



Garlic Pests – Thrips

What are Thrips?

Onion thrips (*Thrips tabaci*) and Western flower thrips (*Frankliniella occidentalis*) are very small insects (adults 1.5 mm long). 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 garlic, thrips may infest onions, onion relatives, and cereals.

What is the Damage Caused?

Damage to onion and garlic 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. In areas with high thrips infestations, plant foliage takes on a silvery appearance. Feeding scars may also serve as entry points for foliar pathogens.

How to Manage Thrips in Garlic?

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

Cultural Management:

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

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 orchard.
- 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.

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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>

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