

## FLOWER INSECT CONTROL

(Also includes container plantings of trees, shrubs, plants, etc.)

The following table provides flower insect control recommendations with pesticides for use by the homeowner (marked with an \*) and with pesticides for use by licensed applicators only.

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.

Insecticides listed below are identified by common chemical name. A trade name in parentheses may also be listed as a convenience for the reader. Additional trade names that may be available locally are listed in the HOMEOWNER INSECTICIDE PRODUCT LIST beginning on page 233.

| Insect   | Insecticide  | Amount of Formulation per Gallon of Spray | Amount per 100 Gallons of Water | Minimum Interval Between Application and Reentry | Comments/Precautions   |  |
|--|--|---|---------------------------------|--|--|--|
| Aphid  | abamectin (Avid) 1.5 EC  | ---                                       | 8 oz                            | 12 hours   | 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 in certain species of ferns. |  |
|  | acephate (various brands and formulations, some suitable for *homeowner use) | Follow label directions                   | Follow label directions         | 24 hours   |  |  |
|  | acetamiprid (TriStar) 70 WSP   | ---                                       | 1 pack                          | 24 hours   | Not for landscape use.   |  |
|  | azadirachtin (Azatrol EC, Azatin XL)   | Follow label directions                   | Follow label directions         | 4 hours  |  |  |
|  | <i>Beauveria bassiana</i> (BotaniGard) 22 WP                                 | 2 tsp                                     | 1 lb                            | 12 hours   | Three to five sprays needed for adequate control. May burn some tender foliage. Best when used with brown sugar.   |  |
|  | (BotaniGard) 11.3 EC   | 1-2 tsp                                   | 1 pt-1 qt                       | 12 hours   |  |  |
|  | (Naturalis-O) 7.16 EC  | 2 tsp-2 tbsp                              | 30-100 oz                       | 4 hours  |  |  |
|  | bifenthrin (Talstar) 10 WP   | 1-5 tsp                                   | 6.4-32 oz                       |  |  |  |
|  | 7.9 F  | 1 1/2-3 tsp                               | 5-10 oz                         | Not for agricultural use                         |  |  |
|  | clothianidin (Celero)  | Follow label directions                   | Follow label directions         | Follow label directions                          | Follow label directions  | Follow label directions.                         |
|  | cyfluthrin (Decathlon 20WP)  | Follow label directions                   | Follow label directions         | Follow label directions                          | 12 hours   |  |
|  | dinotefuron (Safari)   | Follow label directions                   | Follow label directions         | Follow label directions                          | Follow label directions  | Follow label directions.                         |
|  | fenpropathrin (Tame) 2.4EC   |   | 10 oz                           | 24 hours   |  |  |
|  | flonicamid 50 WDG (Aria 0.7 oz package)                                      |   | 1-6 packets (0.7-4.3 oz)        | 12 hours   |  | Repeat application every 7-28 days as necessary. |
|  | fluvalinate (Mavrik) 22.3 F  | 1/8-5/8 tsp                               | 2-10 oz                         | Follow label directions                          |  | Also labeled as a dip.                           |
| *horticultural oil (Sunspray and others) 98.8 EC | 5 tbsp   | 2 gal                                     | 4 hours                         |  |  |  |

\*Suitable for home use.

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(Also includes container plantings of trees, shrubs, plants, etc.)

| Insect   | Insecticide   | Amount of Formulation per Gallon of Spray | Amount per 100 Gallons of Water | Minimum Interval Between Application and Reentry               | Comments/Precautions   |
|--|---|---|---------------------------------|--|--|
| <b>Aphids</b> (cont.)                              | imidacloprid<br>*(Merit) 75 SP<br>(Marathon) 60 WP  | ---                                       | ---                             | Follow label directions<br>12 hours                            | Follow label directions.   |
|  | *malathion 57 EC  | 2 tsp                                     | 1 qt                            | Follow label directions  |  |
|  | permethrin (Astro) 36.8 EC  | 1/4-1/2 tsp                               | 4-8 oz                          | Follow label directions  |  |
|  | *pyrethrins<br>(X-clude) 0.3 A<br>(Pyrenone) 6 EC   | 1/4-1/2 tsp                               | 2-12 oz                         | Follow label directions  | Spray when air is still; 5-10 seconds/100 sq ft.   |
|  | pymetrozine (Endeavor)  |   | 2.5-5.0 oz                      | 12 hours   |  |
|  | *resmethrin (SPB-1382)<br>0.25 A<br>23.4 EC   | ---<br>1 tsp                              | ---<br>1 pt                     | Follow label directions  | Spray foliage until slightly moist.  |
|  | rotenone 1 D  | ---                                       | ---                             | Follow label directions  |  |
|  | *soap<br>(M-Pede) 49 EC<br>(Olympic Insecticidal) 25% EC<br>(Olympic Insecticidal) 49.5% EC | 2 1/2 oz<br>2 1/2-5 oz<br>2 1/2 oz        | 7 1/2 qt<br>---<br>2 gal        | Follow label directions<br>Follow label directions<br>12 hours |  |
|  | thiamethoxam (Flagship)   | ---                                       | Follow label directions         | 12 hours   |  |
|  | <b>Beetle</b>   | acetamiprid (TriStar)                     | Follow label directions         | Follow label directions  | Follow label directions  |
| azadirachtin (Azatrol EC, Azatin XL)               |   | Follow label directions                   | Follow label directions         | 4 hours  |  |
| bifenthrin (Talstar)<br>10 WP<br>7.9 F             |   | 1-5 tsp<br>1 1/2-3 tsp                    | 6.4-32 oz<br>5-10 oz            | Not for agricultural use                                       |  |
| *carbaryl (Sevin) 50 WP                            |   | Follow label directions                   | Follow label directions         | Follow label directions  | Follow label directions.   |
| imidacloprid<br>*(Merit) 75 SP<br>(Marathon) 60 WP |   | Follow label directions                   | Follow label directions         | Follow label directions  | Follow label directions.   |
| *neem oil  |   | Follow label directions                   | Follow label directions         | Follow label directions  | Follow label directions.   |
| pyrethrins   |   | Follow label directions                   | Follow label directions         | Follow label directions  | Follow label directions.   |
| *soap (Olympic Insecticidal) 25% EC                |   | 2 1/2-5 oz                                | ---                             | Follow label directions  |  |
| spinosad (Conserve) SC                             |   | 0.06 fl oz/gal                            | 6 fl oz                         | 4 hours  | Labeled only for Chrysomelid beetles (e.g., elm leaf beetle, imported willow leaf beetle). |

