

## FLOWERS AND FOLIAGE PLANTS COMMERCIAL GREENHOUSE INSECT CONTROL

**Note:** The following list of pesticides is labeled for the uses listed. However, there are different formulations of particular compounds, and you must make sure the pesticide used is properly labeled. All pesticides must be handled and applied in strict accordance with the label on the pesticide container. The plant being damaged and the site where the plant is located (greenhouse) must be listed on the label. The pests that a compound is registered for are also listed on the label. The pesticides below are listed by common name and by a formulation name, which is used as an example of the formulations available. Many insecticides are now off patent, and there are new trade names available for these active ingredients. There are also mixtures of active ingredients plus synergist available that are not listed. For example, there are several formulations of pyrethrum combined with other active ingredients and synergists available in spray concentrates, aerosols and space-release canisters for the control of several pests. Some chemicals are labeled for use in low-volume spray equipment. Proper rates must be determined by applying the proper amount of active ingredient for the area treated. The rates given below are for high-volume spray equipment. Many insects are developing resistance to pesticides available on the market. Practice resistance management and rotate the insecticides used to manage a pest. With most pesticides, you should rotate the compounds used at least once during a generation time for that insect. In addition, it is desirable to rotate mode of action of compounds used. A guide to rotating modes of action is the Insecticide Resistance Action Committee (IRAC) classification of the different mode of action sites and a letter for subgroups. In resistance management rotations, these number/letter codes can be used to determine which compounds have different modes of action. These are listed in the table under the column heading "Mode of Action No." (un = unknown).

Some of the insecticides listed are extremely toxic. Handle with caution and use protective equipment required by the label. A minimum interval between application and reentry has been established. Make sure of the proper reentry period for the insecticide has been observed before allowing people without label-prescribed personal protective equipment to enter the treated area. These are listed in the table under the column heading "REI."

Phytotoxicity (damage to the plant as a result of the application of a chemical) is an important consideration in controlling pests of ornamentals. Phytotoxicity is generally expressed as damage to the leaves, flowers or stems and is observed as "burn" (browning of tissue), "chlorosis" (yellowing or bleaching of tissue) or modification of growth by deformation or stunting. There are many species and cultivars of ornamental plants with varying sensitivity to chemicals. Other environmental conditions, such as your particular growing conditions, will also affect phytotoxicity. You are encouraged to evaluate a pesticide for phytotoxicity on a few plants under your particular conditions before treating all plants.

Insect or Mite	Insecticide and Formulation	Amount Per 100 Gallons of Water	REI	Mode of Action Number	Comments/Precautions
Aphids	abamectin (Avid) 0.15EC	8 oz	12 hours	6	Apply as needed and repeat application at 7-day intervals or as necessary. Do not apply more than 16 fl oz per acre. Use in sufficient water to obtain uniform plant coverage. Phytotoxicity has been observed in certain species of ferns.
	acephate Orthene TT&O Pro 75 PT 1300 TT&O 97	2/3 lb aerosol 8 oz	24 hours	1B	<b>Caution:</b> Phytotoxicity has occurred on the following plants: <i>Blechnum gibbum</i> , <i>Cissus antarctica</i> , <i>Ficus triangularis</i> , <i>Fittonia verschaffeltii</i> , <i>Maranta leuconeura kerchoveana</i> , <i>Pachystachya lutea</i> , <i>Placetranthus australis</i> , <i>Polypodium aureus</i> , <i>Polystichum</i> , <i>Pteris ensiformis</i> , <i>Tolmiea menziesii</i> . Before treating large plantings, spray only a few plants and observe 2 weeks for varietal phytotoxicity.
	acetamiprid TriStar 70WSP TriStar 30SG	1 soluble bag 1.3 oz	24 hours 12 hours	4A	Apply as a full coverage foliar spray. The use of a non-ionic spreader-sticker adjuvant may improve control.
	azadirachtin Azatin 3.0% XL, Align-XL Neemazad 4.5 EC Ornazin 3%	10-16 oz 2.25-4.5 oz 8 oz	4 hours 12 hours 12 hours	18B	Must get full coverage for control but avoid excess runoff. Use fine spray; can also be applied as drench.  Addition of 0.5%-1.0% non-phytotoxic oil will enhance efficacy.
	<i>Beauveria bassiana</i> Naturalis-O BotaniGard ES	30-100 fl oz 16-32 fl oz	4 hours 12 hours		Wait 48 hours before applying fungicides.

