

## INSECT CONTROL FOR ORNAMENTALS GROWN IN NURSERIES OR LANDSCAPES

**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. The plant which is being damaged and the site where the plant is located (nursery or landscape) must be listed on the label. The pests that a compound is registered for are also listed on the label.

Many insects are developing resistance to currently available pesticides. 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 Group" (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 "Minimum Hours Between Application and Reentry."

Phytotoxicity (damage to the plant as the 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.

Insecticides listed below are identified by common chemical name. A trade name in parentheses may also be listed as a convenience for the reader. Some additional trade names that may be available to homeowners are listed in the **HOMEOWNER INSECTICIDE PRODUCT LIST** section beginning on page 317.

All chemical information provided below is given with the understanding that no endorsement of named products is intended nor is criticism implied of similar products that are not mentioned. Individuals who use pesticides are responsible for ensuring that the intended use complies with current regulations and conforms to the product label. Before purchasing or using any pesticide, always read and carefully follow the label directions.

Insect or Mite	Pesticide Common Name (Trade Name)	Minimum Hours Between Application and Reentry	IRAC Mode of Action Group	Permitted Application Sites:
				G = greenhouse L = landscape N = nursery
<b>Adelgid</b>	acetamiprid (TriStar)	12 hours	4A	G, L, N
	chlorantraniliprole (Acelepryn)	4 hours	28	L
	dinotefuran (Safari)	12 hours	4A	G, L, N
	horticultural oil (various brands)	4 hours		G, L, N
	imidacloprid (Merit, Marathon, others)	12 hours	4A	follow label
	insecticidal soap (various brands)	12 hours	---	G, L, N
	spirotetramat (Kontos)	24 hours foliar (see exception for drench application)	23	G, N
	thiamethoxam (Flagship)	12 hours	4A	G, N
<b>Aphids</b>	abamectin (Avid)	12 hours	6	G, L, N
	acephate (Orthene)	24 hours	1B	G, L, N
	acetamiprid (TriStar)	12 hours	4A	G, L, N
	azadirachtin (Azatin XL, Ornazin)	4 hours	18B	G, L, N
	<i>Beauveria bassiana</i> (BotaniGard)	4 hours	---	G, L, N
	bifenthrin + clothianidin (Aloft)	12 hours	4 + 4A	L
	bifenthrin + imidacloprid (Allectus)	12 hours	3 + 4A	L
	carbaryl (Sevin)	12 hours	1A	L, N
	clothianidin (Arena)	12 hours	4A	follow label
	cyfluthrin (Decathlon)	follow label directions	3	G, N
	fluvalinate (Mavrik)	follow label directions	3	G, L

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Insect or Mite	Pesticide Common Name (Trade Name)	Minimum Hours Between Application and Reentry	IRAC Mode of Action Group	Permitted Application Sites:
				G = greenhouse L = landscape N = nursery
<b>Aphids</b>	horticultural oil (various brands)	4 hours	—	G, L, N
	imidacloprid (Merit, Marathon)	12 hours	4A	follow label
	insecticidal soap (various brands)	12 hours	—	G, L, N
		follow label directions		
	neem oil (Triact) 70	4 hours	18B	G, L, N
	permethrin (Astro, Perm-UP, others)	12 hours	3	follow label
	pymetrozine (Endeavor)	12 hours	9B	G, L, N
	pyrethrins (various brands)	12 hours	3A	G, L, N
	spinetoram + sulfoxaflor (XXpire)	12 hours	4C + 5	G, L, N
	spirotetramat (Kontos)	24 hours foliar (see exception for drench application)	23	G, N
	thiamethoxam (Flagship)	12 hours	4A	G, N
<b>Armored Scale</b> (such as juniper scale, oystershell scale, pine needle scale, tea scale, euonymus scale, white peach scale)	acephate (Orthene)	24 hours	1B	G, L, N
	acetamiprid (TriStar)	12 hours	4A	G, L, N
	buprofezin (Talus)	12 hours	16	G, L, N
	carbaryl (Sevin)	follow label directions	1A	L, N
	dinotefuran (Safari)	12 hours	4A	G, L, N
	horticultural oil (various brands)	4 hours	---	G, L, N
	insecticidal soap (various brands)	12 hours	---	G, L, N
		follow label directions		
	neem oil (Triact) 70	4 hours	18B	G, L, N
	pyriproxyfen (Distance)	12 hours	7C	G, L, N
	spinetoram + sulfoxaflor (XXpire)	12 hours	4C + 5	G, L, N
<b>Bagworm</b>	acephate (Orthene)	24 hours	1B	G, L, N
	acetamiprid (TriStar)	12 hours	4A	G, L, N
	azadirachtin (Azatin)	4 hours	18B	G, L, N
	<i>Bacillus thuringiensis kurstaki</i> (BiobitHP, DiPel or Foray)	4 hours	11B2	G, L, N
	bifenthrin (Talstar)	follow label directions	3	G, L, N
	bifenthrin + clothianidin (Aloft)	12 hours	4 + 4A	L
	bifenthrin + imidacloprid (Allectus)	12 hours	3 + 4A	L
	carbaryl (Sevin)	follow label directions	1A	L, N
	chlorantraniliprole (Acelepryn)	4 hours	28	L
	fluvalinate (Mavrik)	follow label directions	3	G, L
	indoxacarb (Provaunt)	12 hours	22	L
	novaluron (Pedestal)	12 hours	15	G, N
	spinetoram + sulfoxaflor (XXpire)	12 hours	4C + 5	G, L, N
	spinosad (Conserve SC)	4 hours	5	G, N

