

Onion Thrips

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Onion thrips (*Thrips tabaci*) are an important annual pest of onion. They can attack nearly all garden crops but serious damage is generally confined to onions, cauliflower, cabbage, snap beans, cucumbers, melons, tomatoes, and sweet clover.

Appearance Adult onion thrips are pale yellowish or brown insects about 1/12 inch long. Wings have no veins and are fringed with long hairs. Nymphs resemble adults except for their smaller size and lack of wings.



Onion thrips damage to onion foliage

Symptoms and Effects Onion thrips primarily damage onions directly by their rasping and feeding activities, causing whitish blotches on leaves or decreased pollen set. Both adults and larvae cause damage that appears as a silvery streaking on the leaves. As time passes, affected areas become dry and yellow. Heavy infestations can cause browning of onion leaf tips. Severe damage to onions will cause bulbs to become distorted or remain undersized.

Because thrips prefer tight spaces, cabbage varieties with extremely dense heads are most susceptible to damage. They are often found several layers deep within developing cabbage heads. Red varieties are usually less susceptible. Thrips damage can be serious on kraut cabbage where there is a necrotic flecking of the internal tissues and white blisters on the outer leaves of the raw cabbage that show up as dark blotches on the processed kraut. Heavy thrips buildup inside the cabbage head may cause the head to be distorted. On cauliflower, thrips damage causes tan or brown streaks on the curd. Damaged curds are more susceptible to soft rot bacteria.

Onion thrips are also vectors of plant viruses such as the tomato spotted wilt virus.

Life Cycle Adults and nymphs overwinter on plants or debris, or along weedy field edges. Females can reproduce without mating and lay eggs beneath the leaf surface. Eggs hatch after 5-10 days and nymphs are full grown within 15-30 days. Development of the last two nymphal stages occurs in the soil, without feeding. After the fourth molt, adult female thrips return to the plant. There are usually five to eight generations per year. Hot, dry weather favors thrips outbreaks.



Control

Cultural: Thrips should be controlled early, before they become protected by plant tissue. Due to their small size and reclusive habits, onion thrips are difficult to monitor and control. No treatment thresholds have been established for onions or cabbage. Yellow or white sticky traps may be used along field edges to monitor the initial migration of thrips into a field. Cleaning plant debris from the field and the surrounding area may aid in controlling thrips. In general, onion cultivars with an open type of growth, circular leaf structure, and glossy foliage suffer less damage than cultivars with leaf sheaths tight to the stem. Red onions are particularly susceptible to attack while sweet Spanish onions are more resistant.

Chemical: Because of this protected location in the plant, control through the use of insecticides is difficult. Foliar insecticides should be applied in sufficient water with a spray additive to achieve penetration into the plant. Insecticide resistance is a primary concern, severely limiting the choice of chemicals. Refer to UWEX publication A3422 "Commercial Vegetable Production in Wisconsin" for a list of registered insecticides.

For pesticide recommendations: See UW-Extension Bulletin A3422 or contact your County Extension Agent.

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