

Suggested Pesticides for Insect and Mite Management on Woody Ornamentals

Read the label to avoid plant injury. If treating citrus or other edible crop plants, be VERY CERTAIN the plant species is on the label and observe harvest restrictions. Also see **ENY-338, 'Insect Management on Landscape Plants'** by E. Buss and D. Short. Check our web site for more information and fact sheets <http://collier.ifas.ufl.edu/> . Refer to fact sheets on specific pests for 'Window-of-Control' (timing) and number of applications.

PEST	Products
Aphids	horticultural soap; Bayer Advanced Garden* as a soil drench, bifenthrin ^{1/} or cyfluthrin ^{2/} , etc.
Bark beetles, borers, palm	permethrin***; bifenthrin ^{1/}
Beetles, leaf	spinosad**; bifenthrin ^{1/} or cyfluthrin ^{2/} , Sevin™ (carbaryl); etc.
Caterpillars	spinosad**; <i>B. t.</i> ; permethrin***; Sevin™ (carbaryl); etc.
Galls	rarely cause serious damage; permethrin*** for twig galls as adults emerge
Hibiscus midge	Bayer* soil drench/1x/year and bifenthrin ^{1/} or cyfluthrin ^{2/} foliar monthly (the foliar sprays will minimize budworm, whitefly, mealybug, but not mites, see mite recommendation below)
Lace bugs	Bayer* soil drench; horticultural soap; bifenthrin ^{1/} or cyfluthrin ^{2/} ; etc.
Leafminers	spinosad** for citrus leafminer and other Lepidoptera; bifenthrin ^{1/} or cyfluthrin ^{2/} for ornamentals only.
Mealybugs	horticultural soap; Bayer* soil drench; bifenthrin ^{1/} or cyfluthrin ^{2/} , etc. Pink hibiscus mealybug is very difficult to control- use systemic soil drench only to preserve parasites.
Mites	horticultural <i>mineral</i> (paraffinic grade) oil; Ortho Rose Pride Orthonex Insect & Disease Control contains hexakis, a miticide
Scales	horticultural mineral (paraffinic grade) oil at a 2% concentration when immatures present; but for Asian sago scale (<i>Aulacaspis</i> scale), an armored scale, use soil applications of Safari (dinotefuran by Valent Corp.) or Green Light Tree & Shrub Insect Control Safari 2G; however, Bayer Advanced Garden™ Tree & Shrub Insect Control* root drench is better for soft scale species.
Thrips	horticultural mineral (paraffinic grade) oil; Bayer* soil drench; spinosad**
Slugs, snails	slug baits with metaldehyde; beer baits, coffee grounds(?)
Weevil, Sri lanka	Knock adults into soapy water; bifenthrin ^{1/} or other pyrethroid such as Triazicide (lambda cyhalothrin) or Bonide Caterpillar killer (L-cyhalothrin); no product labeled for fruit trees
Whiteflies	horticultural mineral (paraffinic grade) oil; Bayer* soil drench.

*The product (ai=active ingredient) in Bayer Advanced Garden™ Tree & Shrub Insect Control, is 1.47% imidacloprid (Merit™75 WP is the professionals' product name).

** **Spinosad** is in a ferti-lome® product called 'Borer, Bagworm, Leafminer & Tent Caterpillar Spray '(0.5% spinosad); also Conserve-Naturalyte by Southern Ag. Conserve (Dow AgriScience) is the professional product.

Pyrethroid based products. These may cause mite flare-ups:

*** Real Kill™ and Spectracide Bug Stop™ both contain 2.5% permethrin.

^{1/} Bifenthrin is available from Ortho® as Rose & Flower Insect Killer (0.012% active ingredient).

^{2/} Cyfluthrin is available from Bayer in 2 products called Multi-Insect Killer at 0.003% ai and 0.75% ai.