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Aphid	bifenthrin Talstar T&O, Attain		12 hours	3A	Apply as a full coverage foliage spray.
	10 WP	6-32 oz			
	7.9%	25-50 fl oz			
	0.67 F	8-40 oz			
	Attain	aerosol			
	chlorpyrifos DuraGuard 20% ME	0.25-0.5 oz/gal	24 hours	1B	
	cyfluthrin Decathlon 2E	1-2 oz	12 hours	3A	Good coverage is necessary to provide most effective control. Addition of a spreader sticker may enhance control of insects on some plants.
	20WP	1.9 oz			
	dinotefuran Safari 20SG	1/4-1/2 lb for foliar 3/4-1 1/2 lb for drench	12 hours	4A	For drench apply 4 fl oz finished solution per 6 inch pot. See label for ebb and flood rates.
	fenpropathrin Tame 2.4EC	10 2/3 oz	24 hours	3A	
	flonicamid 50 WDG	1-6 packets	12 hours	9C	Repeat application every 7-28 days as necessary.
	Aria 0.7 oz package	0.7-4.3 oz			
	fluvalinate Mavrik 2E	2-5 oz	12 hours	3A	
	imidacloprid Marathon 1G, 60WP	9-15 oz/1,000 sq ft	12 hours	4A	Use 60WP as drench.
	Marathon II	1.7 fl oz			
	insecticidal soap M-Pede	1%-2%	12 hours		Repeat spray in 2 or 3 days. Thoroughly wet both surfaces of infested leaves. Use soft water when possible.
	Olympic	1-2 gal			
	λ-cyhalothrin Scimitar GC	1.5-5.0 oz	24 hours	3A	
	methiocarb Mesurol 75W	0.5-1.0 lb	24 hours	1A	
	pymetrozine Endeavor 50WG	2.5-5.0 oz	12 hours	9B	
	pyrethrum X-Clude	follow label directions	12 hours	3A	Follow label directions.
	Pyrenone, Natural Plus				
	s-kinoprene Enstar II	8-20 oz	4 hours	7A	Complete coverage of foliage is essential for control. Phytotoxicity has been observed under certain conditions.
spirotetramat Kontos 2F	1.7 fl oz	24 hours	23	See label for drench instructions.	
thiamethoxam Flagship 25WG	2-4 oz	12 hours	4A	Medium treatment may take 1-2 weeks for activity. Do not leach for 7 days.	
Flagship 0.22G	follow label directions				

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<b>Armored and Soft Scale</b>	acetamiprid TriStar 30SG	2.7-5.3 oz	12 hours	4A	Apply as a full coverage foliage spray. Use of a non-ionic, spreader-sticker adjuvant may improve control.
	buprofezin Talus	follow label directions	12 hours	16	Apply no more than two applications per growing cycle.
	chlorpyrifos DuraGuard 20% ME	0.25-0.5 oz/gal	24 hours	1B	Shake concentrate well before diluting.
	dinotefuran Safari 20SG	1/4-1/2 lb for foliar 3/4-1 1/2 lb for drench	12 hours	4A	For drench, apply 4 fl oz finished solution per 6 inch pot. See label for ebb and flood rates.
	horticultural oils Sunspray ultrafine Saf-T-Side Triact	1%-2% (1-2 gal)	4 hours		Care must be taken because some plants are sensitive to oils. Thorough coverage is necessary, but do not over apply and get excessive runoff. Use fine spray.
	imidacloprid Marathon 1G 60WP Marathon II	9-15 oz/1,000 sq ft follow label directions	12 hours	4A	Armored scales (suppression only).
	λ-cyhalothrin Scimitar GC	1.5-5.0 oz	24 hours	3A	
	pyriproxyfen Distance	8-12 fl oz	12 hours	7C	Target crawler stage for best results.
	s-kinoprene Enstar II	6-20 oz	4 hours	7A	See <b>Aphids</b> .
	thiamethoxam Flagship 25WG	2-4 oz	12 hours	4A	
<b>Armyworm</b>	azadirachtin Azatin 3.0% E Neemazad 4.5 EC Oranzin 3%	10-16 oz 2.25-4.5 oz 8 oz	4 hours 12 hours 12 hours	18B	Must get full coverage for control but avoid excess runoff. Use fine spray; can also be applied as drench. Spray when pests first appear.
	<i>Bacillus thuringiensis</i> Dipel Thuricide MVP Sok-Bt Biobit	1-4 qt	4 hours	11B2	

