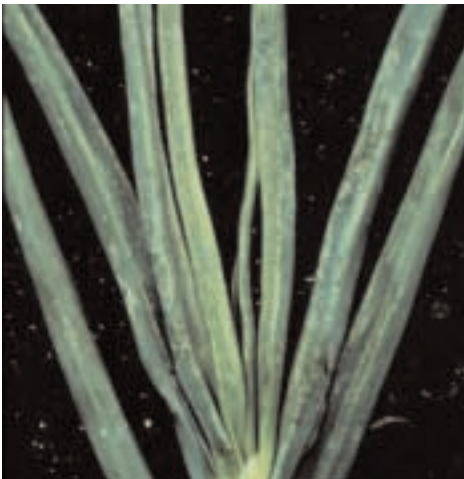


Onion Thrips

K.A. Delahaut



Damage caused by onion thrips produces a blotchy appearance on foliage.

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

Appearance

Adult onion thrips are pale yellow or brown insects about $\frac{1}{12}$ -inch long. Their wings have no veins and are fringed with long hairs. Nymphs resemble adults except that they are smaller and lack wings.

Symptoms and effects




Onion thrips damage onions primarily by their rasping and feeding which produces 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 onion leaf tips to turn brown. Severe damage to onions causes bulbs to become distorted or undersized.

Because thrips prefer tight spaces, cabbage varieties with extremely dense heads are most susceptible to damage. Thrips 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 become 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, debris, or along weedy field edges. Females can reproduce without mating and lay eggs beneath the leaf's surface. Eggs hatch after 5–10 days and

Onion thrips life cycle					
Egg		Nymph		Adult	
					
When to scout for cabbage maggot					
April	May	June	July	August	September
early mid late	early mid late	early mid late	early mid late	early mid late	early mid late

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

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. Thrips produce about 5 to 8 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

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 thrips' 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 the UW-Extension publication *Commercial Vegetable Production in Wisconsin* (A3422) for a list of registered insecticides.

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