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|--|--|---|---------------------------------|--|---|
| <b>Blister Beetle</b>  | *carbaryl (Sevin) 50 WP  | 2 tbsp                                    | 2 lb                            | Follow label directions                          | Apply when injury first noted in spring.            |
|  | *pyrethrins (X-clude) 0.3A   | ---                                       | ---                             | Follow label directions                          | Spray when air is still; 5-10 seconds/100 sq ft.    |
| <b>Broad Mite</b>  | *horticultural oil (Sunspray and others) 98.8 EC   | 5 tbsp                                    | 2 gal                           | 4 hours  |   |
| <b>Bulb Fly, Lesser Bulb Fly</b>   | *trichlorfon (Dylox, Proxol) 80 WP   | ---                                       | 20-30 oz                        | Follow label directions                          | Apply as drench at rate of 100 gal/1,000 row feet.  |
|  | 40 EC  | ---                                       | 2-3 pt                          |  |   |
| <b>Bulb Mite, Bulb Scale Mite</b>  | HOT WATER (110°F). Soak for 1 hour. Soak bulbs, such as amaryllis and narcissus, for 30 minutes. |   |                                 |  |   |
| <b>Caterpillar, Beet Armyworm, Corn Earworm, Cutworms, European Corn Borer, Other Caterpillars</b> | acephate (various brands and formulations, some suitable for *homeowner use)                     | Follow label directions                   | Follow label directions         | 24 hours   |   |
|  | azadirachtin (Azatrol EC, Azatin XL)   | Follow label directions                   | Follow label directions         | 4 hours  |   |
|  | * <i>Bacillus thuringiensis</i> (Dipel) 3.2 WP   | 1-2 tsp                                   | 1/2-1 lb                        | 4 hours  | Treat as needed.                                    |
|  | bifenthrin (Talstar) 10 WP   | 1-5 tsp                                   | 6.4-32 oz                       | Follow label directions                          |   |
|  | 7.9 F  | 1-2 tbsp                                  | 10-20 oz                        | Not for agricultural use                         |   |
|  | *carbaryl (Sevin) 50 WP  | 2 tbsp                                    | 2 lb                            | Follow label directions                          |   |
|  | cyfluthrin (Decathlon 20WP)  | Follow label directions                   | Follow label directions         | 12 hours   |   |
|  | diflubenzuron (Dimilin) 25 WP  |   |                                 | Follow label directions                          | 1/2-1 lb/acre in a dilute spray of 200 gal or less. |
|  | flupalinate (Mavrik) *22.3 F   | 1/8-5/8 tsp                               | 2-10 oz                         | Follow label directions                          |   |
|  | *horticultural oil (Sunspray and others) 98 to 99 EC   | 5 tbsp                                    | 2 gal                           | 4 hours  |   |
|  | *neem oil  | Follow label directions                   | Follow label directions         | Follow label directions                          | Follow label directions.                            |
|  | novaluron (Pedestal)   | ---                                       | 6-8 oz                          | 12 hours   | Labeled for armyworms only. Not for landscape use.  |
|  | permethrin (Astro) 36.8 EC   | 1/4-1/2 tsp                               | 4-8 oz                          | 24 hours   |   |
| *pyrethrins (Pyrenone) 6 EC  | 1/8-1 1/2 tsp  | 2-12 oz                                   | Follow label directions         |  |   |