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<b>Armyworm</b>	<i>Beauveria bassiana</i> Naturalis-O	30-100 fl oz	4 hours		Wait 48 hours before applying a fungicide.	
	bifenthrin Talstar T&O 10 WP 7.9% 0.67F	6-32 oz 25-50 fl oz 8-40 oz	12 hours	3A	Apply as a full coverage foliar spray.	
	chlorpyrifos DuraGuard 20% ME	0.25-0.5 oz/gal	24 hours	1B	Shake concentrate well before diluting.	
	chlorfenapyr Pylon	2.6-6.4 fl oz	12 hours	13		
	diflubenzuron Adept 25W	1/2-1 lb	12 hours	15	Apply on chrysanthemums when larvae appear and repeat at weekly intervals as required.	
	fenpropathrin Tame 2.4EC	10 oz	24 hours	3A		
	λ-cyhalothrin Scimitar GC	1.5-5.0 oz	24 hours	3A		
	novaluron Pedestal 10%SC	6-8 fl oz	12 hours	15	Do not apply more than once every 30 days or more than 2 applications per crop. Do not apply to poinsettias.	
	pyrethrum X-Clude Pyrenone Natural Plus		12 hours	3A	Follow label directions.	
	pyridalyl Overture 35WP	8 oz	12 hours	un	2 oz soluble packets; do not get wet.	
	tebufenozide Confirm T/O	4-8 fl oz	4 hours	18A	For best results, begin applications when larvae are first observed or at first sign of feeding.	
	<b>Cabbage Looper</b>	azadirachtin Azatin	10-16 oz	4 hours	18B	Must get full coverage for control but avoid excess runoff. Use fine spray; can also be applied as drench. Spray when pests first appear.
		Neemazad	2.25-4.5 fl oz	12 hours		
Ornazin 3%		8 oz	12 hours			
<i>Bacillus thuringiensis</i> Dipel Thuricide MVP Sok-Bt Biobit		1-4 qt	4 hours	11B2	Follow manufacturer's suggestions.	
chlorfenapyr Pylon		2.6-6.4 fl oz	12 hours	13		