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				G = greenhouse L = landscape N = nursery
<b>Bark Beetle</b>	bifenthrin (Onyx, Talstar)	follow label directions	3	follow label
	permethrin (Astro, Perm-UP, others)	12 hours	3	follow label
<b>Black Vine Weevil</b>	acephate (Orthene)	follow label directions	1A	G, L, N
	<i>Beauveria bassiana</i> (BotaniGard)	4 hours	---	G, L, N
	bifenthrin (Onyx, Talstar)	follow label directions	3	follow label
	cyfluthrin + imidacloprid (Discus)	12 hours	3 + 4A	N
	dinotefuran (Safari)	12 hours	4A	G, L, N
	fluvalinate (Mavrik)	follow label directions	3	G, L
	imidacloprid (Merit, Marathon, others)	12 hours	4A	follow label
<b>Borers</b> (clearwing, flatheaded, and roundheaded borers are included in this section. Make sure label specifically lists the type of borer you are trying to control.)	azadirachtin (Azatin)	4 hours	18B	G, L, N
	bifenthrin (Onyx, Talstar)	follow local regulations for landscape reentry	3	follow label
	chlorantraniliprole (Acelepryn)	4 hours	28	L
	cyfluthrin + imidacloprid (Discus)	12 hours	3 + 4A	N
	dinotefuran (Safari)	12 hours	4A	G, L, N
	imidacloprid (Merit, Marathon II, others)	12 hours	4A	follow label
<b>Caterpillars</b> (such as armyworm, budworm, eastern tent caterpillar, fall webworm, orangestriped oakworm, leafrollers)	permethrin (Astro, Perm-UP, Permethrin Pro)	12 hours	3	follow label
	acephate (Orthene)	24 hours	1B	G, L, N
	acetamiprid (TriStar)	12 hours	4A	G, L, N
	azadirachtin (Azatin)	4 hours	18B	G, L, N
	<i>Bacillus thuringiensis kurstaki</i> (DiPel)	4 hours	11B2	G, L, N
	bifenthrin (Onyx, Talstar)	follow label directions	3	follow label
	bifenthrin + clothianidin (Aloft)	12 hours	4 + 4A	L
	bifenthrin + imidacloprid (Allectus)	12 hours	3 + 4A	L
	carbaryl (Sevin)	12 hours	1A	L, N
	chlorantraniliprole (Acelepryn)	4 hours	28	L
	indoxacarb (Provaunt)	12 hours	22	L
	insecticidal soap (various brands)	follow label directions	---	G, L, N
	novaluron (Pedestal)	12 hours	15	G, N
	permethrin (Astro, Perm-UP, Permethrin Pro)	12 hours	3	follow label
	spinetoram + sulfoxaflor (XXpire)	12 hours	4C + 5	G, L, N
	spinosad (Conserve SC)	4 hours	5	G, N
	tebufenozide (Confirm)	4 hours	18A	G, L, N
<b>Carpenter Ant</b>	permethrin (Astro, Perm-UP, Permethrin Pro)	12 hours	3	follow label
<b>Cricket</b>	bifenthrin (Onyx, Talstar)	12 hours	3	follow label
	cyfluthrin (Decathlon)	follow label directions	3	G, N