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| <b>Insect</b>  | <b>Insecticide</b>   | <b>Amount of Formulation per Gallon of Spray</b> | <b>Amount per 100 Gallons of Water</b> | <b>Minimum Interval Between Application and Reentry</b> | <b>Comments/Precautions</b>                            |
|--|--|--|--|---|--|
| <b>Caterpillar, Beet Armyworm, Corn Earworm, Cutworms, European Corn Borer, Other Caterpillars (cont.)</b> | *rotenone 1D   | ---  | ---                                    | Follow label directions                                 | For cabbage looper on chrysanthemum and geranium only. |
|  | *soap (Olympic Insecticidal) 25 EC<br>spinosad (Conserve)  | 2 1/2-5 oz                                       | ---                                    | Follow label directions<br>4 hours                      | Use in rotation with other pesticides.                 |
| <b>Cricket</b>   | bifenthrin (Talstar) 7.9 F   | 1-2 tbsp   | 10-20 oz                               | Not for agricultural use                                |  |
|  | cyfluthrin (Decathlon 20WP)  | Follow label directions                          | Follow label directions                | 12 hours  |  |
|  | fluvalinate (Mavrik) 22.3 F  | 1/8-5/8 tsp                                      | 2-10 oz                                | Follow label directions                                 |  |
|  | *pyrethrins (Pyrenone) 6 EC  | 1/8-1 1/2 tsp                                    | 2-12 oz                                | Follow label directions                                 |  |
|  | *soap (M-Pede) 49 EC<br>(Olympic Insecticidal) 25% EC  | 2 1/2 oz<br>2 1/2-5 oz                           | 7 1/2 qt<br>---                        | Follow label directions                                 |  |
| <b>Cucumber Beetle</b>   | bifenthrin (Talstar) 10 WP   | 1-5 tsp  | 6.4-32 oz                              | Follow label directions                                 |  |
|  | fluvalinate (Mavrik) 22.3 F  | 1/8-5/8 tsp                                      | 2-10 oz                                | Follow label directions                                 |  |
|  | spinosad (Conserve)  |  |  | 4 hours   | Use in rotation with other pesticides.                 |
|  | *pyrethrins (X-clude) 0.3 A  | ---  | ---                                    | Follow label directions                                 | Spray when air is still; 5-10 seconds/100 sq ft.       |
| <b>Earwig</b>  | bifenthrin (Talstar) 10 WP   | 1-5 tsp  | 6.4-32 oz                              | Not for agricultural use                                |  |
|  | 7.9 F  | 1-2 tbsp   | 10-20 oz                               |   |  |
|  | *soap (M-Pede) 49 EC   | 2 1/2 oz   | 7 1/2 qt                               | Follow label directions                                 |  |
|  | (Olympic Insecticidal) 25% EC<br>(Olympic Insecticidal) 49.5 EC  | 2 1/2-5 oz<br>2 1/2 oz                           | ---<br>2 gal                           | Follow label directions<br>12 hours                     |  |
| <b>Fire Ants, Red Imported</b>   | <p>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 Program Aid No. 1822, "Imported Fire Ant 2005: Quarantine Treatments for Nursery Stock and Other Regulated Articles" 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:</p> <p>bifenthrin (Talstar, Bifenthrin Pro), G, F<br/> chlorpyrifos (Dursban, Chlorpyrifos) EC, W, G<br/> diazinon (Diazinon/D-n-z) WP, EC<br/> fenoxycarb (Award) bait</p> |  |  |   |  |

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|--------------------------------|--|--|--|--|--|
| <b>Fire Ants, Red Imported</b> | fipronil (Chipco Choice, Chipco Top Choice) G                                |  |  |  |  |
|                                | hydramethylnon (Amdro Pro, Siege Pro) bait                                   |  |  |  |  |
|                                | methoprene (Extinguish) bait   |  |  |  |  |
|                                | pyriproxyfen (Distance) bait   |  |  |  |  |
|                                | tellfluthrin (Fireban) G   |  |  |  |  |
| <b>Flea Beetle</b>             | azadirachtin (Azatrol EC, Azatin XL)   | Follow label directions                          | Follow label directions                | 4 hours  |  |
|                                | bifenthrin (Talstar) 10 WP   | 1-5 tsp  | 6.4-32 oz                              |  | Not for agricultural use                         |
|                                | 7.9 F  | 1-2 tbsp   | 10-20 oz                               |  |  |
|                                | cyfluthrin (Decathlon 20WP)  | Follow label directions                          | Follow label directions                | 12 hours   |  |
|                                | fluvalinate (Mavrik) 22.3 F  | 1/8-5/8 tsp                                      | 2-10 oz                                | Follow label directions  |  |
|                                | *pyrethrins (X-clude) 0.3A   | ---  | ---                                    | Follow label directions  | Spray when air is still; 5-10 seconds/100 sq ft. |
|                                | (Pyrenone) 6 EC  | 1/8-1 1/2 tsp                                    | 2-12 oz                                |  |  |
| *rotenone 1D                   |  |  | Follow label directions                | Use on petunia, primrose, stock, sunflower, violet and wallflower. |  |
| spinosad (Conserve) SC         | 0.06 fl oz   | 6 fl oz  | 4 hours                                |  |  |
| <b>Fleahopper</b>              | *pyrethrins (X-clude) 0.3A   |  |  | Follow label directions  | Spray when air is still; 5-10 seconds/100 sq ft. |
| <b>Flower Thrips</b>           | acephate (various brands and formulations, some suitable for *homeowner use) | Follow label directions                          | Follow label directions                | 24 hours   |  |
|                                | azadirachtin (Azatrol EC, Azatin XL)   | Follow label directions                          | Follow label directions                | 4 hours  |  |
|                                | *pyrethrins (Pyrenone) 6 EC  | 1/8-1 1/2 tsp                                    | 2-12 oz                                | Follow label directions  |  |
| <b>Fungus Gnat</b>             | *neem oil  | Follow label directions                          | Follow label directions                | Follow label directions  | Follow label directions.                         |
|                                | *pyrethrins  | —  | —                                      | Follow label directions  | Follow label directions.                         |
|                                | *soap (Olympic insecticidal) 49.5 EC   | 2 1/2 oz   | 2 gal                                  | 12 hours   |  |
| <b>Grasshopper</b>             | acephate (various brands and formulations, some suitable for *homeowner use) | Follow label directions                          | Follow label directions                | 24 hours   |  |
|                                | bifenthrin (Talstar) 7.9F  | 1-2 tbsp   | 10-20 oz                               |  | Not for agricultural use                         |
|                                | *soap (Olympic Insecticidal) 49.5 EC   | 2 1/2 oz   | 2 gal                                  | 12 hours   |  |