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<b>Cabbage Looper</b> (cont.)	insecticidal soap M-Pede Olympic	1%-2% (1-2 gal)	12 hours		Repeat spray weekly for 2 or 3 weeks. Thoroughly wet both surfaces of infested leaves. Use soft water when possible.	
	pyrethrum X-Clude Pyrenone	aerosol 2-12 oz/acre	12 hours	3A	Follow label directions.	
	pyridalyl Overture 35WP	8 oz	12 hours	un	2 oz soluble packets; do not get wet.	
	spinosad Conserve SC	6 fl oz	4 hours	5		
	tebufenozide Confirm T/O	4-8 fl oz	4 hours	18A	For best results, begin applications when larvae are first observed or at first sign of feeding.	
	<b>Cutworm</b>	<i>Bacillus thuringiensis</i> Dipel Thuricide MVP Sok-Bt Biobit	1-4 qt	4 hours	11B2	Follow manufacturer's suggestions.
		carbaryl Sevin SL	1 qt	12 hours	1A	Follow label directions.
cyfluthrin Decathlon 2EC 20WP		1-2 oz 1.3 oz	12 hours	3A	See <b>Aphids</b> .	
λ-cyhalothrin Scimitar GC		1.5-5.0 oz	24 hours	3A		
spinosad Conserve SC		6 fl oz	4 hours	5		
tebufenozide Confirm T/O		4-8 fl oz	4 hours	18A	For best results, begin applications when larvae are first observed or at first sign of feeding.	
<b>Fungus Gnat</b>		acetamiprid TriStar 30SG	2.7-5.3 oz	12 hours	4A	Apply as a directed; spray to thoroughly wet the upper 1/2 to 1 inch of soil medium.
		azadirachtin Azatin 3.0% E	8 oz	4 hours	18B	
		<i>Bacillus thuringiensis</i> H-14 Gnatrol	1-8 pt 0.5-4.0 pt	4 hours	11B2	Apply as a soil drench or spray for larvae. Thoroughly wet the first 3 to 4 cm of soil. Under benches should also be treated.
	chlorfenapyr Pylon	5.2-10 fl oz	24 hours	13		
	chlorpurifos DuraGuard 20% ME	0.25-0.5 oz/gal	24 hours	1B	Shake concentrate well before diluting.	

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<b>Fungus Gnat</b>	cyromazine Citation 75WP	follow label directions	12 hours	17	
	diflubenzuron Adept 25W	follow label directions	12 hours	15	Do not use on poinsettias, Rieger begonias and hibiscus.
	dinotefuran Safari 20SG	3/4-1 1/2 lb	12 hours	4A	Drench applying 4 fl oz finished solution per 6 inch pot. See label for ebb and flood rates.
	pyriproxyfen Distance	2-6 fl oz (see comments)	12 hours	7C	New supplemental label changes rates to a 2 oz drench and 3-6 oz drench.
	resmethrin 2EC resmethrin PT 1200	1-2 pt aerosol	12 hours	3A	Spray soil surface until thoroughly wet. Repeat at 10-day intervals if necessary. Aerosol for adults only.
	s-kinoprene Enstar II	1 oz/5 gal	4 hours	7A	Drench by submersion in solution until no more air bubbles escape.
	<i>Steinernema feltiae</i> Entonem NemaShield Nemasys ScanMask	follow label directions	4 hours		Apply when small larvae first appear. Moisture and temperature are critical.
	thiamethoxam Flagship 25WG	follow label for drench	12 hours	4A	Drench may take 1-2 weeks for activity; do not leach for 7 days.
<b>Leafminer</b>	abamectin Avid 0.15EC	8 oz	12 hours	6	Apply as needed and repeat application at 7-day intervals or as necessary. Do not apply more than 16 fl oz or less than 8 fl oz per acre. Use in sufficient water to obtain uniform plant coverage. Phytotoxicity has been observed on certain species of ferns.
	acetamiprid TriStar 30SG	6.7-8.0 oz	12 hours	4A	Rotate with other insecticides. Apply as a full coverage foliar spray. Use of a non-ionic spreader-sticker adjuvant may improve control.
	azadirachtin Azatin 3.0% E Neemazad Ornazin 3%	10-16 oz 2.25-4.5 fl oz 10 oz	4 hours 12 hours 12 hours	18B	Must get full coverage for control but avoid excess runoff. Use fine spray; can also be applied as drench. Spray early. Make 2 applications in rotation with adulticides such as pyrethroids.
	chlorpyrifos DuraGuard 20% ME	0.25-0.5 oz/gal	24 hours	1B	Shake concentrate well before diluting.
	cyromazine Citation 75WP	2.66 oz/acre	12 hours	17	Labeled only for chrysanthemums. Apply to wet in minimum of 100 gal of water when stippling first appears. Harvesters must wear long sleeved shirt, long pants and rubber gloves when harvesting.
	dinotefuran Safari 20SG	1/4-1/2 lb for foliar 3/4-1 1/2 lb for drench	12 hours	4A	For drench apply 4 fl oz finished solution per 6-inch pot. See label for ebb and flood rates.
	λ-cyhalothrin Scimitar GC	1.5-5.0 oz	24 hours	3A	Use for adults only.

