

Apple

Woolly Apple Aphid

Scientific name: *Eriosoma lanigerum*

(Reviewed 8/06, updated 1/11)

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DESCRIPTION OF THE PEST

Woolly apple aphids infest roots, trunks, limbs, shoots, and occasionally fruit of apple trees. The bodies of these bark-feeding aphids are completely covered by masses of white, wool-like, waxy materials. This aphid is found in colonies on the aerial portions of the tree and on roots during winter. The nymphs migrate up or down the trunk of infested trees during summer and fall.

DAMAGE

The main injury to young and mature trees is stunting due to the formation of [root galls](#). If populations are high, honeydew and sooty mold will also be problems, and aphids may enter the calyx end of fruit.

MANAGEMENT

Woolly apple aphid is found throughout California's apple-growing regions, and it is a major pest in coastal counties. It occasionally infests pyracantha, hawthorn, and pear.

Resistant Varieties/Rootstocks

Winter Banana is one of the most susceptible varieties to aerial galls. Yellow Newtown fruit frequently has aphids in the calyx end. The Malling series of rootstock numbers 106 and 111 are resistant to this pest.

Biological Control

[Aphelinus mali](#) is a parasite that can completely control aerial colonies. In the absence of this parasite there can be large increases of aerial colonies and woolly aphids may be found in the calyx of the apple. Outbreaks of woolly apple aphid are most common following the use of pyrethroids, which destroys its natural enemies.

Organically Acceptable Methods

Resistant varieties and rootstocks as well as biological control are organically acceptable methods.

Treatment Decisions

The delayed dormant application should control woolly apple aphids. A summer application (late July to August) will only be required if the parasites are disrupted. Foliage treatments may be necessary for young trees with severe infestations.

Common name (trade name)	Amount to use** (conc.)	Amount to use** (dilute)	R.E.I.+ (hours)	P.H.I.+ (days)
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When choosing a pesticide, consider information relating to the impact on natural enemies and honey bees Not all registered pesticides are listed. Always read label of product being used. and environmental impact.

DELAYED DORMANT (Preferred timing)

A. NARROW RANGE OIL	Label rates	Label rates	see label	0
MODE OF ACTION: Improves translaminar movement and insecticide persistence.				
... PLUS ...				
CHLORPYRIFOS*		Label rates	4	0
(Lorsban) 4EC				
MODE OF ACTION GROUP NUMBER ¹ : 1B				
COMMENTS: Avoid drift and runoff into surface waters or choose alternative materials.				
Chlorpyrifos has been found in surface waters at levels that violate federal and state water quality standards.				
... or ...				
DIAZINON* 50WP	2–4 lb	0.5–1.0 lb	4 days	21
MODE OF ACTION GROUP NUMBER ¹ : 1B				
COMMENTS: Avoid drift and runoff into surface waters or choose alternative materials.				
Diazinon has been found in surface waters at levels that violate federal and state water quality standards.				

FOLIAGE SPRAY

A. SPIROTETRAMAT	6–9 fl oz	—	24	7
(Movento)				
MODE OF ACTION GROUP NUMBER ¹ : 23				
COMMENTS: Do not apply until after petal fall. Allow 14 days between applications. Maximum is 25 fl oz/acre (0.4 lb a.i./acre)/crop/season.				
B. DIAZINON* 50WP	4 lb	1 lb	4 days	21

MODE OF ACTION: An organophosphate (Group 1B)¹ insecticide.

COMMENTS: Applications made during the foliage season are very disruptive to beneficials. Avoid drift and runoff into surface waters or choose alternative materials.

** For dilute application, rate is per 100 gal water to be applied in 300–500 gal water/acre, according to label; for concentrate applications, use 80–100 gal water/acre or lower if the label allows.

+ Restricted entry interval (R.E.I.) is the number of hours (unless otherwise noted) from treatment until the treated area can be safely entered without protective clothing. Preharvest interval (P.H.I.) is the number of days from treatment to harvest. In some cases the REI exceeds the PHI. The longer of two intervals is the minimum time that must elapse before harvest.

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

¹ Rotate chemicals with a different mode-of-action Group number, and do not use products with the same mode-of-action Group number more than twice per season to help prevent the development of resistance. For example, the organophosphates have a Group number of 1B; chemicals with a 1B Group number should be alternated with chemicals that have a Group number other than 1B. Mode of action Group numbers are assigned by IRAC (Insecticide Resistance Action Committee). For additional information, see their Web site at <http://www.irac-online.org/>.

PUBLICATION



UC IPM Pest Management Guidelines: Apple

UC ANR Publication 3432

Insects and Mites

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<http://www.ipm.ucdavis.edu/PMG/r4301711.html>