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| <b>Insect</b>          | <b>Insecticide</b>   | <b>Amount of Formulation per Gallon of Spray</b> | <b>Amount per 100 Gallons of Water</b> | <b>Minimum Interval Between Application and Reentry</b> | <b>Comments/Precautions</b>   |
|------------------------|--|--|--|---|---|
| <b>Iris Borer</b>      | dimethoate<br>23.4 EC<br>(2.67 EC) 30.5 EC<br>(Clean Crop 400) 43.5 EC       | 2 tbsp<br>3 tsp<br>1 tsp                         | 2 pt<br>3 pt<br>1 pt                   | Follow label directions                                 | Spray when leaves are 5-6 inches tall.  |
|                        | imidacloprid<br>*(Merit) 75 SP<br>(Marathon) 60 WP                           | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.  |
| <b>Japanese Beetle</b> | acephate (various brands and formulations, some suitable for *homeowner use) | Follow label directions                          | Follow label directions                | 24 hours  |   |
|                        | acetamiprid (TriStar)  | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.  |
|                        | azadirachtin (Azatrol EC, Azatin XL)   | Follow label directions                          | Follow label directions                | 4 hours   |   |
|                        | bifenthrin (Talstar)<br>10 WP<br>7.9 F                                       | 1-5 tsp<br>2-4 tbsp                              | 6.4-32 oz<br>20-40 oz                  | Follow label directions<br>Not for agricultural use     | Apply to foliage as needed.   |
|                        | *carbaryl (Sevin)<br>50 WP<br>5 D  | 2 tbsp<br>---                                    | 2 lb<br>---                            |   |   |
|                        | cyfluthrin (Decathlon 20WP)  | Follow label directions                          | Follow label directions                | 12 hours  |   |
|                        | imidacloprid<br>*(Merit) 75 SP<br>(Marathon) 60 WP                           | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.  |
|                        | *malathion 57 EC   | 2 tsp  | 2 pt                                   | Follow label directions                                 |   |
|                        | *neem oil  | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.  |
|                        | permethrin (Astro) 36.8 EC   | 1/4-1/2 tsp                                      | 4-8 oz                                 | Follow label directions                                 |   |
|                        | pyrethrins (X-clude) 0.3A<br>*resmethrin (SBP-1382)<br>0.25A<br>23.4 EC      | ---<br>---<br>1 tsp                              | ---<br>---<br>1 pt                     | Follow label directions<br>Follow label directions      | Spray when air is still; 5-10 seconds/100 sq ft.<br>Spray foliage until barely moist. |
| <b>Leafhopper</b>      | acephate (various brands and formulations, some suitable for *homeowner use) | Follow label directions                          | Follow label directions                | 24 hours  |   |
|                        | acetamiprid (TriStar)  | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.  |
|                        | azadirachtin (Azatrol EC, Azatin XL)   | Follow label directions                          | Follow label directions                | 4 hours   |   |
|                        | bifenthrin (Talstar)<br>10 WP<br>7.9 F                                       | 1-5 tsp<br>2 tsp                                 | 6.4-32 oz<br>10-20 oz                  | Follow label directions<br>Not for agricultural use     |   |

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|-------------------------|--|---|---------------------------------|---|--|
| <b>Leafhopper</b>       | buprofezin (Talus)   | ---                                       | Follow label directions         | 12 hours  |  |
|                         | cyfluthrin (Decathlon 20WP)  | Follow label directions                   | Follow label directions         | 12 hours  |  |
|                         | disulfoton (Di-Syston) 1.5 G   |   |                                 | 24 hours  | 10.7 oz/150-300 row feet. Spread evenly.                 |
|                         | fluvalinate (Mavrik) 22.3 F  | 1/8-5/8 tsp                               | 2-10 oz                         | Follow label directions                             |  |
|                         | imidacloprid<br>*(Merit) 75 SP<br>(Marathon) 60 WP                           | Follow label directions                   | Follow label directions         | Follow label directions                             | Follow label directions.                                 |
|                         | *neem oil (Triact) 90 EC   | 2/3-1 1/3 oz                              | 1/2-1 gal                       | 4 hours   | Keep agitated while spraying.                            |
|                         | oxamyl 10 G  | ---                                       | ---                             | Follow label directions                             | 22-30 oz/1,000 sq ft.                                    |
|                         | permethrin (Astro) 36.8 EC   | 1/4-1/2 tsp                               | 4-8 oz                          | 24 hours  |  |
|                         | *pyrethrins<br>(X-clude) 0.3A<br>(Pyrenone) 6 EC                             | 1/8-1 1/2 tbsp                            | 2-12 oz                         |   | Spray when air is still; 5-10 seconds/100 sq ft.         |
|                         | *resmethrin (SBP-1382) 0.25 A  |   |                                 |   | Spray foliage until barely moist.                        |
|                         | *soap (Olympic Insecticidal)<br>25% EC<br>49.5 EC                            | 2 1/2-5 oz<br>2 1/2 oz                    | ---<br>2 gal                    |   |  |
| thiamethoxam (Flagship) | ---  | 4 oz                                      | 12 hours                        |   |  |
| <b>Leafminer</b>        | abamectin (Avid) 2 EC  | 1/4 tsp                                   |                                 |   | Do not use on ferns or conifers.                         |
|                         | acephate (various brands and formulations, some suitable for *homeowner use) | Follow label directions                   | Follow label directions         | 24 hours  |  |
|                         | azadirachtin (Azatrol EC, Azatin XL)   | Follow label directions                   | Follow label directions         | 4 hours   |  |
|                         | bifenthrin (Talstar)<br>10 WP<br>7.9 F                                       | 1-5 tsp<br>2-4 tbsp                       | 6.4-32 oz<br>20-40 oz           | Follow label directions<br>Not for agricultural use |  |
|                         | cyromazine (Citation)  | Follow label directions                   | Follow label directions         | Follow label directions                             | Follow label directions.                                 |
|                         | dinotefuron (Safari)   | Follow label directions                   | Follow label directions         | Follow label directions                             | Follow label directions.                                 |
|                         | imidacloprid<br>*(Merit) 75 SP<br>(Marathon) 60 WP                           | ---                                       | ---                             | Not for agricultural use<br>12 hours                | 1.6 oz packet/300 gal water.<br>Follow label directions. |

