested plants or through vents from plants outside the greenhouse.

The spread of (TSWV) by thrip involves acquisition of the virus from infected plants by the larval stages. Although thrips can acquire the disease from a plant in as little as 15 minutes, the virus must incubate within the thrips from 4 to 10-days before it can be transmitted by the adults. Infected adults will then continue to spread the virus until it dies.

Thrips Management Program

A well-planned management program includes proper cultural practice and intelligent chemical control. Inspect plants introduced into the greenhouse and monitor the thrips population in the greenhouse by using yellow or blue sticky board placed just above the crop canopy (at least 1/1000 sq ft) and near doors and vents to detect the presence of thrips. Screening of vents can be important although screening selection is critical because of its effect on greenhouse ventilation. Frequent applications at short intervals (every 5 days) are required for effective chemical control. If using a directed spray, use a fine droplet size and enough pressure to force the insecticide between the leaves into the center of the plant to improve control. Greater success may be obtained if materials such as pyrethrins or resmethrins are used first to "agitate" the thrips and flush them out of hiding, immediately followed by an insecticide spray.