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<b>Leafminer</b> (cont.)	novaluron Pedestal 10% SC	6-8 fl oz	12 hours	15	Do not apply more than once every 30 days or more than 2 applications per crop. Do not apply to poinsettias.
	permethrin Pounce 3.2EC	20 fl oz	24 hours	3A	Registered for use on chrysanthemums.
	spinosad Conserve SC	22 fl oz	4 hours	5	
	thiamethoxam Flagship 24WG	4-8 oz	12 hours	4A	
<b>Leafroller</b>	acephate Orthene TT&O 75SP TT&O 97	2/3 lb 8-12 oz	24 hours	1B	
	cyfluthrin Decathlon 2EC 20WP	1-2 oz 1.9 oz	12 hours	3A	See <b>Aphids</b> .
	pyrethrum X-Clude Pyrenone Natural Plus	aerosol 2-12 oz/acre	12 hours	3A	Follow label directions.
<b>Mealybug</b>	acephate Orthene TT&O 75SP TT&O 97	2/3 lb 8-12 oz	24 hours	1B	See <b>Aphids</b> .
	acetamiprid TriStar 70WSP TriStar 30SG	2-4 soluble bags 2.7 oz	24 hours 12 hours	4A	Tank mix with surfactant or pyrethroid may improve control of adults. Apply as a full coverage foliage spray. Use of a non-ionic spreader-sticker adjuvant may improve control.
	azadirachtin Azatin Neemazad Ornazin 3%	10-16 oz 2.25-4.5 oz 8 oz	4 hours 12 hours 12 hours	18B	Must get full coverage for control but avoid excess runoff. Use fine spray; can also be applied as drench. Addition of 0.5%-1.0% non-phytotoxic oil will enhance efficacy.
	<i>Beauveria bassiana</i> Naturalis-O	30-100 fl oz	4 hours		Wait 48 hours before applying a fungicide.
	bifenthrin Talstar T&O, Attain 10 WP 7.9% 0.67 F Attain	8-40 oz 25-50 fl oz 8-40 oz aerosol	12 hours	3A	Apply as a full coverage foliar spray.
	buprofezin Talus	follow label directions	12 hours	16	Apply no more than two applications per growing cycle.

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<b>Mealybug</b>	chlorpyrifos DuraGuard 20% ME	0.25-0.5 oz/gal	24 hours	1B	Shake concentrate well before diluting.
	cyfluthrin Decathlon 2EC	1-2 oz	12 hours	3A	See <b>Aphids</b> .
	dinotefuran Safari 20SG	1/4-1/2 lb for foliar 3/4-1 1/2 lb for drench	12 hours	4A	For drench, apply 4 fl oz finished solution per 6 inch pot. See label for ebb and flood rates.
	fenpropathrin Tame 2.4EC	10 oz	24 hours	3A	
	flonicamid 50 WDG Aria 0.7 oz package	1-6 packets (0.7-4.3 oz)	12 hours	9C	Repeat application every 7-28 days as necessary.
	fluvalinate Mavrik 2EC	2-5 oz	12 hours	3A	
	horticultural oils Sunspray ultrafine Saf-T-Side	1%-2% 1-2 gal 1-2 gal	4 hours		Care must be taken because some plants are sensitive to oils. Thorough coverage is necessary, but do not over apply and get excessive runoff. Use fine spray.
	imidacloprid Marathon 1G Marathon II	9-15 oz/1,000 sq ft 1.7 fl oz	12 hours	4A	
	insecticidal soap M-Pede Olympic	1%-2% 1-2 gal 1-2 gal	12 hours		Repeat spray after 2 or 3 days. Thoroughly wet both surfaces of infested leaves. Use soft water whenever possible.
	methiocarb MesuroI 75 WP	0.5-1 lb	24 hours	1A	
	s-kinoprene Enstar II	6-20 oz	4 hours	7A	See <b>Aphids</b> . Registered for root mealybug.
	spirotetramat Kontos 2F	1.7 fl oz	24 hours	23	See label for drench instructions.
	thiamethoxam Flagship 25WG Flagship 0.22G	2-4 oz follow label directions	12 hours	4A	Medium treatment may take 1-2 weeks for activity; do not leach for 7 days.
	<b>Slugs and Snails</b>	metaldehyde Deadline B 15D	follow label directions	24 hours	
methiocarb MesuroI 75 WP		1/2-1 lb	24 hours	1A	Spray plants and foliage until wet. Do not use in conjunction with foliar fertilizer.