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|-----------------------------|--|---|---------------------------------|--|------------------------------|
| <b>Leafminer</b><br>(cont.) | *neem oil  | Follow label directions                   | Follow label directions         | Follow label directions                          | Follow label directions.     |
|                             | permethrin<br>(Astro) 36.8 EC<br>(Prames)                                    | 1/4-1/2 tsp<br>1-3 tsp                    | 4-8 oz<br>1-3.2 pt              | 24 hours<br>Follow label directions              |                              |
|                             | spinosad (Conserve) SC   | ---                                       | 20 fl oz                        | 4 hours  |                              |
| <b>Leafroller</b>           | azadirachtin (Azatrol EC, Azatin XL)   | Follow label directions                   | Follow label directions         | 4 hours  |                              |
|                             | bifenthrin (Talstar) 7.9 F   | 1-2 tbsp                                  | 10-20 oz                        | Not for agricultural use                         |                              |
|                             | *neem oil  | Follow label directions                   | Follow label directions         | Follow label directions                          | Follow label directions.     |
|                             | permethrin (Astro) 36.8 EC   | 1/4-1/2 tsp                               | 4-8 oz                          | 24 hours   |                              |
| <b>Lygus Bug</b>            | acephate (various brands and formulations, some suitable for *homeowner use) | Follow label directions                   | Follow label directions         | 24 hours   |                              |
|                             | acetamiprid (Tristar)  | Follow label directions                   | Follow label directions         | Follow label directions                          | Follow label directions.     |
|                             | azadirachtin (Azatrol EC)  | Follow label directions                   | Follow label directions         | 4 hours  |                              |
|                             | <i>Beauveria bassiana</i><br>(Naturalis-O) 7.16 EC                           | 2 tsp-2 tbsp                              | 30-100 oz                       | 4 hours  | Three to five sprays needed. |
|                             | bifenthrin (Talstar) 7.9 F   | 1-2 tbsp                                  | 10-20 oz                        | Not for agricultural use                         |                              |
|                             | cyfluthrin (Decathlon 20WP)  | Follow label directions                   | Follow label directions         | 12 hours   |                              |
|                             | imidacloprid<br>*(Merit) 75 SP<br>(Marathon) 60 WP                           | Follow label directions                   | Follow label directions         | 12 hours   |                              |
|                             | permethrin (Astro) 36.8 EC<br>thiamethoxam (Flagship)                        | 1/4-1/2 tsp<br>---                        | 4-8 oz<br>4 oz                  | 24 hours<br>12 hours                             |                              |
| <b>Mealybug</b>             | acetamiprid (TriStar) 70 WSP   | ---                                       | 2 packs                         | 24 hours   | Not for landscape use.       |
|                             | azadirachtin (Azatrol EC, Azatin XL)   | Follow label directions                   | Follow label directions         | 4 hours  |                              |
|                             | <i>Beauveria bassiana</i><br>(BotaniGard) 11.3 EC                            | 1-2 tsp                                   | 1/2-1 qt                        | 12 hours   |                              |
|                             | bifenthrin (Talstar) 7.9 F   | 1-2 tbsp                                  | 10-20 oz                        | Not for agricultural use                         |                              |
|                             | buprofezin (Talus)   | ---                                       | Follow label directions         | 12 hours   |                              |
|                             | clothianidin (Celero)  | Follow label directions                   | Follow label directions         | Follow label directions                          | Follow label directions.     |

## FLOWER INSECT CONTROL

(Also includes container plantings of trees, shrubs, plants, etc.)

| Insect                               | Insecticide                                    | Amount of Formulation per Gallon of Spray                                    | Amount per 100 Gallons of Water | Minimum Interval Between Application and Reentry    | Comments/Precautions   |
|--------------------------------------|--|--|---------------------------------|---|--|
| <b>Mealybug</b>                      | dinotefuron (Safari)                           | Follow label directions  | Follow label directions         | Follow label directions                             | Follow label directions.   |
|                                      | fluvalinate (Mavrik) 22.3F                     | 3/8 tsp  | 5 oz                            | Follow label directions                             | Labeled as a dip.  |
|                                      | *horticultural oil (Sunspray et al.) 99.8 EC   | 5 tbsp   | 2 gal                           | 4 hours   |  |
|                                      | imidacloprid *(Merit) 75 SP (Marathon) 60 WP   | ---  | ---                             | Not for agricultural use<br>12 hours                | 1.6 oz packet/300 gal water.<br>Follow label directions.         |
|                                      | *neem oil                                      | Follow label directions  | Follow label directions         | Follow label directions                             | Follow label directions.   |
|                                      | permethrin (Astro) 36.8 EC                     | 1/4-1/2 tsp  | 4-8 oz                          | 24 hours  |  |
|                                      | *soap (Olympic Insecticidal) 25% EC 49.5 EC    | 2 1/2-5 oz<br>2 1/2 oz   | ---<br>2 gal                    | Follow label directions<br>12 hours                 |  |
|                                      | thiamethoxam (Flagship)                        | ---  | Follow label directions         | 12 hours  |  |
| <b>Mite</b>                          | azadirachtin (Azatrol EC, Azatin XL)           | Follow label directions  | Follow label directions         | 4 hours   |  |
|                                      | <i>Beauveria bassiana</i> (BotaniGard) 11.3 EC | 2 tsp-2 tbsp   | 1 pt-1 qt                       | 12 hours  | Three to five sprays needed.                                     |
|                                      | bifenazate (Floramite)                         |  |                                 | 4 hours   |  |
|                                      | bifenthrin (Talstar) 7.9F                      | 1-2 tbsp   | 10-20 oz                        | Not for agricultural use                            |  |
|                                      | fluvalinate (Mavrik) 22.3F                     | 1/8-5/8 tsp  | 2-10 oz                         | Follow label directions                             |  |
|                                      | *soap (Olympic Insecticidal) 25% EC 49.5 EC    | 2 1/2-5 oz<br>2 1/2 oz   | ---<br>2 gal                    | Follow label directions<br>12 hours                 |  |
|                                      | sulfur 90 WP                                   | ---  | 6 lb                            | Follow label directions                             | Labeled for snapdragon. Phytotoxic at high temperatures.         |
|                                      | <b>Plant Bug</b>                               | acephate (various brands and formulations, some suitable for *homeowner use) | Follow label directions         | Follow label directions                             | 24 hours   |
| acetamiprid (TriStar)                |  | Follow label directions  | Follow label directions         | Follow label directions                             | Follow label directions.   |
| azadirachtin (Azatrol EC, Azatin XL) |  | Follow label directions  | Follow label directions         | 4 hours   |  |
| bifenthrin (Talstar) 10 WP 7.9 F     |  | 1-5 tsp<br>1 1/2-3 tbsp  | 6.4-32 oz<br>5-10 oz            | Follow label directions<br>Not for agricultural use | Apply as necessary. More than one application usually necessary. |
|                                      |  |  |                                 |   |  |

