

ORNAMENTALS: COMMERCIAL GROUNDS MAINTENANCE INSECT CONTROL

Will Hudson, Extension Entomologist

Pollinator Protection: There is growing concern for the health of pollinators in general. Flowering plants in the landscape provide a major portion of the food resources for these beneficial insects in urban and suburban areas. Care should be taken to minimize the chance of harming pollinators with insecticide applications by avoiding application when honeybees, in particular, are active. When possible, treating in late afternoon or evening, or before plants are in bloom where possible, will

reduce risks to bees and other pollinating insects. Broad-spectrum contact insecticides (pyrethroids, Sevin, etc.) are extremely toxic to most pollinators and should be used with caution around flowering plants. Neonicotinyl insecticides (imidacloprid, thiamethoxam, acetamiprid, clothianidin, dinotefuran) may be translocated to blooms in some circumstances and also require caution. Read labels carefully.

| PEST | INSECTICIDE | MOA | AMOUNT/100 GAL WATER | REMARKS AND PRECAUTIONS |
|---------------------|---|----------|--------------------------|---|
| Aphids | <i>clothianidin</i> Arena 50 WDG | 4A | 0.63-1.26 oz | |
| | <i>dinotefuran</i> Safari 20 SG, Zylam | 4A | 4-8 oz | Granular formulations are also available. |
| | Thiamethoxam | 4A | | |
| | <i>imidacloprid</i> Merit, generic | 4A | Follow label directions. | Many brands and several formulations are available. Read labels carefully. |
| | <i>isaria fumorosea</i> Preferal | UN | 14-28 oz | |
| | Oils | | 2-4 oz | |
| | <i>pyrifluquinazon</i> Rycar | UN | 2.4-3.2 oz 2-2.75 oz | |
| | Soaps | | See label | Do not use soaps on Japanese maple. |
| | <i>spinetoram + sulfoxaflor</i> XXpire | 5 + 4C | 2-2.75 oz 2-2.75 oz | |
| | <i>acetamiprid</i> Tristar 30 SG | 4A | | |
| Azalea leaf miner | <i>abamectin</i> Avid 0.15 lb/gal EC | 6 | 8 fl oz | |
| | <i>acetamiprid</i> Tristar 30SG | 3A | 6.7-8 oz | |
| | Various pyrethroids | 3 | | See note below. |
| Bagworm | Acelepryn | | 1-16 oz | |
| | Carbary 12 lb/gal F | 1A | 2 qt | Treat when bagworms are small before they construct bags around their bodies (late spring to early summer). |
| | Carbary 14lb/gal L | | 5 oz/gal | Other carbaryl formulations available. |
| | Conserve SC | 5 | 22 oz | |
| | <i>cyantraniliprole</i> Mainspring | 28 15 | 1-8 oz 0.01-0.08 oz | |
| | Dimilin 25W | 11A | 4 oz/A | |
| | Dipel 2X | 1B | 1 lb/A | |
| | Orthene TTO 75% SP Sevin SL 4 lb/gal F | 1A | 0.33 lb 1 qt | |
| Various pyrethroids | 3 | | See note below. | |

NOTE: A number of pyrethroid materials are available in a variety of formulations for use as broad-spectrum contact insecticides. Common names include bifenthrin, cyfluthrin, cypermethrin, deltamethrin, lambda-cyhalothin, tralomethrin, permethrin. Active ingredients are listed on the label.

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|---|---|------------|-------------------------------|--|
| Bark Beetles | <i>permethrin</i> Astro 3.2 lb/gal EC | 3 | 1-2 qt | Spray all trunk surfaces when adults are active. Healthy trees are usually not attacked. |
| | <i>bifenthrin</i> Onyx | 3 | 6.4-3 2 oz | |
| | <i>carbaryl</i> Sevin SL | 1A | 5 oz/gal (named beetles only) | |
| Beetles (foliage feeders including Japanese beetle, elm leaf beetle, etc.) | <i>clothianidin</i> Arena 50WG | 4A | 2 oz | Treat when beetles or skeletonized foliage is seen and repeat as needed. |
| | <i>diflubenzuron</i> Dimilin | 15 | 4 oz/A | |
| | <i>imadacloprid</i> Merit, etc. | 4A | See label | |
| | <i>carbaryl</i> Sevin Liquid 2 lb/gal F Sevin SL 4 lb/gal F | | 2 qt 1 qt | |
| | <i>thiamethoxam</i> | 4A | 4-8 oz | |
| | Various pyrethroids | 3 | | |
| Borers (dogwood borer, flatheaded apple tree borer etc) | <i>bifenthrin</i> Astro 3.2 lb/gal EC Onyx | 3 | 1-2 qt | Treat when adults are present and laying eggs on trees. |
| | <i>permethrin</i> Astro 3.2 lb/gal EC | 3 | 6.4-32 oz | |
| | <i>imidacloprid</i> Merit, others | | See label | For flat-headed borers. |
| | <i>chlorantraniliprole</i> Acelepryn | | 4-32 oz | For clearwing borers only. |
| Boxwood leafminer | <i>dimethoate</i> (Cygon) Tristar 30SG | 1B | Consult label 6.7-8 oz | Use systemics when larvae are present in mines. |
| | <i>acetamiprid</i> Tristar 30SG | | 4.69 qt 2 lb | Use any of these materials in early spring when adults are active. |
| | <i>acephate</i> Orthene 9.4% EC | | | |
| | <i>carbaryl</i> Sevin 50% WP | | 4.69 qt | |
| | Various pyrethroids | 3 | 2 lb | |
| Boxwood Psyllid | <i>clothianidin</i> Arena 50WDG | 4A | 2 oz | |

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|---|---|------------|-----------------------------|--|
| Boxwood Psyllid <i>(continued)</i> | <i>imidacloprid</i> Merit, etc. | 4A | Consult label | Treat when young psyllids are present (early spring) and repeat treatment as needed. |
| | Oils (horticultural) | | Consult label | |
| | <i>carbaryl</i> Sevin SL 4lb/gal EC | 1A | 1 qt | |
| | Soaps (insecticidal) | | Consult label | |
| | <i>acetamiprid</i> Tristar 30SG | 4A | 6.7-8 oz | |
| | Various pyrethroids | 3 | | See note below. |
| Caterpillars azalea caterpillar, fall webworm, tent caterpillars, greenstriped mapleworm | <i>chlorantraniliprole</i> Acelepryn | 28 | 1-16 oz | |
| | “Bt” (kurstaki) | 11 | Consult label | Treat when larvae are small. |
| | <i>spinosad</i> Conserve SC | 5 | 22 oz | |
| Caterpillars azalea caterpillar, fall webworm, tent caterpillars, greenstriped mapleworm <i>(continued)</i> | <i>cyantraniliprole</i> Mainspring | 28 | 1-8 oz 0.01-0.08 oz | |
| | <i>diflubenzuron</i> Dimilin 25W | 15 | 20 oz/A | |
| | Oils (horticultural) | | Consult label | |
| | <i>carbaryl</i> Sevin 4F, others | 1A | 1 qt | |
| | Soaps | | Consult label | |
| | Various pyrethroids | 3 | | |
| Cottony Maple Scale | See SCALE INSECT section. | | | Spray infested trees thoroughly when crawlers are present (early summer). Follow with a second application in 14-21 days if crawlers are still present. Do not apply Isotox or Orthene to red or sugar maples. |
| Eastern tent caterpillars | See CATERPILLARS section. | | | Eggs hatch about the time buds break in the spring. Treat when webs are first noticed. Apply treatments to foliage of plant where caterpillars are feeding. |
| Euonymus scale | See SCALE INSECT section. | | | Use dormant oil in late fall or early spring. Time application of other materials when crawlers are present. First generation crawlers appear in early spring. |
| Fall webworm | See CATERPILLARS section. | | | Treat when webs first appear. Spray must penetrate into the interior of the webs to be effective. |

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|--|--|-------------------|---------------------------------|--|
| Fire Ants | BAIT TREATMENTS | | | The most effective method for control of ants over a broad area is the use of a broadcast bait two times per year (spring/fall) coupled with individual mound treatments as needed. |
| | <i>abamectin</i> Award II | 6 | 1-3 Tbsp/mound or 1-1.5 lb/A | |
| | <i>hydromethylnon</i> Amdro | 20A | 5 Tbsp/mound or 1-1.5 lb/A | |
| | <i>indoxacarb</i> Advion | 22A | 4 Tbsp/mound or 1.5 lb/A | <u>Broadcast Bait Treatments</u> Broadcast baits when ants are actively foraging for food (typically, warm, dry days in spring and fall). Some baits work within 48 hr., some may take a month. Avoid applying baits just before or after irrigation or rain. |
| | MOUND DRENCH TREATMENTS | | | <u>Individual Mound Treatments</u> Do not disturb mounds before treatment. <i>Drenches:</i> Drench mounds when queen and brood are located close to soil surface on warm, dry days. Generally, it takes 1-2 gallons of water to drench a fire ant mound effectively. |
| | <i>acephate</i> Orthene TTO 75WP, generic | 1B | 1 oz/5 gal | <i>Granules:</i> Scatter granules around the edge of the nest, not on top. <u>Products cleared for pasture/rangeland use</u> Amdro Extinguish Pounce Pyrenone Siege Pro |
| | <i>acephate</i> Orthene 97, others | | 0.75 oz/5 gal | |
| | <i>bifenthrin</i> Talstar GC Flowable, generic | 3 | 1 tsp/gal | |
| | <i>carbaryl</i> Sevin SL, generic | 1A | 0.75 fl oz/gal | |
| | <i>chlorpyrifos</i> Dursban 50W (golf course and sod farms only) | 1B | RUP 0.24 oz/gal | |
| | <i>deltamethrin</i> DeltaGard GC 5SC | 3 | RUP 1.5 fl oz/gal | |
| | <i>chlorpyrifos</i> Dursban Pro, others | 1B | 1 fl oz/2 gal | |
| | <i>imidacloprid + bifenthrin</i> Allectus SC (landscape turf only) | 4A + 3 | 0.33 fl oz /gal | |
| | <i>imidacloprid + bifenthrin</i> Allectus GC SC (golf course and sod farms only) | 4A + 3 | RUP 0.33 fl oz /gal | |
| | <i>lambda-cyhalothrin</i> Scimitar CS (landscape turf only) | 3 | 0.5 fl oz /2.5 gal | |
| | <i>permethrin</i> Astro, others (landscape turf only) | 3 | 1.6 fl oz /gal | |
| <i>Lambda-cyhalothrin</i> Scimitar GC | 3 | 0.5 fl oz/2.5 gal | | |
| <i>spinosad</i> Conserve | 5 | 0.1 fl oz/gal | | |

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| Fire Ants (continued) | DRY MOUND TREATMENTS | | | ** Follow with 1-2 gallons of water for best results |
| | <i>acephate</i> Orthene TTO 75WP | 1B | 1-2 tsp/mound | |
| | <i>imidacloprid + bifenthrin</i> Allectus G (landscape turf only) | 4A + 3 | 4 oz/mound** | |
| | <i>cyfluthrin</i> Bayer Fire Ant Killer | 3 | 1 tsp /mound | |
| | <i>deltamethrin</i> DeltaGard G (landscape turf only) | 3 | 2 Tbsp/mound ** | |
| | <i>deltamethrin</i> Bengal Ultra Dust Fire Ant Killer (0.05%) | 3 | RUP 1 Tbsp/mound | |
| | <i>imidacloprid + bifenthrin</i> Allectus GC (golf course and sod farms only) | 4A + 3 | RUP 4 oz/mound ** | |
| | Terro Fire Ant Killer (0.05%) | | 1 Tbsp/mound | |
| | BROADCAST TREATMENTS | | | |
| | <i>bifenthrin</i> Talstar GC Flowable, others | 3 | 0.5 fl oz/1000 sq ft | |
| | <i>imidacloprid + bifenthrin</i> Allectus GC (landscape turf only) | 4A + 3 | 1.7-2.9 lb/1000 sq ft | |
| | <i>lambda cyhalothrin</i> Scimitar CS, others (landscape turf only) | 3 | 7 mL/1000 sq ft | |
| | <i>carbaryl</i> Sevin SL | 1A | 3 fl oz/1000 sq ft | |
| | <i>chlorpyrifos</i> Dursban 50W (golf course and sod farms only) | 1B | RUP 16 lb/A | |
| | <i>cyfluthrin</i> Tempo SC Ultra, others (landscape turf only) | 3 | 8 mL/1000 sq ft | |
| <i>cyfluthrin</i> Tempo WP GC (golf course and sod farms only) | 3 | 1 packet/7,800 sq ft | | |

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| Fire Ants (continued) | BROADCAST TREATMENTS | | | |
| | <i>deltamethrin</i> DeltaGard G DeltaGard T&O 5SC (landscape turf only) DeltaGard GC 5SC | 3 | 1.5 fl oz/gal 1.5 fl oz/gal 1.5 fl oz/gal | |
| | <i>chlorpyrifos</i> Dursban Pro | 1B | 1.5 fl oz/1000 sq ft | |
| | <i>fipronil</i> TopChoice, Quali-Pro Fipronil 0.0143, 0.1 | | See label for rates and restrictions. | |
| | <i>imidacloprid + bifenthrin</i> Allectus GC SC | 4A + 3 | RUP 1.32-1.6 5 fl oz /1000 sq ft | |
| | <i>lambda-cyhalothrin</i> Scimitar GC, others | 3 | 7 mL/1000 sq ft | |
| | <i>cyfluthrin</i> Tempo WP Ultra, others (landscape turf only) | 3 | 5-10 g (1-2 scoops)/ 1000 sq ft | |
| Hemlock woolly adelgid | <i>dinotefuran</i> Safari 20 SG, Zylam | | Follow label | Foliar, drench and soil injection may be effective. |
| | <i>imadacloprid</i> Merit 75WP | | Follow label | |
| | <i>thiamethoxam</i> Flagship 25WG | | Follow label | |
| | <i>acetamiprid</i> Tristar 30SG | | 6.7-8 oz | |
| Holly leaf miner | <i>lambda-cyhalothrin</i> Scimitar 9.52% WP | 3 | 2.4-4.8 oz | Use a non-systemic insecticide on the foliage in early to mid April to control the adults. |
| | <i>carbaryl</i> Sevin SL | 1A | 1 qt | Use one of the systemic materials once larvae have entered leaves. |
| | <i>bifenthrin</i> Talstar, others | 3 | 0.5-1 fl oz/1000 sq ft | Do not apply Cygon to Burford Holly |
| | <i>acetamiprid</i> Tristar 30SGr | 4A | 6.7-8 oz | |
| Lace bug | <i>acephate</i> Orthrene, etc. | 1B | Consult label | Treat when lace bug nymphs are first seen. Repeat as needed to protect foliage. |
| | <i>imidacloprid</i> (various brand names) | 4A | See label for rates and application instructions. | |
| | <i>acetamiprid</i> Tristar 30SG | 4A | 6.7-8 oz | |

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|--|--|----------------------------|--|--|
| Mealybug | <i>dinotefuran</i> Safari 20 SG, Zylam | 4A | 4.8 oz | If the mealybugs have dense cottony masses, additional applications may be needed at 10 to 14 day intervals for control. Other bifenthrin formulations are available. |
| | <i>clothianidin</i> Arena 5 0WDG | 4A | 0.9-1.26 oz | |
| | <i>acephate</i> Orthene | 1B | 2/3 lb | |
| | <i>acetamiprid</i> Tristar | 4A | 2.7 oz | |
| | <i>buprofezin</i> Talus | 16 | 0.71 lb | |
| | <i>imidacloprid</i> various brand names | 4A | See label for rates and application instructions | |
| | <i>isaria fumorosea</i> Preferal | UN | 14-28 oz | |
| | Oils | | 1-3 gal | |
| | <i>pyrifluquinazon</i> Rycar | UN | 2.4-3.2 oz 0.025-0.0275 oz | |
| | Soaps | | 1-2 gal | |
| | <i>spinetoram + sulfoxaflor</i> XXpire | 5 + 4C | 2-2.75 oz 0.02-0.0275 oz | |
| <i>bifenthrin</i> Talstar One, others | 3 | 0.25-0.50 fl oz/1000 sq ft | | |
| Rhododendron Borer | <i>permethrin</i> Astro 3.2 lb/gal EC | 3 | 1-2 qt | Treat trunk and larger branches when adults are present (April-early May). |
| | <i>bifenthrin</i> Onyx | 3 | 6.4-32 oz | |
| Sawflies | <i>imidacloprid</i> various brand names including Merit | 4A | | Make application when larvae are actively feeding on plant. See label for rate. |
| | <i>carbaryl</i> Sevin SL 4 lb/gal F | 1A | 1 qt | |
| | Soaps | | 1-2 gal | |
| | Various pyrethroids | 3 | | See note below. |
| Scales | <i>acetamiprid</i> Tristar 3 OSG | 4A | 2.7-5.3 | Refer to each species for the times that crawlers are emerging and settling. Contact insecticides are most effective if timed for crawlers. Oil applications are effective in reducing populations of soft scales. Armored scales, which overwinter in the egg stage are generally less susceptible to dormant oil sprays. |
| | <i>buprofezin</i> Talus | 16 | 0.86 lb | |
| | <i>dinotefuran</i> Safari 20 SG, Zylam | 4A | 4-8 oz | Granular formulations are also available. |

NOTE: A number of pyrethroid materials are available in a variety of formulations for use as broad-spectrum contact insecticides. Common names include bifenthrin, cyfluthrin, cypermethrin, deltamethrin, lambda-cyhalothin, tralomethrin, permethrin. Active ingredients are listed on the label.

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|--|---|------------|-----------------------------|--|--|
| Scales <i>(continued)</i> | <i>pyriproxifen</i> Distance IGR | 7C | 8-12 oz | | |
| | <i>imidacloprid</i> Merit, etc. | 4A | | | |
| | Oils | | 1-3 gal | | |
| | <i>carbaryl</i> Sevin SL 4 lb/gal F | 1A | 1 qt | | |
| | Soaps | | 1-2 gal | | |
| | <i>thiamethoxam</i> Meridian | 4A | See label | | |
| Southern Pine Beetle | See BARK BEETLES section. | | | Spray trunk surface when adults are active. | |
| Spider mites (southern red mite, spruce spider mite, twospotted spider mite) | <i>abamectin</i> Avid, others | 6 | 4 oz | Many spider mites attack ornamentals and perennials. Proper identification is important in determining control timing. Spruce spider mite and southern red mite are more prevalent in fall and early spring. Twospotted spider mite and boxwood spider mite are most prevalent during hot, dry weather. Spider mite control usually requires a spray program that involves 2-3 applications at 7-10 day intervals. Do not use Avid on conifers. | |
| | <i>fenazaquin</i> Magus | 21A | 12-24 oz | | |
| | <i>hexythiazox</i> Hextgon DF | 10A | 1-2 oz (named species) | | |
| | Oils | | | | |
| | Soaps | | 2.4-4.8 oz | | |
| | <i>spiromesifen</i> Forbid | 23 | 2-4 oz | | |
| Slugs and snails | Bug-Geta 3.25% B | | 1 lb/1000 sq ft | Apply when leaf damage is first noticed and reap ply as needed. | |
| | <i>metaldehyde</i> Deadline Bullets 4% B | | 0.25 lb/1000 sq ft | | |
| | Deadline Ornamental Mini-pellets B | | 0.25 lb/1000 sq ft | | |
| | Mesurool 75% WP | | 2 lb | | Mesurool is highly toxic and a Restricted Use Pesticide. |
| | Slug-Geta 2% B | | 1 lb/1000 sq ft | | |
| Thrips | <i>spinosad</i> Conserve SC | 5 | 22 oz | Treat foliage and flowers when thrips are detected . It is often necessary to repeat the application at 7-10 day intervals to control heavy infestations. | |
| | <i>imidacloprid</i> Merit, others | 4A | Consult label | | |
| | Oils (horticultural) | | 1 qt | | |
| | <i>carbaryl</i> Sevin SL 4 lbs /gal. F | 1A | Consult label | NOTE: A number of pyrethroid materials are available in a variety of formulations for use as broad-spectrum contact insecticides. Common names include bifenthrin, cyfluthrin, cypermethrin, deltamethrin, lambda-cyhalothin, tralomethrin, permethrin. Active ingredients are listed on the label. | |
| | <i>acetamiprid</i> Tristar 30SG | 4A | 3.5 tbs | | |

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|---------------------|---|------------|-------------------------------|--|
| Twolined Spittlebug | Orthene 9.4% EC Merit | 4A | 4.69 qt | Two generations per year in Georgia. Treat when spittle masses appear in turf to avoid problems with adult feeding on ornamentals. |
| | Various pyrethroids | 1B | See label | See note below. |
| Whitefly | <i>acephate</i> Orthene, etc. | 1B | Consult label | Treat when whiteflies are first noticed and repeat as needed. |
| | <i>acetamiprid</i> Tristar 3 OSG | 4A | 2.7-5.3 | |
| | <i>clothianidin</i> Arena, Celero | 4A | 3-4 oz | |
| | <i>dinotefuran</i> Safari 20 SG, Zylam | 4A | See label | |
| | <i>pyriproxifen</i> Distance IGR | 7C | 6-8 oz | |
| | <i>imidacloprid</i> Merit, others | 4A | Follow label directions | |
| | <i>isaria fumorosea</i> Preferal | UN | 14-28 oz | |
| | <i>pyrifluquinazon</i> Rycar | UN | 2.4-3.2 oz 0.025-0.0275 oz | |
| | Oils | | 1-3 gal | |
| | Soaps | | 1-2 gal | |
| | <i>spinetoram + sulfoxaflor</i> XXpire | 5 + 4C | 2-2.75 oz 0.02-0.0275 oz | |
| | <i>spiromesifen</i> Forbid | 23 | 2-4 oz | |

COMMERCIAL GREENHOUSE INSECT CONTROL

Will Hudson, Extension Entomologist

NOTE: The following pesticides are 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 which is being damaged and the site where the plant is located (greenhouse) must be listed on the label. The pests a compound is registered for are also listed on the label. The pesticides below are listed by common name and by a formulation name that 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 synergists 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 sub-groups. In resistance management rotations of these number/letter codes can be used to determine which compounds are different modes of action. These are listed in the table under the column heading “Mode of Action No.”

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 that the proper reentry period for the insecticide has been observed before allowing people without labeled, 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 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.

COMMERCIAL GREENHOUSE INSECT CONTROL

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | REI/PHI (Days or Hours) | MOA | REMARKS |
|----------------------------------|----------------|--|--|------------------------------|-----|---|
| (Many flower and foliage plants) | Aphids | <i>abamectin</i> Avid 0.15EC | 8 oz | 12 H/ – | 6 | Apply as needed and repeat application at 7 day intervals or as necessary. Do not apply more than 16 fl oz/A. Use in sufficient water to obtain uniform plant coverage. Phytotoxicity has been observed in certain species of ferns. |
| | | <i>acephate</i> Orthene TT& O 75 WSP, Pro 75 PT 1300 12% TT&O 97 | 1/3-2/3 lb Aerosol 8 oz | 24 H/ – | 1B | Caution: 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 treat only a few plants and observe 2 weeks for varietal phytotoxicity. |
| | | <i>acetamiprid</i> TriStar 70WSP TriStar 30SG | 1 soluble bag 1.3 oz | 24 H/ 12 H/– | 4A | Apply as a full coverage foliar spray. The use of a non-ionic sp reader-sticker adjuvant may improve control. |
| | | <i>azadirachtin</i> Azatin 3.0 % XL, Align-XL Neemazad 4.5 EC Ornazin 3% | 10-16 oz 2.25-4.5 oz 8 oz | 4 H/ – 12 H/ 12 H/– | 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% non-phytotoxic oil will enhance efficiency. |
| | | <i>beauveria bassiana</i> Naturalis-O BotaniGard ES | 30-10 fl oz 16-32 fl oz | 4 H/ – 12 H/ – | | Wait 48 hrs before applying fungicides. |
| | | <i>bifenthrin</i> Talstar T&O or Attain 10 WP 7.9% 0.67 F Attain | 6-32 oz 25-50 fl oz 8-40 oz aerosol | 12 H/ – | 3A | Apply as a full coverage foliage spray. |
| | | <i>chlorpyrifos</i> Dursban 50WP 4E DuraGuard 20% ME | 0.25-0.5 lb 0.5-1 pt 0.25-0.5 oz/gal | 12 H/ – | 1B | |
| | | <i>cyfluthrin</i> Decathlon 2E 20WP | 1-2 oz 1.9 oz | 12 H/ – | 3A | Good coverage is necessary to the provide most effective control. Addition of a spreader/sticker may enhance control of insects on some plants. |
| | | <i>dinotefuran</i> Safari 20 SG | 0.5-1 lb for foliar 0.75-1.5 lb for drench | 12 H/ – | 4A | For drench, apply 4 fl oz finished solution per 6” pot. See label for ebb and flood rates. |

COMMERCIAL GREENHOUSE INSECT CONTROL

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | REI/PHI (Days or Hours) | MOA | REMARKS | |
|--|------------------------------|---|--|--------------------------------|------------|--|--|
| (Many flower and foliage plants) <i>(continued)</i> | Aphids <i>(continued)</i> | <i>fenprothrin</i> Tame 2.4EC | 10% oz | 24 H/ – | 3A | | |
| | | <i>flonicamid</i> 50 WDG Aria 0.7 oz package | 1-3 packets (0.7-2.1 oz) | 12 H/ – | 9C | Repeat application every 7-28 days as necessary. | |
| | | <i>imidacloprid</i> Merit, others | | | | 4A | Follow label directions. |
| | | <i>isaria fumorosea</i> Preferal | 14-28 oz | | | UN | |
| | | <i>pyrifluquinazon</i> Rycar | 2.4-3.2 oz | 12 H/ – | | UN | |
| | | <i>sulfloxaflo</i> r + <i>spinetoram</i> XXpire | 2-2.75 oz | 12 H/ – | | 4C 5 | |
| | | <i>tolfenpyrad</i> Hachi-Hachi SC | 21-32 oz | 12 H/ – | | 21A | |
| | Armyworms | <i>acetamiprid</i> TriStar 30SG | 2.7-5.3 oz | 12 H/ – | | 4A | Apply as a full coverage foliage spray. The use of a non-ionic sp reader-sticker adjuvant may improve control. |
| | | <i>chlorpyrifos</i> Dursban 50WP, 4E Duraguard 20% ME | 1 lb 0.5-1 pt 0.25-0.5 oz/gal | 12 H/ – | | 1B | |
| | | <i>cyantraniliprole</i> Mainspring | 1-8 oz 0.01-0.08 oz | 4 H/ – | | 28 | |
| | | <i>dinotefuran</i> Safari 20 SG | 0.5-1 lb for foliar 0.75-1.5 lb for drench | 12 H/ – | | 4A | For drench apply 4 fl oz finished solution per 6” pot. See label for ebb and flood rates. |
| | | <i>lambda-cyhalothrin</i> Scimitar GC | 1.5-5 oz | 24 H/ – | | 3A | |
| | | <i>methiocarb</i> Mesurool 75WP | 0.5-1 lb | 24 H/ – | | 1A | Apply during early evening when foliage is dry. Keep greenhouse closed at least 2-4 hours. |
| | | <i>novaluron</i> Pedestal 10%SC | 6-8 fl oz | 12 H/ – | | 15 | Do not apply more than once every 30 days nor more than 2 applications per crop. Do not apply to poinsettias. |
| | | <i>pyrethrum</i> X.Clude Pyrenone, Natural Plus | See Remarks | 12 H/ – | | 3A | Follow label directions. |
| | | <i>pyridalyl</i> Overture 35WP | 8 oz | 12 H/ – | | UN | 2 oz soluble packets. Do not get wet. |
| | | <i>sulfloxaflo</i> r + <i>spinetoram</i> XXpire | 2-2.75 oz | 12 H/ – | | 4C 5 | |
| | | <i>tebufenozide</i> Confirm T/O | 4-8 fl oz | 4 H/ – | | 18A | For best results, begin applications when larvae are first observed or at first sign of feeding. |
| | | <i>thiamethoxam</i> Flagship 25WG | 2-4 oz | 12 H/ – | | 4A | |

COMMERCIAL GREENHOUSE INSECT CONTROL

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | REI/PHI (Days or Hours) | MOA | REMARKS |
|---|------------------------------------|--|----------------------|-------------------------|--|---|
| (Many flower and foliage plants) (continued) | Broad and Clycamen Mite | <i>abamectin</i> Avid .15EC | 4 oz | 12 H/ – | 6 | Apply as needed and repeat as necessary. |
| | | <i>chlorfenapyr</i> Pylon | 2.6-5.2 fl oz | 12 H/ – | 13 | |
| | | <i>pyridaben</i> Sanmite 75WP | 2-4 oz | 12 H/ – | 21A | |
| | | <i>sulfur</i> elemental sulfur | Follow label | 12 H/ – | | Do not tank mix with oils. |
| | Cabbage looper | <i>azadirachtin</i> Azatin | 10-16 oz | 4 H/– | 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 H/– | | |
| | | Ornazin 3% | 8 oz | 12 H/– | | |
| | | <i>Bacillus thuringiensis</i> Dipel, Thuricide, MVP, Sok-Bt, Biobit | 1-4 qt | 4 H/ – | 11B2 | Follow manufacturer's suggestions. |
| | | <i>chlorfenapyr</i> Pylon | 2.6-6.4 fl oz | 12 H/ – | 13 | |
| | | Insecticidal Soap M-Pede Olympic | 1-2% (1-2 gal) | 12 H/ – | | Repeat spray weekly for 2 or 3 weeks. Thoroughly wet both surfaces of infested leaves. Use soft water when possible. |
| | | <i>pyrethrum</i> X.Clude Pyrenone | Aerosol 2-12 oz/A | 12 H/ – | 3A | Follow label directions. |
| | | <i>pyridalyl</i> Overture 35WP | 8 oz | 12 H/ – | un | 2 oz soluble packets. Do not get wet. |
| | <i>spinosad</i> Conserve SC | 6 fl oz | 4 H/ – | 5 | | |
| | <i>tebufenozide</i> Confirm T/O | 4-8 fl oz | 4 H/ – | 18A | For best results, begin applications when larvae are first observed or at first sign of feeding. | |
| | Cutworm | <i>bacillus thuringiensis</i> Dipel, Thuricide, MVP, Sok-Bt, Biobit | 1-4 qt | 4 H/ – | 11B2 | Follow manufacturer's suggestions. |
| | | <i>carbaryl</i> Sevin SL | 1 qt | 12 H/ – | 1A | Apply to soil surface beneath plants. Sevin injures Boston Ivy, Virginia Creeper and maidenhair fern. |
| | | <i>cyantraniliprole</i> Mainspring | 1-8 oz | 12 H/ – | 28 | |
| | | <i>cyfluthrin</i> Decathlon 2EC 20WP | 1-2 oz 1.3 oz | 12 H/ – | 3A | (see aphids) |