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<b>Spider Mite</b>	abamectin Avid 0.15EC	4 oz	12 hours	6	Apply as needed and repeat as necessary.
	acequinocyl Shuttle 15 SC	6.4-12.8 fl oz	12 hours	20B	Do not apply through any type irrigation. Wetting agent can be used.
	bifenazate Floramite	2-4 oz	12 hours	un	Do not apply in successive applications. Use at least two alternative products between Floramite treatments.
	bifenthrin Talstar T&O or Attain 10WP 7.9% Attain	6-32 oz 25-50 fl oz aerosol	12 hours	3A	Apply as a full coverage foliar spray.
	chlorfenapyr Pylon	2.6-5.2 fl oz	12 hours	13	
	chlorpyrifos DuraGuard 20% ME	0.25-0.5 oz/gal	24 hours	1B	Shake concentrate well before diluting.
	clofentezine Ovation	2 oz	12 hours	10A	Limited number of plants (see label).
	dicofol Kelthane 35WP	1-1 1/3 lb	12 hours	un	Repeat as necessary.
	etoxazole TetraSan 5WDG	8-16 oz	12 hours	10B	Limit to 2 applications per crop cycle.
	fenbutatin-oxide Vendex 50WP	8-16 oz	48 hours	12B	Do not add oil to spray solution.
	fenpropathrin Tame 2.4EC	8-16 oz	24 hours	3A	
	fenpyrozimate Akari 5 SC	16-24 fl oz	12 hours	21A	
	fluvalinate Mavrik 2E	2-5 oz	12 hours	3A	
	hexythiazox Hexygon DF	1-2 oz	12 hours	10A	
	horticultural oil Sunspray ultrafine Saf-T-Side Triact	1-2 gal	4 hours		
	Insecticidal soap M-Pede Olympic	1%-2% 1-2 gal 1-2 gal	12 hours		Repeat spray weekly for 2 or 3 weeks. Thoroughly wet both surfaces of infested leaves. Use soft water whenever possible.
	λ-cyhalothrin Scimitar GC	1.5-5 oz	24 hours	3A	

