

Pesticides for the Treatment of Orchid Pests

by Sue Bottom, sbottom15@bellsouth.net

Chemical Name Active Ingredient	Application Rate (tsp/gal)	Floral Damage?	Systemic?	Scale	Mealybugs	Thrips	Whiteflies	Aphids	Mites	Caterpillars	Fungus Ghats
Commonly Available Pesticides											
Bayer 3 in 1 Imidacloprid 0.47%	15.75	No?	Yes	x	x		x	x	x		
Bayer Tree & Shrub Imidacloprid 1.47%	5 - 6	No?	Yes	x	x		x	x	x		
Kelthane 50W Dicofol 51%	2	No	No						x		
Malathion 50% EC Malathion 50% EC	3	No	No	x	x	x	x	x			
Neem Oil Neem Oil	6	No	No	x	x		x	x	x		
Orthene Powder Acephate 97%	1	No	Yes?	x	x	x	x	x			
Orthenex Acephate, Fenbutatin oxide	6	No	Yes?	x	x	x	x	x	suppresion		
Permetrol Permethrin 10%	1.3	No	No	x	x	x	x	x	x		
Safer 3-in-1 Sulfur 6.48%, Soap 12.38%	48	No	No	x	x	x	x	x	x		x
Summer Oil Spray Paraffinic Oil	2.5	Yes	No	x	x	x	x		x		
Thuricide Bacillus Thuringensis	2 - 4	No	No							x	x
Specialty Pesticides											
Avid Abamectin 2.0%	0.24-mites 0.48-thrips	No	No?			suppresion	suppresion	suppresion	x		
Conserve Spinosad 11.6%	0.36-thrips 1.2-mites	No	No			x			suppresion		
Distance Pyriproxygen 11.23%	0.48-0.72	No	Yes	x			x	x			x
Marathon II Imidacloprid 21.4%	0.10	Yes	Yes	x	x	suppresion	x	x			
Mavrik Aqua Flow Fluvalinate 22.3%	1.3 - 3.0	No?	No?		x	x	x	x	x	x	
Sanmite 75 WP Pyridaben 75%	1.10	No?	No?				x		x		
Talstar Flowable Bifenthrin 7.9%	0.6 - 1.3	Yes	No?	x	x	x	x	x	x		x
TetraSan 5 WDG Etoxazole 5%	0.84 - 1.7	No?	Yes?						x		

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Chemical Name Active Ingredient	Application Rate (tsp/gal)	Floral Damage?	Systemic?	Comments and Caveats - Always Check Product Label for Information on Proper Use and Precautions
Commonly Available Pesticides				
Bayer 3 in 1 Imidacloprid 0.47%	15.75	No?	Yes	Do not use with summer oil. Use with weak fertilizer to enhance uptake.
Bayer Tree & Shrub Imidacloprid 1.47%	5 - 6	No?	Yes	Do not use with summer oil. Use with weak fertilizer to enhance uptake.
Kelthane 50W Dicofol 51%	2	No	No	
Malathion 50% EC Malathion 50% EC	3	No	No	Harms some ferns.
Neem Oil Neem Oil	6	No	No	Insecticide, Miticide and Fungicide
Orthene Powder Acephate 97%	1	No	Yes?	Repeat at 2 week intervals if crawlers continuously appearing. Apply no more than 3 times consecutively. Can be mixed with fungicide.
Orthenex Acephate, Fenbutatin oxide	6	No	Yes?	Fenbutatin oxide is a miticide, Acephate is an insecticide. Same additional comments as for Orthene above.
Permetrol Permethrin 10%	1.3	No	No	
Safer 3-in-1 Sulfur 6.48%, Soap 12.38%	48	No	No	Use only if temperatures below 90°F. Don't apply within 30 days of using oil sprays. Don't apply to ferns.
Summer Oil Spray Paraffinic Oil	2.5	Yes	No	Use only if temperatures below 90°F. Don't apply within 30 days of using sulfur or mix with fungicide, copper or Captan. Don't apply to ferns or palms.
Thuricide Bacillus Thuringensis	2 - 4	No	No	
Specialty Pesticides				
Avid Abamectin 2.0%	0.24-mites 0.48-thrips	No	No?	Harms some ferns. Use weekly for 3 weeks when thrips immature then alternate. Residual control may be enhanced by adding summer oil.
Conserve Spinosad 11.6%	0.36-thrips 1.2-mites	No	No	Can be used 3 times consecutively on one generation of thrips then alternate. Spray flowers, then use imidacloprid for systemic control (avoiding flowers).
Distance Pyriproxygen 11.23%	0.48-0.72	No	Yes	Harms some ferns.
Marathon II Imidacloprid 21.4%	0.10	Yes	Yes	Apply to cattleyas only, no dendrobiums and no thin leafed orchids. Do not use with summer oil. Use with weak fertilizer to enhance uptake.
Mavrik Aqua Flow Fluvalinate 22.3%	1.3 - 3.0	No?	No?	At low to medium use rates, controls aphids, thrips, whiteflies, leaf-feeding caterpillars; at higher rates, mites will also be suppressed or controlled.
Sanmite 75 WP Pyridaben 75%	1.10	No?	No?	Alternate use with other miticides.
Talstar Flowable Bifenthrin 7.9%	0.6 - 1.3	Yes	No?	Mite control most effective in spring to early summer.
TetraSan 5 WDG Etoxazole 5%	0.84 - 1.7	No?	Yes?	Kills mite eggs and nymphs but not adult, apply with adulticide if infested, treated adult mites will not produce viable eggs. Translaminar.