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<b>Cricket</b>	insecticidal soap (various brands)	Follow label directions	3	G, L, N
	pyrethrins (Pyrenone)	Follow label directions		follow label
<b>Eriophyid Mite</b>	abamectin (Avid)	12 hours	6	G, L, N
	horticultural oil (various brands)	4 hours	---	G, L, N
	spiromesifen (Judo, Forbid)	12 hours	23	G, N
<b>False Spider Mite</b> (such as privet mite)	acequinocyl (Shuttle)	12 hours	20B	G, N
	bifenazate (Floramite)	12 hours	un	G, L, N
	etoxazole (TetraSan)	12 hours	10B	G, L, N
	horticultural oil (various brands)	4 hours	---	G, L, N
	insecticidal soaps	12 hours	---	G, L, N
	spiromesifen (Judo, Forbid)	12 hours	23	follow label
<b>Fire Ant (Imported)</b>	Treatment is required to ship containerized or balled plants from quarantined to non-quarantined areas. Also, maintenance of Fire Ant free status of nurseries in federal imported fire ant quarantine areas requires certain actions. Consult Arkansas Plant Board to determine your nursery's classification and consult USDA APHIS 81-25-001, "Imported Fire Ant: Quarantine Treatments for Nursery Stock, Grass Sod, and Related Materials," updated January 2015, for all rules and regulations pertaining to the Federal Imported Fire Ant quarantine and treatment requirements. The following insecticides are authorized by USDA for the treatment of regulated articles under the Imported Fire Ant (IFA) quarantine: abamectin (Award II) Bait - Field grown bifenthrin (Talstar, Onyx Pro), etc. (many) G, F, EC - Container, B&B, sod chlorpyrifos (Dursban, Chlorpyrifos) E, G - Container, B&B, field grown, sod diazinon Section 24(c) only, contact State plant regulatory official fenoxycarb (Award) Bait - Field grown fipronil (Top Choice, Fipronil) G - Container, sod hydramethylnon (Amdro Pro) Bait - Field grown methoprene (Extinguish) Bait - Field grown pyriproxyfen (Distance) Bait - Field grown tefluthrin (no label currently available) G - Container			
<b>Fungus Gnat Adults</b>	bifenthrin (Talstar)	12 hours	3	follow label
	cyfluthrin (Decathlon)	12 hours	3A	G, L, N
	fluvalinate (Mavrik)	12 hours	3A	G, L, N
	insecticidal soaps	12 hours		G, L, N
	permethrin (Astro, Perm-UP, Permethrin Pro)	12 hours	3	follow label
<b>Fungus Gnat Larvae</b>	acetamiprid (TriStar)	12 hours	4A	G, L, N
	azadirachtin (Azatin XL)	12 hours	18B	G, L, N
	<i>Bacillus thuringiensis</i> var. <i>israelensis</i>	4 hours	11A1	follow label
	chlorfenapyr (Pylon)	12 hours	13	G
	cyromazine (Citation)	12 hours	17	G, L, N
	diflubenzuron (Adept)	12 hours	15	G
	kinoprene (Enstar II)	4 hours	7A	G
	pyriproxyfen (Distance)	12 hours	7C	G, L, N
	<i>Steinernema feltiae</i> (various; beneficial nematode)	0 hours	biological	G, L, N