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<b>Spider Mite</b>	methiocarb Mesurol 75W	1/2-1 lb	24 hours	1A	
	pyridaben Sanmite 75WP	2-4 oz	12 hours	21A	
	spinosad Conserve SC	22 fl oz	4 hours	5	
	spiromesifen Judo 4 F	1-4 oz	12 hours	23	Effective on nymphal and egg stages.
	spirotetramat Kontos 2F	1.7 fl oz	24 hours	23	See label for drench instructions.
	<b>Thrips</b>	abamectin Avid 0.15 EC	8 oz	12 hours	6
acetamiprid TriStar 30SG		4-8 oz	12 hours	4A	Apply as a full coverage foliage spray. Use of a non-ionic spreader-sticker adjuvant may improve control.
acephate Orthene TT&O 75SP TT&O 97		2/3 lb 8 oz	24 hours	1B	Aerosol may also be used as for aphid control.
azadirachtin Azatin 3.0% E Neemazad 4.5% Ornazin 3%		12-16 oz 2.25-4.5 oz 8 oz	4 hours 12 hours 12 hours	18B	Must get full coverage for control but avoid excess runoff. Use fine spray; can also be applied as drench. Addition of 0.5% to 1.0% non-phytotoxic oil will enhance efficacy.
<i>Beauveria bassiana</i> Naturalis-O BotaniGard ES		30-100 fl oz 32-64 fl oz	4 hours 12 hours		
chlorfenapyr Pylon		10-20 fl oz	12 hours	13	
chlorpyrifos DuraGuard 20% ME		0.25-0.5 oz/gal	24 hours	1B	Shake concentrate well before diluting.
cyfluthrin Decathlon 2EC 20WP		1-2 oz 1.9 oz	12 hours	3A	See <b>Aphids</b> .
dinotefuran Safari 20SG		4-8 oz for foliar 12-24 oz for drench	12 hours	4A	Suppression only. For drench apply 4 fl oz finished solution per 6 inch pot. See label for ebb and flood rates.
flonicamid 50 WDG Aria 0.7 oz package		1-6 packets (0.7-4.3 oz)	12 hours	9C	Repeat application every 7-28 days as necessary.
fluvalinate Mavrik 2E		2-5 oz	12 hours	3A	

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<b>Thrips (cont.)</b>	imidacloprid Marathon 1G 60WP	9-15 oz/1,000 sq ft	12 hours	4A	Use 60WP as drench.
	insecticidal soap M-Pede Olympic	1%-2% 1-2 gal 1-2 gal	12 hours		Repeat spray weekly for 2 or 3 weeks. Thoroughly wet both surfaces of infested leaves. Use soft water whenever possible.
	λ-cyhalothrin Scimitar GC	1.5-5.0 oz	24 hours	3A	
	novaluron Pedestal 10% SC	6-8 fl oz	12 hours	15	Do not apply more than once every 30 days or more than 2 applications per crop. Do not apply to poinsettias.
	pyrethrum X-Clude Natural Plus Pyrenone	aerosol 2-12 oz/acre	12 hours	3A	Follow label directions.
	pyridalyl Overture 35WP	8 oz	12 hours	un	2 oz soluble packets; do not get wet.
	resmethrin SBP-1382 2E PT 1200	1 pt aerosol	12 hours	3A	Use on begonia, fuchsia, salvia, poinsettia, coleus, chrysanthemum, geranium, petunias, aster, calendula, marigolds, roses, azalea and ivy.
	spinosad Conserve SC	6 fl oz	4 hours	5	
	thiamethoxam Flagship 25WG	2-4 oz	12 hours	4A	For leaf-feeding thrips.
	<b>Whitefly</b>	abamectin Avid 0.15EC	8 fl oz	12 hours	6
acephate Orthene TT&O 75SP PT 1300 TT&O 97		2/3 lb aerosol 8 oz	24 hours	1B	
acetamiprid TriStar 70WSP TriStar 30SG		2-4 soluble bags 2.7-5.3 oz	24 hours 12 hours	4A	Tank mix with surfactant or pyrethroid may improve control of adults. Apply as a full coverage foliage spray. Use of a non-ionic, spreader-sticker adjuvant may improve control.
azadirachtin Azatin 3.0% E Neemazad Ornazin 3%		10-16 oz 2.25-4.5 oz 10 oz	4 hours 12 hours 12 hours	18B	Must get full coverage for control but avoid excess runoff. Use fine spray; can also be applied as drench. Ensure good coverage to top and bottom of leaves.
<i>Beauveria bassiana</i> Naturalis-O BotaniGard ES		30-100 fl oz 16-32 fl oz	4 hours 12 hours		

**FLOWERS AND FOLIAGE PLANTS  
COMMERCIAL GREENHOUSE INSECT CONTROL**

<b>Insect or Mite</b>	<b>Insecticide and Formulation</b>	<b>Amount Per 100 Gallons of Water</b>	<b>REI</b>	<b>Mode of Action Number</b>	<b>Comments/Precautions</b>
<b>Whitefly</b>	bifenthrin Talstar T&O or Attain 10WP 7.9% Attain	6-32 oz 25-50 fl oz aerosol	12 hours	3A	Apply as a full coverage foliar spray.
	buprofezin Talus	follow label directions	12 hours	16	Apply no more than two applications per growing cycle.
	cyfluthrin Decathlon 2E	1-2 oz	12 hours	3A	See <b>Aphids</b> .
	dinotefuran Safari 20SG	1/4-1/2 lb for foliar 3/4-1 1/2 lb for drench	12 hours	4A	For drench apply 4 fl oz finished solution per 6" pot.
	fenpropathrin Tame 2.4EC	5 1/3-10 2/3 oz	24 hours	3A	
	fenvalerate Pydrin 2.4EC	5-10 oz	12 hours	3A	
	flonicamid 50 WDG Aria 0.7 oz. package	1-6 packets (0.7-4.3 oz)	12 hours	9C	Repeat application every 7-28 days as necessary.
	fluvalinate Mavrik 2E	2-5 oz	12 hours	3A	
	horticultural oils Sunspray ultrafine Saf-T-Side	1%-2% 1-2 gal 1-2 gal	4 hours		Care must be taken because some plants are sensitive to oils. Thorough coverage is necessary but do not over apply and get excessive runoff. Use fine spray.
	imidacloprid Marathon 1G 60WP Marathon II	9-15 oz/1,000 sq ft 1.7 fl oz	12 hours	4A	Use 60WP as drench.
	insecticidal soap M-Pede Olympic	1%-2% 1-2 gal 1-2 gal	12 hours		Thoroughly wet both surfaces of infested leaves. Use soft water whenever possible.
	λ-cyhalothrin Scimitar GC	1.5-5 oz	24 hours	3A	
	novaluron Pedestal 10% SC	6-8 fl oz	12 hours	15	Do not apply more than once every 30 days or more than 2 applications per crop. Do not apply to poinsettias.
	pymetrozine Endeavor 50WG	2.5-5 oz	12 hours	9B	
	pyridaben Sanmite 75WP	2-4 oz	12 hours	21A	
	pyriproxyfen Distance	6-8 fl oz	12 hours	7C	Target crawlers. Apply no more than two times per crop cycle. Do not apply to poinsettias.

**FLOWERS AND FOLIAGE PLANTS  
COMMERCIAL GREENHOUSE INSECT CONTROL**

<b>Insect or Mite</b>	<b>Insecticide and Formulation</b>	<b>Amount Per 100 Gallons of Water</b>	<b>REI</b>	<b>Mode of Action Number</b>	<b>Comments/Precautions</b>
<b>Whitefly (cont.)</b>	pyrethrum X-Clude Pyrenone Natural Plus	aerosol 2-12 oz/acre	12 hours	3A	Follow label directions.
	resmethrin SBP-1382 2E PT 1200	1 pt aerosol	12 hours	3A	Use on begonia, fuchsia, salvia, poinsettia, coleus, chrysanthemum, geranium, petunias, aster, calendula, marigolds, roses, azalea and ivy.
	s-kinoprene Enstar II	6-20 oz	4 hours	7A	See <b>Aphids</b> .
	spiromesifen Judo 4 F	1-4 oz	12 hours	23	Effective on nymphal and egg stages.
	spirotetramat Kontos 2F	1.7 fl oz	24 hours	23	See label for drench instructions.
	thiamethoxam Flagship 25WG Flagship 0.22G	2-4 oz follow label directions	12 hours	4A	Medium treatment may take 1-2 weeks for activity; do not leach for 7 days.
	<b>Broad and Clycamen Mite</b>	abamectin Avid 0.15EC	4 oz	12 hours	6
chlorfenapyr Pylon		2.6-5.2 fl oz	12 hours	13	
dicofol Kelthane 35WP		1-1 1/2 lb	12 hours	un	
pyridaben Sanmite 75WP		2-4 oz	12 hours	21A	
sulfur elemental sulfur		follow label directions	12 hours		Do not tank mix with oils.