

## UC Pest Management Guidelines

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### AVOCADO

### AVOCADO THRIPS

Scientific Name: *Scirtothrips perseae*

(Reviewed: 7/01, updated: 7/03)



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#### DESCRIPTION OF THE PEST

A new thrips pest, avocado thrips, recently appeared on avocados in California. This pest is similar to [citrus thrips](#) in appearance and damage caused to fruit. Adults and larvae can also be easily confused with [western flower thrips](#). Use a hand lens to examine the tip of the abdomen; western flower thrips have thick, bristlelike hairs at the tip whereas avocado thrips do not. Avocado thrips lays its eggs in leaf tissue, and has two larval instars and a propupal, pupal, and adult stage. The first instar is pale white just after hatch, and takes on a deeper yellow color after it has fed. The second instar is larger and more robust. Larvae are typically found along the venal ribs on the underside of younger leaves and on young fruit. Adults are 0.03 inch (0.7 mm) long, uniformly orange-yellow with pronounced thin brown banding on the abdomen and three small red dots on top of the head.

#### DAMAGE

Avocado thrips feeds on young tissue. Its feeding on young leaves causes irregular scarring lines on both sides of the leaf, typically concentrated along the midrib and lateral leaf veins. On fruit, feeding begins near the calyx, gradually producing a [scar](#) that can cover the entire fruit. The fruit subsequently develops a leathery, brown skin. Feeding is most common on young fruit; economic damage generally occurs on fruit up to 0.75 inch in length (2-3 weeks after fruit set). Older fruit with thicker skin is less susceptible to attack.

#### BIOLOGICAL CONTROL

The naturally occurring predaceous thrips, *Franklinothrips orizabensis*, is the only biological control agent observed to respond in large numbers to the presence of avocado thrips populations. Other general predators, such as lacewings and sixspotted thrips, also feed on avocado thrips. These biological control agents have at most only suppressed avocado thrips populations and have not been observed to reduce avocado thrips populations below damaging levels.

## ORGANICALLY ACCEPTABLE METHODS

Biological control as well as sprays of oil and the Entrust formulation of spinosad are acceptable for use on organically certified crops.

## MONITORING and MANAGEMENT DECISIONS

Monitor the orchard during bloom time. When fruit set begins, determine if a spray is needed based on the amount of fruit set and the intensity of the infestation. An average of three to five thrips per leaf at fruit set warrants treatment. Once the spray program begins, continue treating reoccurring populations until the bulk of the fruit has sized to the point (larger than an inch in diameter) that it will not host the pest.

## TREATMENT

Pesticide (commercial name)	Amount/Acre	P.H.I.+ (days)
A. SABADILLA (Veratran-D)	10-15 lb <i>PLUS</i> up to 10 lb sugar or 1.5 gal molasses in 50-200 gal water	0
COMMENTS: Restricted entry interval: 24 hours. Acidify water in the spray tank to a pH of 4.5 before adding sabadilla; use citric acid or other approved acidifying agents. Re-treat when thrips populations reappear, usually every 2-3 weeks or so.		
B. ABAMECTIN* (Agri-Mek) 0.15 EC	Label rates	14
... <i>PLUS</i> ... NARROW RANGE OIL# (415)	1-2%	0
COMMENTS: Check with your county agricultural commissioner about the availability of this product under a Section 18 registration. Use with 1-2% narrow range (415) oil in a minimum of 50 gal water/acre. On large trees aerial applications may require larger volumes of water to achieve desired efficacy. Control may last 3 or more weeks. Only use in an alkaline or slightly acidic solution. Do not tank mix with nutrients.		
C. SPINOSAD (Entrust)#	1.25-3 oz	1
(Success) 2SC	5-10 fl oz	1
... <i>PLUS</i> ... NARROW RANGE OIL# (415)	1-2%	0
COMMENTS: Restricted entry interval: 4 hours. Choose a lower rate for light infestations and/or small trees and a higher rate for heavy infestations and/or large trees. Toxic against some natural enemies (eg., sixspotted thrips) when sprayed and for 8-24 hours after. Short residual of this pesticide, however, allows most populations of natural enemies to survive quite well. Apply in a minimum of 50 gal water/acre. On larger trees, aerial applications may require larger volumes of water to achieve desired efficacy. Control may last 3 or more weeks. Only use in an alkaline or slightly acidic solution. Do not tank mix with nutrients.		

+ Preharvest interval. Do not apply within this many days of harvest.

\* Permit required from county agricultural commissioner for purchase or use.

# Acceptable for use on organically grown produce.

**PRECAUTIONS**

**PUBLICATION**



UC IPM Pest Management Guidelines: Avocado

UC ANR Publication 3436

Insects and Mites

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