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<b>Granulate Ambrosia Beetle</b>	permethrin (Astro, Perm-UP, Permethrin Pro)	12	3	follow label
<b>Grasshopper</b>	bifenthrin (Onyx, Talstar)	12 hours	3	follow label
	carbaryl (Sevin 5) bait	follow label directions	1A	follow label
	cyfluthrin (Decathlon)	follow label directions	3	G, N
	insecticidal soap (various brands)	12 hours	---	G, L, N
<b>Gypsy Moth</b>	Contact the Arkansas State Plant Board, 1 Natural Resources Drive, P. O. Box 1069, Little Rock, AR 72203-1069, Phone 501-225-1598, Fax 501-219-1697.			
<b>Japanese Beetle (adult) and other leaf-feeding scarab beetles</b>	acephate (Orthene)	follow label directions	1A	G, L, N
	acetamiprid (TriStar)	12 hours	4A	G, L, N
	azadirachtin (Azatin XL)	4 hours	18B	G, L, N
	bifenthrin (Onyx, Talstar)	follow label directions	3	follow label
	bifenthrin + clothianidin (Aloft)	12 hours	4 + 4A	L
	bifenthrin + imidacloprid (Allectus)	12 hours	3 + 4A	L
	carbaryl (Sevin)	follow label directions	3	L, N
	chlorantraniliprole (Acelepryn)	4 hours	28	L
	clothianidin (Arena)	12 hours	4A	L
	cyfluthrin (Decathlon) 20 WP	follow label directions	3	G, N
	cyfluthrin + imidacloprid (Discus)	12 hours	3 + 4A	N
	dinotefuran (Safari)	12 hours	4A	G, L, N
	imidacloprid (Merit, Marathon II, others)	12 hours	4A	follow label
	permethrin (Astro, Perm-UP, Permethrin Pro)	12 hours	3	follow label
	spinetoram + sulfoxaflor (XXpire)	12 hours	4C + 5	G, L, N
thiamethoxam (Flagship)	12 hours	4A	G, N	
<b>June Beetle</b>	carbaryl (Sevin)	follow label directions	1A	L, N
	cyfluthrin (Decathlon)	follow label directions	3	G, N
<b>Lace Bug</b>	acephate (Orthene)	follow label directions	1A	G, L, N
	<i>Beauveria bassiana</i> (BotaniGard)	4 hours	---	G, L, N
	bifenthrin (Talstar, Onyx)	12 hours	3	follow label
	bifenthrin + clothianidin (Aloft)	12 hours	4 + 4A	L
	bifenthrin + imidacloprid (Allectus)	12 hours	3 + 4A	L
	carbaryl (Sevin)	12 hours	1A	L, N
	chlorantraniliprole (Acelepryn)	4 hours	28	L
	cyfluthrin + imidacloprid (Discus)	12 hours	3 + 4A	N
	dinotefuran (Safari)	12 hours	4A	G, L, N
	imidacloprid (Merit, Marathon, others)	12 hours	4A	follow label
	permethrin (Astro, Perm-UP, Permethrin Pro)	12 hours	3	follow label

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<b>Lace Bug</b>	spinetoram + sulfoxaflor (XXpire)	12 hours	4C + 5	G, L, N
	soap (Olympic Insecticidal)	12 hours follow label directions	---	follow label
	thiamethoxam (Flagship)	12 hours	4A	G, N
<b>Leaf Beetle</b> (such as cucumber beetle, elm leaf beetle, willow leaf beetle, and flea beetles including <i>Altica</i> spp.)	acephate (Orthene)	12 hours	1A	G, L, N
	acetamiprid (TriStar)	12 hours	4A	G, L, N
	bifenthrin (Onyx, Talstar)	12 hours	3	follow label
	bifenthrin + clothianidin (Aloft)	12 hours	4 + 4A	L
	bifenthrin + imidacloprid (Allectus)	12 hours	3 + 4A	L
	carbaryl (Sevin)	12 hours	3	L, N
	chlorantraniliprole (Acelepryn)	4 hours	28	L
	cyfluthrin + imidacloprid (Discus)	12 hours	3 + 4A	N
	dinotefuran (Safari)	12 hours	4A	G, L, N
	imidacloprid (Merit, Marathon II, others)	12 hours	4A	follow label
	spinetoram + sulfoxaflor (XXpire)	12 hours	4C + 5	G, L, N
	spinosad (Conserve SC)	4 hours	5	G, N
	thiamethoxam (Flagship)	12 hours	4A	G, N
<b>Leafhopper</b> (such as potato leafhopper and sharpshooter)	acephate (Orthene)	follow label directions	1A	G, L, N
	acetamiprid (TriStar) 70 WSP	24 hours	4A	G, L, N
	bifenthrin (Onyx, Talstar)	follow label directions	3	follow label
	bifenthrin + clothianidin (Aloft)	12 hours	4 + 4A	L
	bifenthrin + imidacloprid (Allectus)	12 hours	3 + 4A	L
	carbaryl (Sevin)	follow label directions	1A	L, N
	clothianidin (Arena)	12 hours	4A	L
	cyfluthrin (Decathlon)	follow label directions	3	G, N
	cyfluthrin + imidacloprid (Discus)	12 hours	3 + 4A	N
	dinotefuran (Safari)	12 hours	4A	G, L, N
	fluvalinate (Mavrik)	follow label directions	3	G, L
	imidacloprid (Merit, Marathon II, others)	12 hours	4A	follow label
	insecticidal soap (various brands)	12 hours	---	G, L, N
	neem oil (Triact) 90 EC	4 hours	18B	G, L, N
	permethrin (Astro, Perm-UP, Permethrin Pro)	12 hours	3	follow label
spirotriamat (Kontos)	24 hours foliar (see exception for drench application)	23	G, N	
thiamethoxam (Flagship)	12 hours	4A	G, N	