COMMERCIAL GREENHOUSE INSECT CONTROL

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | REI/PHI (Days or Hours) | MOA | REMARKS |
|---|-------------------------------|---|---|-------------------------|------------|--|
| (Many flower and foliage plants) (continued) | Cutworm <i>(continued)</i> | <i>lambda-cyhalothrin</i> Scimitar GC | 1.5-5 oz | 24 H/ – | 3A | |
| | | <i>spinosad</i> Conserve SC | 6 fl oz | 4 H/ – | 5 | |
| | | <i>sulflxaflor + spinetoram</i> XXpire | 2-2.75 oz | 12 H/ – | 4C 5 | |
| | | <i>tebufenozide</i> Confirm T/O | 4-8 fl oz | 4 H/ – | 18A | For best results, begin applications when larvae are first observed or at first sign of feeding. |
| | Fungus gnats | <i>acetamiprid</i> TriStar 30SG | 2.7-5.3 oz | 12 H/ – | 4A | Apply as a directed spray to thoroughly wet the upper ½ -1 inch of soil medium. |
| | | <i>azadirachtin</i> Azatin 3.0% E | 8 oz | 4 H/ – | 18B | |
| | | <i>bacillus thuringiensis</i> H-14 Gnatrol | 1-8 pt 0.5-4 pt | 4 H/ – | 11B2 | Apply as a soil drench or spray for larvae. Thoroughly wet the first 3-4 cm of soil. Under benches should also be treated. |
| | | <i>chlorfenapyr</i> Pylon | 5.2-10 fl oz | 12 H/ – | 13 | |
| | | <i>chlorpyrifos</i> DuraGuard 20% ME | 0.25-0.5 oz/gal | 12 H/ – | 1B | Shake concentrate well before diluting. |
| | | <i>cyromazine</i> Citation 75WP | Follow label | 12 H/ – | 17 | |
| | | diflubenzuron (Adept) 25W | Follow label | 12 H/ – | 15 | Do not use on poinsettias, Reiger begonias, and hibiscus. |
| | | <i>dinotefuran</i> Safari 20 SG | 0.75-1.5 lb | 12 H/ – | 4A | Drench by applying 4 fl oz finished solution per 6” pot. See label for ebb and flood rates. |
| | | <i>kinoprene</i> Enstar II 5EC | 1 oz/5 gal | 4 H/ – | 7A | Drench by submersion in solution until no more air bubbles escape. |
| | | <i>pyriproxyfen</i> Distance | 2-6 fl oz (see comments) | 12 H/ – | 7C | New supplemental label changes rates to a 2 oz drench and 3-6 oz drench. |
| | | <i>resmethrin</i> 2EC <i>resmethrin</i> PT 1200 | 1-2 pt aerosol | 12 H/ – | 3A | Spray soil surface until thoroughly wet. Repeat at 10 day intervals, if necessary. Aerosol for adults only. |
| | | <i>Steinernema feltiae</i> Entonem, NemaShield, Nemasys, ScanMask | Follow label | 4 H/ – | | Apply when small larvae first appear. Moisture and temperature are critical. |
| | | <i>thiamethoxam</i> Flagship 25WG | Follow label for drench | 12 H/ – | 4A | Drench may take 1-2 weeks for activity, do not leach for 7 days. |
| | | Leafminer | <i>abamectin</i> Avid, generic .15EC | 8 oz | 12 H/ – | 6 |

COMMERCIAL GREENHOUSE INSECT CONTROL

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | REI/PHI (Days or Hours) | MOA | REMARKS |
|---|---------------------------------|--|--|---------------------------|-----|--|
| (Many flower and foliage plants) (continued) | Leafminer <i>(continued)</i> | <i>acephate</i> Orthene TT& O 75 WSP, Pro 75 PT 1300 12% TT&O 97 | 0.33-0.75 lb Aerosol 8 oz | 24 H/ – | 1B | See phytotoxicity warning for aphids. |
| | | <i>acetamiprid</i> TriStar 30SG | 6.7-8 oz | 12 H/ – | 4A | Rotate with other insecticides. Apply as a full coverage foliar spray. The use of a non-ionic spreader-sticker adjuvant may improve control. |
| | | <i>azadirachtin</i> Azatin 3% E Neemazad Ornazin 3% | 10-16 oz 2.25-4.5 fl oz 10 oz | 4 H/– 12 H/– 12 H/– | 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. |
| | | <i>chlorpyrifos</i> Dursban 50WP DuraGuard 20% ME | 2 lb 0.25-0.5 oz/gal | 12 H/ – | 1B | |
| | | <i>cyromazine</i> Citation 75WP | 2.66 oz/A | 12 H/ – | 17 | Apply to wet in minimum of 100 gal of water when stippling first appears. |
| | | <i>dinotefuran</i> Safari 20 SG | 0.5-1 lb for foliar 0.75-1.5 lb for drench | 12 H/ – | 4A | For drench apply 4 fl oz finished solution per 6” pot. See label for ebb and flood rates. |
| | | <i>lambda-cyhalothrin</i> Scimitar GC | 1.5-5 oz | 24 H/ – | 3A | Use for adults only. |
| | | <i>novaluron</i> Pedestal 10% SC IGR | 6-8 fl oz | 12 H/ – | 15 | |
| | | <i>permethrin</i> Pounce 3.2EC | 20 fl oz | 24 H/ – | 3A | Registered for use on chrysanthemums. |
| | | <i>thiamethoxam</i> Flagship 24WG | 4-8 oz | 12 H/ – | 4A | |
| | | <i>spinosad</i> Conserve SC | 22 fl oz | 4 H/ – | 5 | |
| | Leafroller | <i>acephate</i> Orthene TT&O 75 WSP, Pro 75 PT 1300 12% TT&O 97 | 1/3-2/3 lb Aerosol 8 oz | 24 H/ – | 1B | See phytotoxicity warning for aphids. |
| | | <i>cyantraniliprole</i> Mainspring | 1-8 oz | 4 H/ – | 28 | |
| | | <i>cyfluthrin</i> Decathlon 2EC 20WP | 1-2 oz 1.9 oz | 12 H/ – | 3A | See aphids. |
| | | <i>pyrethrum</i> X.clude Pyrenone, Natural Plus | Aerosol 2-12 oz/A | 12 H/ – | 3A | Follow label directions. |

COMMERCIAL GREENHOUSE INSECT CONTROL

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | REI/PHI (Days or Hours) | MOA | REMARKS |
|---|----------------|---|---|-------------------------|-----|--|
| (Many flower and foliage plants) (continued) | Mealybug | <i>acephate</i> Orthene TT & O 75 WSP, Pro 75 PT 1300 12% TT&O 97 | 1/3-2/3 lb Aerosol 8 oz | 24 H/ – | 1B | See phytotoxicity warning for aphids. |
| | | <i>acetamiprid</i> TriStar 70WSP TriStar 3 OSG | 2-4 soluble bags 2.7 oz | 24 H/ 12 H/– | 4A | Tank mix with surfactant or pyrethroid may improve control of adults. Apply as a full coverage foliage spray. The use of a non-ionic sp reader-sticker adjuvant may improve control. |
| | | <i>azadirachtin</i> Azatin Neemazad Ornazin 3% | 10-16 oz 2.25-4.5 oz 8 oz | 4 H/ 12 H/ 12 H/– | 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% non-phytotoxic oil will enhance efficiency. |
| | | <i>beauveria bassiana</i> Naturalis-O | 30-100 fl oz | 4 H/ – | | Wait 48 hours before applying a fungicide. |
| | | <i>bifenthrin</i> Talstar T&O or Attain 10WP 7.9% 67F (Attain) | 8-40 oz 25-50 fl oz 8-40 oz aerosol | 12 H/ – | 3A | Apply as a full coverage foliar spray. |
| | | <i>chlorpyrifos</i> Dursban 50WP 4E | 1 lb 0.5-1 pt | 12 H/ – | 1B | |
| | | <i>cyfluthrin</i> Decathlon 2EC | 1-2 oz | 12 H/ – | 3A | (See aphids). |
| | | <i>dinotefuran</i> Safari 20 SG | ½-1 lb for foliar ¾-1 ½ lb for drench | 12 H/ – | 4A | For drench apply 4 fl oz finished solution per 6” pot. See label for ebb and flood rates. |
| | | <i>fenpropathrin</i> Tame 2.4EC | 10% oz | 24 H/ – | 3A | |
| | | <i>flonicamid</i> 50 WDG Aria 0.7 oz package | 3-6 packets (2.1-4.3 oz) | 12 H/ – | 9C | Repeat application every 7-28 days as necessary. |
| | | <i>fluvalinate</i> Mavrik 2EC | 2-5 oz | 12 H/ – | 3A | |
| | | horticultural oils Sunspray ultrafine Saf-T-Side | 1-2% (1-2 gal) | 4 H/ – | | 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. |
| | | <i>imidacloprid</i> Many generic formulations and names | Follow label | 12 H/ – | 4A | |
| | | Insecticidal Soap M-Pede Olympic | 1-2% (1-2 gal) | 12 H/ – | | Repeat spray after 2 or 3 days. Thoroughly wet both surfaces of infested leaves. Use soft water whenever possible. |
| | | <i>isaria fumorosea</i> Preferal | 14-28 oz | | UN | |
| | | <i>kinoprene</i> Enstar II 5EC | 6-20 oz | 4 H/ – | 7A | See aphid. Registered for root mealybug. |

COMMERCIAL GREENHOUSE INSECT CONTROL

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | REI/PHI (Days or Hours) | MOA | REMARKS |
|---|-------------------------|--|--------------------------|-------------------------|--|---|
| (Many flower and foliage plants) (continued) | Mealybug (continued) | <i>methiocarb</i> Mesurol 75 WP | 0.5-1 lb | 24 H/ – | 1A | |
| | | <i>pyrifluquinazon</i> Rycar | 2.4-3.2 oz | 12 H/ – | UN | |
| | | <i>spirotetramat</i> Kontos 2F | 1.7 fl oz | 24 H/ – | 23 | See label for drench instructions. |
| | | <i>sulfloxaflor + spinetoram</i> XXpire | 2-2.75 oz | 12 H/ – | 4C 5 | |
| | | <i>thiamethoxam</i> Flagship 25WG Flagship 0.22G | 4-8.5 oz Follow label | 12 H/ – | 4A | Medium treatment may take 1-2 weeks for activity. Do not leach for 7 days. |
| | Slugs and Snails | <i>metaldehyde</i> Deadline B 15D | Follow label | 24 H/ – | | |
| | | <i>methiocarb</i> Mesurol 75 WP | 2 lb | 24 H/ – | 1A | Spray plants and foliage until wet. Do not use in conjunction with foliar fertilizer. |
| | Spider Mite | <i>abamectin</i> Avid, generic .15EC | 4 oz | 12 H/ – | 6 | Apply as needed and repeat as necessary. |
| | | <i>acequinocyl</i> Shuttle 15 SC | 6.4-12.8 fl oz | 12 H/ – | 20B | Do not apply through any type irrigation. Wetting agent can be used. |
| | | <i>cyflumetofen</i> Sultan | 13.7 fl oz | 12 H/ – | 25 | No more than 2 applications per crop cycle. |
| <i>bifenazate</i> Floramite | | 2-4 oz | 12 H/ – | UN | Do not apply in successive applications. Use at least 2 alternative products between Floramite treatments. | |
| <i>chlorfenapyr</i> Pylon | | 2.6-5.2 fl oz | 12 H/ – | 13 | | |
| <i>clofentezine</i> Ovation | | 2 oz | 12 H/ – | 10A | Limited number of plants (see label). | |
| <i>etoxazole</i> TetraSan 5WDG | | 8-16 oz | 12 H/ – | 10B | Limited to 2 applications per crop cycle. | |
| <i>fenazaquin</i> Magus | | 12-24 oz | 12 H/ – | 21 | | |
| <i>fenbutatin-oxide</i> Vendex 50WP | | 8-16 oz | 48 H/ – | 12B | Do not add oil to spray solution. | |
| <i>fenpyrozimate</i> Akari 5 SC | 16-24 fl oz | 12 H/ – | 21A | | | |

COMMERCIAL GREENHOUSE INSECT CONTROL

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | REI/PHI (Days or Hours) | MOA | REMARKS |
|---|-----------------------------------|---|-------------------------------------|-------------------------|--------------|---|
| (Many flower and foliage plants) (continued) | Spider Mite <i>(continued)</i> | <i>fluvalinate</i> Mavrik 2E | 2-5 oz | 12 H/ – | 3A | |
| | | <i>hexythiazox</i> Hexygon DF | 1-2 oz | 12 H/ – | 10A | |
| | | horticultural oil Sunspray ultrafine, Saf-T-Side, Triact | 1-2 gal | 4 H/ – | | |
| | | Insecticidal Soap M-Pede Olympic | 1-2% (1-2 gal) | 12 H/ – | | Repeat spray weekly for 2 or 3 weeks. Thoroughly wet both surfaces of infested leaves. Use soft water whenever possible. |
| | | <i>pyridaben</i> Sanmite 75WP | 2-4 oz | 12 H/ – | 21A | |
| | | <i>spinosad</i> Conserve SC | 22 fl oz | 4 H/ – | 5 | |
| | | <i>spiromesifen</i> Judo 4 F, Savate | 1-4 oz | 12 H/ – | 23 | Effective on nymphal and egg stages. |
| | | <i>spirotetramat</i> Kontos 2F | 1.7 fl oz | 24 H/ – | 23 | See label for drench instructions. |
| | Thrips | <i>abamectin</i> Avid, generic 0.15EC | 8 oz | 12 H/ – | 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/A. Use in sufficient water to obtain uniform plant coverage. Phytotoxicity has been observed in certain species of ferns. |
| | | <i>acetamiprid</i> TriStar 30SG | 4-8 oz | 12 H/ – | 4A | Apply as a full coverage foliage spray the use of a non-ionic sp reader-sticker adjuvant may improve control. |
| | | <i>acephate</i> Orthene TT&O 75 WSP, Pro 75 PT 1300 12% TT & O 97 | 1/3-2/3 lb Aerosol 8 oz | 24 H/ – | 1B | Aerosol may also be used as for aphid control. See phytotoxicity warning for aphids. |
| | | <i>azadirachtin</i> Azatin 3% E neemazad 4.5% Ornazin 3% | 12-16 oz 2.25-4.5 oz 8 oz | 4 H/ 12 H/ 12 H/– | 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% non-phytotoxic oil will enhance efficiency. |
| | | <i>beauveria bassiana</i> Naturalis-O BotaniGard ES | 30-100 fl oz 32-64 fl oz | 4 H/ 12 H/– | | |
| | | <i>chlorfenapyr</i> Pylon | 10-20 fl oz | 12 H/ – | 13 | |
| | | <i>chlorpyrifos</i> Dursban 50WP 4E DuraGuard 20% ME | 1 lb 0.5-1 pt 0.25-0.5 oz/gal | 12 H/ – | 1B | |
| <i>cyfluthrin</i> Decathlon 2EC 20WP | | 1-2 oz 1.9 oz | 12 H/ – | 3A | (See aphids) | |

COMMERCIAL GREENHOUSE INSECT CONTROL

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | REI/PHI (Days or Hours) | MOA | REMARKS | |
|--|----------------------------------|---|--|-----------------------------------|---|--|---|
| (Many flower and foliage plants) (continued) | Thrips (continued) | <i>cyfluthrin</i> Decathlon 2EC 20WP | 1-2 oz 1.9 oz | 12 H/ – | 3A | (See aphids) | |
| | | <i>dinotefuran</i> Safari 20 SG | 4-8 oz for foliar, 12-24 oz for drench | 12 H/ – | 4A | Suppression only. For drench apply 4 fl oz of finished solution per 6” pot. See label for ebb and flood rates. | |
| | | <i>flonicamid</i> 50 WDG Aria 0.7 oz. package | 3-4 packets (2.1-2.9 oz) | 12 H/ – | 9C | Repeat application every 7-28 days as necessary. | |
| | | <i>fluvalinate</i> Mavrik 2E | 2-5 oz | 12 H/ – | 3A | Not for western flower thrips. | |
| | | <i>imidacloprid</i> Marathon 1G, 60WP | 9-15 oz/1000 sq ft | 12 H/ – | 4A | Use 60WP as drench. | |
| | | Insecticidal Soap M-Pede Olympic | 1-2% (1-2 gal) | 12 H/ – | | Repeat spray weekly for 2 or 3 weeks. Thoroughly wet both surfaces of infested leaves. Use soft water whenever possible. | |
| | | <i>lambda-cyhalothrin</i> Scimitar GC | 1.5-5 oz | 24 H/ – | 3A | | |
| | | <i>novaluron</i> Pedestal 10%SC | 6-8 fl oz | 12 H/ – | 15 | Do not apply more than once every 30 days nor make more than 2 applications per crop. Do not apply to poinsettias. | |
| | | <i>pyrethrum</i> X.Clude, Natural Plus Pyrenone | aerosol 2-12 oz/A | 12 H/ – | 3A | Follow label directions. | |
| | | <i>pyridalyl</i> Overture 35WP | 8 oz | 12 H/ – | un | 2 oz soluble packets. Do not get wet. | |
| | | <i>spinosad</i> Conserve SC | 6 fl oz | 4 H/ – | 5 | | |
| | | <i>thiamethoxam</i> Flagship 25WG | 4-8.5 oz | 12 H/ – | 4A | For leaf feeding thrips. | |
| | | <i>tolfenpyrad</i> Hachi-Hachi SC | 14-28 oz | 12 H/ – | 21A | | |
| | | Whitefly | <i>abamectin</i> Avid, generic 0.15EC | 8 fl oz | 12 H/ – | 6 | For suppression of pests, young must be contacted by spray. |
| | | | <i>aacephate</i> Orthene TT & O 75 WSP, Pro 75 PT 1300 12% TT&O 97 | 1/3-2/3 lb Aerosol 8 oz | 24 H/ – | 1B | See phytotoxicity warning for aphids. |
| <i>acetamiprid</i> TriStar 70WSP TriStar 30SG | 2-4 soluble bags 2.7-5.3 oz | | 24 H/– 12 H/– | 4A | Tank mixing with surfactant or pyrethroid may improve control of adults. Apply as a full coverage foliage spray. The use of a non-ionic sp reader-sticker adjuvant may improve control. | | |
| <i>azadirachtin</i> Azatin 3% E Neemazad Ornazin 3% | 10-16 oz 2.25-4.5 oz 10 oz | | 4 H/– 12 H/– 12 H/– | 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. | | |

COMMERCIAL GREENHOUSE INSECT CONTROL

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | REI/PHI (Days or Hours) | MOA | REMARKS |
|---|-----------------------------|---|--|-------------------------|-----|--|
| (Many flower and foliage plants) (continued) | Whitefly (continued) | <i>beauveria bassiana</i> Naturalis-O BotaniGard ES | 30-100 fl oz 16-32 fl oz | 4 H/- 12 H/- | | |
| | | <i>bifenthrin</i> Talstar T&O or Attain 10WP 7.9% Attain | 6-32 oz 25-50 fl oz aerosol | 12 H/ - | 3A | Apply as a full coverage foliar spray. |
| | | <i>chlorpyrifos</i> Dursban 50WP DuraGuard 20% | 0.5-1 lb 0.25-0.5 oz/gal | 12H/ - | 1B | |
| | | <i>cyfluthrin</i> Decathlon 2E | 1-2 oz | 12 H/ - | 3A | (See aphids). |
| | | <i>dinotefuran</i> Safari 20 SG | 0.25-0.5 lb for foliar 0.75-1.5 lb for drench | 12 H/ - | 4A | For drench, apply 4 fl oz finished solution per 6" pot. |
| | | <i>fenpropathrin</i> Tame 2.4EC | 5.33-10.66 oz/100 gal | 24 H/ - | 3A | |
| | | <i>fenvalerate</i> Pydrin 2.4EC | 5-10 oz | 12 H/ - | 3A | |
| | | <i>flonicamid</i> 50 WDG Aria 0.7 oz package | 4-6 packets (2.9-4.3 oz) | 12 H/ - | 9C | Repeat application every 7-28 days as necessary. |
| | | <i>fluvalinate</i> Mavrik 2E | 2-5 oz | 12 H/ - | 3A | |
| | | horticultural oils Sunspray ultrafine Saf-T-Side | 1-2% (1-2 gal) | 4 H/ - | | 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. |
| | | <i>imidacloprid</i> Marathon 1G, 60WP Marathon II, Others | 9-15 oz/1000 sq ft 1.7 fl oz | 12 H/ - | 4A | Use 60WP as drench. Imidacloprid is also available as a generic product under many names. Also available as Coretect tablets. |
| | | Insecticidal Soap M-Pede Olympic | 1-2% (1-2 gal) | 12 H/ - | | Thoroughly wet both surfaces of infested leaves. Use soft water whenever possible. |
| | | <i>isaria fumorosea</i> Preferal | 14-28 oz | 4H/ - | UN | |
| | | <i>kinoprene</i> Enstar II 5EC | 6-20 oz | 4 H/ - | 7A | (See aphids). |
| | | <i>lambda-cyhalothrin</i> Scimitar GC | 1.5-5 oz | 24 H/ - | 3A | |
| | | <i>novaluron</i> Pedestal 10%SC | 6-8 fl oz | 12H/ - | 15 | Do not apply more than once every 30 days nor make more than 2 applications per crop. Do not apply to poinsettias. |
| | | <i>pymetrozine</i> Endeavor 50WG | 2.5-5 oz | 12 H/ - | 9B | |

COMMERCIAL GREENHOUSE INSECT CONTROL

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | REI/PHI (Days or Hours) | MOA | REMARKS |
|---|----------------------------|--|--------------------------|-------------------------|--------|---|
| (Many flower and foliage plants) (continued) | Whitefly (continued) | <i>pyridaben</i> Sanmite 75WP | 2-4 oz | 12 H/ - | 21A | |
| | | <i>pyrifluquinazon</i> Rycar | 1.6-3.2 oz | 12 H/ - | UN | |
| | | <i>pyriproxyfen</i> Distance | 6-8 fl oz | 12 H/ - | 7C | Target crawlers. Apply no more than 2 times/crop cycle. Do not apply to poinsettias. |
| | | <i>pyrethrum</i> X.Clude, Pyrenone, Natural Plus | aerosol 2-12 oz/A | 12 H/ - | 3A | Follow label direction. |
| | | <i>resmethrin</i> SBP-1382 2E PT 1200 | 1 pt aerosol | 12 H/ - | 3A | Use on begonia, fuchsia, salvia, poinsettia, coleus, chrysanthemum, geranium, petunias, aster, calendula, marigolds, roses, azalea and ivy. |
| | | <i>spiromesifen</i> Judo 4F | 1-4 oz | 12 H/ - | 23 | Effective on nymphal and egg stages. |
| | | <i>spirotetramat</i> Kontos 2F | 1.7 fl oz | 24 H/ - | 23 | See label for drench instructions. |
| | | <i>sulfoxaflor + spinetoram</i> XXpire | 2-2.75 oz | 12 H/ - | 4C + 5 | |
| | | <i>thiamethoxam</i> Flagship 25WG Flagship 0.22G | 4-8.5 oz Follow label | 12 H/ - | 4A | Medium treatment may take 1-2 weeks for activity. Do not leach for 7 days. |
| | Broad and Clycamen Mite | <i>abamectin</i> Avid .15EC | 4 oz | 12 H/ - | 6 | Apply as needed and repeat as necessary. |
| | | <i>chlorfenapyr</i> Pylon | 2.6-5.2 fl oz | 12 H/ - | 13 | |
| | | <i>pyridaben</i> Sanmite 75WP | 2-4 oz | 12 H/ - | 21A | |
| | | <i>sulfur</i> elemental sulfur | Follow label | 12 H/ - | | Do not tank mix with oils. |

ANNUAL FLOWERS AND HERBACEOUS PERENNIALS: COMMERCIAL GREENHOUSE AND FIELD PRODUCTION WEED CONTROL

Mark A. Czarnota, Extension Horticulturist – Weed Science

| HERBICIDE | MOA | AMOUNT OF FORMULATION PER ACRE | POUNDS ACTIVE INGREDIENT PER ACRE | REI (Hours) | REMARKS AND PRECAUTIONS |
|--|-----|--|-----------------------------------|-------------|--|
| PREEMERGENCE ^{1, 2, 3, 4} | | | | | |
| HERBACEOUS FLOWERING PLANTS | | | | | |
| <i>benefin</i> + <i>oryzalin</i> XL 2G | K1 | 2% granular | 4.6-6.9 | 24 H | Can be applied over-the-top of several established bedding plants (see label). Provides broad spectrum control of many broad leaf and annual grass weeds. |
| <i>napropamide</i> Devrinol 2G Devrinol 50DF | K3 | 100-150 lb 8-12 lb | 2-4 | 12 H | Good at controlling several annual grasses and broadleaf weeds. Can be used over-the-top on many established bedding plants (see label). |
| <i>oryzalin</i> Surflan 4AS Surflan 85 DF | K1 | 2-4 qt 2.4-7.1 lb 2.4-4.7 lb | 2-4 | 24 H | Controls a wide variety of annual and broadleaf plants from seed. As with many preemergent herbicides, over-the-top oryzalin sprays can cause stunting to select actively growing herbaceous plants. Do not apply these treatments to seeded beds or to non-rooted plants or in greenhouses. |
| <i>pendimethalin</i> Pendulum 3.3 EC Pendulum AquaCap 3.8 ACS Pendulum 2 GR Corral 2.68 GR | K1 | 3.6-7.2 pt 2.1-4.2 qt 75-100 lb 76-114 lb | 1.4-3 2-4 1.5-2 2-3 | 24 H | Apply to established plantings to control annual grass and certain broadleaf weeds. On most bedding plants, do not apply within 4 weeks of transplanting. See label for details. DO NOT use in greenhouses. |
| <i>trifluralin</i> Treflan 5G | K1 | 80 lb | 4 | 12 H | Do not apply to seeded beds or to non-rooted plants or use in greenhouses. Refer to label for soil texture restrictions. Use the Treflan products registered for ornamental use (several companies market the 5G formulation and all have different labels). |
| POSTEMERGENCE: Control of annual and perennial grasses | | | | | |
| <i>fluazifop-P</i> Ornamec 0.5 lb /gal. | A1 | 2.3-3 qt | 0.25-0.38 | 12 H | Apply postemergence over-the-top to actively growing grasses that are not drought stressed. Refer to label to determine best rate for the species /size of grass you are trying to control. Refer to label to determine if a surfactant should be added to the spray mix. If so, consider the use of a non-ionic surfactant, as oil type adjuvants tend to cause more damage to desirable plant foliage. DO NOT apply these herbicides to ornamental grasses. Foliage of some ornamental flower species can be damaged by fluazifop. |
| Fusilade II 2 lb /gal. | A1 | 1-1.5 pt | 0.25-0.38 | 12 H | |
| <i>clethodim</i> Envoy Plus 0.97 lb /gal | A1 | 17-34 fl oz | 0.12-0.25 | 24 H | |
| <i>fenoxaprop</i> Acclaim Extra 0.57 lb /gal. | A1 | 1.2-2.4 pt | 0.09-0.17 | 24 H | |
| <i>sethoxydim</i> Segment 1 lb /gal. | A1 | 2.25-3.75 pt | 0.28-0.47 | 121 H | Apply postemergence over-the-top to actively growing grasses that are not drought-stressed. Refer to label to determine best rate for the species /size of grass you are trying to control. DO NOT add a surfactant or crop oil concentrate to Segemnt. DO NOT apply to ornamental grasses. |

ANNUAL FLOWERS AND HERBACEOUS PERENNIALS – COMMERCIAL GREENHOUSE AND FIELD PRODUCTION WEED CONTROL

| HERBICIDE | MOA | AMOUNT OF FORMULATION PER ACRE | POUNDS ACTIVE INGREDIENT PER ACRE | REI (Hours) | REMARKS AND PRECAUTIONS |
|---|------------|---------------------------------------|--|--------------------|---|
| POSTEMERGENCE: Areas adjacent to Ornamentals | | | | | |
| <i>glufosinate</i> Finale 1 lb/gal | H10 | 3-6 qt | 0.75-1.5 | 12 H | Controls a wide range of broadleaf weeds and grasses. DO NOT permit spray to contact foliage or green stems of desirable ornamentals. |
| <i>glyphosate</i> Various trade names and formulations available | G9 | See label | See label | 4-12 H | Controls a wide range of broadleaf weeds and grasses. DO NOT permit spray to contact foliage or green stems of desirable ornamentals or turfgrasses. DO NOT use Roundup Pro in greenhouses with desirable vegetation or when air circulation / ventilation systems are running. Use caution when spraying glyphosate around greenhouse air intakes. Small air borne spray droplets can enter greenhouses through air intakes causing damage to plant materials in greenhouse. |
| POSTEMERGENCE: For use in greenhouses, lathhouses, and shade structures. | | | | | |
| <i>diquat</i> Reward 2 lb/gal | D22 | 1-2 qt/100 gal of water | 1-2 | 24 H | Do not allow spray drift to contact desirable plants. Postemergent applications provide contact kill of most herbaceous plant material. Add surfactant to mixture. |
| <i>fluazifop-P</i> Ornamec 0.5 lb/gal | A1 | 2.3-3 qt | 0.25-0.38 | 12 H | Only controls annual and perennial grasses. Apply postemergence over-the-top to actively growing grasses, which are not drought-stressed, according to plant size limitations shown on the label. A surfactant is required for both products (add surfactant so that the final spray solution is 0.25% v/v surfactant (0.5 oz surfact/gallon). DO NOT apply these herbicides to ornamental grasses. Foliage of some ornamental flower species can be damaged by fluazifop (see label). For spot spraying use 0.75 oz of Fusilade II (plus 0.5 oz of a non-ionic surfactant) per gallon of water. |
| Fusilade II 2 lb/gal | | 1-1.5 pt | 0.25-0.38 | | |
| <i>glufosinate</i> Finale 1 lb/gal | H10 | 3-6 qt | 0.75-1.5 | 12 H | May be used to control emerged weeds in greenhouses and shadehouses. Air circulation fans must be turned off during application. Avoid spray droplet drift and direct contact with foliage and green stems of ornamentals. |
| <i>glyphosate</i> Various trade names and formulations are available | G9 | See label | See label | 4-12 H | Controls a wide range of broadleaf weeds and grasses. Can be used in greenhouses that do not contain desirable vegetation. DO NOT use glyphosate in greenhouses when air circulation / ventilation systems are running. Not all formulations of glyphosate are labeled for this application. Check label for compliance. USE ONLY A BRAND RECOMMENDED FOR THIS USE! |
| Potassium salts of fatty acids Various trade names are available | NC | See label | See label | See label | Provides postemergence, contact control of mosses, algae, liverworts and lichens inside greenhouses, on growing containers and benches. Do not allow spray to contact foliage of desirable ornamentals. |
| Sodium chloride Rock Salt | NC | 10 lb/100 sq ft | 10 lb/100 sq ft | 0 H | Provides both pre and postemergence control of weeds under the greenhouse benches. Can be used to spot treat small weeds (1/8-1/4 cup NaCl pre plant). No restriction on plant materials in greenhouse at time of treatment. Gloves are recommended if treatments are applied by hand. Care should be taken when using NaCl, as product is mobile, and can move (leach) to property surrounding the greenhouse, and damage sensitive plants or contaminate water supplies. |
| Sodium chlorate + Sodium metaborate Barespot | NC | 870-1740 (2-4 lb/100 sq ft) | 683-1396 | See label | Can be used under greenhouse benches to control unwanted vegetation. Also provides a short period of preemergent weed control. Apply granular herbicide anytime when actively growing plants can be seen. Product can be used in a greenhouse when desirable plants are present. |

¹ All preemergent herbicides require a rain or irrigation event in order for herbicide activation to occur (approximately 0.5-1” of water). If no rain event occurs and no supplemental watering is provided after a preemergent herbicide application, weed control can be extremely poor.

² Most preemergent herbicides will only control germinating weed seed. Generally, they will not control weeds after they have become established (1st or 2nd true leaf), and most preemergent herbicides will not control weeds coming from vegetative structures (i.e. yellow and purple nutsedge).

³ As long as the treated area remains undisturbed; most pre-emergent herbicides will provide weed control for 2-4 months in most growing mediums.

⁴ Do not apply preemergence herbicides to seeded beds or to non-rooted plants.