\*Suitable for home use.

## FLOWER INSECT CONTROL

(Also includes container plantings of trees, shrubs, plants, etc.)

| Insect                        | Insecticide  | Amount of Formulation per Gallon of Spray | Amount per 100 Gallons of Water | Minimum Interval Between Application and Reentry | Comments/Precautions                             |
|-------------------------------|--|---|---------------------------------|--|--|
| <b>Plant Bug</b> (cont.)      | *carbaryl (Sevin) 50 WP  | 2 tbsp                                    | 2 lb                            | Follow label directions                          |  |
|                               | cyfluthrin (Decathlon 20WP)  | Follow label directions                   | Follow label directions         | 12 hours   |  |
|                               | fluvalinate (Mavrik) 22.3 F  | 1/8-5/8 tsp                               | 2-10 oz                         | Follow label directions                          |  |
|                               | *horticultural oil (Sunspray and others) 98.8 EC                             | 5 tbsp                                    | 2 gal                           | 4 hours  |  |
|                               | *pyrethrins (X-clude) 0.3 A  | ---                                       | ---                             | Follow label directions                          | Spray when air is still; 5-10 seconds/100 sq ft. |
|                               | *resmethrin (SPB-1382) 0.25 A  |   |                                 | Follow label directions                          | Spray foliage until barely moist.                |
|                               | *soap (Olympic Insecticidal) 25% EC  | 2.5-5 oz                                  | ---                             | Follow label directions                          |  |
|                               | 49.5 EC  | 2 1/2 oz                                  | 2 gal                           | 12 hours   |  |
|                               | thiamethoxam (Flagship)  | ---                                       | 4 oz                            | 12 hours   |  |
| <b>Rose Chafer</b>            | azadirachtin (Azatrol EC, Azatin XL)   | Follow label directions                   | Follow label directions         | 4 hours  |  |
|                               | *neem oil  | Follow label directions                   | Follow label directions         | Follow label directions                          | Follow label directions.                         |
|                               | *pyrethrins (X-clude) 0.3 A  | ---                                       | ---                             | Follow label directions                          | Spray when air is still; 5-10 seconds/100 sq ft. |
| <b>Scale Insect</b>           | acephate (various brands and formulations, some suitable for *homeowner use) | Follow label directions                   | Follow label directions         | 24 hours   |  |
|                               | acetamiprid (TriStar)  | Follow label directions                   | Follow label directions         | Follow label directions                          | Follow label directions.                         |
|                               | azadirachtin (Azatrol EC, Azatin XL)   | Follow label directions                   | Follow label directions         | 4 hours  |  |
|                               | buprofezin (Talus)   | ---                                       | Follow label directions         | 12 hours   |  |
|                               | dinotefuron (Safari)   | Follow label directions                   | Follow label directions         | Follow label directions                          | Follow label directions.                         |
|                               | imidacloprid   |   |                                 |  |  |
|                               | *(Merit) 75 SP   | 1/2-1 tbsp                                | 1 1/2-3 lb                      | 12 hours   | 1.6 oz packet/300 gal water.                     |
|                               | (Marathon) 60 WP   | ---                                       | ---                             | 12 hours   | Follow label directions.                         |
|                               | *neem oil  | Follow label directions                   | Follow label directions         | Follow label directions                          | Follow label directions.                         |
|                               | *pyrethrins (X-clude) 0.3 A  | ---                                       | ---                             | Follow label directions                          | Spray when air is still; 5-10 seconds/100 sq ft. |
|                               | *soap  |   |                                 | Follow label directions                          |  |
| (M-Pede) 49 EC                | 2 1/2 oz   | 7 1/2 qt                                  |                                 |  |  |
| (Olympic Insecticidal) 25% EC | 2 1/2-5 oz   | ---                                       |                                 |  |  |
|                               | thiamethoxam (Flagship)  | ---                                       | 2-4 oz                          | 12 hours   | Only controls soft scale.                        |

## FLOWER INSECT CONTROL

(Also includes container plantings of trees, shrubs, plants, etc.)