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<b>Leafminer</b> (such as boxwood leafminer, holly leafminer, birch leafminer)  <b>Note:</b> This includes dipterous, lepidopterous, and coleopterous leafminers. Make sure leafminer to be treated is listed on label.	abamectin (Avid)	follow label directions	6	G, L, N
	acephate (Orthene)	follow label directions	1A	G, L, N
	acetamiprid (TriStar)	24 hours	4A	G, L, N
	azadirachtin (Azatin XL)	12 hours	18B	G, L, N
	bifenthrin (Onyx, Talstar)	follow label directions	3	follow label
	chlorantraniliprole (Acelepryn SC)	4 hours	28	L
	clothianidin (Arena)	12 hours	4A	L
	cyfluthrin + imidacloprid (Discus)	12 hours	3 + 4A	N
	dinotefuran (Safari)	12 hours	4A	G, L, N
	imidacloprid (Merit, Marathon, others)	12 hours	4A	follow label
	permethrin (Astro, Perm-UP, Permethrin Pro)	12 hours	3	follow label
	pyriproxyfen (Distance)	12 hours	7C	G, L, N
spinosad (Conserve SC)	4 hours	5	G, N	
<b>Mealybug</b>	acephate (Orthene)	12 hours	1A	G, L, N
	acetamiprid (TriStar)	24 hours	4A	G, L, N
	<i>Beauveria bassiana</i> (BotaniGard)	4 hours	---	G, L, N
	bifenthrin (Onyx, Talstar)	follow label directions	3	follow label
	buprofezin (Talus)	12 hours	16	G, N
	carbaryl (Sevin)	follow label directions	1A	L, N
	clothianidin (Arena)	12 hours	4A	L
	cyfluthrin (Decathlon) 20 WP	follow label directions	3	G, N
	cyfluthrin + imidacloprid (Discus)	12 hours	3 + 4A	N
	dinotefuran (Safari)	12 hours	4A	G, L, N
	flupalinate (Mavrik) 22.3 F	follow label directions	3	G, L
	horticultural oil (various brands)	4 hours	---	G, L, N
	imidacloprid (Merit, Marathon, others)	12 hours	4A	follow label
	insecticidal soap (various brands)	12 hours	---	G, L, N
	neem oil (Triact) 70	4 hours	18B	G, L, N
	permethrin (Astro, Perm-UP, Permethrin Pro)	12 hours	3	follow label
	spinetoram + sulfoxaflor (XXpire)	12 hours	4C + 5	G, L, N
spirotetramat (Kontos)	24 hours foliar (see exception for drench application)	23	G, N	
thiamethoxam (Flagship)	12 hours	4A	G, N	

