



Onion Pests – Thrips

What are Thrips?

Onion thrips (*Thrips tabaci*) and Western flower thrips (*Frankliniella occidentalis*) are very small insects (adults 1.5 mm long) that infest onion and garlic foliage. Thrips have two pairs of wings that are fringed with long hairs. Adults are yellow to light brown with dark eyespots. Nymphs resemble adults but are wingless and typically lighter in color. In addition to onions, thrips may infest: garlic, other onion relatives, and cereals.



What is the Damage Caused?

Thrips are the most common onion pest. Damage to onion leaves and stalks is caused by the unusual feeding style of the thrips. Thrips have rasping-sucking mouthparts; they feed by “sawing” into the surface of leaves, releasing enzymes to predigest plant tissues, and then suck up the resulting plant fluid. Feeding damage can reduce the plant’s ability to properly photosynthesize, ultimately causing reductions in yield and quality, especially in green onions where leaves can be heavily scarred. Feeding scars may also serve as entry points for foliar pathogens. In areas with high thrips infestations, plant foliage takes on a silvery appearance.

How to Manage Thrips in Onions?

Monitor for thrips early in the season. It is important to manage thrips before onions begin to bulb otherwise populations may exceed levels that can be adequately controlled.

Cultural Management:

- Avoid planting onions near grain fields, where thrips populations build up.
- Rainfall and overhead irrigation provide limited suppression. Thrips thrive in hot and dry climates.

Thrips only grow to 1.5 mm; a hand lens may be necessary to detect their presence.^{1,2}

Pesticide Treatment Options:

- Spinosad (Entrust*) at 90-175 g/ha (1.25-2.5 oz/acre). Maximum 630 g/ha (9 oz/acre) per season. Do not apply within 1 day of harvest. Wait 4 hours after application before reentering the crop.
- Permethrin (Ambush 25W*) at 670-1345 g/ha (9.6-19.2 oz/acre). For bulb onions or garlic only. Maximum 2240 g/ha (2 lbs/acre) per season. Do not apply within 1 day of harvest. Wait 12 hours after application before reentering the field.
- Thrips can be annoying for workers during harvest. Managing thrips closer to harvest may be necessary.

For more treatment options visit www.ipm.ucdavis.edu

*Commercial name. The authors make no endorsement towards commercial brands mentioned in this document nor are the absence of other brand names an implication of our disapproval.

Prepared by Frank Zalom, Emily Symmes, Mark Henderson and Mark Bell, July 2009

Sources: Statewide IPM Program, Agriculture and Natural Resources, University of California <http://www.ipm.ucdavis.edu/index.html>

Alfredo Rueda and Ben Shelton – CIIFAD, Cornell University
<http://www.nysaes.cornell.edu/ent/hortcrops/english/thrips.html>

Photo Credit: ¹Art Cushman, USDA, ²Jack Kelly Clark, Statewide IPM Program, UC ANR

For more information visit: International Programs: <http://ip.ucdavis.edu>

Copyright © UC Regents Davis campus, 2011. All Rights Reserved.