| Insect             | Insecticide  | Amount of Formulation per Gallon of Spray | Amount per 100 Gallons of Water | Minimum Interval Between Application and Reentry       | Comments/Precautions  |
|--------------------|--|---|---------------------------------|--|---|
| <b>Slug, Snail</b> | *metaldehyde<br>(Deadline bullets or granules and others)                    | ---                                       | ---                             | Follow label directions                                | Follow label directions.  |
|                    | methiocarb (Mesurol)<br>*2 B<br>75 WP  | ---<br>8 tsp                              | ---<br>4 lb                     | Follow label directions<br>24 hours                    | Up to four applications per season.<br>Not for landscape use.   |
| <b>Sowbug</b>      | *malathion 57 EC   | Follow label directions                   | Follow label directions         | Follow label directions                                |   |
| <b>Spider Mite</b> | abamectin (Avid) 2 EC  | 1/4 tsp                                   | 4 oz                            | 12 hours   | Do not use on ferns or conifers.  |
|                    | acequinocyl (Shuttle)  | Follow label directions                   | Follow label directions         | Follow label directions                                | Follow label directions.  |
|                    | azadirachtin (Azatrol EC, Azatin XL)   | Follow label directions                   | Follow label directions         | 4 hours  |   |
|                    | bifenazate (Floramite)   |   |                                 | 4 hours  | Use in rotation with other pesticides. Compatible with biological controls.   |
|                    | bifenthrin (Talstar)<br>10 WP<br>7.9F  | 1-5 tsp<br>1-2 tbsp                       | 6.4-32 oz<br>10-20 oz           | Follow label directions<br>Not for agricultural use    | Treat as needed. Two or more applications usually are necessary to clean up heavy infestation.<br>Repeat in 5 to 14 days. |
|                    | clofentazine (Ovation)   | Follow label directions                   | Follow label directions         | Follow label directions                                | Follow label directions.  |
|                    | etoxazole (TetraSan)   | Follow label directions                   | Follow label directions         | Follow label directions                                | Follow label directions.  |
|                    | fluvalinate (Mavrik) 22.3 F  | 1/6-1/3 tsp                               | 2-5 oz                          | Follow label directions                                |   |
|                    | hexythiazox (Hexygon) DF   |   | 1-2 oz                          | 12 hours   | Active against eggs and immature stages.  |
|                    | *horticultural oil<br>(Sunspray and others) 98.8 EC                          | 5 tbsp                                    | 2 gal                           | 4 hours  |   |
|                    | *pyrethrins (X-clude) 0.3 A  | ---                                       | ---                             | Follow label directions                                | Spray when air is still; 5-10 seconds/100 sq ft.  |
|                    | *soap<br>(M-Pede) 49 EC<br>(Olympic insecticidal) 49.5 EC                    | 2 1/2 oz<br>2 1/2 oz                      | 7 1/2 qt<br>2 gal               | Follow label directions<br>12 hours                    |   |
|                    | spiromesifen (Judo)  | Follow label directions                   | Follow label directions         | Follow label directions                                | Follow label directions.  |
| sulfur 90 WP       | ---  | 6 lb                                      | Follow label directions         | Labeled for sweetpea. Phytotoxic at high temperatures. |   |
| <b>Spittlebug</b>  | acephate (various brands and formulations, some suitable for *homeowner use) | Follow label directions                   | Follow label directions         | 24 hours   |   |
|                    | acetamiprid (TriStar)  | Follow label directions                   | Follow label directions         | Follow label directions                                | Follow label directions.  |

\*Suitable for home use.

**FLOWER INSECT CONTROL**

(Also includes container plantings of trees, shrubs, plants, etc.)

| <b>Insect</b>              | <b>Insecticide</b>   | <b>Amount of Formulation per Gallon of Spray</b> | <b>Amount per 100 Gallons of Water</b> | <b>Minimum Interval Between Application and Reentry</b> | <b>Comments/Precautions</b>  |
|----------------------------|--|--|--|---|------------------------------|
| <b>Spittlebug</b> (cont.)  | cyfluthrin (Decathlon 20WP)  | Follow label directions                          | Follow label directions                | 12 hours  |                              |
|                            | *soap (M-Pede) 49 EC   | 2 1/2 oz   | 7 1/2 qt                               | Follow label directions                                 |                              |
|                            | thiamethoxam (Flagship)  | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.     |
| <b>Stalk Borer</b>         | imidacloprid<br>*(Merit) 75 SP<br>(Marathon) 60 WP                           | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.     |
|                            | acetamiprid (TriStar)  | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.     |
| <b>Stink Bug</b>           | *carbaryl (Sevin)  |  |  | Follow label directions                                 |                              |
|                            | *imidacloprid  | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.     |
|                            | *soap (M-Pede) 49 EC   | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.     |
|                            | thiamethoxam (Flagship)  | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.     |
|                            | acetamiprid (TriStar)  | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.     |
| <b>Tarnished Plant Bug</b> | *carbaryl (Sevin)  |  |  | Follow label directions                                 |                              |
|                            | *imidacloprid  | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.     |
|                            | *soap (M-Pede) 49 EC   | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.     |
|                            | thiamethoxam (Flagship)  | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.     |
|                            | acetamiprid (TriStar)  | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.     |
| <b>Thrips</b>              | abamectin (Avid) 0.15 EC   |  | 8 fl oz                                | 12 hours  |                              |
|                            | acephate (various brands and formulations, some suitable for *homeowner use) | Follow label directions                          | Follow label directions                | 24 hours  |                              |
|                            | acetamiprid (TriStar)  | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.     |
|                            | azadirachtin (Azatrol EC, Azatin XL)   | Follow label directions                          | Follow label directions                | 4 hours   |                              |
|                            | <i>Beauveria bassiana</i><br>(BotaniGard) 22 WP                              | 2-4 tsp  | 1-2 lb                                 | 12 hours  |                              |
|                            | (BotaniGard) 11.3 EC   | 2-4 tsp  | 1-2 qt                                 | 12 hours  | Three to five sprays needed. |
|                            | cyfluthrin (Decathlon 20WP)  | Follow label directions                          | Follow label directions                | 12 hours  |                              |
|                            | fluvalinate (Mavrik) 2 EC  | ---  | 2-5 oz                                 | 12 hours  |                              |
|                            | *neem oil  | Follow label directions                          | Follow label directions                | Follow label directions                                 | Follow label directions.     |
|                            | novaluron (Pedestal)   | ---  | 6-8 oz                                 | 12 hours  | Not for landscape use.       |
|                            | permethrin (Astro) 36.8 EC   | 1/4-1/2 tsp                                      | 4 to 8 oz                              | 24 hours  |                              |
|                            | spinosad (Conserve) SC   | 0.06 fl oz                                       | 6 fl oz                                | 4 hours   |                              |
|                            | thiamethoxam (Flagship)  | ---  | 2-4 oz                                 | 12 hours  | For leaf-feeding thrips.     |

## FLOWER INSECT CONTROL

(Also includes container plantings of trees, shrubs, plants, etc.)

| Insect                         | Insecticide  | Amount of Formulation per Gallon of Spray | Amount per 100 Gallons of Water | Minimum Interval Between Application and Reentry | Comments/Precautions                                     |
|--------------------------------|--|---|---------------------------------|--|--|
| Whitefly                       | acephate (various brands and formulations, some suitable for *homeowner use) | Follow label directions                   | Follow label directions         | 24 hours   |  |
|                                | acetamiprid (TriStar) 70 WSP   | ---                                       | 2-4 packs                       | 24 hours   | Not for landscape use.                                   |
|                                | azadirachtin (Azatrol EC, Azatin XL)   | Follow label directions                   | Follow label directions         | 4 hours  |  |
|                                | <i>Beauveria bassiana</i>  |   |                                 |  |  |
|                                | (Naturalis-O) 7.16 EC  | 2 tsp-2 tbsp                              | 30-100 oz                       | 4 hours  | Three to five sprays needed for adequate control.        |
|                                | (BotaniGard) 22 WP   | 2 tsp                                     | 1 lb                            | 12 hours   |  |
|                                | (BotaniGard) 11.3 EC   | 1-2 tsp                                   | 1/2-1 qt                        | 12 hours   |  |
|                                | bifenthrin (Talstar)   |   |                                 |  |  |
|                                | 10 WP  | 1-5 tsp                                   | 6.4-32 oz                       | Follow label directions                          |  |
|                                | 7.9 F  | 1-2 tbsp                                  | 10-20 oz                        | Not for agricultural use                         |  |
|                                | buprofezin (Talus)   | ---                                       | Follow label directions         | 12 hours   |  |
|                                | clothianidin (Celero)  | Follow label directions                   | Follow label directions         | Follow label directions                          | Follow label directions.                                 |
|                                | cyfluthrin (Decathlon 20WP)  | Follow label directions                   | Follow label directions         | 12 hours   |  |
|                                | dinotefuron (Safari)   | Follow label directions                   | Follow label directions         | Follow label directions                          | Follow label directions.                                 |
|                                | fenoxycarb (Precision) 25 WP   | ---                                       | 2-4 oz                          | Follow label directions                          |  |
|                                | fluvalinate (Mavrik) 22.3 F  | 1/8-5/8 tsp                               | 2-10 oz                         | Follow label directions                          |  |
|                                | *horticultural oil   |   |                                 |  |  |
|                                | (Subspray and others) 98.8 EC  | 5 tbsp                                    | 2 gal                           | 4 hours  |  |
|                                | imidacloprid   |   |                                 |  |  |
|                                | *(Merit) 75 SP   | ---                                       | ---                             | Not for agricultural use                         | 1.6 oz packet/300 gal water.<br>Follow label directions. |
|                                | (Marathon) 60 WP   | ---                                       | ---                             | 12 hours   |  |
|                                | (Marathon II)  | ---                                       | 1.7 fl oz                       | 12 hours   |  |
|                                | *neem oil  | Follow label directions                   | Follow label directions         | Follow label directions                          | Follow label directions.                                 |
| novaluron (Pedestal)           | ---  | 6-8 oz                                    | 12 hours                        | Not for landscape use.                           |  |
| permethrin (Astro) 36.8 EC     | 1/4-1/2 tsp  | 4-8 oz                                    | 24 hours                        |  |  |
| pymetrozine (Endeavor)         |  | 2.5-5.0 oz                                | 12 hours                        |  |  |
| *pyrethrins                    |  |   | Follow label directions         | Spray when air is still; 5-10 seconds/100 sq ft. |  |
| (X-clude) 0.3 A                |  |   |                                 |  |  |
| (Pyrenone) 6 EC                | 1/8-1 1/2 tsp  | 2-12 oz                                   |                                 |  |  |
| *resmethrin 23.4 EC            | 1 tsp  | 1 pt                                      | Follow label directions         |  |  |
| *soap                          |  |   |                                 |  |  |
| (M-Pede) 49 EC                 | 2 1/2 oz   | 7 1/2 qt                                  | Follow label directions         |  |  |
| (Olympic insecticidal) 25% EC  | 2 1/2-5 oz   | ---                                       | Follow label directions         |  |  |
| (Olympic insecticidal) 49.5 EC | 2 1/2 oz   | 2 gal                                     | 12 hours                        |  |  |
| spiromesifen (Judo)            | Follow label directions  | Follow label directions                   | Follow label directions         | Follow label directions.                         |  |
| thiamethoxam (Flagship)        | ---  | Follow label directions                   | 12 hours                        |  |  |

\*Suitable for home use.