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<b>Pillbug</b>	bifenthrin (Onyx, Talstar)	12 hours	3	follow label
	cyfluthrin (Decathlon) 20 WP	follow label directions	3	G, N
<b>Plant Bug</b>	bifenthrin (Onyx, Talstar)	follow label directions	3	follow label
	cyfluthrin (Decathlon)	follow label directions	3	G, N
	insecticidal soap (various brands)	12 hours	---	G, L, N
		follow label directions		
	permethrin (Astro, others)	12 hours	3	follow label
	spinetoram + sulfoxaflor (XXpire)	12 hours	4C + 5	G, L, N
thiamethoxam (Flagship)	12 hours	4A	G, N	
<b>Psyllid</b>	acephate (Orthene)	follow label directions	1A	G, L, N
	acetamiprid (TriStar)	24 hours	4A	G, L, N
	azadirachtin (Azatin XL)	12 hours	18B	G, L, N
	<i>Beauveria bassiana</i> (BotaniGard)	4 hours	---	G, L, N
	dinotefuran (Safari)	12 hours	4A	G, L, N
	imidacloprid (Merit, Marathon, others)	12 hours	4A	follow label
	insecticidal soap (various brands)	12 hours	---	G, L, N
	neem oil (Triact) 70	4 hours	18B	G, L, N
	spinosad (Conserve SC)	4 hours	5	G, N
	thiamethoxam (Flagship)	12 hours	4A	G, N
<b>Sawfly</b>	acephate (Orthene)	follow label directions	1A	G, L, N
	acetamiprid (TriStar)	24 hours	4A	G, L, N
	carbaryl (Sevin)	follow label directions	1A	L, N
	chlorantraniliprole (Acelepryn SC)	4 hours	28	L
	cyfluthrin (Decathlon) 20 WP	follow label directions	3	G, N
	cyfluthrin + imidacloprid (Discus)	12 hours	3 + 4A	N
	imidacloprid (Merit, Marathon, others)	12 hours	4A	follow label
	indoxacarb (Provaunt)	12 hours	22	L
	insecticidal soap (various brands)	12 hours	---	G, L, N
	spinetoram + sulfoxaflor (XXpire)	12 hours	4C + 5	G, L, N
	spinosad (Conserve SC)	4 hours	5	G, N
<b>Slug, Snail</b>	iron phosphate (bait)	follow label directions	un	follow label
	metaldehyde + carbaryl (Sevin) bait	follow label directions	follow label	follow label
	methiocarb (Mesurol)	24 hours	1A	follow label



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				G = greenhouse L = landscape N = nursery
<b>Soft Scale</b> (such as Fletcher scale, cottony cushion scale, wax scale, San Jose scale)	acetamiprid (TriStar)	12 hours	4A	G, L, N
	buprofezin (Talus)	12 hours	16	G, N
	cyfluthrin + imidacloprid (Discus)	12 hours	3 + 4A	N
	dinotefuran (Safari)	12 hours	4A	G, L, N
	horticultural oil (various brands)	4 hours	---	G, L, N
	imidacloprid (Merit, Marathon, others)	follow label directions	4A	follow label
	pyriproxyfen (Distance)	12 hours	7C	G, L, N
	spinetoram + sulfoxaflor (XXpire)	12 hours	4C + 5	G, L, N
	thiamethoxam (Flagship)	12 hours	4A	G, N
<b>Sowbug</b>	cyfluthrin (Decathlon)	follow label directions	3	G, N
<b>Spider Mite</b> (such as twospotted, southern red, and spruce spider mite)	abamectin (Avid)	12 hours	6	G, L, N
	acequinocyl (Shuttle)	12 hours	20B	G, N
	bifenazate (Floramite)	12 hours	un	G, L, N
	clofentezine (Ovation)	12 hours	10A	G, N
	cyflumetofen (Sultan)	12 hours	25	G, L, N
	etoxazole (TetraSan)	12 hours	10B	G, L, N
	fenazaquin (Magus)	12 hours	21A	G, L, N
	fenpyroximate (Akari)	12 hours	21A	G, N
	hexythiazox (Hexygon)	12 hours	10B	G, L, N
	horticultural oil (various brands)	4 hours	---	follow label
	insecticidal soaps	12 hours	---	follow label
	pyridaben (Sanmite)	12 hours	21A	G, L, N
	spiromesifen (Judo, Forbid)	12 hours	23	follow label
	<b>Spittlebug</b>	acephate (Orthene)	12 hours	1A
cyfluthrin (Decathlon)		follow label directions	11B2	G, N
horticultural oil (various brands)		4 hours	---	follow label
insecticidal soaps (various brands)		12 hours	---	follow label
<b>Stink Bug</b>	pyrethrins (PyGanic, Pyrenone)	follow label directions	3	follow label
<b>Thrips</b>	abamectin (Avid)	12 hours	6	G, L, N
	acephate (Orthene)	24 hours	1B	G, L, N
	acetamiprid (TriStar)	12 hours	4A	G, L, N
	azadirachtin (Azatin)	4 hours	18B	G, L, N
	<i>Beauveria bassiana</i> (BotaniGard)	4 hours	---	G, L, N
	bifenthrin (Onyx, Talstar)	follow label directions	3	follow label
	cyfluthrin (Decathlon)	12 hours	3A	G, L, N
	flonicamid (Aria)	12 hours	9C	G, L, N

**INSECT CONTROL FOR ORNAMENTALS GROWN IN NURSERIES OR LANDSCAPES**

Insect or Mite	Pesticide Common Name (Trade Name)	Minimum Hours Between Application and Reentry	IRAC Mode of Action Group	Permitted Application Sites:
				G = greenhouse L = landscape N = nursery
<b>Thrips</b>	fluvalinate (Mavrik)	12 hours	3A	G, L, N
	horticultural oil (various brands)	4 hours	---	follow label
	novaluron (Pedestal)	12 hours	15	G, N
	spinetoram + sulfoxaflor (XXpire)	12 hours	4C + 5	G, L, N
	spinosad (Conserve SC)	4 hours	4	G, N
<b>Twig Borer</b>	bifenthrin (Onyx, Talstar)	12 hours	3	follow label
<b>Whitefly</b>	abamectin (Avid)	12 hours	6	G, L, N
	acephate (Orthene)	12 hours	1A	G, L, N
	acetamiprid (TriStar)	12 hours	4A	G, L, N
	azadirachtin (Azatin)	4 hours	18B	
	<i>Beauveria bassiana</i> (BotaniGard)	4 hours	---	G, L, N
	bifenthrin (Onyx, Talstar)	12 hours	3	follow label
	buprofezin (Talus)	12 hours	16	G, N
	cyfluthrin (Decathlon)	follow label directions	3	G, N
	dinotefuran (Safari)	follow label directions	4A	G, L, N
	fenazaquin (Magus)	12 hours	21A	G, L, N
	flonicamid (Aria)	12 hours	9C	G, L, N
	fluvalinate (Mavrik)	follow label directions	3	G, L
	horticultural oil (various brands)	4 hours	---	G, L, N
	imidacloprid (Merit, Marathon, others)	12 hours	4A	follow label
	insecticidal soap (various brands)	12 hours	---	G, L, N
	neem oil (Triact)	4 hours	18B	G, L, N
	novaluron (Pedestal)	12 hours	15	G, N
	permethrin (Astro, others)	12 hours	3	follow label
	pyridaben (Sanmite)	12 hours	21A	G, L, N
	pyriproxyfen (Distance) 11.2 EC	12 hours	7C	G, L, N
spinetoram + sulfoxaflor (XXpire)	12 hours	4C + 5	G, L, N	
spirotetramat (Kontos)	24 hours foliar (see exception for drench application)	23	G, N	
	thiamethoxam (Flagship)	12 hours	4A	G, N
<b>White Grub</b> (such as Oriental and Japanese beetle). <b>FOR USE IN CONTAINERS OR LANDSCAPES NOT TURF.</b>	<i>Beauveria bassiana</i> (BotaniGard)	4 hours	---	G, L, N
	chlorantraniliprole (Acelepryn)	4 hours	28	L
	clothianidin (Arena)	12 hours	4A	L
	dinotefuran (Safari)	12 hours	4A	G, L, N
	imidacloprid (Merit, Marathon, others)	12 hours	4A	follow label
	thiamethoxam (Flagship)	12 hours	4A	G, N