COMMERCIAL INTERIOR PLANTSCAPES INSECT CONTROL

Will Hudson, Extension Entomologist

Note: People without proper application protective clothing must not enter treated area until plants are dry or as stipulated on the label. If possible, remove infested plants from living and eating areas prior to spray application. Place plants outdoors or in an area not likely to come in contact with people, pets, or food while spraying and while plants are wet. In most situations plants can be returned to original location when they are dry. If plants can not be removed follow label precautions.

| PLANTS | INSECT OR MITE | INSECTICIDE AND FORMULATION | AMOUNT/100 GAL WATER | AMOUNT PER GALLON | MOA | COMMENTS |
|---|----------------|---|-----------------------------|---------------------|-----|--|
| Many (flower and foliage. Check label.) | Aphid | <i>Beauveria bassiana</i> Botani Gard ES | 0.5-1 lb | 0.08-1.6 oz | | |
| | | <i>cyfluthrin</i> Decathlon | 1.3-1.9 oz | | 3A | Follow label directions. |
| | | <i>flonicamid</i> 50 WDG Aria 0.7 oz package | 1-6 packets (0.7-4.3 oz) | | 9C | Repeat application every 7-28 days as necessary. |
| | | <i>fluvalinate</i> Mavrik | 4-10 oz | | 3A | Follow label directions. |
| | | <i>horticultural oil</i> Sunspray ultrafine, Saf-T-Side, Triact 90EC | 1-2% | 1-2% | | Thorough coverage is necessary, spray must contact pest to be effective. |
| | | <i>imidacloprid</i> Merit, Marathon, many other names | | | 4A | Per label directions. |
| | | <i>insecticidal soap</i> M-Pede | 1-2% | 1-2% | | Thorough coverage is necessary, spray must contact pest to be effective. Repeat spray 3 times at 5-7 day interval. Soap could make floor slippery. |
| | | <i>isaria fumorosea</i> Preferal | 14-28 oz | 0.14-0.28 oz | UN | |
| | | <i>kinoprene</i> Enstar 5E | 6-10 oz | | 7A | Follow label directions. |
| | | Naturalis-O | 30-100 fl oz | 0.30-1 fl oz | | |
| | | <i>pymetrozine</i> Endeavor | 2-5 oz | | 9B | Follow label directions. |
| | | <i>pyriproxyfen</i> Distrance | 6-8 fl oz | 0.02 oz (0.6 ml) | 7C | Follow label directions. |
| | | <i>spirotetramat</i> Kontos 2F | 1.7 fl oz | | 23 | Follow label directions. |
| | Scale | <i>cyfluthrin</i> Decathlon | 1.3-1.9 oz | 1/4 tsp | 3A | Follow label directions. |
| | | <i>dinotefuran</i> Safari 20 SG | | 0.5-1 tsp | 5A | Also effective on armored scale. |
| | | <i>horticultural oils</i> Sunspray ultrafine, Saf-T-Side, Triact 90EC | 1-2% | 1-2% | | Care must be taken because some plants are sensitive to oils. Thorough coverage is necessary but do not over apply. Use fine spray. |
| | | <i>imidacloprid</i> Marathon, Others | | | 4A | Follow label. Many names and formulations are available. |
| | | <i>insecticidal soap</i> M- Pede | 1-2% | 1-2% | | Thorough coverage necessary. Spray must contact pest to be effective. Soap could make floor slippery. |

COMMERCIAL INTERIOR PLANTSCAPES INSECT CONTROL

| PLANTS | INSECT OR MITE | INSECTICIDE AND FORMULATION | AMOUNT/100 GAL WATER | AMOUNT PER GALLON | MOA | COMMENTS |
|---|----------------------|---|-----------------------------|--------------------------|-----|---|
| Many (flower and foliage. Check label.) | Scale (continued) | <i>pyrethrum</i> PT 1600 A or Pyrenone | aerosol | | | Follow label directions. |
| | | <i>pyrifluquinazon</i> Rycar | 6.4 oz | 0.064 oz | UN | |
| | | <i>pyriproxyfen</i> Distance | 8-12 fl oz | 0.02 oz (0.6 ml) | 7C | Follow label directions. |
| | | <i>spirotetramat</i> Kontos 2F | 1.7 fl oz | | 23 | Follow label directions. |
| | Fungus gnats | <i>Bacillus thuringiensis</i> Gnatrol | 16-32 oz 64-12 8 oz | 1-2 tsp 4-8 tsp | 11A | For light infestation. For heavy infestation. Follow label directions. |
| | | <i>cryomazine</i> Citation 75% WP | 2.66 oz | | 17 | Follow label directions. |
| | | <i>diflubenzuron</i> Adept 25WSB | 16-24 oz | 0.04-0.08 (1-2 grams) | 15 | Follow label directions. |
| | | <i>kinoprene</i> Enstar AQ | 16-32 fl oz | | 7A | Follow label directions. |
| | | <i>pyriproxyfen</i> Distance | 3-6 fl oz | 0.02 (0.6 ml) | 7C | Follow label directions. |
| | | <i>steinernema feltiae</i> Various brand names | | | | Apply according to supplier's directions. |
| | Mealybug | <i>Beauveria bassiana</i> Botani Gard ES | 0.5-1 lb | 0.08-1.6 oz | | |
| | | <i>clothianidin</i> Celero 16 WSG | 2-4 oz | | 4A | Apply as a full coverage foliar spray or a drench. |
| | | <i>cyfluthrin</i> Decathlon | 1.3-1.9 oz | | 3A | Follow label directions. |
| | | <i>dinotefuran</i> Safari 20 SG | | 0.5-1 tsp | 5A | Also effective on armored scale. |
| | | <i>flonicamid</i> 50 WDG Aria 0.7 oz. package | 1-6 packets (0.7-4.3 oz) | | 9C | Repeat application every 7-28 days as necessary. |
| | | <i>horticultural oils</i> Sunspray ultrafine, Saf-T-Side, Triact 90EC | 1-2% | 1-2% | | Care must be taken because some plants are sensitive to oils. Thorough coverage is necessary but do not over apply. Use fine spray. |
| | | <i>imidacloprid</i> Merit 75WP, WSP Marathon II | | | 4A | Follow label directions. |
| | | <i>insecticidal soap</i> M- Pede | 1-2% | 1-2% | | Thorough coverage necessary, spray must contact pests to be effective. Repeat spray 3 times at 10-14 day intervals. Soap could make floor slippery. |
| | | <i>isaria fumorosea</i> Preferal | 14-28 oz | 0.14-0.28 oz | UN | |

COMMERCIAL INTERIOR PLANTSCAPES INSECT CONTROL

| PLANTS | INSECT OR MITE | INSECTICIDE AND FORMULATION | AMOUNT/100 GAL WATER | AMOUNT PER GALLON | MOA | COMMENTS | |
|---|---|--|-------------------------------|--------------------------|------------|--|--|
| Many (flower and foliage. Check label.) | Mealybug (continued) | <i>kinoprene</i> Enstar AQ | 16-32 fl oz | 0.16-0.32 fl oz | 7A | Follow label directions. | |
| | | <i>pyriproxyfen</i> Distance | 8-12 fl oz | 0.02 (0.6 ml) | 7C | Follow label directions. | |
| | | <i>pyrethrum</i> PT 1600 A or Pyrenone | aerosol | | 3A | Follow label directions. | |
| | | <i>spirotetramat</i> Kontos 2F | 1.7 fl oz | | 23 | Follow label directions. | |
| Many (flower and foliage. Check label.) | Mites | <i>bifenazate</i> Floramite | 2-4 oz | 0.002-0.004 oz | UN | Follow label directions. | |
| | | <i>cyflumetofen</i> Sultan | 13.7 oz | 0.137 | 25 | | |
| | | <i>fenazaquin</i> Magus | 12-24 oz | 0.12-0.24 oz | 21A | | |
| | | <i>fenproximate</i> Akari 5SC | 16-24 oz | 0.16-0.24 oz (4.527 ml) | 21A | Follow label directions. | |
| | | <i>insecticidal soap</i> M-Pede | 1-2% | 1-2% | | Thorough coverage necessary, spray must contact pest to be effective. Repeat spray 3 times at 5-7 day intervals. Soap could make floor slippery. | |
| | | Naturalis-O | 30-100 fl oz | 0.30-1 fl oz | | | |
| | | <i>pyrethrum</i> PT 1600 A or Pyrenone | aerosol | | 3A | Follow label directions. | |
| | Thrips | <i>azadirachtin</i> Azatin | | | | UN | Follow label directions. |
| | | <i>Beauveria bassiana</i> Botani Gard ES | 1-2 lb | 1.6-3.2 oz | | | |
| | | <i>cyfluthrin</i> Decathlon | 1.3-1.9 oz | | | 3A | Follow label directions. |
| | | <i>flonicamid</i> 50 WDG Aria 0.7 oz. package | 1-6 packets (0.7-4.3 oz) | | | 9C | Repeat application every 7-28 days as necessary. |
| | | <i>insecticidal soap</i> M-Pede | 1-2% | 1-2% | | | |
| | | Naturalis-O | 30-100 fl oz | 0.30-1 fl oz | | | |
| | | Whitefly | <i>azadirachtin</i> Azatin | | | | UN |
| | <i>Beauveria bassiana</i> Botani Gard ES | | 0.5-1 lb | 0.08-1.6 oz | | | |
| | <i>cyfluthrin</i> Decathlon 20WP | | 1.3-1.9 oz | | | 3A | Follow label directions. |

COMMERCIAL INTERIOR PLANTSCAPES INSECT CONTROL

| PLANTS | INSECT OR MITE | INSECTICIDE AND FORMULATION | AMOUNT/100 GAL WATER | AMOUNT PER GALLON | MOA | COMMENTS |
|---|-------------------------|---|-----------------------------|-----------------------------|-----|--|
| Many (flower and foliage. Check label.) | Whitefly (continued) | <i>diflubenzuron</i> Adept 25WSB | 16-24 oz | 0.04-0.08 oz (1-2 grams) | 15 | Follow label directions. |
| | | <i>dinotefuran</i> Safari 20 SG | | 0.5-1 tsp | 5A | Also effective on armored scale. |
| | | <i>flonicamid</i> 50 WDG Aria 0.7 oz package | 1-6 packets (0.7-4.3 oz) | | 9C | Repeat application every 7-28 days as necessary. |
| | | <i>horticultural oils</i> Sunspray ultrafine, Saf-T-Side, Triact 90EC | 1-2% | 1-2 oz | | Care must be taken because some plants are sensitive to oils. Thorough coverage is necessary but do not over apply. Use fine spray. |
| | | <i>imidacloprid</i> Merit 75WP Merit 75WPS Marathon II | | | 4A | Follow label directions. |
| | | <i>insecticidal soap</i> M-Pede | 1-2% | 1-2% | | Thorough coverage necessary, spray must contact pest to be effective. Repeat spray 3 times at 5-7 day intervals. Soap could make floor slippery. |
| | | <i>isaria fumorosea</i> Preferal | 14-28 oz | 0.14-0.28 oz | UN | |
| | | <i>kinoprene</i> Enstar AQ | 16-32 fl oz | 0.16-0.32 fl oz | 7A | |
| | | Naturalis-O | 30-100 fl oz | 0.30-1 fl oz | | |
| | | <i>pymetrozine</i> Endeavor | 2-5 oz | | 9B | Follow label directions. |
| | | <i>pyrethrum</i> PT 1600 A or Pyrenone | aerosol | | 3A | Follow label directions. |
| | | <i>pyriproxyfen</i> Distance | 6-8 fl oz | 0.02 oz (0.6 ml) | 7C | Follow label directions. |
| | | <i>spirotetramat</i> Kontos 2F | 1.7 fl oz | | 23 | Follow label directions. |

ORNAMENTALS – WEED RESPONSE TO HERBICIDES

Mark A. Czarnota, Extension Horticulturist – Weed Science

| TIME OF APPLICATION | dichlobenil | dimethenamid | flumioxazin | indaziflam | isoxaben | norflurazon | oxadiazon | simazine | oryzalin |
|---|-------------|--------------|-------------|------------|----------|-------------|-----------|----------|----------|
| | PRE | | | | | | | | |
| PERENNIAL WEEDS (control of plants) | | | | | | | | | |
| bahiagrass | | P | P | P | P | P | P | P | P |
| bermudagrass | | P | P | P | P | P | P | P | P |
| dallisgrass | | P | P | P | P | P | P | P | P |
| nutsedge, purple | G | P | P | P | P | P | P | P | P |
| nutsedge, yellow | G | F | P | P | P | P | P | P | P |
| tall fescue | | P | P | P | P | P | P | P | P |
| wild garlic/wild onion | G | P | P | P | P | P | P | P | P |
| ANNUAL GRASSES (control of plants from seed with pre herbicides, control of plant with post herbicides) | | | | | | | | | |
| annual bluegrass | G | G | E | E | P-F | E | G | G | E |
| crabgrass | G | G | E | E | P-F | G | G | G | E |
| goosegrass | G | G | E | E | P | G | E | | E |
| ANNUAL SMALL SEEDED BROADLEAF WEEDS (control of plants from seed with pre herbicides, control of plant with post herbicides) | | | | | | | | | |
| bittercresses | | E | E | E | G | G | G | F | G |
| common chickweed | G | E | E | E | E | G | G | E | G |
| deadnettle | G | | | E | | G | | G | G |
| dodder | E | | | E | | | | | |
| henbit | G | | E | E | E | F | G | E | G |
| hop clovers | G | | | E | G | | G | E | |
| knotweed | G | | E | E | | G | G | E | G |
| lespedeza | G | | | E | F | | G | E | |
| Morningglories | F | F | G | E | G | F | F | G | F |
| mustards | G | G | G | E | F | | E | E | P |
| niruri/phyllanthus | | E | E | E | E | G | G | G | G |
| spurge | G | E | E | E | E | G | F | E | G |
| woodsorrel | G | E | E | E | E | P-F | E | E | G |

Key to Response Symbols: E – Excellent Control (>90%); G – Good Control (70-90%); F – Fair Control (50-70%); P – Poor Control (<50%)

If no symbol is given, weed response is unknown.

ORNAMENTALS – WEED RESPONSE TO HERBICIDES

| TIME OF APPLICATION | dichlobenil | dimethenamid | flumioxazin | indaziflam | isoxaben | norflurazon | oxadiazon | simazine | oryzalin |
|---|-------------|--------------|-------------|------------|----------|-------------|-----------|----------|----------|
| | PRE | | | | | | | | |
| PERENNIAL BROADLEAF WEEDS (control of plants from seed with pre herbicides, control of plant with post herbicides) | | | | | | | | | |
| clovers | G | G | E | G | G | | G | E | G |
| dandelion | G | | E | G | G | | G | G | G |
| dichondra | P (labeled) | | E | | | | | | |
| docks | G | | E | | G | | | | |
| Florida betony | E | | | | | P | | | |
| mallow | | | E | G | | G | G | G | G |
| mouseear chickweed | G | | E | G | | | G | G | G |
| mugwort | E | | | | | | | | |
| pennywort | G | | | | | | | | |
| plantain | | | G | G | G | | G | | G |

| TIME OF APPLICATION | oxyfluorfen | prodiamine | trifluralin | clethodim | clopyralid | diquat | fluazifop | glufosinate |
|--|-------------|------------|-------------|---------------|------------|--------|-----------|-------------|
| | PRE | | | POSTEMERGENCE | | | | |
| PERENNIAL WEEDS (control of plants) | | | | | | | | |
| bahiagrass | P | P | P | G | P | P | G | P |
| bermudagrass | P | P | P | G-E | P | P | G-E | P |
| dallisgrass | P | P | P | G | P | P | G | P |
| nutsedge, purple | P | P | P | P | P | P | P | P |
| nutsedge, yellow | P | P | P | P | P | P | P | P |
| tall fescue | P | P | P | G | P | P | F | P |
| wild garlic | P | P | P | P | P | P | P | P |
| ANNUAL GRASSES (control of plants from seed with pre herbicides, control of plant with post herbicides) | | | | | | | | |
| annual bluegrass | G | E | G | E | P | G | E | G |
| crabgrass | G | E | E | E | P | G | E | G |
| goosegrass | G | G | G | E | P | G | E | G |

Key to Response Symbols: E – Excellent Control (>90%); G – Good Control (70-90%); F – Fair Control (50-70%); P – Poor Control (<50%)

If no symbol is given, weed response is unknown.

ORNAMENTALS – WEED RESPONSE TO HERBICIDES

| TIME OF APPLICATION | oxyfluorfen | prodiamine | trifluralin | clethodim | clopyralid | diquat | fluazifop | glufosinate |
|---|-------------|------------|-------------|---------------|------------|--------|-----------|-------------|
| | PRE | | | POSTEMERGENCE | | | | |
| ANNUAL SMALL-SEEDED BROADLEAF WEEDS (control of plants from seed with pre herbicides, control of plant with post herbicides) | | | | | | | | |
| bittercresses | G | G | G | P | | G | P | G |
| common chickweed | G | G | G | P | | G | P | E |
| deadnettle | | G | G | P | | G | P | G |
| dodder | | P | | P | | | P | |
| henbit | G | G | G | P | | G | P | E |
| knotweed | | | | P | | | P | E |
| lespedeza | G | G | G | P | E | F | P | F |
| morningglories | | G | F | P | | G | P | P |
| mustards | G | F | F | P | | G | P | G |
| niruri / phyllanthus | G | G | P | P | | G | P | G |
| spurge | G | G | G | P | | G | P | G |
| woodsorrel | G | G | F | P | | G | P | G |
| PERENNIAL BROADLEAF WEEDS (control of plants from seed with pre herbicides, control of plant with post herbicides) | | | | | | | | |
| clovers | G | E | WG | P | E | F | P | F |
| dandelion | G | G | G | P | G | G | P | P |
| dichondra | | | | P | P | | P | |
| docks | G | G | G | P | G | P | P | G |
| Florida betony | | | | P | P | P | P | P |
| mallow | G | G | G | P | | G | P | G |
| mouseear chickweed | G | G | G | P | | G | P | G |
| mugwort | | | | P | E | G | P | P |
| pennywort | | | | P | G | G | P | P |
| plantain | G | G | G | P | P | G | P | F |

ORNAMENTALS – WEED RESPONSE TO HERBICIDES

| | glyphosate | halosulfuron | paraquat | pelargonic acid | sethoxydim | triclopyr |
|---|----------------------|---------------------|-----------------|------------------------|-------------------|------------------|
| TIME OF APPLICATION | POSTEMERGENCE | | | | | |
| PERENNIAL WEEDS (control of plants) | | | | | | |
| bahiagrass | G | P | P | P | G | P |
| bermudagrass | G | P | P | P | G | P |
| dallisgrass | E | P | P | P | P | P |
| nutsedge, purple | G | E | P-F | P | P | P |
| nutsedge, yellow | G | E | P-F | P | P | P |
| tall fescue | E | P | P | P | G | P |
| wild garlic | G | G | P | | P | |
| ANNUAL GRASSES (control of plants from seed with pre herbicides, control of plant with post herbicides) | | | | | | |
| annual bluegrass | E | P | E | G | P-F | P |
| crabgrass | G | P | G | G | E | P |
| goosegrass | E | P | F-G | F | E | P |
| ANNUAL SMALL-SEEDED BROADLEAF WEEDS (control of plants from seed with pre herbicides, control of plant with post herbicides) | | | | | | |
| bittercresses | G | | E | F | P | G |
| common chickweed | E | | E | G | P | G |
| deadnettle | G | | E | G | P | G |
| dodder | E | | | | P | |
| henbit | E | | E | G | P | G |
| knotweed | E | | E | G | P | G |
| lespedeza | E | | | F | P | G |
| morningglories | G | | F-G | F | P | G |
| mustards | E | | E | G | P | G |
| niruri / phyllanthus | E | | E | | P | G |
| spurge | E | | E | G | P | G |
| woodsorrel | E | | E | G | P | G |

Key to Response Symbols: E – Excellent Control (>90%); G – Good Control (70-90%); F – Fair Control (50-70%); P – Poor Control (<50%)

If no symbol is given, weed response is unknown.

ORNAMENTALS – WEED RESPONSE TO HERBICIDES

| | glyphosate | halosulfuron | paraquat | pelargonic acid | sethoxydim | triclopyr |
|---|----------------------|--------------|----------|-----------------|------------|-----------|
| TIME OF APPLICATION | POSTEMERGENCE | | | | | |
| PERENNIAL BROADLEAF WEEDS (control of plants from seed with pre herbicides, control of plant with post herbicides) | | | | | | |
| clovers | F | | | P-F | P | G |
| dandelion | E | G | | P | P | G |
| dichondra | E | | | | P | G |
| docks | E | | | | P | G |
| Florida betony | G | | | | P | G |
| mallow | E | | | F | P | G |
| mouseear chickweed | E | | | G | P | G |
| mugwort | E | | | F | P | F |
| pennywort | E | | | | P | G |
| plantain | E | | | | P | G |

Key to Response Symbols: E – Excellent Control (>90%); G – Good Control (70-90%); F – Fair Control (50-70%); P – Poor Control (<50%)
 If no symbol is given, weed response is unknown.

COMMERCIAL PLANT PRODUCTION INSECT CONTROL (INCLUDES FLOWERS, SHRUBS AND GROUND COVERS)

Will Hudson, Extension Entomologist

Always follow label directions and precautions when handling pesticides. Many insecticides are phytotoxic under certain conditions. Acephate may injure American elm, flowering crabapple, sugar maple, red maple, cottonwood, redbud and weigelia. Repeat applications of acephate may also injure hibiscus, gloxinia, philodendron and salvia. Carbaryl may injure tender foliage of rhododendron. Do not use chlorpyrifos on azalea, camellia, rose or variegated ivy. Demeton may injure cibotium fern

and croft lily. Diazinon may injure ferns, gardenia, hibiscus, papaya pilea and poinsettia. Do not use dimethoate on any plant not listed on the label. Malathion may injure ferns, viburnum and canaerti juniper. Slight injury by malathion may occur on Boston ivy, maidenhair fern, small leaf spirea, white pine and maple. Oils may damage the foliage of some shrubs.

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | MOA | COMMENTS | |
|---|--------------------------------------|---|-----------------------------|--------|---|---|
| ANY | Aphid | <i>acephate</i> Orthene TTO, others | 2/3 lb | 1B | | |
| | | <i>acetamiprid</i> Tristar 3 OSG | See label | 4A | | |
| | | <i>clothianidin</i> Arena 5 OWDG | See label | 4A | | |
| | | <i>dinotefuran</i> Safari 20 SG | 4-8 oz | 4A | | |
| | | Horticultural oils | 2 gal | | | |
| | | <i>imidacloprid</i> Marathon, others | | 4A | See label for rates. Many names and formulations available. | |
| | | <i>pymetrozine</i> Endeavor 50WG | | 9B | Arena can also be applied to the root zone. See label. | |
| | | <i>pyrifluquinazon</i> Rycar | 2.4-3.2 oz 0.25-0.32 oz | UN | | |
| | | <i>spinetoram + sulfoxaflor</i> XXpire | 2-2.75 oz 0.20-0.0275 oz | 5 + 4C | | |
| | | <i>spirotetramat</i> Kontos 2F | 1-8 oz | 23 | | |
| | <i>thiamethoxam</i> Flagship 25WG | 2 oz | 4A | | | |
| | Asian Ambrosia Beetle | <i>bifenthrin</i> onyx | | | 3A | |
| | | <i>permethrin</i> Pounce | Follow label | | 3A | Other pyrethroids are also effective. Apply when beetles are first active in spring, and at 10-14 day intervals until green-up is complete. |
| | Bagworm | <i>chlorantraniliprole</i> Acelepryn | 1-16 oz | | 28 | |
| | | <i>acephate</i> Orthene TTO, Pro75 | 2/3 lb | | 1B | |
| <i>Bacillus thuringiensis</i> Dipel 3.2 WP, others | | 0.5-1 lb | | 11 | | |

NOTE: A number of pyrethroid materials are available in a variety of formulations for use as broad-spectrum contact insecticides. Common names include bifenthrin, cyfluthrin, cypermethrin, deltamethrin, lambda-cyhalothin, tralomethrin, permethrin. Active ingredients are listed on the label.

COMMERCIAL PLANT PRODUCTION INSECT CONTROL

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | MOA | COMMENTS |
|--------------|-------------------------------------|---|----------------------------------|------------|---|
| ANY | Bagworm <i>(continued)</i> | <i>chlorpyrifos</i> | 0.25-0.5 lb/ai | 1B | |
| | | <i>cyantraniliprole</i> Mainspring | 1-8 oz 0.01-0.08 oz | 28 | |
| | | <i>tebufenozide</i> Confirm 2E | 4-8 oz | 18 | |
| | | Various pyrethroids | | 3A | See note below. |
| | Bark Beetles, Woodboring Beetles | <i>chlorpyrifos</i> | 0.5 lb/ai | 1B | See label for control of specific beetles. |
| | | <i>bifenthrin</i> onyx | See label | 3A | |
| | | <i>imidacloprid</i> Marathon, others | See label | 4A | For flat-headed borers. |
| | | <i>permethrin</i> Astro, Pounce | See label | 3A | |
| | Beetles | acephate (Orthene TTO, Pro75) | 1 lb | 1B | Apply when damage is first detected. Pyrethroids also effective for foliage feeders. See note below. |
| | | carbaryl Sevin 4 L | 1 qt | 1A | |
| | | <i>cyantraniliprole</i> Mainspring | 1-8 oz 0.01-0.08 oz | 28 | |
| | | Various pyrethroids | | 3A | |
| | Borers (Various) | <i>chlorantraniliprole</i> Acelepryn | 4-32 oz | 28 | For clearwing borers only. |
| | | <i>bifenthrin</i> onyx | See label | 3A | Spray to drench bark. Repeat as per label to protect damaged trees from further attack. |
| | | <i>chlorpyrifos</i> Dursban 50W | 2 lb | 1B | |
| | | <i>imidacloprid</i> Marathon | See label | 4A | Imidacloprid is effective only for flat-headed borers. Other neonicotinyl insecticides are also effective for flat-headed borers. |
| | | <i>permethrin</i> Astro, Pounce | | 3A | |
| | Caterpillars (various) | <i>chlorantraniliprole</i> Acelepryn | 1-16 oz | 28 | Most effective when larvae are small. Repeat in 10-14 days if reinfestation or extended egg hatch occurs. See label for rates. |
| | | <i>Bacillus thuringiensis</i> Dipel 3.2 WP Thuricide HP Sok-Bt | 0.5-1 lb 0.5-1 lb 0.5-1 lb | 11 | |
| | | carbaryl Sevin SL | 1 qt | 1A | |
| | | <i>cyantraniliprole</i> Mainspring | 1-8 oz 0.01-0.08 oz | 28 | |

COMMERCIAL PLANT PRODUCTION INSECT CONTROL

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | MOA | COMMENTS | | |
|-------|--|---|---------------------------------------|----------------------------|-------------|--|--|
| ANY | Caterpillars (various) <i>(continued)</i> | <i>pyrethroids</i> Decathlon, Scimitar, Deltaguard, others | 6 fl oz | 3A | | | |
| | | <i>spinosad</i> Conserve SC | 4-8 oz | 5 | | | |
| | | <i>tebufenozide</i> Confirm 2E | | 18 | | | |
| | Imported Fire Ants | <i>hydramethylnon</i> Amdro (bait) | | | 20A | <u>Bait Treatments</u> Broadcast baits at rate of 1-1.5 lb/A. Apply when ants are actively foraging for food. | |
| | | <i>metaflumizone</i> Siesta (bait) | | | 22B | | |
| | | <i>abamectin</i> Ascend, Award II, others (bait) | | | 6 | | |
| | | <i>pyriproxifen</i> Distance (bait) | | | 7C | | |
| | | <i>methoprene</i> Extinguish (bait) | | | 7A | | |
| | | <i>bifenthrin</i> Talstar One, Talstar 0.2% G,others | 0.5-1 oz 2.3-4.6 lb | | 3A | <u>Broadcast Treatments.</u> Follow label directions for rate. Fipronil 0.1% is not for home lawns. | |
| | | <i>chlorpyrifos</i> Dursban Pro | | | 1B | | |
| | | <i>fipronil</i> Quali-Pro Fipronil 0.0143, Quali-Pro Fipronil 0.1, Chipco Choice | | | 2B | | |
| | | Japanese Beetle Adults | <i>acephate</i> Orthene TTO, Pro75 | | 2 tsp/mound | 1B | <u>Individual Mound Treatments</u> Drench mounds when queen and brood are located close to soil surface. Do not disturb mound prior to treatment. Use at least 1 gal of solution per medium sized mound. Dust evenly over top of mound. See note below. |
| | | | <i>carbaryl</i> Sevin SL | | 3 tbs/2 gal | 1A | |
| | <i>chlorpyrifos</i> Dursban 2E, Dursban 4E, 50W, Pageant DF | | | 1 oz/2 gal 0.5 oz/2 gal | 1B | | |
| | Various pyrethroids | | | | 3A | | |
| | Japanese Beetle Adults | <i>acetamiprid</i> Tristar 3 OSG | | 4-8 oz | 4A | | |
| | | <i>carbaryl</i> Sevin, etc. | | See label | 1A | Many formulations available | |

NOTE: A number of pyrethroid materials are available in a variety of formulations for use as broad-spectrum contact insecticides. Common names include bifenthrin, cyfluthrin, cypermethrin, deltamethrin, lambda-cyhalothin, tralomethrin, permethrin. Active ingredients are listed on the label.

COMMERCIAL PLANT PRODUCTION INSECT CONTROL

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | MOA | COMMENTS | |
|-------|---------------------------------------|---|-----------------------------|-----|----------|---|
| ANY | Japanese Beetle Adults (continued) | <i>clothiamidin</i> Arena | 2 oz | 4A | | |
| | | <i>cyantraniliprole</i> Mainspring | 1-8 oz 0.01-0.08 oz | 28 | | |
| | | <i>imidacloprid</i> Marathon, etc. | See label | 4A | | |
| | | <i>thiamethoxam</i> Flagship | See label | 4A | | |
| | Lace Bug | <i>acephate</i> Orthene TTO, Pro75 | | | 1B | |
| | | <i>acetamiprid</i> Tristar | 1 pack | | 4A | |
| | | <i>clothianidin</i> Celero | 3-4 oz | | 4A | |
| | | <i>dimethoate</i> Cygon, De-fend Rebelate 23.4 EC | 1.5 pt 1/3 lb | | 1B | Apply only to those plants listed on the label. |
| | | <i>imidacloprid</i> Marathon, others | | | 4A | See label. |
| | | <i>pyrifluquinazon</i> Rycar | 2.4-3.2 oz 0.025-0.032 | | UN | |
| | | <i>spinetoram + sulfoxaflor</i> XXpire | 2-2.75 oz 0.02-0.0275 oz | | 6 + 4C | |
| | | <i>thiamethoxan</i> Flagship | See label | | 4A | |
| | Mites | <i>abamectin</i> AVID, others | 4 oz | | 6 | |
| | | <i>acequinocyl</i> Shuttle | 6.4-12.8 oz | | 20B | |
| | | <i>bifenazate</i> floramite | 2-4 oz | | UN | |
| | | <i>clofentezine</i> Ovation SC | | | 10A | |
| | | <i>cyflumetofen</i> Sultan | 13.7 oz 0.137 oz | | 25 | |
| | | <i>etoxazole</i> Tetrasan | 8-16 oz | | 10B | Shadehouses and lathhouses only. |
| | | <i>fenpyroximate</i> Akari | 16-24 oz | | 21A | |
| | | Hexythiazox Hexygon | 1-2 oz | | 10A | |

COMMERCIAL PLANT PRODUCTION INSECT CONTROL

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | MOA | COMMENTS | |
|-------|---|---|---|---------|--|--|
| ANY | Mites (continued) | Horticultural oils | 1-2 gal | | | |
| | | <i>spiromesifen</i> Judo | 2-4 oz | 23 | | |
| | Scales | <i>acephate</i> Orthene TTO, Pro75 | 2/3 lb | 1B | Work granules into soil or water thoroughly. Follow label directions. | |
| | | <i>acetamiprid</i> TriStar | 2.7-5.3 oz | 4A | | |
| | | <i>carbaryl</i> Sevin, others | See label. Many formulations available | 1A | Apply when crawler stage is present. Repeat application in 10-14 days. | |
| | | <i>chlorpyrifos</i> Dursban 50W | 2 lb | 1B | | |
| | | <i>dimethoate</i> Cygon 23.4 EC | 1.5 pt | 1B | | |
| | | <i>dinotefuran</i> Safari 20 SG | 4-8 oz | 4A | | |
| | | Horticultural Oil | 1-2 gal | | | |
| | | <i>imidacloprid</i> Marathon, others | See label | 4A | | |
| | | <i>pyrifluquinazon</i> Rycar | 2.4-3.2 oz 0.25-0.32 oz | UN | | |
| | | <i>pyriproxyfon</i> Distance | 8-12 oz | 7C | | |
| | | <i>spinetoram + sulfoxaflor</i> XXpire | 2-2.75 oz 0.02-0.0275 oz | 5 + 4C | | |
| | | <i>spirotetramat</i> Kontos 2F | 1-8 oz | 23 | Thiamethoxam for soft scales only. | |
| | | <i>thiamethoxam</i> Flagship | See label | 4A | Imidacloprid is not effective on armored (hard) scales. | |
| | | Slug, Snail | Mesurool 75W | 4 lb | | |
| | | | Methiocarb Grandslam 75WP | ½ -1 lb | 1A | |
| | <i>metaldehyde + carbaryl</i> Sevin bait | | | 1A | | |
| | Spittle Bug | <i>acephate</i> Orthene TTO, Pro75 | 2/3 lb | 1A | | |
| | | <i>imidacloprid</i> marathon, other brands | See label | 4A | See note below. See label for rates. | |
| | | Various pyrethroids | | 3A | | |

NOTE: A number of pyrethroid materials are available in a variety of formulations for use as broad-spectrum contact insecticides. Common names include bifenthrin, cyfluthrin, cypermethrin, deltamethrin, lambda-cyhalothin, tralomethrin, permethrin. Active ingredients are listed on the label.

COMMERCIAL PLANT PRODUCTION INSECT CONTROL

| PLANT | INSECT OR MITE | INSECTICIDE | AMOUNT/100 GAL WATER | MOA | COMMENTS |
|---|-----------------------------|--|-----------------------------|------------|---|
| ANY | Thrips | <i>acephate</i> Orthene TTO, Pro75 | | 1B | |
| | | <i>carbaryl</i> Sevin 50 WP | | 1A | |
| | | <i>chlorpyrifos</i> Dursban 50W | | 1B | |
| | | <i>dimethoate</i> 23.4 EC | | 1B | |
| | | <i>imidacloprid</i> Various brand names | | 4A | |
| | | <i>spinosad</i> Conserve SC | | 5 | |
| | Whitefly | <i>acephate</i> Orthene TTO, Pro75 | 2/3 lb | 1B | Tame may also be tank mixed with Orthene. |
| | | <i>acetamiprid</i> Tristar | 1 pack | 4A | |
| | | <i>clothianidin</i> Arena 50WDG | 2 oz | 4A | |
| | | <i>endosulfan</i> Thiodan 3EC, 50 WP | 1.5 pt 1 lb | 2A | See label for rates. |
| | | <i>dinotefuran</i> Safari 20 SG | 4-8 oz | 4A | |
| | | <i>flonicamid</i> Aria | 1-3 packets | 9C | Greenhouse use only. |
| | | Horticultural Oils | 1-2 gal | | |
| | | Insecticidal soap M-Pede | 1 gal | | |
| | | <i>pymetrozine</i> Endeavor | 2.5-5 oz | 9B | |
| <i>pyrifluquinazon</i> Rycar | 2.4-3.2 oz 0.25-0.32 oz | UN | | | |
| <i>pyrproxifen</i> Distance | 6-12 oz | 7C | | | |
| <i>spinetoram + sulfoxaflor</i> XXpire | 2-2.75 oz 0.02-0.0275 oz | 5 + 4C | | | |
| <i>spiromesifin</i> Judo | 2-4 oz | 23 | | | |
| <i>thiamethoxam</i> Flagship | See label | 4A | | | |

NOTE: A number of pyrethroid materials are available in a variety of formulations for use as broad-spectrum contact insecticides. Common names include bifenthrin, cyfluthrin, cypermethrin, deltamethrin, lambda-cyhalothin, tralomethrin, permethrin. Active ingredients are listed on the label.

WOODY ORNAMENTALS: COMMERCIAL NURSERY PRODUCTION WEED CONTROL

Mark A. Czarnota, Extension Horticulturist – Weed Science

| HERBICIDE | MOA | BROADCAST RATE/ACRE | | REI (Hours) | REMARKS AND PRECAUTIONS |
|--|----------------|-------------------------------------|---------------------------|----------------|---|
| | | AMOUNT OF FORMULATION | POUNDS ACTIVE INGREDIENT | | |
| PREPLANT FUMIGATION | | | | | |
| <i>dazomet</i> Basamid 99GR | Z27 | 350 lb | 347 | 48-120 H | For best results apply at soil temperatures of 54-64°F. Do not apply at soil temperatures less than 43°F or more than 103° F. Uniformly apply granules to freshly tilled, moist soil with a suitable granular applicator. Activity is reduced at low soil temperatures and at low soil moisture levels. After application seal the soil by watering or by tarp (refer to Basamid label). Aerate soil by cultivation 7-12 days after application. After aeration delay planting 3-7 days, depending on soil temperature, to ensure that no gaseous residues are present. A germination test with radish seeds can be conducted to ensure that harmful residues are not present (see label). Do not apply within 3-4 feet of growing plants or closer than the dripline of trees. |
| PREEMERGENCE^{1, 2, 3, 4} | | | | | |
| <i>benefin</i> + <i>oryzalin</i> XL 2 GR | K1 | 200-300 lb | 2-3 + 2-3 | 24 H | Apply to established plantings. Rooted liners must be established in containers 2 weeks prior to treatment or injury may occur. |
| <i>dichlobenil</i> Casoron GR Casoron CS | L20 | 100-150 lb 1.4-4.3 gal | 4-6 2-6 | 12 H | Apply from late fall-early spring. Controls a broad spectrum of weeds, including Florida betony and mugwort. Irrigate immediately after application or incorporate into the top 0.5” of the soil. Should be applied between November 15 and February 15. DO NOT apply until 4 weeks after transplanting. |
| <i>dimethenamid-P</i> Tower 6L | K3 | 21-32 oz | 0.98-1.5 | 12 H | Provides broad spectrum control of many broadleaf and grass weeds. In most cases, needs a tank mix partner (proflam, pendimethalin, etc.). Good rotational product, and safe on a wide array of herbaceous and woody ornamentals. Newly planted ornamentals need to be established before application. Provides some yellow nutsedge control. |
| <i>dimethenamid-P</i> + <i>pendimethalin</i> Freehand 1.75G | K3 + K1 | 100-200 lb | 1.75-3.5 | 12 H | Provides broad spectrum control of many broadleaf and grass weeds. Good rotational product and safe on a wide array of herbaceous and woody ornamentals. |
| <i>flumioxazin</i> BroadStar 0.25GR SureGuard 51WDG | E14 | 150 lb 8-12 oz | 0.375 0.25-0.38 | 12 H | Provides excellent control of many annual weeds. Broadstar may be used over-the-top of many containerized ornamentals (see label). SureGuard can be used as a post directed spray to containerized and field grown ornamentals (trees) that have been established for at least 1 year. Sureguard can also be applied over-the-top of select conifers (see label for precautions and tolerant species) |
| <i>indaziflam</i> Merengo 0.622 lbs/gal 0.224 GR | L29 | 9-18.5 fl. oz /A 200-400 lb pr/A | 0.0437-0.087 44.8-89.6 | 12 H | Controls a wide range of annual weeds in select woody ornamentals. Provides one of the longest preemergence weed control windows of any preemergence herbicide. Do not apply any more than 400 lb pr/A in a 12 month period. Do not allow granules applied “over-the-top” to remain in contact with foliage. If the granules should be in contact with the foliage after an application, wash off affected foliage. Do not use Marengo G on ornamentals where granules may become trapped in developing leaves or in meristematic areas (e.g. whorls of grasses and perennials such as hosta). Do not apply Marengo G to plants less than 5” in height or ornamentals breaking bud. |
| <i>isoxaben</i> Gallery 75DF | L21 | 0.66-1.33 lb | 0.5-1 | 12 H | Controls a wide variety of annual broadleaf weeds. DO NOT apply to newly-transplanted ornamentals until the soil has settled and no cracks are present. DO NOT apply to bedding plants. |
| <i>isoxaben</i> + <i>trifluralin</i> Snapshot 2.5TG | K1 + L21 | 100-200 lb | 0.5-1 + 2-4 | 12 H | Controls a wide range of annual weeds in certain woody ornamentals, trees and groundcovers. DO NOT apply to newly planted ornamentals until the soil has firmly settled and no cracks are present. Not recommended for applications to bedding plants. Groundcovers should be established and well-rooted prior to application. Apply 0.5” of irrigation water, or uniformly incorporate into the soil to a depth of 1-2”, if rainfall is not received within 3 days of application. |

WOODY ORNAMENTALS – COMMERCIAL NURSERY PRODUCTION WEED CONTROL

| HERBICIDE | MOA | BROADCAST RATE/ACRE | | REI (Hours) | REMARKS AND PRECAUTIONS |
|---|---------------------------|-------------------------------------|---------------------------------------|----------------|---|
| | | AMOUNT OF FORMULATION | POUNDS ACTIVE INGREDIENT | | |
| PREEMERGENCE ^{1, 2, 3, 4} | | | | | |
| <i>isoxaben</i> + <i>trifluralin</i> + <i>oxyfluorfen</i> Showcase 2.5TG | L21 + K1 + E4 | 100-200 lb | 0.25-0.5 + 2-4 + 0.25-0.5 | 24 H | Controls a wide range of annual weeds in container and field grown ornamentals. DO NOT apply to ornamentals in a landscape situation. DO NOT apply to newly planted ornamentals until the soil has firmly settled and no cracks are present. DO NOT apply to ornamentals with tight whorled leaf/stem arrangement (i.e. <i>Hydrangea macrophylla</i>) as injury can occur as a result of granular herbicide collecting in leaf/stem whorl. Apply 0.5-1” of irrigation water to treated area if adequate rainfall is not received within 3 days of application. Repeat applications of 150 lbs or higher should not be made sooner than 60 days. DO NOT apply more than 600 lbs/year. |
| <i>metholachlor</i> Pennant Magnum 7.62L | K3 | 1.3-2.6 pt | 1.2-2.5 | 24 H | Refer to label for specific species recommendations. Apply to established ornamentals or newly transplanted ornamentals after the soil has settled around roots. DO NOT make more than 2 applications per year. DO NOT apply to seedbeds, cutting beds or unrooted cuttings. For over-the-top applications, follow with sufficient irrigation to wash spray residues from the ornamental foliage. |
| <i>oryzalin</i> Surflan 4AS Surflan 85DF | K1 | 2-4 qt. 2.4-7.1 lb 2.4-4.7 lb | 2-4 | 24 H | Apply to established plantings. Rooted liners must be established in containers 2 weeks prior to treatment or crop injury may occur. Sprayable Surflan greatly benefits from a tankmix partner such as Gallery or Princep. Repeat applications of Surflan should not be made sooner than 90 days. DO NOT apply Surflan to Eastern Hemlock (<i>Tsuga canadensis</i>), Techny Arborvitea (<i>Thuja occidentalis</i> ‘ <i>Techny</i> ’), or Douglas fir (<i>Pseudotsuga manziesii</i>). |
| <i>oryzalin</i> + <i>oxyfluorfen</i> Rout 3GR | K1 + E14 | 100 lb | 1 + 2 | 24 H | Refer to label for specific ornamental species recommendations. Apply before weed emergence. Do not apply when ornamentals are breaking dormancy or growing rapidly. DO NOT apply to wet foliage. |
| <i>oxadiazon</i> various trade names are available Ronstar 3G | E14 | 100-200 lb | 2-4 | 12 H | DO NOT apply to wet foliage or under conditions in which granules will collect on leaves. Good at controlling Oxalis (<i>Oxalis spp.</i>) and Bittercress (<i>Cardemine spp.</i>) species from seed. |
| <i>oxadiazon</i> + <i>pendimethalin</i> Jewel 3.25GR | E14 + K1 | 100 lb | 3.25 | 24 H | Apply to ornamentals only after established soil has settled around plants. See label for a list of tolerant plants. |
| <i>oxadiazon</i> + <i>prodiamine</i> RegalStar 1.2GR | E14 + K1 | 200 lb | 2.4 | 24 H | Apply to ornamentals only after established soil has settled around plants. See restrictions in Ronstar remarks and precautions. See label for a list of tolerant plants. |
| <i>oxyfluorfen</i> + <i>oxadiazon</i> RegalO-O, 3GR | E14 + E14 | 100 lb | 2 + 1 | 24 H | See label for a list of tolerant plants. Apply before weed emergence. DO NOT apply when ornamentals are breaking dormancy or growing rapidly. Do not apply to wet foliage. |
| <i>oxyfluorfen</i> + <i>trifluralin</i> Weedfree 75, 5GR | E14 + K1 | 100 lb | 5 | 24 H | Apply to ornamentals only after established soil has settled around plants or in pots. Controls a wide spectrum of grass and broadleaf weeds from seed. |

WOODY ORNAMENTALS – COMMERCIAL NURSERY PRODUCTION WEED CONTROL

| HERBICIDE | MOA | BROADCAST RATE/ACRE | | REI (Hours) | REMARKS AND PRECAUTIONS |
|---|----------------|--|------------------------------|-------------|---|
| | | AMOUNT OF FORMULATION | POUNDS ACTIVE INGREDIENT | | |
| PREEMERGENCE ^{1, 2, 3, 4} | | | | | |
| <i>pendimethalin</i> + <i>oxyfluorfen</i> OH-2 2GR | K1 + E14 | 100 lb | 1 + 2 | 24 H | See label for a list of tolerant plants. Apply before weed emergence. DO NOT apply when ornamentals are breaking dormancy or growing rapidly. Do not apply to wet foliage. |
| <i>pendimethalin</i> Pendulum 3.3EC Pendulum AquaCap 3.8ACS Pendulum 68GR | K1 | 3.6-7.2 pt 2.1-4.2 qt 75-100 lb 76-114 lb | 1.4-3 2-4 1.5-2 2-3 | 24 H | Labeled in certain woody ornamentals and ground covers. Apply to established or newly planted ornamentals after the soil has firmly settled around the roots. DO NOT apply to seedbeds. |
| <i>oxyfluorfen</i> + <i>prodiamine</i> Biathlon 2.75 GR | E14 + K1 | 100 lb | 2.75 | 24 H | Good herbicide at controlling a broad spectrum of annual grasses and broadleaf weeds from seed. Do not apply to wet foliage. |
| <i>prodiamine</i> Barricade 65DG Barricade 4L RegalKade 0.5G | K1 | 1-2.3 lb 21-48 oz 300 lb | 0.65-1.5 0.65-1.5 1.51 | 12 H | Controls annual grasses and certain broadleaf weeds. Apply to established plantings or to new transplants after soil has firmly settled around the roots and no cracks are present. |
| <i>simazine</i> Princep 4L Princep Caliber 90DF various trade names of both formulations are available | C1 | 2-3 qt 2.2-4.4 lb | 2-3 2-3 | 12 H | Controls a broad spectrum of annual broadleaf and grass weeds. Junipers are especially tolerant of simazine. DO NOT apply for at least 1 year after transplanting. Spectrum of weeds controlled by simazine can be greatly enhanced by including tank mix partners such as Gallery or Surflan. |
| POSTEMERGENCE GRASS CONTROL | | | | | |
| <i>clethodim</i> Envoy Plus 0.97L | A1 | 12-32 fl oz | 0.11-0.24 | 24 H | Apply postemergence to actively growing grasses that are not drought stressed according to plant size limitations shown on the label. Apply with surfactant as specified on the label. DO NOT add surfactant or crop oil concentrate to Vantage. Ornamental grasses may be injured or killed if sprayed. Refer to label for information on over-the-top or directed applications. |
| <i>fenoxaprop</i> Acclaim Extra 0.57L | A1 | 1.2-2.4 pt | 0.09-0.17 | 24 H | |
| <i>fluazifop-p</i> Fusilade II 2 lb/gal Ornamec 0.5 lb/gal | A1 | 1-1.5 pt 2-3 qt | 0.25-0.38 0.25-0.38 | 12 H | |
| <i>sethoxydim</i> Segment 1 lb/gal | A1 | 1.1-1.9 qt | 0.28-0.47 | 12 H | |

WOODY ORNAMENTALS – COMMERCIAL NURSERY PRODUCTION WEED CONTROL

| HERBICIDE | MOA | BROADCAST RATE/ACRE | | REI (Hours) | REMARKS AND PRECAUTIONS |
|---|-----|--|--|-------------|---|
| | | AMOUNT OF FORMULATION | POUNDS ACTIVE INGREDIENT | | |
| DIRECTED SPRAYS | | | | | |
| <i>bentazon</i> Basagran T/O 4L Lescogran 4L | C3 | 1.5-2 pt | 0.75-1 | 48 H | Apply as a directed spray toward the base of shrubs and trees. Basagran T/O may also be used over-the-top of English ivy, pachysandra and liriopse. For other ornamentals, avoid contact of foliage with spray. A crop oil concentrate at 2 pt/A is recommended for the control of yellow nutsedge and certain broadleaf weeds (see label). Rainfall or irrigation within 8 hours of application may decrease control. |
| <i>diquat</i> Reward 2L | D22 | 1-2 qt | 0.5-1 | 24 H | Controls most annual grass and broadleaf weeds. DO NOT permit spray to contact foliage or green stems of desirable ornamentals. |
| <i>glufosinate</i> Finale 1L | H10 | 3-6 qt | 0.75-1.5 | 12 H | Controls most grass and broadleaf weeds. Poor on well established perennials with extensive underground storage organs (Florida betony, bermudagrass, nutsedge, etc.). Use as a directed spray to control weeds in row middles of woody ornamentals. May also be used between and around containers and as a site preparation treatment for new plantings. DO NOT permit spray to contact foliage or green stems of desirable ornamentals. |
| <i>glyphosate</i> Various trade names and formulations are available. | G9 | See label. | See label. | 4-12 H | Controls most grass and broadleaf weeds. DO NOT allow spray mist to contact ornamental foliage, green bark or base of thin bark plants (i.e. Crapemyrtle), or stumps of cuts sucker or severe injury could occur. Glyphosate is very water soluble and can be mixed with many preemergent herbicides. Refer to glyphosate label for compatibility information. |
| <i>halosulfuron</i> Manage 75DF Sedge Hammer 75DF Prosedge | B22 | 0.67-1.33 oz | 0.031-0.062 | 12 H | Apply as a post-directed application to control yellow and purple nutsedge in established woody ornamentals. Apply with a nonionic surfactant at 0.5% v/v. DO NOT allow the spray to contact the foliage of desirable woody ornamentals. Wait 3 months after transplanting before application. On areas scheduled to be planted in woody ornamentals wait 4 weeks between application and transplanting. |
| <i>paraquat</i> Gramoxone Inteon 2SL Various formulations available | D22 | 1.3-4 pt (varies by formulation, check label) | 0.25-1 (varies with formulation, check label) | 12 H | Apply as directed spray to control annual weeds in ornamental trees. DO NOT allow spray to contact green stems or foliage of ornamentals. Add a nonionic surfactant. ALL PARAQUAT HERBICIDES ARE RESTRICTED USE HERBICIDES. |
| Potassium salts of fatty acids (Scythe) Various trade names are available. | NC | See label. | See label. | See label. | Provides postemergent contact control of mosses, algae, liverworts and lichens inside greenhouses, on growing containers and benches. Do not allow spray to contact foliage of desirable ornamentals. |

¹ All preemergent herbicides require a rain or irrigation event in order for herbicide activation to occur (approximately 0.5-1” of water). If no rain event occurs and no supplemental watering is provided after a preemergent herbicide application, weed control can be extremely poor or totally fail.

² Most preemergent herbicides will only control germinating weed seed. Generally, preemergent herbicides will not control weeds after they have become established (1st or 2nd true leaf), and most preemergent herbicides will not control weeds coming from vegetative structures (i.e. yellow and purple nutsedge).

³ As long as the treated area remains undisturbed, most pre-emergent herbicides will provide weed control for 2-4 months in most growing mediums.

⁴ Do not apply preemergence herbicides to seeded beds or to non-rooted plants or in greenhouses.

WOODY ORNAMENTALS: COMMERCIAL NURSERY PRODUCTION ROOTING COMPOUND

Matthew Chappell, Extension Horticulturist

| CROP | CHEMICALS | PRODUCT | ACTIVE INGREDIENT (CONCENTRATION) |
|-------------------|--|---|--|
| All Nursery Stock | IBA (indole 3-Butyric acid) | LIQUID FORMULATIONS | |
| | KIBA (potassium indole 3-Butyric acid) | GRO-Root Xtra | IBA (0.85%) NAA (0.20%) Kinetin (0.15%) |
| | NAA (naphthaleneacetic acid) | GRO-Root Gel | IBA (0.50%) NAA (0.025%) |
| | NAD (1-Naphthaleneacetamide) | GRO-Root Liquid | IBA (1.0%) NAA (0.5%) |
| | Kinetin (N6-furfuryladenine) | C-Mone | IBA (1% or 2%) |
| | Cytokinin [N-(furan-2-ylmethyl)-7H- purin-6-amine] | C-Mone K | IBA (1.00%) |
| | | C-Mone K+ | IBA (1%) NAA (0.50%) |
| | | Clonex Rooting Gel | IBA (0.31%) |
| | | Dip 'n Grow | IBA (1.00%) NAA (0.50%) |
| | | EasyGro Root Stimulator and Starter Solution | IBA (0.0039%) |
| | | Goldengro Tm R | IBA (0.85%) NAA (0.20%) Cytokinin (0.15%) Benzyladenine (0.15%) |
| | | Green Light Root Stimulator and Starter Solutiuon | IBA (0.0039%) |
| | | Hormex Liquid Concentrate | NAA (0.024%) + IBA (0.13%) B-1 (0.25%) |
| | | NCA Goldengro R | IBA (0.85%) + NAA (0.20%) Cytokinin (0.15%) |
| | | NCA Megagro 1 | IBA (0.85%) Cytokinin(0.15%) |
| | | Radiate | IBA (0.85%) Cytokinin (0.15%) |
| | | Rootaid Gel | BA (0.54%) |
| | Rootgro | IBA (0.80%) | |
| | Vita Grow Ready to Use Rooting Compound | IBA (0.13%) + NAA (0.08%) | |
| | Woods Rooting Compound | IBA (1.03%) + NAA (0.66%) | |

WOODY ORNAMENTALS – COMMERCIAL NURSERY PRODUCTION ROOTING COMPOUND

| CROP | CHEMICALS | PRODUCT | ACTIVE INGREDIENT (CONCENTRATION) |
|-------------------|--|---|--|
| All Nursery Stock | Cytokinin [N-(furan-2-ylmethyl)-7H- purin-6-amine] | POWDER FORMULATIONS | |
| | | Ferti-lome Rooting Powder | IBA (0.10%) |
| | | Hormex Rooting Powder #1 | IBA (0.10%) |
| | | Hormex Rooting Powder #16 | IBA (1.60%) |
| | | Hormex Rooting Powder #3 | IBA (0.30%) |
| | | Hormex Rooting Powder #30 | IBA (3.00%) |
| | | Hormex Rooting Powder #45 | IBA (4.50%) |
| | | Hormex Rooting Powder #8 | IBA (0.80%) |
| | | Hormodin Powder #1 | IBA (0.10%) |
| | | Hormodin Powder #2 | IBA (0.30%) |
| | | Hormodin Powder #3 | IBA (0.80%) |
| | | Hormo-Root A | IBA (0.10%) + Thiram (15.00%) |
| | | Rhizopon AA#1 | IBA (0.10%) |
| | | Rhizopon AA#2 | IBA (0.30%) |
| | | Rhizopon AA#3 | IBA (0.80%) |
| | | Rootone | NAD (0.067%) 2-methyl-1-naphthaleneacetic acid (0.033%) 2-methyl-1 Naphthaleneacetamide (0.013%) |
| | | Rootone F | NAD (0.067%) 2-methyl-1-naphthaleneacetic acid (0.033%) 2-methyl-1 Naphthaleneacetamide (0.013%) Thiram (4.04%) |
| | | Snip N ^o Dip | IBA (0.10%) |
| | | Supernatural Rootburst | IBA (0.80%) |
| | | WATER SOLUBLE TABLETS, SALTS, OR POWDERS | |
| | | Hortus (water soluble salt) | IBA (20%) |
| | | Grow More Rapid Root (WSP) | IBA (0.30%) |
| | | Rhizopon AA Water Soluable Tablets (WST) | IBA (20%) |

Note: These growth regulators are used to induce rooting during vegetative propagation of nursery stock (hardwood and softwood cuttings). IBA is the most common active ingredient in these products. Some products contain combinations of active ingredients. Powder formulations are used without dilution. Water soluble products are dissolved in water at the concentration desired and used like the liquid formulations. Liquid formulations are diluted to match the difficulty of the plant to be propagated. Strengths are discussed interchangeably as either percentage (%) or part per million (ppm). To convert percent to parts per million multiply by 10,000 (e.g. 1% = 10,000 ppm active ingredient). Easy to root plants such as crapemyrtle require 1000-2,000 ppm (.1-.2%); moderately hard to root plants such as holly and photinia require 4,000-8,000 ppm (.4-.8%); hard to root plants like many of the deciduous trees and coniferous evergreens may require 8,000-12,000 ppm or more. The base of cuttings are dipped in the solution for 5 seconds.

WOODY ORNAMENTALS: COMMERCIAL GROUNDS MAINTENANCE WEED CONTROL

Mark A. Czarnota, Extension Horticulturist – Weed Science

| HERBICIDE | AMOUNT OF FORMULATION/GAL PER 1000 SQ FT | REMARKS AND PRECAUTIONS |
|---|--|---|
| PREEMERGENCE^{1, 2, 3} | | |
| <i>benefin</i> + <i>oryzalin</i> XL 2G | 4.6-6.9 lb | Apply only to established ornamentals. One-half inch of rainfall or irrigation water immediately after application will aid in weed control. |
| <i>dimethenamid-P</i> Tower 6L | 4.8-0.73 oz | Provides broad spectrum control of many broadleaf and grass weeds. In most cases, needs a tank mix partner (prodiamine, pendimethalin, etc.). Good rotational product, and safe on a wide array of herbaceous and woody ornamentals. Newly planted ornamentals need to be established before application. Provides some yellow nutsedge control. |
| <i>dimethenamid-P</i> + <i>pendimethalin</i> Freehand 1.75G | 2.3-4.6 lb | Provides broad spectrum of many broadleaf and grass weeds. Good rotational product and safe on a wide array of herbaceous and woody ornamentals. Provides some nutsedge control. |
| <i>dichlobenil</i> Casoron 4G Casoron CS | 2.3-3.4 lb 4.2-12.6 oz | Apply from late fall to early spring (November 15-February 15). Good product for controlling non-seed bearing plants, such as Bracken fern (<i>Pteridium aquilinum</i>), winter annuals, such as Florida betony (<i>Stachys floridana</i>), and mugwort (<i>Artemisia vulgaris</i>). Irrigate immediately after application or incorporate into the top 0.5" of the soil. DO NOT apply until 4 weeks after transplanting. |
| <i>flumioxazin</i> BroadStar 0.25GR SureGuard 51WDG | 3.4 lb 0.18-0.27 oz | Provides excellent control of many annual weeds. Broadstar may be used over-the-top of many containerized ornamentals (see label). SureGuard can be used as a post directed spray to containerized and field grown ornamentals (trees) that have been established for at least one year. Sureguard can also be applied over-the-top of select conifers (see label for precautions and tolerant species). |
| <i>indaziflam</i> Specticle 0.0224 GR Specticle 0.622 FIO | 2.3-4.6 lb 0.2-0.4 fl oz | Controls a wide range of annual weeds in-select woody ornamentals. Provides one of the longest preemergence weed control windows of any preemergence herbicide. Do not apply any more than 9.2 lb pr/1000 sq ft or 0.8 fl oz/1000 sq ft in a 12 month period. |
| <i>indaziflam</i> Specticle Total 1.958 L 0.008 lb gal indaziflam <i>glyphosate</i> 1.87 lb gal glyphosate <i>diquat</i> 0.08 lb gal diquat | 16 oz | Provides both pre and postemergence control on weeds growing in the landscape. Thoroughly wet entire area that you want to protect from future weeds. Subsequent applications can be applied 4 months after initial herbicide application. Water-in within 2 hours after application. If treated area is disturbed after herbicide application, future weed control will be reduced. |
| <i>isoxaben</i> Gallery 75DF | 0.25-0.5 oz | Apply as a fall or spring treatment to control a wide variety of annual broadleaf weeds. DO NOT apply to newly-transplanted ornamentals until the soil has settled and no cracks are present. DO NOT apply to bedding plants. Gallery should be tank-mixed with other labeled herbicides to improve grass control. |
| <i>isoxaben</i> + <i>trifluralin</i> Snapshot 2.5TG | 2.3-4.6 lb | Controls a wide range of annual weeds in certain woody ornamentals, trees and groundcovers. DO NOT apply to newly planted ornamentals until the soil has firmly settled and no cracks are present. Not recommended for applications to bedding plants. Groundcovers should be established and well-rooted prior to application. Apply 0.5" of irrigation water, or uniformly incorporate into the soil to a depth of 1-2" if rainfall is not received within 3 days of application. |
| <i>metholachlor</i> Pennant Magnum 7.62L | 0.5-1 fl oz | Controls selected annual weeds and provides suppression of yellow nutsedge. Apply to established or to newly transplanted ornamentals after the soil has firmly settled around the roots. Use the low rate on coarse textures soils. For over-the-top applications, remove Pennant spray residues or granules with overhead irrigation. DO NOT use on seedbeds or cutting beds. Spectrum of weed control can be enhanced when combined with a tank mix partner such as Gallery or Surflan. |

WOODY ORNAMENTALS – COMMERCIAL GROUNDS MAINTENANCE WEED CONTROL

| HERBICIDE | AMOUNT OF FORMULATION/GAL PER 1000 SQ FT | REMARKS AND PRECAUTIONS |
|--|--|--|
| PREEMERGENCE^{1,2,3} | | |
| <i>oryzalin</i> + <i>oxyfluorfen</i> Rout 3G | 2.3 lb | Apply prior to weed emergence. Controls a broad spectrum of annual grass and broadleaf weeds. DO NOT apply when ornamentals are breaking dormancy or are rapidly growing. DO NOT apply to wet foliage. |
| <i>oxadiazon</i> + <i>pendimethalin</i> Jewel 3.25 GR | 2.3 lb | Apply to ornamentals only after established soil has settled around plants. See label for a list of tolerant plants. |
| <i>oxadiazon</i> Ronstar 2G | 2.3-4.6 lb | Apply to newly planted and established ornamentals. DO NOT apply to wet foliage or under conditions in which granules will stick to the leaves. DO NOT incorporate into the soil. Rainfall or irrigation immediately after application will remove granules from the foliage and aid in weed control. |
| <i>oxadiazon</i> + <i>prodiamine</i> RegalStar 1.2G | 4.5 lb | Apply to ornamentals only after established soil has settled around plants. See restrictions in Ronstar remarks and precautions. See label for a list of tolerant plants. |
| <i>oxyfluorfen</i> + <i>oxadiazon</i> Regal O-O 3G | 2.3 lb | Refer to label for specific ornamental species recommendations. Apply before weed emergence. DO NOT apply to wet foliage. |
| <i>pendimethalin</i> Pendulum 3.3 EC Pendulum AquaCap 3.8 ACS Pendulum 2 GR Corral 2.68 GR | 1.3-2.6 oz 0.7-1.5 oz 1.7-2.3 oz 1.7-2.6 oz | Controls annual grasses and certain annual broadleaf weeds in woody ornamentals and groundcovers. Apply to established or newly planted ornamentals after the soil has firmly settled around the roots and no cracks are present. DO NOT apply to seedbeds. |
| <i>prodiamine</i> Barricade 65DG Barricade 4L RegalKade 0.5G | 0.4-0.8 oz 21-48 oz 6.8 lb | Controls annual grasses and certain annual broadleaf weeds in woody ornamentals and groundcovers. Apply to established or newly transplanted ornamentals after the soil has firmly settled around the roots and no cracks are present. |
| <i>simazine</i> Princep Liquid 4L Princep 90DF | 1.5-2.2 fl oz 0.8-1.2 oz | Controls annual broadleaf weeds and annual grasses. Junipers have excellent tolerance to simazine. DO NOT apply for at least 1 year after transplanting. |
| <i>trifluralin</i> Treflan 5G | 1.8 lb | Apply prior to planting and to established plants. Optimum weed control is obtained when rainfall or irrigation occurs within a few hours of application. DO NOT apply Treflan 5G to ornamentals with wet foliage. DO NOT apply to seeded beds or to non-rooted plants. Use a Treflan product that is registered for ornamental use. |
| POSTEMERGENCE | | |
| <i>clopyralid</i> Lontrel 3L | 0.1-0.5 fl. oz | Controls a wide range of broadleaf weeds, and is particularly good at controlling legume (clovers) and aster (thistle) type weeds. Can be applied over the top on several juniper and pine species as well as other select ornamentals (see label). |
| <i>imazaquin</i> Image 70 DG | 0.2-0.26 oz | Can be applied over the top of several ornamentals (see label). Make sure to add a surfactant at 0.25% v/v. Controls several difficult weeds including sedges, wild onion, and wild garlic. |

WOODY ORNAMENTALS – COMMERCIAL GROUNDS MAINTENANCE WEED CONTROL

| HERBICIDE | AMOUNT OF FORMULATION/GAL PER 1000 SQ FT | REMARKS AND PRECAUTIONS |
|--|---|--|
| POSTEMERGENCE GRASS CONTROL | | |
| <i>clethodim</i> Envoy Plus 0.97L | 0.3-0.7 fl oz | Apply postemergence to actively-growing grasses that are not drought stressed. Apply with 0.25% v/v nonionic surfactant. DO NOT use a crop oil concentrate. Clethodim will not control broadleaf weeds or sedges. |
| <i>fenoxaprop</i> Acclaim Extra 0.57L | 0.5-0.9 fl oz | Apply postemergence to actively growing grasses that are not drought stressed. Add surfactant if spray volume is greater than 60 GPA. Refer to label for recommended list of ornamentals for over-the-top or directed applications. Fenoxaprop will not control broadleaf weeds or nutsedges. |
| <i>fluazifop-P</i> Fusilade II 2 L Ornamec 0.5L | 0.4-0.6 fl oz 1.5-2.2 fl oz | Apply postemergence to actively growing grasses that are not drought stressed. Refer to label for surfactant recommendations, and ornamentals tolerant to over-the-top applications. Fluazifop will not control broadleaf weeds or nutsedges. |
| <i>sethoxydim</i> Segment 1L | 0.8-1.4 fl oz. | Apply postemergence to actively growing weedy grasses that are not drought stressed. DO NOT add a crop oil concentrate or surfactant to Segment. Segment will not control broadleaf weeds or nutsedge(s). |
| AREAS ADJACENT TO ORNAMENTALS (POSTEMERGENCE) | | |
| <i>bentazon</i> Basagran T/O 4L, Lescogran 4L | 0.6-0.75 fl oz | Apply as a directed spray toward the base of ornamental trees and shrubs. May be applied over-the-top of pachysandra, liriope and English ivy. For other ornamentals, avoid spray contact with the foliage. A crop oil concentrate is recommended for the control of yellow nutsedge and certain broadleaf weeds (see label). Rainfall or irrigation within 8 hours may decrease weed control. |
| <i>diquat</i> Reward 2L | 0.7-1.4 fl oz | Apply only as a directed spray to control emerged weeds. Diquat is a contact herbicide that will provide only top kill of perennial weeds. DO NOT allow spray mist to contact ornamental foliage or severe injury will occur. Apply with 0.125% v/v (nonionic) surfactant. |
| <i>glufosinate</i> Finale 1L | 2.2-4.4 fl oz | Controls most grass and broadleaf weeds. Use as a directed spray around trees and woody ornamentals. DO NOT permit spray to contact foliage or green stems of desirable ornamentals |
| <i>glyphosate</i> Various trade names and formulations are available | See label. | Apply Roundup Pro to control most emerged weeds. DO NOT allow spray mist to contact ornamental foliage, green bark, base of thin bark plants (i.e. Crapemyrtle), or stumps of cuts sucker or severe injury could occur. Avoid applications to drought stressed weeds. |
| <i>halosulfuron</i> SedgeHammer 75DF Manage 75DF Prosedge | 0.9 g/1 gal | Apply as a post-directed application to control yellow and purple nutsedge in established woody ornamentals. Apply with 0.33 fl oz of nonionic surfactant/gallon of water. DO NOT allow the spray to contact foliage of desirable woody ornamentals. Wait 3 months after transplanting before application. On areas scheduled to be planted in woody ornamentals wait 4 weeks between application and transplanting. |
| Potassium salts of fatty acids (Scythe and other trade names are available) | See label | Apply Scythe to kill most emerged weeds. DO NOT allow spray mist to contact ornamental foliage or severe injury will occur. Avoid application to drought stressed weeds. Scythe is poor on well-established perennial weeds with extensive underground storage systems (Florida betony, bermudagrass, nutsedge, etc.). Also provides postemergent control of mosses, algae, liverworts and lichens inside greenhouses, on growing containers and benches. Do not allow spray to contact foliage of desirable ornamentals. |

¹ All preemergent herbicides require a rain or irrigation event in order for herbicide activation to occur (approximately 0.5-1" of water). If no rain event occurs and no supplemental watering is provided after a preemergent herbicide application, weed control can be extremely poor or totally fail.

² Most preemergent herbicides will only control germinating weed seed. Generally, preemergent herbicides will not control weeds after they have become established (1st or 2nd true leaf), and most preemergent herbicides will not control weeds coming from vegetative structures (i.e. yellow and purple nutsedge).

³ As long as the treated area remains undisturbed, most pre-emergent herbicides will provide weed control for 2-4 months in most growing mediums

WOODY ORNAMENTALS: COMMERCIAL GROUNDS MAINTENANCE PLANT GROWTH REGULATORS

Mark A. Czarnota, Extension Horticulturist – Weed Science

| TRADE NAME | AMOUNT OF FORMULATION | RATE* (FL OZ/GAL) | REMARKS |
|---|------------------------|-------------------------|--|
| <i>dikegulac sodium</i> Atrimec | 1.67 lb/gal | 0.33-4 oz | Atrimec is a systemic plant growth regulator that enhances lateral branching, and should limit the amount of pinching and pruning required. Growth regulator effect is limited to sprayed branches. Plants must be healthy and well rooted before treating. Remove all flower buds, flowers, and long shoots before pruning. If plants are heavily pruned, at least 2 pair of fully expanded leaves should remain on each shoot before treating with Atrimec. DO NOT trim or hand pinch after application as this will interfere with Atrimec activity. Cuttings take from Atrimec treated plants root and grow normally. Two to three treatments per season are usually required. See label for a list of approved ornamentals, and spray rates recommended on those plants. Suppression of flower and fruit can also be achieved on olive, privet, multiflora rose, and Japanese holly (see label for rates and timing of application) |
| <i>flurprimidol</i> Cutless | 0.0033 lb ai/lb pr | 3.5-20.9 lb /1000 sq ft | Cutless growth regulator will shorten internode length of many ornamental plants, and limit the amount of pruning and trimming that is necessary. Plants treated with Cutless will have darker green foliage, increased plant density and compact growth. Use Cutless on well-established plants that are actively growing. Apply 3.5-20.9 lb/1000 sq ft, using a rotor or air assisted applicator. Can be used for containerized ornamentals (see label for application directions). Time Cutless applications after pruning or trimming. For aggressive growing ornamentals, prune or shape 5-7 days after application. Repeat applications every 2-6 months. DO NOT use Cutless on plants from which fruits, nuts or other plant parts will be used for human consumption. DO NOT use on annual bedding plants or areas to be used for annual bedding plants. For plants not listed on label, user should perform small trials to determine best use rates. DO NOT apply more than 909 lb/A/12 month period. |
| <i>mefluidide</i> Embark 2-S Embark | 2 lb/gal 0.2 lb/g | 0.6 6.5 | Apply to specific ornamentals/groundcovers (see label) to reduce pruning and trimming for up to 8 weeks. Application should be made to healthy, actively growing plants 7-14 days after pruning. Once plant resumed active growth, pruning and repeat application may be made. DO NOT apply to stressed, diseased plants, DO NOT apply to plants grown in containers. DO NOT irrigate with 8 hours of application, and DO NOT treat if a rainfall is expected within 8 hours of treatment. Keep concentrate and spray solutions out of lakes, streams, and ponds. |
| <i>ethyl Inaphthaleneacetate</i> Tre-Hold Spout Inhibitor A-112 Sucker Stopper RTU | 1 lb/gal 1.2 oz/gal | 10 Ready-to-use | Tre-Hold is a growth regulator that inhibits sprout and sucker growth. Household interior white latex paint can be substituted for equal amount of water. Substitute white latex paint for water from 15-60 fl oz, higher rates for better sun scaled protection. Prune in dormant season or when new shoot growth is 6-12". After proper pruning, apply treatment solution with brush, small hand-held sprayer or back-pack sprayer. Treat all pruned areas where sprout or sucker inhibition is desired. Apply Sucker Stopper to recently pruned ornamentals to prevent suckers and sprouts (i.e. Crape myrtle, ornamental pears, etc.) |
| <i>uniconazole</i> Sumagic | | 0.5-50 PPM | Although mainly used for greenhouse grown bedding plants, florist azaleas, and poinsettias; Sumagic can be used on woody landscape ornamentals to decrease the size of internode length and make plant heights more uniform as well as increase flower numbers. Applications should be applied 2 weeks following a spring pruning. For most woody ornamentals, 50m PPM sprays are recommended (i.e. crape myrtle, pyracantha, and other woody ornamentals). |

STERILIZATION AND PASTEURIZATION OF SOIL, GROUND BEDS, AND POTTING MIXES FOR GREENHOUSES AND COMMERCIAL NURSERIES

Jean L. Williams-Woodward – Extension Plant Pathologist

FOR SOILS, SOIL IN PLANT BEDS AND/OR POTTING MIXES

| MATERIAL | RATE OF USE | APPLICATION | RELATIVE EFFECTIVENESS | | | | | USE/REMARK |
|---------------------------------|--|--|------------------------|----------|---------|----------|-------|---|
| | | | WEEDS | NEMATODE | INSECTS | BACTERIA | FUNGI | |
| aerated steam | 145°-160°F for 30 min. | Same as steam. | Good | Good | Good | Good | Good | All crops. All pests. |
| steam | Heat soil 6 inches deep to 180°-200°F for 30 min | Perforated pipes on or in soil, cover with tarp. | Good | Good | Good | Good | Good | All crops. All pests. |
| <i>dazomet</i> Basamid G | Rates vary. See label. For soilborne pathogens: 10-13 oz/100 sq ft | See label and follow application restrictions. | Fair | Good | Fair | Good | Good | All crops. All pests. Long waiting period in cold soils. |
| <i>metam sodium</i> Vapam HL | Read Label | Read and follow label directions and use precautions. | Fair | Good | Fair | Fair | Good | Restricted Use pesticide. NOT for use in greenhouses or other enclosed structures. Applicators must have certified applicator training. All crops, all pests. Long waiting period after fumigating in cold soil (under 60°F). |
| dry heat | 180°F for 30 min. | Place small quantities in oven. | Good | Good | Good | Good | Good | |
| solarization | 140°F, 4-8 hr/day for 7 days | Cover pots, benches, tools, and shallow soil with plastic tarp. Or, close greenhouse during hot, sunny days in summer for at least 1 week. | Good | Fair | Good | Fair | Good | Greenhouse must reach 140°F or higher each day. Remove debris and heat-sensitive materials. Keep greenhouse and contents moist. |

DISINFECTION OF CONTAINERS, BENCHES, AND SURFACES IN GREENHOUSES AND COMMERCIAL NURSERIES

Jean L. Williams-Woodward – Extension Plant Pathologist

FOR CONTAINERS, POTS, FLATS, BENCHES AND OTHER SURFACES

| MATERIAL and BRAND NAME | RATE OF USE | APPLICATION | RELATIVE EFFECTIVENESS | | | | | USE/REMARK |
|---|--|--|------------------------|-----------|-----------|-------|---------|---|
| | | | NEMATODE | ALGAE | BACTERIA | FUNGI | VIRUSES | |
| alcohol grain, rubbing, wood, Lysol Disinfectant Spray 70-100% | Full strength. Lysol is RTU – read label. | Dip, swab or spray; do not rinse. 10 min for pots, flats, surfaces. Tools can be dipped for 10 sec. | Fair | Fair | Good | Good | Good | Items that are being treated should be clean of dirt and debris. Temperature should be above 60°F. |
| <i>chlorine dioxide</i> Selectocide | 100 ppm/10 min or 50 ppm/20 min for non-porous surfaces. See label for disease control. | Apply by mop, sponge, or sprayer to wet for allotted time. May be applied through irrigation lines. | Poor | Good | Good | Good | Fair | See Technical Bulletin for product as contact times and concentrations are application-specific. |
| <i>hydrogen dioxide</i> (or <i>peroxide</i>) <i>peroxyacetic acid</i> ZeroTol 2.0, SaniDate 5.0, Oxidate 2.0 | 0.5-2.5 fl oz/gal water for clean non-porous surfaces and tools. Read labels as rates and directions for products vary. | Dip, swab, or spray; do not rinse. Contact time of 1-10 min needed. | Poor | Excellent | Good | Good | Poor | Sweep and remove all plant and soil debris prior to use. Must be used in neutral pH (~7.0) water. Very corrosive; eye/skin irritant. Must be stored in cool location. |
| <i>phenolics</i> Lysol Concentrate Disinfectant, Pheno-Cen Spray Disinfectant | 1.25 fl oz (2.5 Tbsp)/1 gallon water. Mix well. Pheno-Cen Spray is RTU. | Dip tools for 10 sec and allow to dry. Do not rinse. 10 min for pots, equipment, surfaces. | Poor | Fair | Excellent | Good | Good | There are lots of Lysol formulations; they are NOT the same. Make sure product contains 5.5% O-benzyl- p-chlorophenol. Wear gloves; concentrate harmful to eyes/skin. |
| <i>quaternary ammonium</i> Triathlon, Physan 20, GreenShield, KleenGrow | 1 tsp-1 Tbsp/gal. See label; varies with surface. | Dip or swab to keep wet for at least 10 minutes. Do not rinse. Allow to air dry. | Poor | Good | Good | Good | Fair | Not effective on wood or porous surfaces. Effective on non-porous surfaces (floors, walls, metal benches, pots, tools). |
| <i>sodium carbonate</i> <i>peroxyhydrate</i> TerraCyte, Green Clean | 15 lb over 1000 sq ft bed or bench weekly; 1/3-1/2 tsp/8-10" pot bi-weekly curative rate. | Evenly distribute over bed, bench or surface of pot. Apply to wet surfaces and rinse granules off foliage to prevent burn. | Poor | Excellent | Fair | Good | Poor | Apply to wet surfaces. Activated by moisture. Rinse from foliage. Undiluted granules will cause burn on non-target plants. |
| <i>sodium hypochlorite</i> 8.25% Clorox, Commercial bleach | 10% concentration. | Dip 1-10 seconds, brush, spray, let drain, do not rinse. Best to soak object 10 min. | Poor | Good | Good | Good | Fair | Change solution at least every hour. Alkaline water (pH>6.8) reduces effectiveness. Chlorine is toxic to some plants. |
| solarization | 140°F, 4-8 hr/day for 7 days. | Place cleaned items on sunny driveway, cover tightly with clear plastic. | Fair | Good | Fair | Good | Poor | Remove debris from containers and surfaces. Keep surfaces moist. |
| steam and aerated steam | Heat object to 180°F for 30 min; 140°F for at least 30 mins. | Loosely stack objects and cover with tarp to seal. | Good | Good | Good | Good | Poor | Excellent. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

PART A: LISTING OF FUNGICIDES

Jean L. Williams-Woodward, Extension Plant Pathologist

INSTRUCTIONS: There are two sections for disease control recommendations for ornamentals: Part A and Part B.

Part A: Is a listing of fungicides labeled for use on ornamentals for specific diseases. It is organized alphabetically according to plant disease common name or pathogen. Fungicides labeled to control the disease and their labeled rate are provided in the table. Not all information given in the fungicide label is duplicated within this table. Refer to the fungicide label or

Part B: Plant Use Index to determine if the product is labeled for use on a particular plant.

Other information presented in the tables includes: fungicide mode of action (MOA), whether product is contact or systemic, restricted entry interval (REI), general application rates, and remarks/restrictions. For fungicide resistance management, rotate or tank mix products with different MOA numerical codes. General application rates are provided as a guide only. Always refer to the fungicide label for specific instructions, special rates, and timing of application.

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|----------------------|--|---------|---|--------------------------|--|
| Alternaria leaf spot | <i>azoxystrobin</i> Heritage | 11 | Systemic 1-4 oz/100 gal | 4 H | Repeat every 7-28 days. Apply at the first sign of disease. Use low rate (1-2 oz) at 7-14 day intervals for low disease pressure; Use higher rate (3-4 oz) at 14-28 day intervals under high disease pressure. Rotate after 2-3 applications with non-strobilurin fungicide. |
| | <i>Bacillus subtilis</i> <i>QST 713 strain</i> Cease | Bio | Contact 2-8 qt/100-300 gal/A 4 qt/100-300 gal/A (typical) | 4 H | Make applications on a 3-10 day schedule. Typical interval of 7-days. Shorten under severe disease pressure. |
| | <i>Captan</i> Captan 50WP | M4 | Contact 2 lb/100gal (Carnation) | 48 H | Begin applications at first sign of disease. Repeat applications at 7-10 day intervals. |
| | <i>chlorothalonil</i> + <i>thiophanate methyl</i> Spectro 90WDG | M5 + 1 | Contact/Systemic 1-2 lb/100 gal 3/4-1 ½ lb/100 gal | 24 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7-day re-treatment interval. Do not exceed 2.15 lbs/acre of product. |
| | <i>chlorothalonil</i> Daconil Zn Daconil Ultrex Daconil Weatherstik Thalonil 64L Thalonil 90DF + many other formulations | M5 | Contact 2 pt/100 gal 1.4 lb/100 gal 1 3/8 pt/100 gal 1.4 lb/100 gal 1 3/8 pt/100 gal See product label for rates. | 12 H | Re-apply at 7-14 day intervals. Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Do not combine with pesticides, surfactants, or fertilizers in spray tank. |
| | <i>copper hydroxide</i> CuPRO 2005 T/N/O Nu-Cop 50 DF Nu-Cop HB Nu-Cop 3L Champion WG | M1 | Contact 0.75-2 lb/A 1.0 lb/100 gal 0.5 lb/100 gal 1 1/3 pt/100 gal 0.5 lb/100 gal | 24-48 H (check label) | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette or other phosphite/phosphante fungicides. Begin application at the first sign of disease and repeat at 7-14 day intervals. |
| | <i>copper hydroxide</i> + <i>mancozeb</i> Junction | M1 + M3 | Contact 1.5-3.5 lb/100 gal | 48 H | Do not apply in spray solutions having pH less than 6.5. Re-apply at 7-14 day intervals. |
| | <i>copper salts of fatty and rosin acids</i> Camelot O | M1 | Contact 0.5-2 gal/100 gal/A | 4 H | Discoloration of blooms may occur. Do not spray just before or during bloom periods. Apply at 7-10 day intervals. |
| | <i>cyprodinil</i> + <i>fludioxonil</i> Palladium | 9 + 12 | Systemic/Contact 2-4 oz/100 gal | 12 H | Begin applications prior to the onset of disease, and repeat applications at 7-14-day intervals if conditions remain favorable for disease development. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|---|--|--------|---|----------------------------|---|
| Alternaria leaf spot (continued) | <i>fludioxonil</i> Medallion WDG | 12 | Contact 1-2 oz/100 gal | 12 H | Re-apply at 7-28 day intervals. Application to impatiens at seedling stage may cause stunting and/or chlorosis. |
| | <i>fluoxastrobin</i> Disarm O | 11 | Systemic 1-4 oz/100 gal | 12 H | Under light disease pressure, use lower rates (1-2 oz/100 gal) on a 7-14 day interval or the higher rates (3-4 oz/100 gal) on a 14-28 day interval. Under high disease pressure, use the higher rates on a 7-14 day interval. |
| | <i>fluxapyroxad + pyraclostrobin</i> Orkestra Intrinsic | 7 + 11 | Contact/Systemic 4-6 fl oz/100 gal | 12 H | DO NOT apply to Ninebark or Wintercreeper. |
| | <i>iprodione</i> Chipco 26019 N/G Chipco 26019 FLO Iprodione Pro 2SE | 2 | Contact 1-2 lb/100 gal 1-2.5 qt/100 gal 1-2.5 qt/100 gal | 12 H | Do not use on Spathiphyllum or as a drench on Impatiens or Pothos. Re-apply at 7-14 day intervals. |
| | <i>iprodione + thiophanate methyl</i> 26/36 | 2 + 1 | Contact + Systemic 33-84 fl oz/100 gal | 12 H | Spray plants to ensure thorough coverage. Repeat at 7-14 day intervals. Do not make more than 4 applications/crop/year. Do not use on <i>Spathiphyllum</i> or <i>New Guinea Impatiens</i> . Provides good Alternaria control. |
| | <i>kresoxim-methyl</i> Cygnus | 11 | Systemic 1.6-3.2 oz/100 gal | 12 H | Apply as protective spray and continue on a 7-14 day interval. |
| | <i>mancozeb</i> Dithane 75DF Dithane WF Fore 80WP Mancozeb DG Pentathlon DF Protect DF | M3 | Contact 1-2 lb/100 gal 1.5 lb/100 gal 1.5 lb/100 gal 1-2 lb/100 gal 0.8-1.6 qt/A/100 gal 1-2 lb/100 gal | 24 H | Addition of a spreader sticker will improve performance. Do not use Fore on Pachysandra. Repeat application on 7-10 day intervals. |
| | <i>mancozeb + myclobutanil</i> Clevis | M3 + 3 | Contact + Systemic 2 lb/100 gal (on viburnum) | 24 H | Addition of a spreader sticker will improve performance. Repeat application on 7-10 day intervals. Begin application at first sign of disease or when plants are well leafed out. Spray at 7-10 day intervals. |
| | <i>polyoxin D Zn salt</i> Affirm WDG Veranda T | 19 | Systemic 0.5 lb/100 gal 0.5 lb/100 gal | 4 H | Apply as full coverage foliar spray every 7-10 days. Apply prior to disease development and when conditions are conducive for disease. |
| | <i>propiconazole</i> Banner Maxx II Fathom 14.3 MEC Propiconazole Strider | 3 | Systemic 5-8 fl oz/100 gal 5-8 fl oz/100 gal 5-8 fl oz/100 gal 5-8 fl oz/100 gal | Banner 12 H Others 24 H | Do not apply to African violets, begonias, Boston fern or geranium. Do not use in greenhouses. Apply every 14-21 days when conditions are favorable for disease development. Spray to drip. |
| | <i>potassium bicarbonate</i> MilStop | | Contact 2.5-5 lb/100 gal | 1 H | Apply by increasing 0.25lb/application not to exceed 5 lb. Repeat applications at 1-2 week intervals. See label for precautions for use on poinsettia, impatiens, and pansy. |
| | <i>pyraclostrobin + boscalid</i> Pageant | 11 + 7 | Systemic 4-8 oz/100 gal | 12 H/ | Use preventively. Begin applications when conditions are favorable for disease, prior to disease symptom development. Re-apply at 7-14 day intervals. |
| | <i>trifloxystrobin</i> Compass O 50WGD | 11 | Systemic 2-4 oz/100 gal (spray) | 12 H | Re-apply at 7-14 day intervals as needed. Rotate with fungicides in different chemical class. |
| | <i>triflumizole</i> Terraguard SC Terraguard SC/LS | 3 | Contact 4-8 oz/100 gal 4-8 oz/100 gal | 12 H | Apply foliar sprays at 7-14 day intervals. Use high rate for initial application. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--|---|------------|---|--------------------------|---|
| Anthracnose (<i>Colletotrichum</i> , <i>Glomerella</i> <i>Elsinoe</i> , <i>Discula</i> , <i>Marssonina</i> , and <i>others</i>) | azoxystrobin Heritage | 11 | Systemic 1-4 oz/100 gal | 4 H | Repeat every 7-28 days. Apply at the first sign of disease. Use low rate (1-2 oz) at 7-14 day intervals for low disease pressure. Use higher rate (3-4 oz) at 14-28 day intervals under high disease pressure. Rotate after 2-3 applications with non-strobilurin fungicide. |
| | Bacillus subtilis QST 713 strain Cease | Bio | Contact 2-8 qt/100-300 gal/A 4 qt/100-300 gal/A (typical) | 4 H | Make applications on a 3-10-day schedule. Typical interval of 7-days. Shorten interval under severe disease pressure. |
| | <i>benzovindiflupyr</i> + <i>azoxystrobin</i> Mural | 7 + 11 | Contact/Systemic 4-7 oz/100 gal | 12 H | Do NOT apply to apple, crabapple, flowering cherry, privet, leatherleaf fern or other fern used for cut foliage. Apply at 7-14 day intervals. |
| | <i>chlorothalonil</i> Daconil Zn Daconil Ultrex Daconil Weatherstik + many other formulations | M5 | Contact 2 pt/100 gal 1.4 lb/100 gal 1 3/8 pt/100 gal See product label for rates. | 12 H | Re-apply at 7-14 day intervals. Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Do not combine with pesticides, surfactants, or fertilizers in spray tank. |
| | <i>chlorothalonil</i> + <i>thiophanate methyl</i> Spectro 90WDG | M5 + 1 | Contact/Systemic 1-2 lb/100 gal | 12 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7-day re-treatment interval. Do not exceed 2.15 lb/A of product. |
| | <i>copper hydroxide</i> Champ WG CuPRO 2005 T/N/O Nu-Cop 50 DF Nu-Cop HB Nu-Cop 3L | M1 | Contact 0.5 lb/100 gal 0.75-2 lb acre 1 lb/100 gal 0.5 lb/100 gal 1 1/3 pt/100 gal | 24-48 H (check label) | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette or other phosphite/phosphate fungicides. Begin application at the first sign of disease and repeat at 7-14 day intervals. |
| | <i>copper hydroxide</i> + <i>mancozeb</i> Junction | M1 + M3 | Contact 1.5-3.5 lb/A | 48 H | Do not apply in spray solutions having pH less than 6.5. Re-apply at 7-14 day intervals. |
| | <i>copper salts of fatty and rosin acids</i> Camelot O | M1 | Contact 0.5-2 gal/100 gal | 4 H | Discoloration of blooms may occur. Do not spray just before or during bloom periods. Apply at 7-10 day intervals. |
| | <i>copper sulfate</i> Basicop | M1 | Contact 2-4 lb/100 gal or 2-4 lb/A | 24 H | Phytotoxicity may occur on certain plant species/cultivars. Limited host labeling, check Ornamentals Section B: Plant Use Index. Trees: Apply to swelling buds and repeat 2 times at 10-day intervals as needed. Shrubs/ Flowers: Apply preventively, and repeat at 7-10 day intervals and after rains. |
| | <i>cyprodinil</i> + <i>fludioxonil</i> Palladium | 9 + 12 | Systemic/Contact 2-4 oz/100 gal | 12 H | Begin applications prior to the onset of disease, and repeat applications at 7-14-day intervals if conditions remain favorable for disease development. |
| | <i>fluxapyroxad</i> + <i>pyraclostrobin</i> Orkestra Intrinsic | 7 + 11 | Contact/Systemic 8-10 fl oz/100 gal | 12 H | Do NOT apply to Ninebark or Wintercreeper. |
| | <i>kresoxim-methyl</i> Cygnus | 11 | Systemic 3.2-6.4 oz/100 gal | 12 H | Apply strictly as a protective spray and continue on a 7-10 day interval. |
| | <i>myclobutanil</i> Eagle 20EW Hoist | 3 | Systemic 6-12 oz/100 gal 3-6 oz/100 gal | 24 H | For dogwood anthracnose only. Repeat application at 10-14 day intervals. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|---|---|------------|---|--------------------|--|
| Anthracnose (<i>Colletotrichum</i> , <i>Glomerella</i> <i>Elsinoe</i> , <i>Discula</i> , <i>Marssonina</i> , and <i>others</i>) (continued) | <i>fluoxastrobin</i> Disarm O | 11 | Systemic 4-8 oz/100 gal | 12 H | Apply every 7-28 days. Under light disease pressure, use lower rates (4-5 oz/100 gal) on a 7-14 day interval or the higher rates (6-8 oz/100 gal) on a 14-28 day interval. Under high disease pressure, use the higher rates on a 7-14 day interval. |
| | <i>mancozeb</i> Dithane 75DF Fore 80WP Mancozeb DG Pentathlon DF Pentathlon LF Protect DF | M3 | Contact 1-2 lb/100 gal 1.5 lb/100 gal 1.5 lb/100 gal 1-2 lb/100 gal 0.8-1.6 qt/A/100 gal 1-2 lb/100 gal | 24 H | Addition of a spreader sticker will improve performance. Repeat application on 7-10 day intervals. For dogwood, apply when buds begin to open, when bracts have fallen, 4 weeks later, and again in late summer after flower buds for next season have formed. Do not use Fore on Pachysandra. |
| | <i>mancozeb + myclobutanil</i> Clevis | M3 + 3 | Contact + Systemic 2 lb/100 gal | 24 H | Begin application at first sign of disease or when plants are well leafed out. Spray at 7-10 day intervals. Addition of spreader-binder or surfactant will improve performance. |
| | <i>metconazole</i> Tourney | 3 | Systemic 1-4 oz/100 gal | 12 H | Apply to the point of drip at 14-28 day intervals. |
| | <i>polyoxin D Zn salt</i> Affirm WDG Veranda T | 19 | Systemic 0.25-0.5 lb/100 gal 0.25-0.5 lb/100 gal | 4 H | Apply as full coverage foliar spray every 7-10 days. Apply prior to disease development and when conditions are conducive for disease. |
| | <i>propiconazole + chlorothalonil</i> Concert II | 3 + M5 | Systemic + Contact 22-35 fl oz (1.4-2.2 pt)/100 gal | 12 H | For outdoor and landscape use only. Do not use in greenhouses. Limited host plant labeling; check label. Do not apply to African Violets, Begonias, Boston fern, Geranium, Pittosporum, or Schefflera. Re-apply at 21 day intervals. Application to blooms or tender new growth may cause injury. |
| | <i>potassium bicarbonate</i> MilStop | | Contact 2.5-5 lb/100 gal | 1 H | Apply by increasing 0.25 lbs per application not exceeding 5.0 lbs. Repeat applications at 1-2 week intervals. See label for precautions for use on poinsettia, impatiens, and pansy. |
| | <i>pyraclostrobin + boscalid</i> Pageant | 11 + 7 | Systemic + Contact 18 oz/100 gal | 12 H | Use preventively. Begin applications when conditions are favorable for disease, prior to disease symptom development. Re-apply at 7-14 day intervals. |
| | <i>thiophanate methyl</i> Allban Flo 3336F, 3336 WP, SysTec 1998 WDG OHP 6672 4.5F OHP 6672 50WP + many other formulations | 1 | Systemic 10.75-20 fl oz/100 gal 12-16 fl.oz /100 gal 12-16 oz/100 gal 20 fl oz/100 gal 10.75-20 fl oz/100 gal 12-16 oz/100 gal See labels for rates. | 12 H | Not recommended for use on Boston fern, Swedish Ivy or Easter Cactus. Apply at bud break. Repeat application on 7-14 day intervals. Rotations or tank mix combinations of mancozeb or chlorothalonil can be used. |
| | <i>thiophanate methyl + mancozeb</i> Zyban WSB | 1 + M3 | Systemic/Contact 24 oz (4 bags)/100 gal | 24 H/ | Apply at weekly intervals. Limit to 20 applications/year. |
| | <i>trifloxystrobin</i> Compass O 50WDG | 11 | Systemic/Contact 2-4 oz /100 gal | 12 H | Apply at first sign of disease and continue at 7-14 day intervals. Rotate with fungicide in different chemical class. |
| | <i>trifloxystrobin + triadimefon</i> Trigo | 11 + 3 | Systemic 3-9 oz/100 gal | 12 H | Apply to the point of drip and repeat at 7-14 day intervals. Do NOT use on Petunia, Violets, and New Guinea Impatiens. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--|---|------------|--|--------------------------|---|
| Bacterial leaf spots/rots (<i>Xanthomonas</i> , <i>Pseudomonas</i> , <i>Acidovorax</i> , etc.) | <i>streptomycin sulfate</i> Agri-mycin 17 | 25 | Contact Between 50-200 ppm (4 oz – 1 lb/100 gal) ***See label for more specific rates | 12 H | Philodendron only – Spray as preventive or at first signs of water-soaked areas on leaf. Apply every 4-5 days. For curative action, remove all rotted leaves from plant, then spray every 4 days. Dieffenbachia only – Soak cuttings for 20 minutes (200 ppm = 1 lb/100 gal). To stop spread of rot in stock plants, spray every 5-7 days with 100 ppm (8 oz/100 gal). |
| | <i>Bacillus subtilis</i> QST 713 strain Cease | Bio | Contact 2-8 qt/100-300 gal/A 4 qt/100-300 gal/A (typical) | 4 H | Make applications on a 3-10 day schedule. Typical interval of 7 days. Shorten under severe disease pressure. Begin applications when conditions favor disease development prior to disease onset. Thorough coverage is essential. |
| | <i>copper hydroxide</i> CuPRO 2005 T/N/O Nu-Cop 50 DF Nu-Cop HB Nu-Cop 3L Champ WG | M1 | Contact 0.75-2 lb A 1.0 lb/100 gal 0.5 lb/100 gal 1 1/3 pt/100 gal 0.5 lb/100 gal | 24-48 H (check label) | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette or other phosphite/phosphante fungicides. Begin application at the first sign of disease and repeat at 7-14 day intervals. |
| | <i>copper hydroxide</i> + <i>mancozeb</i> Junction | M1 + M3 | Contact 1.5-3.5 lb/A | 48 H | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette fungicide. Re-apply at 7-14 day intervals. |
| | <i>copper salts of fatty and rosin acids</i> Camelot O | M1 | Contact 0.5-2 gal/100 gal/A | 4 H | Discoloration of blooms may occur. Do not spray just before or during bloom periods. Apply at 7-10 day intervals. |
| | <i>copper sulphate pentahydrate</i> Phyton 27 | M1 | Contact 1 ½-2 ½ oz/10 gal | 24 H | Re-apply at 3-5 day intervals. |
| | <i>fosetyl-AL</i> Aliette WDG | 33 | Systemic 2-4 lb/100 gal | 12 H | Spray to wet using no more than 400 gal/A. Repeat as necessary, but make no more than 1 application every 7 days. |
| | <i>phosphorous acid</i> Alude Fosphite | 33 | Systemic 2-4 pt/100 gal (<i>Xanthomonas</i>) 1-2 pt/100 gal (<i>Xanthomonas</i>) | 4 H | Apply spray to thoroughly wet foliage. Repeat as needed at 7-14 day intervals. |
| BLACK ROOT ROT (see <i>Thielaviopsis</i>) | | | | | |
| Black Spot (<i>Diplocarpon rosea</i> , <i>Marssonina rosea</i>) | <i>azoxystrobin</i> Heritage | 11 | Systemic 4-8 oz/100 gal | 4 H | Apply at 7-day intervals; may be increased to 14 days when disease pressure is light. May be tank-mixed with another black spot control fungicide when disease pressure is severe. |
| | <i>Bacillus subtilis</i> QST 713 strain Cease | Bio | Contact 2-8 qt/100-300 gal/A 4 qt/100-300 gal/A (typical) | 4 H | Make applications on a 3-10 day schedule. Typical interval of 7-day. Shorten under severe disease pressure. |
| | <i>chlorothalonil</i> Daconil Zn Daconil Ultrex Daconil WeatherStik + many other formulations | M5 | Contact 1.5 pt/100 gal 1 lb/100 gal 1 pt/100 gal See product label for rates. | 12 H | Re-apply at 7-14 day intervals. Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Do not combine with pesticides, surfactants, or fertilizers in spray tank. |
| | <i>chlorothalonil</i> + <i>thiophanate methyl</i> Spectro 90WDG | M5 + 1 | Contact/Systemic 1-2 lb/100 gal | 12 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7-day re-treatment interval. Do not exceed 2.15 lb/A of product. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--|--|------------|--|--------------------------|--|
| Black Spot (<i>Diplocarpon rosea</i> , <i>Marssonina rosea</i>) (continued) | <i>copper hydroxide + mancozeb</i> Junction | M1 + M3 | Contact 1.5-3.5 lb/A | 48 H | Do not apply in spray solutions having pH less than 6.5. Re-apply at 7-14 day intervals. |
| | <i>copper hydroxide</i> CuPRO 2005 T/N/O Nu-Cop 50 DF Nu-Cop HB Nu-Cop 3L | M1 | Contact 0.75-2 lb A 1.0 lb/100 gal 0.5 lb/100 gal 1 1/3 pt/100 gal | 24-48 H (check label) | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette or other phosphite/phosphante fungicides. Begin application at the first sign of disease and repeat at 7-14 day intervals. |
| | <i>copper salts of fatty & rosin acids</i> Camelot O | M1 | Contact 0.5-2 gal/100 gal | 4 H | Discoloration of blooms may occur. Do not spray just before or during bloom periods. Apply at 7-10 day intervals. |
| | <i>fluoxastrobin</i> Disarm O | 11 | Systemic 2-4 oz/100 gal | 12 H | Apply every 7-21 days. Under light disease pressure, use lower rates on a 7-14 day interval or the higher rates on a 21-day interval. Under high disease pressure, use the higher rates on a 7-14 day interval. |
| | <i>kresoxim-methyl</i> Cygnus | 11 | Systemic 1.6-3.2 oz/100 gal | 12 H | Apply as protective spray and continue on a 7-14 day interval. |
| | <i>mancozeb + myclobutanil</i> Clevis | M3 + 3 | Contact + Systemic 2 lb/100 gal | 24 H | Begin application at first sign of disease or when plants are well leaved out. Spray at 7-10 day intervals. Addition of spreader-binder or surfactant will improve performance. |
| | <i>metconazole</i> Tourney | 3 | Systemic 1-4 oz/100 gal | 12 H | Apply to the point of drip at 14-28 day intervals. |
| | <i>myclobutanil</i> Eagle 20EW | 3 | Systemic 6-12 oz/100 gal | 24 H | Repeat application at 10-14 day intervals. |
| | <i>propiconazole</i> Banner Maxx II Strider | 3 | Systemic + Contact 5-8 oz/100 gal 5-8 oz/100 gal | 12 H Strider 24 H | For outdoor use only. Tank mix with a contact fungicide. Re-apply at 14-21 day intervals. |
| | <i>propiconazole + chlorothalonil</i> Concert II | 3 + M5 | Systemic + Contact 22-35 fl oz (1.4-2.2 pt)/100 gal | 12 H | For outdoor and landscape use only. Do not use in greenhouses. Limited host plant labeling; check label. Do not apply to African violets, begonias, Boston fern, geranium, pittosporum, schefflera. Re-apply at 14-21 day intervals. Application to blooms or tender new growth may cause injury. |
| | <i>potassium bicarbonate</i> – MilStop | | Contact 2.5-5 lb/100 gal | 1 H | Apply by increasing 0.25 lb/application not exceeding 5 lb. Repeat applications at 1-2 week intervals. See label for precautions for use on poinsettia, impatiens, and pansy. |
| | <i>tebuconazole</i> Torque | 3 | Systemic 4-10 fl oz/100 gal | 12 H | Apply every 14-21 days during the growing season, starting when leaves first appear. Rotate with a fungicide in a different class (different MOA#) to reduce fungicide resistance development. |
| | <i>thiophanate methyl</i> Allban Flo 3336 F 3336 WP, E3336EG SysTec 1998WDG OHP 6672 4.5F OHP 6672 50WP | 1 | Systemic 10.75-20 fl oz/100 gal 12-16 fl oz /100 gal 12-16 oz/100 gal 20 fl oz/100 gal 10.75-20 fl oz/100 gal 12-16 oz/100 gal | 12 H | Apply at bud break or at first sign of disease. Repeat application on 7-14 day intervals. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--|--|------------|--|--------------------------|--|
| Black Spot (<i>Diplocarpon rosea</i> , <i>Marssonina rosea</i>) (continued) | <i>thiophanate methyl</i> + <i>mancozeb</i> Zyban WSB | 1 + M3 | Systemic/Contact 24 oz (4 bags)/100 gal | 24 H | While disease is prevalent spray foliage at weekly intervals. |
| | <i>trifloxystrobin</i> Compass O 50WDG | 11 | Systemic 2-4 oz/100 gal | 12 H | Apply to drip on 7-14 day intervals when conditions are favorable to disease development. |
| | <i>trifloxystrobin</i> + <i>triadimefon</i> Trigo | 11 + 3 | Systemic 1.2 oz/100 gal (winter) 2.4 oz/100 gal (summer) | 12 H | Apply to the point of drip. Do not apply at intervals shorter than 30 days to avoid flower stalk length reduction. |
| Botrytis blight (gray mold) | <i>azoxystrobin</i> Heritage | 11 | Systemic 4-8 oz/100 gal | 4 H | Repeat every 7-21 days prior to infection. For suppression only. |
| | <i>Bacillus subtilis</i> <i>QST 713 strain</i> Cease | Bio | Contact 2-8 qt/100-300 gal/A 4 qt/100-300 gal/A (typical) | 4 H | Make applications on a 3-10 day schedule. Typical interval of 7-days. Shorten under severe disease pressure. |
| | <i>captan</i> Captan 50WP | M4 | Contact 2 lb/100 gal (Chrysanthemum) | 48 H | Apply at first sign of disease. Repeat applications at 7-10 day intervals. |
| | <i>chlorothalonil</i> Daconil Zn Daconil Ultrex Daconil Weatherstik Exotherm Termil + many other formulations | M5 | Contact 2 pt/100 gal 1.4 lb/100 gal 1 3/8 pt/100 gal 1 can/1500 sq ft See labels for rates. | 12 H | Re-apply at 7-day intervals. Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Exotherm-See label for method of application. |
| | <i>chlorothalonil</i> + <i>thiophanate methyl</i> Spectro 90WDG | M5 + 1 | Contact 1-2 lb/100 gal | 12 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7-day re-treatment interval. Do not exceed 2.15 lb/A of product. |
| | <i>copper hydroxide</i> CuPRO 2005 T/N/O Nu-Cop 50 DF Nu-Cop HB Nu-Cop 3L | M1 | Contact 0.75-2 lb/A 1 lb/100 gal 0.5 lb/100 gal 1 1/3 pt/100 gal | 24-48 H (check label) | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette or other phosphite/phosphante fungicides. Begin application at the first sign of disease and repeat at 7-14 day intervals. |
| | <i>copper hydroxide</i> + <i>mancozeb</i> Junction | M1 + M5 | Contact 1.5-3.5 lb/A | 48 H | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette fungicide. Re-apply at 7-14 day intervals. |
| | <i>copper salts of fatty and rosin acids</i> Camelot O | M1 | Contact 0.5-2 gal/100 gal/A | 4 H | Discoloration of blooms may occur. Do not spray just before or during bloom periods. Apply at 7-14 day intervals. |
| | <i>copper sulphate pentahydrate</i> Phyton 27 | M1 | Contact 1 1/2-2 1/2 oz/10 gal | 24 H | Re-apply at 3-5 day intervals. |
| | <i>copper sulfate</i> Basicop | M1 | Contact 2-4 lb/100 gal or 2-4 lb/A | 24 H | Phytotoxicity may occur on certain plant species/cultivars. Limited host labeling, check Ornamentals Section B: Plant Use Index. Apply preventively, and repeat at 7-10 day intervals and after rains. |
| | <i>cyprodinil</i> + <i>fludioxonil</i> Palladium | 9 + 12 | Systemic/Contact 4-6 oz/100 gal | 12 H | Spray at 7-14 day intervals while conditions are favorable for disease development. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|---|---|------------|--|--------------------|---|
| Botrytis blight (gray mold) <i>(continued)</i> | <i>dicloran</i> Botran 75-W | 14 | Contact 1 lb/150-200 gal (rose, geranium, chrysanthemum) 1.33 lb/100 gal (gladiolus) 1 lb/100 gal (rose, hydrangea) 2 lb/A (conifers) | 12 H | Limited host labeling; refer to Ornamentals Section B: Plant Use Index. Spray at the first sign of disease or preventively, repeat every 7-14 days. Spray plants prior to storage or shipment. |
| | <i>fenhexamind</i> Decree 50% | 17 | Contact 0.75 lb/100 gal (preventative) 1-1.5 lb/100 gal (curative) | 12 H | Do not make more than 2 consecutive applications or use more than 6 lb/A/crop on plants grown outside or 0.14 lb/1000 sq ft/crop cycle on plants grown in greenhouses. Re-apply at 7-14 day intervals preventively and 7 day intervals for curative. |
| | <i>fluoxastrobin</i> Disarm O | 11 | Systemic 4-8 oz/100 gal | 12 H | Apply prior to infection. Under light disease pressure, use lower rates on a 7-14 day interval or the higher rates on a 14-21 day interval. Under high disease pressure, use the higher rates on a 7-14 day interval. |
| | <i>fudioxonil</i> Emblem Medallion WDG Mozart TR | 12 | Contact 2-4 oz/100 gal 2-4 oz/100 gal 1 can/4,500 sq. ft (1 can/1,500 sq ft under high disease pressure) | 12 H | May stunt or yellow some impatiens, New Guinea impatiens, and some geranium cultivars. Do not use after bract formation on poinsettia. Re-apply at 7-14 day intervals. Rotate to different fungicide class after 2 applications. |
| | <i>fluxapyroxad + pyraclostrobin</i> Orkestra Intrinsic | 7 + 11 | Contact/Systemic 8 fl oz/100 gal | 12 H | Do NOT apply to Ninebark or Wintercreeper. May discolor flowers of Impatiens and Petunia. |
| | <i>iprodione</i> Chipco 26019 N/G Chipco 26019 FLO Iprodione Pro 2SE | 2 | Contact 1-2 lb/100 gal 1-2.5 qt/100 gal 1-2.5 qt/100 gal | 12 H | Do not use on Spathiphyllum or as a drench on Impatiens or Pothos. Re-apply at 7-14 day intervals. |
| | <i>iprodione + thiophanate methyl</i> 26/36 | 2 + 1 | Contact + Systemic 33-84 fl oz/100 gal | 12 H | Spray plants to ensure thorough coverage. Repeat at 7-14 day intervals. Do not make more than 4 applications/crop/year. Do not use on Spathiphyllum or New Guinea Impatiens. |
| | <i>mancozeb</i> Dithane 75DF Fore 80WP Mancozeb DG Pentathlon DF Pentathlon LF Protect DF | M3 | Contact 1-2 lb/100 gal 1.5 lb/100 gal 1.5 lb/100 gal 1-2 lb/100 gal 0.8-1.6 qt/100 gal 1-2 lb/100 gal | 24 H | Addition of a spreader sticker will improve performance. Repeat application on 7-10 day intervals. Do not use Fore on Pachysandra. |
| | <i>mancozeb + myclobutanil</i> Clevis | M3 + 3 | Contact + Systemic 2 lb/100 gal | 24 H | Begin application at first sign of disease or when plants are well leafed out. Spray at 7-10 day intervals. Addition of spreader-binder or surfactant will improve performance. |
| | <i>metconazole</i> Tourney | 3 | Systemic 1-4 oz/100 gal | 12 H | Apply to point of drip at 14-28 day intervals. |
| | <i>polyoxin D Zn salt</i> Affirm WDG Veranda T | 19 | Systemic 0.25-0.5 lb/100 gal 2.5-5 lb/100 gal | 4 H | Apply as full coverage foliar spray every 7-10 days. Apply prior to disease development and when conditions are conducive for disease. |
| | <i>potassium bicarbonate</i> MilStop | | Contact 2.5-5 lb/100 gal | 1 H | Apply by increasing 0.25lbs/application not exceeding 5 lb. Repeat applications at 1-2 week intervals. See label for precautions for use on poinsettia, impatiens, and pansy. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|---|---|------------|--|--------------------------|--|
| Botrytis blight (gray mold) <i>(continued)</i> | <i>pyraclostrobin + boscalid</i> Pageant | 11 + 7 | Systemic + Contact 12-18 oz/100 gal | 12 H | Use preventively. Begin applications when conditions are favorable for disease, prior to disease symptom development. Re-apply at 7-14 day intervals. |
| | <i>thiophanate methyl</i> Allban Flo 3336 F, 3336 WP, 3336EG SysTec1998 WDG OHP 66724.5F OHP 6672 50W + many other formulations | 1 | Systemic 10-14.5 fl oz/100 gal 12-16 fl oz/100 gal 12-16 oz/100 gal 10 fl oz/100 gal 10-14.5 fl oz/100 gal 12-16 oz/100 gal See labels for rates. | 12 H | Fungicide resistance known. Rotate with fungicide with a different MOA number. Not recommended for use on Boston fern, Swedish Ivy or Easter Cactus. Repeat application on 7-14 day intervals. |
| | <i>thiophanate methyl + mancozeb</i> Zyban WSB | 1 + M3 | Systemic/Contact 24 oz (4 bags)/100 gal | 24 H | Apply on weekly intervals. Limit to 20 applications per year. |
| | <i>trifloxystrobin</i> Compass O 50WDG | 11 | Systemic 2-4 oz/100 gal (drip) | 12 H | Apply at first sign of disease and continue at 7-14 day intervals. Rotate with fungicide in different chemical class. |
| | <i>triflumizole</i> Terraguard SC Terraguard SC/LS | 3 | Contact 4-8 oz/100 gal 4-8 oz/100 gal | 12 H | Apply foliar sprays at 7-14 day intervals. Use high rate for initial application and heavy disease pressure. Do not use on impatiens plugs. |
| | <i>triticonazole</i> Trinity TR | 3 | Systemic 1 can/3,000 sq ft (greenhouse) | 12 H | Elevate container above the plant canopy and clear a 6 ft area around can. Shut off exhaust and close vents. Repeat at 7-day intervals up to 3x per crop (2x for pansies). |
| Cercospora, Septoria leaf spots | <i>azoxystrobin</i> Heritage | 11 | Systemic 1-4 oz/100 gal | 4 H | Apply to the point of drip at 7-28 day intervals. |
| | <i>Bacillus subtilis</i> <i>QST 713 strain</i> Cease | Bio | Contact 2-8 qt/10 0-300 gal/A 4 qt/100-300 gal/A (typical) | 4 H | Make applications on a 3-10 day schedule. Typical interval of 7-days. Shorten under severe disease pressure. |
| | <i>benzovindiflupyr + azoxystrobin</i> Mural | 7 + 11 | Contact/Systemic 4-7 oz/100 gal | 12 H | Do NOT apply to apple, crabapple, flowering cherry, privet, leatherleaf fern or other fern used for cut foliage. Apply at 7-14 day intervals. |
| | <i>captan</i> Captan 50WP | M4 | Contact 2 lb/100 gal (Chrysanthemum) | 48 H | Apply at first sign of disease. Repeat applications at 7-10 day intervals. |
| | <i>chlorothalonil</i> Daconil Zn Daconil Ultrex Daconil Weatherstik + many other formulations | M5 | Contact 2 pt/100 gal 1.4 lb/100 gal 1 3/8 pt/100 gal See labels for rates. | 12 H | Re-apply at 7-14 day intervals. Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Foliage of Knock-Out and Double Delight roses may be injured under certain growing conditions. Do not combine with pesticides, surfactants, or fertilizers in spray tank. |
| | <i>chlorothalonil + thiophanate methyl</i> Spectro 90WDG | M5 + 1 | Contact/Systemic 1-2 lb/100 gal | 12 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7-day re-treatment interval. Do not exceed 2.15 lb/A of product |
| | <i>copper hydroxide</i> Champ WG Cupro 2005 T/N/O Nu-Cop 50 DF Nu-Cop HB Nu-Cop 3L | M1 | Contact 0.5 lb/100 gal 0.75-2 oz/100 gal 1 lb/100 gal 0.5 lb/100 gal 1 1/3 pt/100 gal | 24-48 H (check label) | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette or other phosphite/phosphante fungicides. Begin application at the first sign of disease and repeat at 7-14 day intervals. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|---------------------------------|---|------------|--|---|--|
| Cercospora, Septoria leaf spots | <i>copper hydroxide + mancozeb</i> Junction | M1 + M3 | Contact 1.5-3.5 lb/100 gal | 48 H | Do not apply in spray solutions having pH less than 6.5. Re-apply at 7-14 day intervals. |
| (continued) | <i>copper salts of fatty and rosin acids</i> Camelot | M1 | Contact 0.5-2 gal/100 gal/A | 4 H | Discoloration of blooms may occur. Do not spray just before or during bloom periods. Apply at 7-10 day intervals. |
| | <i>cyprodinil + fludioxonil</i> Palladium | 9 + 12 | ystemic/Contact 2-4 oz/100 gal | 12 H | Begin applications prior to the onset of disease, and repeat applications at 7-14-day intervals if conditions remain favorable for disease development. Do not use on residential ornamentals. |
| | <i>fludioxonil</i> Emblem Medallion 50% | 12 | Contact 1-2 oz/100 gal 1-2 oz/100 gal | 12 H | Re-apply at 7-14 day intervals. |
| | fluoxastrobin Disarm O | 11 | Systemic 1-4 oz/100 gal | 12 H | Under light disease pressure, use lower rates (1-2 oz/100 gal) on a 7-14 day interval or the higher rates (3-4 oz/100 gal) on a 14-28 day interval. Under high disease pressure, use the higher rates on a 7-14 day interval. |
| | <i>kresoxim-methyl</i> Cygnus | 11 | Systemic 1.6-3.2 oz/100 gal | 12 H | Apply as protective spray and continue on a 7-14 day interval. |
| | <i>mancozeb</i> Dithane 75DF Fore 80WP Mancozeb DG Pentathlon DF Pentathlon LF Protect DF | M3 | Contact 1-2 lb/100 gal 1.5 lb/100 gal 1.5 lb/100 gal 1-2 lb/100 gal 0.8-1.6 qt/A/100 gal 1-2 lb/100 gal | 24 H | Addition of a spreader sticker will improve performance. Apply at the first sign of disease. Repeat application on 7-10 day intervals. |
| | <i>mancozeb + myclobutanil</i> Clevis | M3 + 3 | Contact + Systemic 2 lb/100 gal | 24 H | Begin application at first sign of disease or when plants are well leafed out. Spray at 7-10 day intervals. Addition of spreader-binder or surfactant will improve performance. |
| | <i>metconazole</i> Tourney | 3 | Systemic 1-4 oz/100 gal | 12 H | Apply to point of drip at 14-28 day intervals. |
| | <i>myclobutanil</i> Eagle 20EW | 3 | Systemic 6-12 oz /100 gal | 24 H | Repeat application at 10-14 day intervals. |
| | <i>propiconazole + chlorothalonil</i> Concert II | 3 + M5 | Systemic + Contact 22-35 fl oz (1.4-2.2 pt)/100 gal | 12 H | For outdoor and landscape use only. Do not use in greenhouses. Limited host plant labeling; check label. Do not apply to African violets, begonias, Boston fern, geranium, pittosporum, schefflera. Re-apply at 14-21 day intervals. Application to blooms or tender new growth may cause injury. |
| | <i>propiconazole</i> Banner Maxx II Propiconazole Strider | 3 | Systemic 8-12 fl oz/100 gal 8-12 fl oz/100 gal 8-12 fl oz/100 gal | 12 H Strider/ Propiconazole 48 H | Do not apply to African violets, begonias, Boston fern or geranium. Do not use in greenhouses. Apply every 30 days to point of drip. Begin when conditions favor disease development (generally mid-July through September). |
| | <i>pyraclostrobin + boscalid</i> Pageant | 11 + 7 | Systemic + contact 8-12 oz/100 gal | 12 H | Use preventively. Begin applications when conditions are favorable for disease, prior to disease symptom development. Re-apply at 7-14 day intervals |
| | <i>thiophanate methyl</i> Allban Flo 3336 F, 3336 WP, SysTec 1998 WDG OHP 6672 4.5F OHP 6672 50WP | 1 | Systemic 10-14.5 fl oz/100 gal 12-16 fl oz /100 gal 12-16 oz/100 gal 10 fl oz/100 gal 10-14.5 fl oz/100 gal 12-16 oz/100 gal | 12 H | Not recommended for use on Boston fern, Swedish Ivy or Easter Cactus. Begin application 14-21 days prior to when disease typically occurs or at the latest at the first sign of the disease. Repeat application on 7-14 day intervals. Rotations or tank mix combinations of mancozeb or chlorothalonil can be used. See labels for rates. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--|--|------------|---|-------------------------|---|
| Cercospora, Septoria leaf spot <i>(continued)</i> | <i>thiophanate methyl + mancozeb</i> Zyban WSB | 1 + M3 | Systemic/Contact 24 oz (4 bags)/100 gal | 24 H | While disease is prevalent, spray foliage at weekly intervals. Limit applications to 20/year. |
| | <i>triadimefon</i> Bayleton 50 | T3 | Systemic 5.5 oz /275-550 gal | 12 H | Application should begin at expanded bud stage (color showing). Repeat at 14-21 day intervals. Not for use on plants grown for sale. |
| | <i>trifloxystrobin</i> Compass O 50WDG | 11 | Systemic 2-4 oz/100 gal | 12 H | Do not apply to Petunia, Violet, or New Guinea Impatiens or on Poinsettia after bract formation. Apply at first sign of disease and continue at 7-14 day intervals. Rotate with fungicide in different chemical class. |
| | <i>triticonazole</i> Trinity TR Trinity | 3 | Systemic 2 cans/3,000 sq ft (greenhouse) 4-8 fl oz/100 gal | 12 H | For Trinity TR: Elevate container above the plant canopy and clear a 6 ft area around can. Shut off exhaust and close vents. Repeat at 7 day intervals up to 3x per crop (2x for pansies). |
| Cercosporidium needle blight see Needle Blight (<i>Passalora sequioae</i> , syn. <i>Cercosporidium sequioae</i>) | | | | | |
| Cristulariella leaf spot (zonate leaf spot) | <i>propiconazole (3)</i> Banner Maxx II Strider | 3 | Systemic 8-12 fl oz/100 gal 8-12 fl oz/100 gal | 12 H Strider 24 H | For outdoor use only. Apply to drip at 14-21 day intervals. |
| Cylindrocladium root and stem rot | <i>benzovindiflupyr + azoxystrobin</i> Mural | 7 + 11 | Contact/Systemic 4-7 oz/100 gal | 12 H | Do NOT apply to apple, crabapple, flowering cherry, privet, leatherleaf fern or other fern used for cut foliage. Apply at 7-14 day intervals. |
| | <i>chlorothalonil</i> Daconil Zn Daconil Weatherstik Daconil Ultrex | M5 | Contact 2 pt/100 gal 1 3/8 pt/100 gal 1.4 lb/100 gal | 12 H | Re-apply at 7-14 day intervals. Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Do not combine with pesticides, surfactants, or fertilizers in spray tank. |
| | <i>chlorothalonil + thiophanate methyl</i> Spectro 90 WDG | M5 + 1 | Contact/Systemic 1-2 lb/100 gal | 12 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7 day re-treatment interval. Do not exceed 2.15 lb/A of product. |
| | <i>cyprodinil + fludioxonil</i> Palladium | 9 + 12 | Systemic/Contact 2-4 oz/100 gal | 12 H | Begin applications prior to the onset of disease. Repeat applications at 7-14 day intervals if conditions remain favorable for disease development. Ensure full spray coverage of all stems and inner areas of plants to the soil/media level. |
| | <i>fludioxonil</i> Emblem Medallion WDG | 12 | Contact 2 pt/sq ft 2 pt/sq ft | 12 H | Do not use on Leatherleaf fern. |
| | <i>fludioxonil + mefenoxam</i> Hurricane WP | 12 + 4 | Contact 3/4 oz/100 gal (drench at seeding) 1.5 oz/100 gal (2 packets) as drench of cuttings and transplants + Add 1 oz of Medallion WDG fungicide/100 gal solution | 48 H | Application to Impatiens, New Guinea Impatiens, Pothos, Geranium, and Easter Lily may cause stunting and/or chlorosis. Do not use on Leather leaf fern. Add Medallion fungicide at 1 oz/100 gal water as a tank mix. Make only 1 application to seedling crop prior to transplanting to larger containers. For cuttings or transplants, re-treat at 21-28 day intervals if needed. For use only in greenhouses, containers, and enclosed structures. |
| | <i>iprodione</i> Iprodione Pro 2 SE Chipco 26019 N/G Chipco 26019 FLO | 2 | Contact 1 qt/100 gal 1 qt/100 gal 1 qt/100 gal | 12 H | Dip azalea and rhododendron cuttings for 5 minutes prior to planting. |
| | <i>iprodione + thiophanate methyl</i> 26/36 | 2 + 1 | Contact + Systemic 66 fl oz/100 gal – DIP for cuttings 5 min 13.5 fl oz/100 gal – DRENCH 33-84 fl oz/100 gal – FOLIAR SPRAY | 12 H | Dip cuttings for 5 minutes prior to planting. Repeat at 7-14 day intervals. Do NOT make more than 4 applications/crop/year. Do not use on Spathiphyllum or New Guinea impatiens or as a drench on Impatiens, Petunia or Pothos. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|---|--|---------------------------------|--|---|---|
| Cylindrocladium root and stem rot (continued) | <i>pyraclostrobin + boscalid</i> Pageant | 11 + 7 | Systemic + Contact 12-18 oz/100 gal | 12 H | Use preventively. Begin applications when conditions are favorable for disease, prior to disease symptom development. The crown and base of the plant and potting medium surrounding the crown must be thoroughly covered. Re-apply at 7-14 day intervals |
| | <i>thiophanate methyl</i> Allban Flo 3336 F 3336 WP SysTec 1998 WDG OHP 6672 4.5F OHP 6672 50WP + many others | 1 | Systemic 7.5-20 fl oz/100 gal 8-16 fl oz/100 gal (drench) 16-24 oz/100 gal (dip) 8-16 oz/100 gal (drench) 16-24 oz/100 gal (dip) 20 fl oz/100 gal 7.5-20 fl oz/100 gal 8-16 oz/100 gal (drench) 16-24 oz/100 gal (dip) See labels for rates. | 12 H | Repeat application on 2-4 week interval. Apply as heavy spray or drench at 1-2 pt/sq ft (equates to 100 gal/800 sq ft) Does not control <i>Cylindrocladium spathiphylli</i> (on <i>spathiphyllum</i>). |
| | <i>trifloxystrobin</i> Compass O 50WDG | 11 | Systemic 1-2 oz/100 gal (wet media) | 12 H | Do not drench on pansy. Start application at time of planting and at 14-28 day intervals depending on disease pressure. Rotate with fungicide in different chemical class. |
| | <i>triflumizole</i> Terraguard SC | 3 | Contact 4-8 oz/100 gal (<i>C. spathiphylli</i>) 6-12 oz/100 gal (<i>C. scoparium</i> , <i>C. theae</i>) 6-8 oz/100 gal (drench) 6-12 oz/100 gal for established plants | 12 H | Apply at 2-4 week intervals. Use higher rate at heavier disease pressure. Lower rate may be used in subsequent applications. Do not exceed 8 ozs/600 sq ft of bed or bench area or inhibition of rooting may occur. |
| | Downy Mildew | <i>azoxystrobin</i> Heritage | 11 | Systemic 2-4 oz/100 gal (on rose) 1-4 oz/100 gal (Bedding Plants) | 4 H |
| <i>Bacillus subtilis</i> <i>QST 713 strain</i> Cease | | Bio | Contact 2-8 qt/100-300 gal/A 4 qt/100-300 gal/A (typical) | 4 H | Make applications on a 3-10-day schedule. Typical interval of 7 days. Shorten under severe disease pressure. |
| <i>copper hydroxide</i> Champ WG CuPRO 2005 T/N/O Nu-Cop 50 DF Nu-Cop HB Nu-Cop 3L | | M1 | Contact 0.5 lb/100 gal 0.75-2 lb A 1 lb/100 gal 0.5 lb/100 gal 1.33 pt/100 gal | 24-48 H (check label) | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette or other phosphite/phosphante fungicides. Begin application at the first sign of disease and repeat at 7-14 day intervals. |
| <i>copper hydroxide + mancozeb</i> Junction | | M1 + M3 | Contact 1.5-3.5 lb/A | 48 H | Do not apply in spray solutions having pH less than 6.5. Re-apply at 7-14 day intervals. |
| <i>copper salts of fatty and rosin acids</i> Camelot | | M1 | Contact 0.5-2 gal/100 gal/A | 4 H | Discoloration of blooms may occur. Do not spray just before or during bloom periods. Apply at 7-10 day intervals. |
| <i>cyazofamid</i> Segway | | 21 | Locally systemic 6.12-12.25 fl oz/100 gal | 12 H | Apply on 14-21 day intervals. Do not make more than 4 applications per crop cycle. Alternate application with a fungicide with a different mode of action. |
| <i>dimethomorph</i> Stature SC | | 40 | Systemic 6.12-12.25 fl oz/100 gal | 12 H | Begin spraying when plants are well established or at first sign of disease. Apply on 10-14 day interval. Thoroughly wet foliage until runoff. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|------------------------------------|--|------------|---|--------------------|---|
| Downy Mildew <i>(continued)</i> | <i>dimethomorph + ametoctradin</i> Orvego | 40 + 45 | Systemic 11-14 fl oz/100 gal | 12 H | Begin spraying when plants are well established or at first sign of disease using a full-coverage spray applied on a 10-14 day interval. Rotate with a fungicide with a different mode of action to reduce fungicide resistance. Not labeled for landscape use. |
| | <i>fenamidone (11)</i> FenStop | 11 | Locally Systemic 7-14 oz/100 gal (foliar spray) | 12 H | Repeat as necessary at 28 day intervals. Has cross-resistance to strobilurin fungicides. Do not rotate with strobilurin fungicides. |
| | <i>fluopicolide</i> Adorn | 43 | Systemic Foliar Spray: 2-4 fl oz/100 gal Drench: 1-4 fl oz/100 gal | 12 H | Apply before disease development. Use higher rate when treating plants with a high potential for disease development. Re-apply after 14-28 days. Must be tank mixed with the labeled rate of another labeled fungicide product that has a different mode. Do not apply more than two applications per cropping cycle. |
| | <i>fluoxastrobin</i> Disarm O | 11 | Systemic 1-4 oz/100 gal | 12 H | Apply at 7-21 day intervals. Under light disease pressure, use lower rates (1-2 oz /100 gal) on a 7-14 day interval or the higher rates (3-4 oz /100 gal) on a 14-28 day interval. Under high disease pressure, use the higher rates on a 7-14 day interval. |
| | <i>fosetyl-AL</i> Aliette WDG | 33 | Systemic 2.5 lb/100 gal (rose) 2.5 lb/100 gal (bedding plants) | 12 H | Do not make more than 1 application every 7 days (for rose) or 30 days (for bedding). Spray to wet using no more than 400 gal/acre. |
| | <i>kresoxim-methyl</i> Cygnus | 11 | Systemic 3.2-6.4 oz/100 gal | 12 H | Apply strictly as a protective spray and continue on a 7-10 day interval. |
| | <i>mancozeb</i> Dithane 75DF Fore 80WSP Mancozeb DG Pentathlon DF Pentathlon LF Protect DF | M3 | Contact 1-2 lb/100 gal 1.5 lb/100 gal 1.5 lb/100 gal 1-2 lb/100 gal 0.8-1.6 qt/A/100 gal 1-2 lb/100 gal | 24 H | Addition of a spreader sticker will improve performance. Repeat application on 7-10 day intervals. Do not use Fore on Pachysandra. |
| | <i>mancozeb + myclobutanil</i> Clevis | M3 + 3 | Contact + Systemic 2 lb/100 gal (on viburnum) | 24 H | Begin application at first sign of disease or when plants are well leafed out. Spray at 7-10 day intervals. Addition of spreader-binder or surfactant will improve performance. |
| | <i>mandipropamid</i> Micora | 40 | Systemic 4-8 fl oz/100 gal | 4 H/ – | Begin foliar applications prior to disease development and continue on 7-4-day interval. Make no more than 2 consecutive applications before switching to another effective non-Group 40 fungicide. Use shorter intervals and higher rates under high disease pressure. |
| | <i>mefenoxam</i> Subdue Maxx | 4 | Systemic 0.5-1 fl oz/100 gal (spray) | 48 H | Apply as a tank mix for foliar spray with a non-Group 4 fungicide, such as with Adorn. Apply only one foliar application before rotating with another fungicide for resistance management. As a drench, apply at transplanting or in early spring or fall to reduce downy mildew disease development. |
| | <i>oxathiapiprolin</i> Segovis | U15 | Contact 0.6-2.4 fl oz/100 gal (foliar spray) 0.65-3.2 fl oz/100 gal (drench) | 4 H | Apply on 5-14 day intervals. Do not make more than 2 sequential applications before rotating to a fungicide with a different mode of action. |
| | <i>phosphorous acid</i> Alude Fosphite + many others | 33 | Systemic 1.25-2.5 qt/100 gal 1-2 qt/100 gal See labels | 4 H | Apply as a spray to thoroughly wet foliage. Re-apply as needed at 14-21 day intervals. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|-----------------------------|---|------------|--|--|--|
| Downy Mildew (continued) | <i>polyoxin D Zn salt</i> Affirm WG Veranda O | 19 | Systemic 0.25-0.5 lb/100 gal 0.25-0.5 lb/100 gal | 4 H | Apply as full coverage foliar spray every 7-10 days. Apply prior to disease development and when conditions are conducive for disease. |
| | <i>pyraclostrobin + boscalid</i> Pageant | 11 + 7 | Systemic + Contact 12-18 oz/100 gal | 12 H | Use preventively. Begin applications when conditions are favorable for disease, prior to disease symptom development. Re-apply at 7-10 day intervals. |
| | <i>thiophanate methyl + mancozeb</i> Zyban WSB | 1 + M3 | Systemic/Contact 24 oz (4 bags)/100 gal | 24 H | Apply at weekly intervals. Limit to 20 applications per year. |
| | <i>trifloxystrobin</i> Compass O 50WDG | 11 | Systemic 1-2 oz/100 gal (drip) | 12 H | Apply at first sign of disease and continue at 7-14 day intervals. Rotate with fungicide in different chemical class (different MOA#). |
| Entomosporium leaf spot | <i>azoxystrobin</i> Heritage | 11 | Systemic 1-4 oz/100 gal | 4 H | Repeat every 7-28 days. Apply at the first sign of disease at bud break. Use low rate (1-2 oz) at 7-14 day intervals for low disease pressure; Use higher rate (3-4 oz) at 7-14 day intervals under high disease pressure. Rotate after 2-3 applications with non -strobilurin fungicide. |
| | <i>Bacillus subtilis QST 713 strain</i> Cease | Bio | Contact 2-8 qt/100-300 gal/A 4 qt/100-300 gal/A (typical) | 4 H | Make applications on a 3-10 day schedule. Typical interval of 7-days. Shorten under severe disease pressure. |
| | <i>chlorothalonil</i> Daconil Zn Daconil Ultrex Daconil Weatherstik + many other formulations | M5 | Contact 2 pt/100 gal 1.4 lb/100 gal 1 3/8 pt/100 gal See labels for rates. | 12 H | Re-apply at 7-14 day intervals. Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. |
| | <i>chlorothalonil + thiophanate methyl</i> Spectro 90 WDG | M5 + 1 | Contact/Systemic 1-2 lb/100 gal | 12 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7 day re-treatment interval. Do not exceed 2.5 lb/A of product. |
| | <i>copper hydroxide + mancozeb</i> Junction | M1 + M3 | Contact 1.5-3.5 lb/A | 48 H | Do not apply in spray solutions having pH less than 6.5. Re-apply at 7-14 day intervals. |
| | <i>copper salts of fatty and rosin acids</i> Camelot | M1 | Contact 0.5-2 gal/100 gal/A | 4 H | Discoloration of blooms may occur. Do not spray just before or during bloom periods. Apply at 7-14 day intervals. |
| | <i>mancozeb + myclobutanil</i> Clevis | M3 + 3 | Contact + Systemic 2 lb/100 gal (on viburnum) | 24 H | Begin application at first sign of disease or when plants are well leafed out. Spray at 7-10 day intervals. Addition of spreader-binder or surfactant will improve performance. |
| | <i>myclobutanil</i> Eagle 20EW | 3 | Systemic 6-12 oz /100 gal | 24 H | Repeat application at 10-14 day intervals. |
| | <i>propiconazole</i> Banner Maxx II Propiconazole Strider | 3 | Systemic 5 -fl oz/100 gal 5-8 fl oz/100 gal 5-8 fl oz/100 gal | 12 H Propiconazole /Strider 24 H | Apply every 14-21 days during period of infection. Spray to drip. |
| | <i>propiconazole + chlorothalonil</i> Concert II | 3 + M5 | Systemic + Contact 22-35 fl oz (1.4-2.2 pt)/100 gal | 12 H | For outdoor and landscape use only. Do not use in greenhouses. Limited host plant labeling; check label. Do not apply to African violets, begonias, Boston fern, geranium, pittosporum, schefflera. Re-apply at 14-21 day intervals. Application to blooms or tender new growth may cause injury. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|---|---|------------------------------|--|---|---|
| Entomosporium leaf spot <i>(continued)</i> | <i>triadimefon</i> Bayleton 50 | 3 | Systemic 5.5 oz/68.75-137.5 gal | 12 H | Apply in early spring as growth starts. Repeat at 14-21 day intervals. Protect new growth that develops in late summer and early fall as temperatures begin to drop. Bayleton is not for use on plants grown for sale. |
| | <i>triticonazole</i> Trinity | 3 | Systemic 12 fl oz/100 gal | 12 H | Use preventively. Use highest labeled rate for <i>Entomosporium</i> . |
| Fire Blight | <i>streptomycin sulfate</i> Agri-mycin 17 | 25 | Contact 100 ppm (8 oz/100 gal) | 12 H | For pear, apple, or pyracantha: Apply first spray at start of blossoming and continue every 3-4 days during bloom period. Apply additional sprays every 5-7 days after blooming when weather conditions favor disease spread. |
| | <i>copper hydroxide</i> Champ WG CuPRO 2005 T/N/O Nu-Cop 50 DF Nu-Cop HB Nu-Cop 3L | M1 | Contact 1 lb/100 gal 0.75-2 lb/A 1 lb/100 gal 0.5 lb/100 gal 1 1/3 pt/100 gal | 24-48 H (check label) | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette or other phosphite/phosphante fungicides. Begin application at the first sign of disease and repeat at 7-14 day intervals. |
| | <i>copper hydroxide + mancozeb</i> Junction | M1 + M3 | Contact 1.5-3.5 lb/100 gal (Suppression only) | 48 H/ - | Crabapple: Make 1 application between silver tip and green tip as a full coverage spray. Injury may occur from late application. Pear: Apply at 5 day intervals during bloom period. Do not apply after bloom. Discontinue use when green tip reaches 0.5" |
| | <i>copper salts of fatty & rosin acids</i> Camelot O | M1 | Contact 0.5-2 gal/100 gal/A | 4 H | Discoloration of blooms may occur. Do not spray just before or during bloom periods. Apply at 7-10 day intervals. |
| | <i>copper sulfate</i> Basicop | M1 | Contact 2-4 lb/100 gal or 2-4 lb/A | 24 H | Begin at 10% bloom and repeat at 5-7 day intervals until late bloom is over. Repeat applications after rains. |
| | <i>fosetyl-AL</i> Aliette WDG | 33 | Systemic 2.5 lb/100 gal | 12 H | Begin spray at pre-bloom stage and continue at 7 day intervals until bloom period ends. Do not apply more than one application every 7 days. |
| | Flower or Petal blight <i>(Ovulinia, Ciborinia, Sclerotinia)</i> | <i>captan</i> Captan 50WP | M4 | Contact 2 lb/100 gal (Azalea) 1 lb/100 gal (Camellia) | 48 H |
| <i>chlorothalonil</i> Daconil Zn Daconil Ultrex Daconil Weatherstik many other formulations | | M5 | Contact 2 pt/100 gal 1.4 lb/100 gal 1 3/8 pt/100 gal See labels for rates. | 12 H | Re-apply at 7-14 day intervals. Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Do not combine with pesticides, surfactants, or fertilizers in spray tank. |
| <i>chlorothalonil + thiophanate methyl</i> Spectro 90WDG | | M5 + 1 | Contact/Systemic 1-2 lb/100 gal | 12 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7-day re-treatment interval. Do not exceed 2.15 lbs/A of product. |
| <i>copper sulfate</i> Basicop | | M1 | Contact 2-4 lb/100 gal/A | 24 H | Apply to entire plant before bud break in the spring. Repeat 2-3 weeks later. Remove and destroy any galls that may appear. |
| <i>copper hydroxide + mancozeb</i> Junction | | M1 + M3 | Contact 1.5-3.5 lb/A | 48 H | Do not apply in spray solutions having pH less than 6.5. Re-apply at 7-14 day intervals. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--|---|------------|---|---|--|
| Flower or Petal blight (<i>Ovulinia</i> , <i>Ciborinia</i> , <i>Sclerotinia</i>) (continued) | <i>mancozeb</i> Dithane 75DF Fore 80WP Mancozeb DG Pentathlon DF Pentathlon LF Protect DF | M3 | Contact 1-2 lb/100 gal 1.5 lb/100 gal 1.5 lb/100 gal 1-2 lb/100 gal 0.8-1.6 qt/A/100 gal 1-2 lb/100 gal | 24 H | Addition of a spreader sticker will improve performance. Apply in full cover spray, 2-3 times a week while flowers are opening. Direct spray into flowers and thoroughly spray ground under bushes. Do not use Fore on Pachysandra. |
| | <i>mancozeb + myclobutanil</i> Clevis | M3 + 3 | Contact + Systemic 2 lb/100 gal | 24 H | Begin application at first sign of disease or when plants are well leafed out. Spray at 7-10 day intervals. Addition of spreader-binder or surfactant will improve performance. |
| | <i>PCNB</i> Terraclor 400 | 14 | Contact Woody (drench): 6-12 oz /100 gal Magnolia: 3 pt/100 gal | 12 H | Apply in sufficient water to assure good coverage. Apply to ground beneath bushes. Begin application prior to bud opening and repeat every 4-6 weeks during bloom period. |
| | <i>propiconazole</i> Banner Maxx II Propiconazole Pro Strider | 3 | Systemic 5-8 fl oz/100 gal 5-8 fl oz/100 gal 5-8 fl oz/100 gal | 12 H/ Propiconazole/ Strider 24 H | For outdoor use only. Apply every 14-21 days during period of infection and flower bloom. Spray to drip. |
| | <i>propiconazole + chlorothalonil</i> Concert II | 3 + M5 | Systemic + Contact 22-35 fl oz (1.4-2.2 pt)/100 gal | 12 H | For outdoor and landscape use only. Do not use in greenhouses. Limited host plant labeling; check label. Do not apply to African violets, begonias, Boston fern, geranium, pittosporum, schefflera. Re-apply at 14-21 day intervals. Application to blooms or tender new growth may cause injury. |
| | <i>tebuconazole</i> Torque | 3 | Systemic 4-10 fl oz/100 gal | 12 H | Apply 2-3 times/week into the flowers as they open and develop color. Apply every 14 days. |
| | <i>thiophanate methyl</i> Allban Flo 3336 F 3336 WP SysTec 1998 WDG OHP 6672 4.5F OHP 6672 50WP +many other formulations | 1 | Systemic 7.25-20 fl oz /100 gal (<i>Ovulinia</i>) 10.75-20 oz /100 gal 12-16 fl oz /100 gal 8-16 oz /100 gal (<i>Ovulinia</i>) 12-16 oz /100 gal 8-16 oz /100 gal (<i>Ovulinia</i>) 10 fl oz/100 gal 10.75-20 fl oz/100 gal 7.25-20 oz /100 gal (<i>Ovulinia</i>) 12-16 oz/100 gal 8-16 oz/100 gal (<i>Ovulinia</i>) See labels for rates | 12 H | Apply as flowers open. Repeat application on 7-14 day intervals |
| | <i>thiophanate methyl + mancozeb</i> Zyban WSB | 1 + M3 | Systemic/Contact 12 oz (2 bags)/75 gal (azalea/ rhododendron) 24 oz (4 bags)/100 gal | 24 H | While disease is prevalent, apply at 4-6 day intervals. Azalea and rhododendron: <i>Ovulinia</i> : apply at weekly intervals. |
| | <i>triadimefon</i> Bayleton 50 | 3 | Systemic 5.5 oz/68.75-137.5 gal | 12 H | Application should begin at expanded bud stage (color showing). Repeat at 7-14 day intervals. Bayleton is not for use on plants grown for sale. Landscape use only. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--|---|------------|---|--------------------------|---|
| Fungal Leaf Spots other than <i>Alternaria</i> , <i>Black spot</i> , <i>Cercospora</i> , <i>Septoria</i> , <i>Cristulariella</i> , <i>Entomosporium</i> (<i>Phyllosticta</i> , <i>Phoma</i> , <i>Corynespora</i> , <i>Tubakia</i> , and others) | <i>azoxystrobin</i> Heritage | 11 | Systemic 1-4 oz/100 gal 2-4 oz/100 gal | 4 H | Repeat every 7-28 days. Apply at the first sign of disease at bud break. Use low rate (1-2 oz) at 7-14 day intervals for low disease pressure; Use higher rate (3-4 oz) at 14-28 day intervals under high disease pressure. Rotate after 2-3 applications with non -strobilurin fungicide. |
| | <i>Bacillus subtilis</i> <i>QST 713 strain</i> Cease | Bio | Contact 2-8 qt/100-300 gal/A 4 qt/100-300 gal/A (typical) | 4 H | Make applications on a 3-10 day schedule. Typical interval of 7-days. Shorten under severedisease pressure. |
| | <i>benzovindiflupyr</i> + <i>azoxystrobin</i> Mural | 7 + 11 | Contact/Systemic 4-7 oz/100 gal | 12 H | Do NOT apply to apple, crabapple, flowering cherry, privet, leatherleaf fern or other fern used for cut foliage. Apply at 7-14 day intervals |
| | <i>chlorothalonil</i> Daconil Zn Daconil Ultrex Daconil Weatherstik + many other formulations | M5 | Contact 2 pt/100 gal 1.4 lb/100 gal 1 3/8 pt/100 gal See labels for rates. | 12 H | Re-apply at 7-14 day intervals. Apply to run-off to only dry foliage. Do not use with mist blowers of high pressure spray equipment in greenhouses. May discolor flowers/bracts. Do not combine with pesticides, surfactants, or fertilizers in spray tank. |
| | <i>chlorothalonil</i> + <i>thiophanate methyl</i> Spectro 90WDG | M5 + 1 | Contact/Systemic 1-2 lb/100 gal | 12 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7-day re-treatment interval. Do not exceed 2.15 lb/A of product. |
| | <i>copper hydroxide (M1)</i> . Champ WG CuPRO 2005 T/N/O Nu-Cop 50 DF Nu-Cop HB Nu-Cop 3L | M1 | Contact 0.5-1 lb/100 gal 0.75-2 lb A 1 lb/100 gal 0.5 lb/100 gal 1.33 pt/100 gal | 24-48 H (check label) | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette or other phosphite/phosphante fungicides. Begin application at the first sign of disease and repeat at 7-14 day intervals. |
| | <i>copper hydroxide</i> + <i>mancozeb</i> Junction | M1 + M5 | Contact 1.5-3.5 lb/100 gal | 48 H | Do not apply in spray solutions having pH less than 6.5. Re-apply at 7-10 day intervals. |
| | <i>copper salts of fatty & rosin acids</i> Camelot O | M1 | Contact 0.5-2 gal/100 gal/A | 4 H | Discoloration of blooms may occur. Do not spray just before or during bloom periods. Apply at 7-10 day intervals. |
| | <i>copper sulfate</i> Basicop | M1 | Contact 2-4 lb/100 gal or 2-4 lb/A | 24 H | Phytotoxicity may occur on certain plant species/cultivars. Limited host labeling, check Ornamentals Section B: Plant Use Index. Trees: Apply to swelling buds and rep eat 2 times at 10 day intervals as needed. Shrubs/Flowers: Apply preventively, and repeat at 7-10 day intervals and after rains. |
| | <i>fluxapyroxad</i> + <i>pyraclostrobin</i> Orkestra Intrinsic | 7 + 11 | Contact/Systemic 8-10 fl oz/100 gal | 12 H | Do NOT apply to Ninebark or Wintercreeper. May cause flower discoloration of Petunia and Impatiens. |
| | <i>kresoxim-methyl</i> Cygnus | 11 | Systemic 1.6-3.2 oz/100 gal | 12 H | Apply as protective spray and continue on a 7-14 day interval. |
| | <i>mancozeb</i> Dithane 75DF Fore 80WP Mancozeb DG Pentathlon DF Pentathlon LF Protect DF | M3 | Contact 1-2 lb/100 gal 1.5 lb/100 gal 1.5 lb/100 gal 1-2 lb/100 gal 0.8-1.6 qt/A/100 gal 1-2 lb/100 gal | 24 H | Addition of a spreader sticker will improve performance. Repeat application on 7-10 day intervals. Do not use Fore on Pachysandra. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|---|---|------------|---|--------------------|--|
| Fungal Leaf Spots other than <i>Alternaria</i> , <i>Black spot</i> , <i>Cercospora</i> , <i>Septoria</i> , <i>Cristulariella</i> , <i>Entomosporium</i> (<i>Phyllosticta</i> , <i>Phoma</i> , <i>Corynespora</i> , <i>Tubakia</i> , and others) (continued) | <i>mancozeb + myclobutanil</i> Clevis | M3 + 3 | Contact + Systemic 2 lb/100 gal | 24 H | Begin application at first sign of disease or when plants are well leafed out. Spray at 7-10 day intervals. Addition of spreader-binder or surfactant will improve performance. |
| | <i>propiconazole + chlorothalonil</i> Concert II | 3 + M5 | Systemic + Contact 22-35 fl oz (1.4-2.2 pt)/100 gal | 12 H | For outdoor and landscape use only. Do not use in greenhouses. Limited host plant labeling; check label. Do not apply to African violets, begonias, Boston fern, geranium, pittosporum, schefflera. Re-apply at 14-21 day intervals. Application to blooms or tender new growth may cause injury. |
| | <i>potassium bicarbonate</i> MilStop | | Contact 2.5-5 lb/100 gal | 1 H | Apply by increasing 0.25 lb/application not exceeding 5 lb. Repeat applications at 1-2 week intervals. See label for precautions for use on poinsettia, impatiens, and pansy. |
| | <i>pyraclostrobin + boscalid</i> Pageant | 11 + 7 | Systemic + contact 8-12 oz/100 gal | 12 H | Use preventively. Begin applications when conditions are favorable for disease, prior to disease symptom development. Re-apply at 7-14 day intervals. |
| | <i>tebuconazole</i> Torque | 3 | Systemic 4-10 fl oz/100 gal | 12 H | Apply at least 3 times per year, 14-21 days apart, beginning with spring bud break. Rotate with a fungicide in a different class (different MOA) to reduce fungicide resistance development. Do not use on African violet, begonia, Boston fern, or geranium. |
| | <i>thiophanate methyl</i> Allban Flo 3336 F 3336 WP SysTec 1998 WDG OHP 6672 4.5F OHP 6672 50WP + many more formulations | 1 | Systemic 10-14.5 fl oz/100 gal 12-16 fl oz /100 gal 12-16 oz/100 gal 20 fl oz/100 gal 10-14.5 fl oz/100 gal 12-16 oz/100 gal See product labels for rates. | 12 H | Not recommended for use on Boston fern, Swedish Ivy or Easter Cactus. Apply at first sign of disease. Repeat application on 7-14 day intervals. Rotations or tank mix combinations of mancozeb or chlorothalonil can be used. |
| | <i>thiophanate methyl + mancozeb</i> Zyban WSB | 1 + M3 | Systemic/ Contact 24 oz/100 gal (4 Bags) | 24 H | Apply at weekly intervals. Limit to 20 applications per year. |
| Fusarium stem and root rot | <i>azoxystrobin</i> Heritage | 1 | Systemic 1-4 oz/100 gal (directed spray) 0.2-0.9 oz/100 gal (drench) | 4 H/ – | Repeat every 7-21 days. Apply 1-2 pints/sq ft of surface area, every 7-28 days. |
| | <i>Bacillus subtilis</i> QST 713 strain Cease | Bio | Contact 2-8 qt/100-300 gal/A 4 qt/100-300 gal/A (typical) | 4 H/ – | Drenches for use only in greenhouses and nurseries (open or enclosed). Apply 1 pt/3” soil depth to thoroughly soak the growing medium as a drench or directed spray. Optimal when used preventively and repeated every 21-28 days during growing cycle. |
| | <i>benzovindiflupyr + azoxystrobin</i> Mural | 7 + 11 | Contact/Systemic 5-7 oz/100 gal (directed soil spray) 2-3 oz/100 gal (drench) | 12 H | Do NOT apply to apple, crabapple, flowering cherry, privet, leatherleaf fern or other fern used for cut foliage. Apply at 7-21 day intervals. Apply as a directed soil spray. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|---|---|------------|--|--------------------|---|
| Fusarium stem and root rot (continued) | <i>chlorothalonil</i> + <i>thiophanate methyl</i> Spectro 90 WDGs | M5 + 1 | MODE OF ACTION: Contact/Systemic 1-2 lb/100 gal | 12 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7-day re-treatment interval. Do not exceed 2.15 lb/A of product. |
| | <i>cyprodinil</i> + <i>fludioxonil</i> Palladium | 9 + 12 | Systemic/Contact 2-4 oz/100 gal | 12 H | Begin applications prior to the onset of disease, and repeat applications at 7-14 day intervals if conditions remain favorable for disease development. Ensure full spray coverage of all stems and inner areas of plants to the soil/media level. |
| | <i>etridiazole</i> + <i>thiophanate methyl</i> Banrot 8G Banrot 40WP | 14 + 1 | Contact/Systemic 12 oz/cu yd 4-8 oz/100 gal (bedding) 6-12 oz/100 gal (woody/foilage) | 12 H | Use low rates for bedding plants and high rates for woody and foliage plants for Banrot 8G. Drench at seeding and transplanting. Re-apply at 4-8 week intervals. |
| | <i>fludioxonil</i> Emblem Medallion WDG | 12 | Contact 2 pt/sq ft 2 pt/sq ft | 12 H | Mix with Subdue MAXX. Wet entire medium. |
| | <i>fludioxonil</i> + <i>mefenoxam</i> Hurricane (WP) | 12 + 4 | Contact 3/4 oz/100 gal (drench at seeding) 1.5 oz/100 gal (2 packets) as drench of cuttings and transplants + Add 1 oz Medallion WDG fungicide/100 gal solution | 48 H | Application to Impatiens, New Guinea Impatiens, Pothos, Geranium, and Easter Lily may cause stunting and/or chlorosis. Do not use on Leather leaf fern. Add Medallion fungicide at 1 oz/100 gal water as a tank mix. Make only one application to seedling crop prior to transplanting to larger containers. For cuttings or transplants, re-treat at 21-28 day intervals if needed. For use only in greenhouses, containers, and enclosed structures. |
| | <i>fluoxastrobin</i> Disarm O | 11 | MODE OF ACTION: Systemic 2-4 oz/100 gal (Crown spray) 0.15-0.6/100 gal (Drench or surface spray) | 12 H | Apply at 7-21 day intervals for crown spray and 14-28 day interval for drench or surface spray application. |
| | <i>pyraclostrobin</i> Empress | 11 | Systemic 1-3 fl oz/100 gal (unrooted cuttings, seedlings, plugs) 2-6 fl oz/100 gal (herbaceous/woody plants) | 12 H | Use preventively when conditions are favorable for disease and prior to symptom development. Rotate to a non-group 11 fungicide for resistance management. Do not apply more than 4.4 fl oz/1000 sq ft/year. Repeat applications as needed 7-28 days after initial application. |
| | <i>pyraclostrobin</i> + <i>boscalid</i> Pageant | 11 + 7 | Systemic + Contact 12-18 oz/100 gal | 12 H | Use preventively. Begin applications when conditions are favorable for disease, prior to disease symptom development. The crown and base of the plant and the potting medium surrounding the crown must be thoroughly covered. Re-apply at 7-14 day intervals. |
| | <i>thiophanate methyl</i> Allban Flo 3336 F 3336 WP SysTec 1998 WDG OHP 6672 4.5F OHP 6672 50WP + many more formulations | 1 | Systemic 10-14.5 fl oz /100 gal 8-16 fl oz /100 gal 12- 16 oz /100 gal (Spray) 16-24 oz /100 gal (Plant dip) 8-16 oz /100 gal (Drench) 20 fl oz /100 gal 10-14.5 fl oz/100 gal 12-16 oz /100 gal See label for rates. | 12 H | Apply as a heavy spray or drench at rate of 0.5-2 pt/sq ft (100 gal/1,600-400 sq ft). Applications can be re-applied at 7-14 day intervals. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|----------------------------------|---|------------|---|--------------------|--|
| Fusarium stem and root rot | <i>triflumizole</i> Terraguard SC | 3 | Contact 4-8 fl oz/100 gal | 12 H | Apply soil drenches at weekly intervals. Use higher rate under heavy disease pressure. |
| (continued) | <i>triticonazole</i> Trinity TR Trinity | 3 | Systemic 2 cans/3,000 sq ft (greenhouse) 8-12 fl oz/100 gal | 12 H | For Trinity TR: Elevate container above the plant canopy and clear a 6 ft area around can. Shut off exhaust and close vents. Repeat at 7 day intervals up to 3x per crop. For Trinity (flowable): The crown, base of plant, and rooting medium surrounding the crown must be thoroughly covered. |
| Myrothecium leaf spot and blight | <i>azoxystrobin</i> Heritage | 11 | Systemic 2-4 oz/100 gal | 4 H | Apply every 7-21 days. Do not exceed 2 oz/100 gal on impatiens, pansy or viola. |
| | <i>Bacillus subtilis</i> <i>QST 713 strain</i> Cease | Bio | Contact 2-8 qt/100 gal/A 4 qt/100 gal/A (typical). | 4 H | Make applications on a 3-10 day schedule. Typical interval of 7-day. Shorten under severe disease pressure. |
| | <i>chlorotalonil</i> Daconil Ultrex Daconil Zn Daconil Weatherstik | SA | Contact 1.4 lb/100 gal 2 pt/100 gal 1 3/8 pt/100 gal | 12 H | Re-apply at 7-14 day intervals. Do not use with mist blowers of high pressure spray equipment in greenhouses. May discolor flowers/bracts. Do not combine with pesticides, surfactants, or fertilizers in spray tank. |
| | <i>chlorothalonil + thiophanate methyl</i> Spectro 90WDG | M5 + 1 | Contact/Systemic 1-2 lb/100 gal | 12 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7 -day re-treatment interval. Do not exceed 2.15 lb/A of product. |
| | <i>copper salts of fatty & rosin acids</i> Camelot O | M1 | Contact 0.5-2 gal/100 gal/A | 4 H | Discoloration of blooms may occur. Do not spray just before or during bloom periods. Apply at 7-10 day intervals. |
| | <i>cyprodinil + fludioxonil</i> Palladium | 9 + 12 | Systemic/Contact 2-4 oz/100 gal | 12 H | Begin applications prior to the onset of disease. Repeat applications at 7-14-day intervals if conditions remain favorable for disease development. Ensure full spray coverage of all stems and inner areas of plants to the soil/media level. |
| | <i>fludioxonil</i> Emblem Medallion WDG | 12 | Contact 1-2 oz/100 gal 1-2 oz/100 gal | 12 H | Re-apply at 7-14 day intervals. Drench may cause stunting and/or chlorosis to impatiens and New Guinea impatiens. |
| | <i>fluoxastrobin</i> Disarm O | 11 | Systemic 1-4 oz/100 gal | 12 H | Under light disease pressure, use lower rates (1-2 oz/100 gal) on a 7-14 day interval or the higher rates (3-4 oz/100 gal) on a 14-28 day interval. Under high disease pressure, use the higher rates on a 7-14 day interval. |
| | <i>metconazole</i> Tourney | 3 | Systemic 1-4 oz/100 gal | 12 H | Apply to the point of drip at 14-28 day intervals. |
| | <i>pyraclostrobin + boscalid</i> Pageant | 11 + 7 | Systemic + Contact 8-12 oz/100 gal | 12 H | Use preventively. Begin applications when conditions are favorable for disease, prior to disease symptom development. Re-apply at 7-14 day intervals. Do not expose petunia or impatiens in flower or wintercreeper or nine bark to spray or drift as injury may occur. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|---|---|------------|--|--------------------------|--|
| Myrothecium leaf spot and blight <i>(continued)</i> | <i>thiophanate methyl</i> Allban Flo 3336 F 3336 WP SysTec 1998 WDG OHP 6672 4.5 F OHP 6672 50WP +many more formulations | 1 | Systemic 10-14.5 fl oz/100 gal 12-16 fl oz/100 gal 12-16 oz/100 gal 20 fl oz/100 gal 10-14.5 fl oz/100 gal 12-16 oz/100 gal See product label for rates | 12 H | Apply as a heavy spray or drench at rate of 0.5-2 pt/sq ft (100 gal/1,600-400 sq ft). Applications can be re-applied at 1-2 week intervals. |
| | <i>trifloxystrobin</i> Compass O 50WDG | 11 | Systemic 1-2 oz/100 gal | 12 H | Apply at first sign of disease and continue at 7-14 day intervals. Rotate with fungicide in different chemical class. |
| | <i>triflumizole</i> Terraguard SC | 3 | Contact 4-8 oz/100 gal | 12 H | Apply foliar sprays at 7-14 day intervals. Use high rate for initial application. |
| | <i>triticonazole</i> Trinity TR Trinity | 3 | Systemic 1 can/3,000 sq ft (greenhouse) 8-12 fl oz/100 gal | 12 H | For Trintiy TR: Elevate container above the plant canopy and clear a 6 ft area around can. Shut off exhaust and close vents. Repeat at 7 day intervals up to 3x per crop (2x for pansies). For Trinity (flowable): Use preventively, repeat applications at 7-14 day intervals. |
| Needle Blight <i>(Passalora sequioae, syn. Cercosporidium)</i> *Spores are initially dispersed mid-May -mid-June, with symptoms and spore release peaking in Aug-Sept. Begin preventive fungicide applications mid-May-mid-June and continue through Sept-Oct. Curative applications can reduce disease when applied Aug-Oct when symptoms are first seen. Note: Removal and disposal of infected plant parts can reduce spread. Air-blast applications are not as effective as pistol or direct application to interior of tree. | <i>chlorothalonil</i> Daconil Zn Daconil Ultrex Daconil Weatherstik Thalonil 6L Thalonil 90DF + many more formulations | M5 | Contact 2 pt/100 gal 1.4 lb/100 gal 1 3/8 pt/100 gal 1 3/8 pt/100 gal 1.3 lb/100 gal See product label for rates. | 12 H | Re-apply at 7 day intervals. |
| | <i>chlorothalonil + thiophanate methyl</i> Spectro 90WDG | M5 + 1 | Contact/Systemic 1-2 lb/100 gal | 12 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7-day re-treatment interval. Do not exceed 2.15 lb/A of product. |
| | <i>copper hydroxide</i> Champ WG CuPRO 2005 T/N/O Nu-Cop 50 DF Nu-Cop HB Nu-Cop 3L Kocide 3000 Kocide 2000 | M1 | Contact 0.75-1.75 lb/100 gal 1.5-3 lb/A 1 lb/100 gal 0.5 lb/100 gal 1 1/3 pt/100 gal 0.75-1.75 lb/A 1.5-3 lb/A | 24-48 H (check label) | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette fungicide. Re-apply at 7-14 day intervals. Aplly Kocide at 7-30 day intervals. |
| | <i>copper salts of fatty and rosin acids</i> Camelot | M1 | Contact 0.5-2 gal/100 gal/A | 4 H | Apply first application when needles are just emerging. Make second application 3 weeks later. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--|--|--------|---|--|---|
| Needle Blight (<i>Passalora sequioae</i> , <i>syn. Cercosporidium</i>) <i>(continued)</i> | <i>mancozeb</i> Dithane 75DF Fore 80 WP Mancozeb DG Pentathlon DF Pentathlon LF Protect DF | M3 | Contact 1-2 lb/100 gal 1.5 lb/100 gal 1.5 lb/100 gal 1-2 lb/100 gal 0.8-1.6 qt/A/100 gal 1-2 lb/100 g | 24 H | Addition of a spreader sticker will improve performance. Apply at the first sign of disease. Repeat application on 7-10 day intervals. Do not use Fore on Pachysandra. |
| | <i>mancozeb + myclobutanil</i> Clevis | M3 + 3 | Contact 2 lb/100 gal | 24 H | Begin application at first sign of disease or when plants are well leafed out. Addition of spreader-binder or surfactant will improve performance. Spray at 7-10 day intervals. |
| Phoma basal and root rot (<i>Phoma exigua</i>) | <i>cyprodinil + fludioxonil</i> Palladium | 9 +12 | Systemic/Contact 2-4 oz/100 gal | 12 H | Begin applications prior to the onset of disease, and repeat applications at 7-14 day intervals if conditions remain favorable for disease development. Ensure full spray coverage of all stems and inner areas of plants to the soil/ media level |
| Phomopsis tip blight | <i>azoxystrobin</i> Heritage | 11 | Systemic 1-4 oz/100 gal | 4 H | Repeat every 7-28 days. Apply at the first sign of disease at bud break. |
| | <i>cyprodinil + fludioxonil</i> Palladium | 9 + 12 | Systemic/Contact 2-4 oz/100 gal | 12 H | Begin applications prior to the onset of disease, and repeat applications at 7-14 day intervals if conditions remain favorable for disease development. Ensure full spray coverage of all stems and inner areas of plants to the soil/ media level. |
| | <i>mancozeb</i> Dithane 75DF Fore 80WP Mancozeb DG Pentathlon DF Pentathlon LF Protect DF | DC | Contact 1-2 lb/100 gal 1.5 lb/100 gal 1.5 lb/100 gal 1-2 lb/100 gal 0.8-1.6 qt/A/100 gal 1-2 lb/100 gal | 24 H | Addition of a spreader sticker will improve performance. Repeat application on 7-10 day intervals. Do not use Fore on Pachysandra. |
| | <i>mancozeb + myclobutanil</i> Clevis | M3 + 3 | Contact + Systemic 2 lb/100 gal | 24 H | Begin application at first sign of disease or when plants are well leafed out. Spray at 7-10 day intervals. Addition of spreader-binder or surfactant will improve performance. |
| | <i>metconazole</i> Tourney | 3 | Systemic 1-4 oz/100 gal | 12 H | Apply to the point of drip at 14-28 day intervals. |
| | <i>potassium bicarbonate</i> MilStop | | Contact 2.5-5 lb/100 gal | 1 H | Repeat applications at 1-2 week intervals. See label for precautions for use on poinsettia, impatiens, and pansy. |
| | <i>propiconazole</i> Banner Maxx II Propiconazole Strider | 3 | Systemic 5-8 fl oz/100 gal 5-8 fl oz/100 gal 5-8 fl oz/100 gal | 12 H Propiconazole/ Strider 24 H | Apply every 14-21 days beginning at bud break in spring and during periods of active plant growth. Spray to drip. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--|---|------------|--|--------------------------|---|
| Phomopsis tip blight (continued) | <i>thiophanate methyl</i> Allban Flo 3336 F 3336 WP SysTec 1998 WDG OHP 6672 4.5F OHP 6672 50WP + many more formulations | 1 | Systemic 14.5-20 fl oz/100 gal 16-24 fl oz /100 gal 16-24 oz/100 gal 20 fl oz/100 gal 14.5-20 fl oz/100 gal 16-32 oz/100 gal See product label for rates. | 12 H | Apply at bud break in the spring. Repeat application on 7-14 day intervals. |
| | <i>thiophanate methyl</i> + <i>mancozeb</i> Zyban WSB | 1 + M3 | Systemic/ Contact 36 oz (6 bags)/75 gal (juniper) 24 oz (4 bags)100 gal | 24 H | Apply every 7 days beginning as new growth breaks buds and expands (juniper). For other plants apply at weekly intervals. |
| Phytophthora Root Rot and Foliar Blight (See Pythium and Phytophthora) | | | | | |
| Pine needle cast (<i>Lophodermium</i>) | <i>chlorothalonil</i> Daconil Zn Daconil Ultrex Daconil Weather Stik | M5 | Contact 4-8 pt/A 2.5-5 lb/100 gal or A 2.75-5.5 pt/A | 12 H | Apply in early spring prior to bud break. Repeat applications at 6-8 wk intervals. Apply monthly during periods of frequent rainfall. Suspend treatment during drought periods. |
| | <i>copper hydroxide</i> CuPRO 2005 T/N/O Kocide 3000 Kocide 2000 | M1 | Contact 1.5-3 lb/A 0.75-1.75 lb/A 1.5-3 lb/A | 24-48 H (check label) | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette fungicide. Re-apply at 14 day intervals. |
| | <i>copper hydroxide</i> + <i>mancozeb</i> Junction | M1 + M3 | Contact 1.5-3.5 lb/A | 48 H | Do not apply in spray solutions having pH less than 6.5. Re-apply at 7-14 day intervals. |
| | <i>copper salts of fatty and rosin acids</i> Camelot O | M1 | Contact 0.5-2 gal/100 gal/A | 4 H | Apply first application when needles are emerging. Make second application 3 weeks later. |
| | <i>mancozeb</i> Dithane 75DF Fore 80WP Mancozeb DG Pentathlon DF Pentathlon LF Protect DF | M3 | Contact 1-2 lb/100 gal 1.5 lb/100 gal 1.5 lb/100 gal 1-2 lb/100 gal 0.8-1.6 qt/A/100 gal 1-2 lb/100 gal | 24 H | Addition of a spreader sticker will improve performance. Apply at 7-10 day intervals. Do not use Fore on Pachysandra. |
| | <i>mancozeb</i> + <i>myclobutanil</i> Clevis | M3 + 3 | Contact + Systemic 2 lb/100 gal | 24 H | Begin application at first sign of disease or when plants are well leafed out. Spray at 7-10 day intervals. Addition of spreader-binder or surfactant will improve performance. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|----------------|---|--------|--|--------------------------|---|
| Powdery Mildew | <i>azoxystrobin</i> Heritage | 11 | Systemic 1-4 oz/100 gal | 4 H | Preventative applications only. Repeat at 7-28 days. Do not make more than 2 sequential applications before rotating to another class of fungicide. |
| | <i>Bacillus subtilis</i> <i>QST 713 strain</i> Cease | Bio | Contact 2-4 qt/100 gal/A 4 qt/100-300 gal/A (typical) | 4 H | Make applications on a 3-10 day schedule. Typical interval of 7-day. Shorten under severe disease pressure. |
| | <i>benzovindiflupyr</i> + <i>azoxystrobin</i> Mural | 7 + 11 | Contact + Systemic 4-7 oz/100 gal | 12 H | Do NOT apply to apple, crabapple, flowering cherry, privet, leatherleaf fern or other fern used for cut foliage. Apply at 7-21 day intervals. Do not make more than 2 sequential applicatiosn before rotating with a product with a different mode of action. |
| | <i>chlorothalonil</i> Daconil Ultrex Daconil Zn Daconil Weatherstik | M5 | Contact 1.4 lb/100 gal 2 pt/100 gal 1 3/8 pt/100 gal | 12 H | Apply on 7-14 day intervals at first sign of disease or when conditions favor disease development. Do not combine with pesticides, surfactants, or fertilizers in spray tank. |
| | <i>chlorothalonil</i> + <i>thiophanate methyl</i> Spectro 90WDG | M5 + 1 | Contact/Systemic 1-2 lb/100 gal | 24 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7-day re-treatment interval. Do not exceed 2.15 lb/A of product. |
| | <i>copper hydroxide</i> CuPRO 2005 T/N/O Nu-Cop 50 DF Nu-Cop HB Nu-Cop 3L | M1 | Contact 0.75-2 lb A 1 lb/100 gal 0.5 lb/100 gal 1 1/3 pt/100 gal | 24-48 H (check label) | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette or other phosphite/phosphante fungicides. Begin application at the first sign of disease and repeat at 7-14 day intervals. |
| | <i>copper salts of fatty and rosin acids</i> Camelot | M1 | Contact 0.5-2 gal/100 gal/A | 4 H | Discoloration of blooms may occur. Do not spray just before or during bloom periods. Apply at 7-10 day intervals. |
| | <i>copper sulfate</i> Basicop | M1 | Contact 2-4 lb/100 gal or 2-4 lb/A | 24 H | Phytotoxicity may occur on certain plant species/cultivars. Limited host labeling, check Ornamentals Section B: Plant Use Index. Apply preventively, and repeat at 7-10 day intervals and after rains. |
| | <i>copper sulphate pentahydrate</i> Phyton 27 | M1 | Contact 1½-2½ oz/100 gal | 24 H | Apply preventively, and Re-apply on 3-5 day intervals. Poor curative activity. |
| | <i>cyprodinil</i> + <i>fludioxonil</i> (9 + 12) Palladium | 9 + 12 | Systemic/Contact 4-6 oz/100 gal | 12 H | Begin applications prior to the onset of disease. Repeat applications at 7-14-day intervals if conditions remain favorable for disease development. Ensure full spray coverage of all stems and inner areas of plants to the soil/media level. |
| | <i>fenarimol</i> Rubigan A.S. | 3 | Locally Systemic Herbaceous: 3-5 fl oz/100 gal Woody: 6-10 fl oz/100 gal Dogwood: 8 fl oz/100 gal | 12 H | Re-apply every 10-14 days. |
| | <i>fluoxastrobin</i> Disarm O | 11 | Systemic 1-4 oz/100 gal | 12 H | Apply at 7-28 day intervals. Under light disease pressure, use lower rates (1-2 oz/100 gal) on a 7-14 day interval or the higher rates (3-4 oz/100 gal) on a 14-28 day interval. Under high disease pressure, use the higher rates on a 7-14 day interval. |
| | <i>fluxapyroxad</i> + <i>pyraclostrobin</i> Orchestra Intrinsic | 7 + 11 | Contact/Systemic 6-8 fl oz/100 gal | 12 H | Do NOT apply to Ninebark or Wintercreeper. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--------------------------------------|---|--------------------------------|---|--|--|
| Powdery mildew <i>(continued)</i> | <i>kresoxim-methyl</i> Cygnus | 11 | Systemic 1.6-3.2 oz/100 gal | 12 H | Apply as protective spray or at the first sign of disease. Continue on a 7-14 day interval. Rotate to non-strobilurin fungicide for 2 applications before re-use to reduce fungicide resistance development. Addition of up to 0.06% of a non-organosilicone spreader-sticker type adjuvant may improve control. |
| | <i>mancozeb + myclobutanil</i> Clevis | M3 + 3 | Contact + Systemic 2 lb/100 gal | 24 H | Begin application at first sign of disease or when plants are well leafed out. Spray at 7-10 day intervals. Addition of spreader-binder or surfactant will improve performance. |
| | <i>metconazole</i> Tourney | 3 | Systemic 1-4 oz/100 gal | 12 H | Apply to the point of drip at 14-28 day intervals. |
| | <i>myclobutanil</i> Eagle 20EW | 3 | Systemic 6-12 oz/100 gal | 24 H | Repeat application at 10-14 day intervals. |
| | piperalin Pipron | 5 | Contact 4-8 oz/100 gal | 12 H | Flower/bract spotting may occur. See precautions on hydrangea, begonia, and poinsettia. Use with a surfactant on hard-to-wet leaves or under heavy disease pressure |
| | <i>polyoxin D Zn salt</i> Affirm WDG Veranda O | 19 | Systemic 0.25-0.5 lb/100 gal 0.25-0.5 lb/100 gal | 4 H | Apply as full coverage foliar spray every 7-10 days. Apply prior to disease development and when conditions are conducive for disease. |
| | <i>propiconazole</i> Banner Maxx II Propiconazole Strider | 3 | Systemic 5-8 fl oz/100 gal 5-8 fl oz/100 gal 5-8 fl oz/100 gal | 12 H | Do not apply to African violets, begonias, Boston fern or geranium. Do not use in greenhouses. Apply every 14-21 days during period of infection. Spray to drip. |
| | <i>propiconazole + chlorothalonil</i> Concert II | 3 + M5 | Systemic + Contact 22-35 fl oz (1.4-2.2 pt)/100 gal | 12 H | For outdoor and landscape use only. Do not use in greenhouses. Limited host plant labeling; check label. Do not apply to African violets, begonias, Boston fern, geranium, pittosporum, schefflera. Re-apply at 14-21 day intervals. Application to blooms or tender new growth may cause injury. |
| | <i>pyraclostrobin + boscalid</i> Pageant | 11 + 7 | Systemic + contact 6-12 oz/100 gal | 12 H | Use preventively. Begin applications when conditions are favorable for disease, prior to or at the first sign of disease symptom development. Re-apply at 7-10 day intervals |
| | <i>potassium bicarbonate</i> MilStop | | Contact 2.5-5 lb/100 gal | 1 H | Apply by increasing 0.25 lb/application not exceeding 5 lbs. Repeat applications at 1-2 week intervals. See label for precautions for use on poinsettia, impatiens, and pansy. |
| | <i>tebuconazole</i> Torque | 3 | Systemic 4-10 fl oz/100 gal | 12 H | Apply at least 3 times per year, 14-21 days apart, beginning with spring bed break. |
| | <i>thiophanate methyl</i> Allban Flo 3336 F 3336 WP SysTec 1998 WDG OHP 6672 4.5F OHP 6672 50WP + many more formulations | 1 | Systemic 10-20 fl oz/100 gal 12-24 fl oz /100 gal 12-24 oz/100 gal 10 fl oz/100 gal 10-20 fl oz/100 gal 8-16 oz/100 gal See product label for rates. | 12 H | Not recommended for use on Boston fern, Swedish Ivy or Easter Cactus. Apply at first sign of disease. Repeat application on 7-14 day intervals. |
| | <i>thiophanate methyl + mancozeb</i> Zyban WSB | 1 + M5 | Systemic/Contact 24 oz (4 bags)/100 gal | 24 H | Apply at weekly intervals. Limit to 20 application/year. |
| <i>triadimefon</i> Bayleton 50 | 3 | Systemic 5.5 oz/275-550 gal | 12 H | Apply as full coverage foliage spray to the point of drip. Landscape use only. | |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|---|--|------------|---|--------------------|--|
| Powdery mildew <i>(continued)</i> | <i>trifloxystrobin</i> Compass O 50WDG | 11 | Systemic 1-2 oz/100 gal | 12 H | Do not apply to Petunia, Violet, or New Guinea Impatiens or on Poinsettia after bract formation. Apply at first sign of disease and continue at 7-14 day intervals. Rotate with fungicide in different chemical class. |
| | <i>trifloxystrobin + triadimefon</i> Trigo | 11 + 3 | Systemic 1.2-2.4 oz/100 gal | 12 H | Apply to the point of drip. Do not apply at intervals shorter than 30 days to avoid flower stalk length reduction. Do NOT use on Petunia, Violets, and New Guinea Impatiens. |
| | <i>triflumizole</i> Terraguard SC Terraguard SC/LS | 3 | Contact 4-16 oz/100 gal 4-8 oz/100 gal | 12 H | Apply foliar sprays at weekly intervals. Use 16 oz rate for initial application to existing infections; use 4-8 oz rate preventively. |
| | <i>triticonazole</i> Trinity TR Trinity | 3 | Systemic 1 can/3,000 sq ft (greenhouse) 6-12 fl oz/100 gal | 12 H | For Trinity TR: Elevate container above the plant canopy and clear a 6 ft area around can. Shut off exhaust and close vents. Repeat at 7 day intervals up to 3x per crop (2x for pansies). For Trinity (flowable): Use preventively. Use highest labeled rate for rose powdery mildew. |
| <i>Pythium</i> and <i>Phytophthora</i> aerial blight/ root rot | <i>azoxystrobin</i> Heritage | 11 | Systemic 1-2 oz/100 gal (foliar spray) | 4 H | For use on Phytophthora aerial/shoot blight. Repeat every 7-28 days for foliar blight. |
| | <i>Bacillus subtilis</i> QST 713 strain Cease | Bio | Contact 2-8 qt/100-300 gal/A (foliar spray) 4-8 qt/100-300 gal/A (drench) | 4 H | Drenches for use only in greenhouses. Apply 1 pt /3". soil depth to thoroughly soak the growing medium as a drench or directed spray. Optimal when used preventively and repeated every 3-10 days during growing cycle. |
| | <i>captan</i> Captan 50WP | M4 | Contact 4 lb/100 gal (for 30 min; Begonia) 4 lb/100 gal (Azalea, Carnation, Chrysanthemum) | 48 H | Dip cuttings in mixture before bedding. |
| | <i>chlorothalonil</i> Daconil Ultrex Daconil Zn Daconil Weatherstik | M5 | Contact 1.4 lb/100 gal 2 pt/100 gal 1 3/8 pt/100 gal | 12 H | Re-apply at 7-14 day intervals. Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Do not combine with pesticides, surfactants, or fertilizers in spray tank. |
| | <i>copper hydroxide</i> CuPRO 2005 T/N/O | M1 | Contact 0.75-2 lb A | 24 H | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette or other phosphite/phosphante fungicides. Begin application at the first sign of disease and repeat at 7-14 day intervals. |
| | <i>copper hydroxide + mancozeb</i> Junction | M1 + M3 | Contact 1.5-3. lb/A | 48 H | Do not apply in spray solutions having pH less than 6.5. Re-apply at 7-14 day intervals. |
| | <i>copper salts of fatty and rosin acids</i> Camelot O | M1 | Contact 0.5-2 gal/100 gal/A | 4 H | Discoloration of blooms may occur. Do not spray just before or during bloom periods. Apply at 7-10 day intervals. |
| | <i>cyazofamid</i> Segway | 21 | Limited Systemic 1.5-3 fl oz/100 gal (<i>Pythium</i>) 3-6 fl oz/100 gal (<i>Phytophthora</i>) | 12 H | Apply at 14-28 day interval using another fungicide with a different Mode of Action between applications. Do not make more than 2 applications per crop cycle for root disease control. May be applied through irrigation systems. |
| | <i>dimethomorph</i> Stature SC | 40 | Systemic 12.25 fl oz /100 gal (aerial <i>Phytophthora</i> – foliar spray); 3.06-6.12 fl oz/50-100 gal (drench: greenhouse-grown, herbaceous, bedding plant); 6.12-12.25 fl oz/50-100 gal (drench: container- or field- grown, woody plants and herbaceous perennials) | 12 H | Apply spray and drench when plant roots are well-established, or at first sign of disease, on a 10-14 day interval throughout the production cycle. For drench, use enough solution to wet root zone of the plant. Avoid watering plants for several hours before application to improve plant uptake of product. For foliar spray, thoroughly spray foliage until runoff. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|---|---|------------|---|--------------------|--|
| <i>Pythium</i> and <i>Phytophthora</i> aerial blight/root rot <i>(continued)</i> | <i>dimethomorph</i> + <i>ametoctradin</i> Orvego | 40 + 45 | Systemic 14 fl oz/100 gal (aerial Phytophthora) 11-14 fl oz/100 gal (drench) | 12 H | For use on aerial Phytophthora: Begin spraying when plants are well established or at first sign of disease using a full-coverage spray applied on a 10-14 day interval. Rotate with a fungicide with a different mode of action to reduce fungicide resistance. |
| | <i>etridiazole</i> (14) Terrazole 35WP Truban 25EC Truban 30WP | 14 | Contact 3.5-10 oz/100 gal Woody/Foliage: 4-8 oz/100 gal Bedding: 4-6 oz/100 gal Woody: 3-10 oz/100 gal Foliage: 8-12 oz/100 gal Bedding: 4-6 oz/100 gal | 12 H | Retreat with Terrazole at 4-12 week intervals. Repeat at 4-8 week intervals for bedding plants and at 2-3 months for woody/foliage plants. Apply at 8-12 week intervals for foliage and at 4-8 week intervals for bedding plants. Etridiazole is good for <i>Pythium</i> control, but is not very effective on <i>Phytophthora</i> . Use an alternate product for <i>Phytophthora</i> control. |
| | <i>etridiazole</i> + <i>thiophanate methyl</i> Banrot 8G Banrot 40WP | 14 + 1 | Contact/Systemic 12 oz/cu yd Bedding: 4-8 oz/100 gal Woody/Foliage: 6-12 oz/100 gal | 12 H | Use low rate for bedding plants and high rate for woody and foliage plants for Banrot 8G. Drench at seeding and transplanting. Re-apply at 4-8 week intervals. |
| | <i>fenamidone</i> FenStop | 11 | Systemic 7-14 oz/100 gal (foliar spray) 7-14 oz/50-100 gal (drench) | 12 H | Repeat as necessary at 28 day intervals. Has cross-resistance to strobilurin fungicides. Do not rotate with strobilurin fungicides. |
| | <i>fludioxonil</i> + <i>mefenoxam</i> Hurricane (WP) | 12 + 4 | Contact 3/4 oz/100 gal (drench at seeding) 1.5 oz/100 gal (2 packets) as drench of cuttings and transplants | 48 H | Application to Impatiens, New Guinea Impatiens, Pothos, Geranium, and Easter Lily may cause stunting and/or chlorosis. Do not use on Leather leaf fern. Make only one application to seedling crop prior to transplanting to larger containers. For cuttings or transplants, re-treat at 21-28 day intervals if needed. For use only in greenhouses, containers, and enclosed structures. |
| | <i>fluopicolide</i> Adorn | 43 | Systemic Foliar Spray: 2-4 fl oz/100 gal Drench: 1-4 fl oz/100 gal | 12 H | Apply before disease development. Use higher rate when treating plants with a high potential for disease development. Must be tank mixed with the labeled rate of another fungicide with a different mode. If necessary, re-apply after 14-28 days. Do not apply more than two (2) applications per cropping cycle. Do not apply sequentially, alternate with another fungicide. |
| | <i>fluoxastrobin</i> Disarm O | 11 | Systemic 1-4 oz/100 gal (Crown spray) 0.15-0.6/100 gal (Drench or surface spray) | 12 H | For <i>Phytophthora</i> : Apply at 7-28 day intervals for crown spray and 14-28 day interval for drench or surface spray application. |
| | <i>fosetyl-AL</i> Aliette WDG | 33 | Systemic Foliar spray: 2.5-5 lb/100 gal Bedding: 1.25-4 lb/100 gal Drench: 6.4-12.8 oz/100 gal Soil incorp: 8-12.8 oz/100 gal | 12 H | Do not exceed 1 application every 30 days. Spray to wet using no more than 400 gal/A. Apply to 400 sq ft/100 gal (2 pt/sq ft) Use soil incorporation with well-rooted plants. |
| | <i>mandipropamid</i> Micora | 40 | Systemic 4-8 oz/100 gal | 4 H | For <i>Phytophthora</i> control, apply as a foliar spray on a 7-14 day interval preventively or at the first sign of disease symptoms. Make no more than 2 consecutive applications before switching to another effective non-Group 40 fungicide. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--|---|--|--|---|---|
| <i>Pythium</i> and <i>Phytophthora</i> aerial blight/root rot (continued) | <i>mefenoxam</i> Subdue GR | 4 | Systemic Foliage: 1.6-8 oz/cu yd 8-40 oz/1000 sq ft bed area Bedding: 1.6-8 oz/cu yd 6-30 oz/1000 sq ft bed area Flowers: 1.6-8 oz/cu yd 12-60 oz/1000 sq ft bed area Woody: 1.6-12.5 oz/cu yd 26-125 oz/1000 sq ft bed area Azalea: 1.6-10 oz/cu yd 14.8-75 oz/1000 sq ft bed area | 48 H (spray) | Thoroughly mix per cu. yd. soil or potting medium. After 2-3 months, product may be reapplied as a soil surface application. Soil surface applications can be re-applied at 2-3 month intervals, if needed. |
| | | | | 0 H (drench) | |
| | Subdue MAXX | | Foliage: 0.3-0.6 fl oz/100 gal Bedding: 0.13-0.25 fl oz /100 gal at seeding 0.5-1 fl oz/100 gal at transplanting Flowers: 0.5-1 fl oz/100 gal Woody: 1-2 fl oz/100 gal Azalea: 0.63-1.25 fl oz/100 gal | 0 H | Drench with 1 pt/sq ft. For medium deeper than 4", apply 1.5-2 pt/sq ft. Use higher rate for soil surface spray; spray to wet root zone, irrigate after application with 0.5" of water. |
| | <i>oxathiapiprolin</i> Segovis | U15 | Contact 0.6-2.4 fl oz/100 gal (foliar spray) 0.65-3.2 fl oz/100 gal (drench) | 4 H | For <i>Phytophthora</i> management. Apply on 5-14 day intervals. Do not make more than 2 sequential applications before rotating to a fungicide with a different mode of action. |
| | <i>phosphorous acid</i> Alude | 33 | Systemic 1-2 qt/100 gal (foliar spray) 6.25-12.75 fl oz/100 gal (drench) | 4 H | Apply as spray to thoroughly wet foliage. Re-apply as needed at 14-21 day intervals. As a drench, apply 1-2 pt of solution/sq ft at 2-4 week intervals. Thoroughly soak. |
| | Fosphite | | 1-2 qt/100 gal (foliar spray) 12-24 fl oz/100 gal (drench) | | |
| | <i>propamocarb hydrochloride</i> Banol | 28 | Systemic Herbaceous: 2-3 fl oz/10 gal Woody: 2.5 fl oz/10 gal | 24 H | Apply 3 qt/10 sq ft before seeding or transplanting. |
| | <i>pyraclostrobin</i> Empress | 11 | Systemic 1-3 fl oz/100 gal (drench rooted cuttings, seedlings, plugs) 2-6 fl oz /100 gal (drench herbaceous/woody plants) | 12 H | Use preventively when conditions are favorable for disease and prior to symptom development. Rotate to non-group 11 fungicide for resistance management. Do not apply more than 4.4 fl oz/1000 sq ft/year. Repeat applications as needed 7-28 days after initial application. |
| | <i>pyraclostrobin + boscalid</i> Pageant | 11 + 7 | Systemic + Contact 12-18 oz/100 gal (Soil borne) 18 oz/100 gal (Aerial) | 12 H | Use preventively. Begin applications when conditions are favorable for disease, prior to disease symptom development. Re-apply at 7-10 day intervals for aerial blight and 7-21 days for root rot. For <i>Pythium</i> and <i>Phytophthora</i> root rot, apply in tank mix with another fungicide against these diseases. |
| <i>trifloxystrobin</i> Compass O 50WDG | 11 | Systemic 1-2 oz/100 gal (Aerial) 1-2 oz/100 gal (Drench) | 12 H | For <i>Phytophthora</i> aerial blight. Continue at 7-14 day intervals for aerial blight; 14-28 days as drench for root rot. Rotate with fungicide in different chemical class (different FRAC #). | |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|-------------------------------------|---|--|---|---|--|
| Rhizoctonia root rot and web blight | <i>azoxystrobin</i> Heritage | 11 | Systemic 1-4 oz/100 gal (directed spray) 0.2-0.9 oz/100 gal (drench) | 4 H | Repeat every 7-21 days for directed spray. Use 1-2 pt of solution/sq ft surface area, every 7-28 days for drench. |
| | <i>Bacillus subtilis</i> <i>QST 713 strain</i> Cease | Bio | Contact 4-8 qt/100 gal | 4 H | Drenches for use only in greenhouses and nurseries (open or enclosed). Apply 1 pt/3” soil depth to thoroughly soak the growing medium as a drench or directed spray. Optimal when used preventively and repeated every 21-28 days during growing cycle. |
| | <i>benzovindiflupyr</i> + <i>azoxystrobin</i> Mural | 7 + 11 | Contact/Systemic 4-7 oz/100 gal (foliar spray) 5-7 oz/100 gal (directed soil spray) 2-3 oz/100 gal (drench) | 12 H | Do NOT apply to apple, crabapple, flowering cherry, privet, leatherleaf fern or other fern used for cut foliage. Apply at 7-21 day intervals for directed soil spray; 7-28 days for drench; and 7-14 days for foliar spray. |
| | <i>chlorothalonil</i> Daconil Ultrex Daconil Weatherstik Daconil Zn + many other formulations | M5 | Contact 1.4 lb/100 gal 1 3/8 pt/100 gal 2 pt/100 gal See product labels for rates. | 12 H | Use for aerial/web blight as a foliar spray. Apply at 7-14 day intervals. Do not combine with pesticides, surfactants, or fertilizers in spray tank. |
| | <i>chlorothalonil</i> + <i>thiophanate methyl</i> Spectro 90WDG | M5 + 1 | Contact/Systemic 1-2 lb/100 gal | 12 H | For use on aerial/web blight only. Do not use with mist blowers or high pressure spray equipment in greenhouses. Minimum 7-day re-treatment interval. Do not exceed 2.15 lb/A of product. |
| | <i>copper salts of fatty & rosin acids</i> Camelot O | M1 | Contact 0.5-2 gal/100 gal/A | 4 H | Discoloration of blooms may occur. Do not spray just before or during bloom periods. Apply at 7-10 day intervals. |
| | <i>cyprodinil</i> + <i>fludioxonil</i> Palladium | 9 + 12 | Systemic/Contact 2-4 oz/100 gal | 12 H | Begin applications prior to the onset of disease, and repeat applications at 7-14 day intervals if conditions remain favorable for disease development. Do not use on residential ornamentals |
| | <i>etridiazole</i> + <i>thiophanate methyl</i> Banrot 8G Banrot 40WP | 14 + 1 | Contact/Systemic 12 oz/cu yd Bedding: 4-8 oz/100 gal Woody/Foliage: 6-12 oz/100 gal | 12 H | Use low rate for bedding plants and high rate for woody and foliage plants for Banrot 8G. Drench at seeding and transplanting. Re-apply at 4-8 week intervals. |
| | <i>fludioxonil</i> Emblem Medallion WDG | 12 | Contact 1-2 oz/100 gal (foliar spray) 1 oz/100 gal (drench at seeding) 1-2 oz/100 gal (drench of cuttings and transplants) | 12 H | May stunt Impatiens and New Guinea Impatiens. May stunt some Geranium cultivars. DO NOT use on Leather Leaf Fern. Re-apply spray at 7-14 day intervals. For drench, wet top-half of medium. Re-treat at 21-28 day intervals. |
| | <i>fludioxonil</i> + <i>mefenoxam</i> