

UC Pest Management Guidelines

AVOCADO

AVOCADO BROWN MITE

Scientific Name: *Oligonychus punicae*

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



IN THIS GUIDELINE:

[DESCRIPTION OF THE PEST](#)

[DAMAGE](#)

[BIOLOGICAL CONTROL](#)

[CULTURAL CONTROL](#)

[ORGANICALLY ACCEPTABLE METHODS](#)

[MONITORING and MANAGEMENT DECISIONS](#)

[PUBLICATION](#)

[GLOSSARY](#)

DESCRIPTION OF THE PEST

[Avocado brown mite](#) occurs throughout coastal avocado-growing areas. It is dark brown, oval shaped, and small (1/75 inch, 0.3 mm). Use a hand lens (10X) to see this mite as well as its webbing on the upper leaf surface in the region of the midrib.

[Eggs](#) are amber color and rest on a stalk. They are first laid along the midrib, but as populations increase, they are found distributed quite generally over the upper leaf surface. In summer there may be two complete generations per month. Temperatures of 90° to 95°F or higher kill these mites and their eggs as does the first cold weather in fall or early winter.

DAMAGE

Avocado brown mite feeds primarily on upper leaf surfaces. As feeding progresses, areas along the midrib, then along smaller veins, and finally the entire leaf, turn [brown in color](#). In addition to leaf discoloration, whitish egg shells and cast skins are present. Damage is most pronounced in late summer and fall.

Mite feeding removes chlorophyll from leaves, which reduces photosynthesis. The green color returns if mites are controlled. With severe infestations there may be some defoliation. Severe infestations tend to occur on trees in border rows, probably because the accumulation of road dust on these trees is detrimental to natural enemies of the avocado brown mite.

BIOLOGICAL CONTROL

Naturally occurring populations of the [spider mite destroyer](#) (*Stethorus picipes*), [green lacewings](#) (*Chrysoperla* spp.), [dusty-wings](#) (family Coniopterygidae) and predaceous mites ([Galendromus helveolus](#) and

[*Euseius hibisci*](#)) are reasonably effective in controlling brown mites. Generally the mite is kept under control by natural enemies and hot or cold weather.

CULTURAL CONTROL

Controlling dust, which improves predator activity, is critical in maintaining biological control. Oil or pave main orchard roads. If it is necessary to use dirt roads for orchard operations, use a water truck or trailer to prevent dust, especially during summer months when heat convection currents carry dust well up into the tree canopies.

ORGANICALLY ACCEPTABLE METHODS

Biological and cultural control and sulfur or oil sprays.

MONITORING and MANAGEMENT DECISIONS

In recent years, control measures have usually not been required in California. Major outbreaks have occurred after spraying malathion to control [greenhouse thrips](#) and [omnivorous looper](#). In dealing with these latter pests it is best to spot treat individual trees to avoid an avocado brown mite outbreak. If treatment for the avocado brown mite is required, treatment of individual trees in late summer or fall is the best approach. Sulfur is effective in warmer areas. Oil is an alternative material, but requires good coverage.

TREATMENT

Pesticide (commercial name)	Amount/Acre	P.H.I.+ (days)
A. WETTABLE SULFUR#	Label rates	0
COMMENTS: Restricted entry interval: 1 day. Do not treat with sulfur when temperatures exceed 90°F to avoid leaf damage. Sulfur sprays are often not effective in coastal areas where temperatures do not promote fuming action.		
B. NARROW RANGE OIL#	Label rates	0
COMMENTS: Restricted entry interval: 4 hours. Requires good coverage to be effective.		

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

Acceptable for use on organically grown produce.

PRECAUTIONS

PUBLICATION



UC IPM Pest Management Guidelines: Avocado

UC ANR Publication 3436

Insects and Mites

B. A. Faber, UC Cooperative Extension, Santa Barbara/Ventura counties

P. A. Phillips, UC IPM Program, UC Cooperative Extension, Ventura Co.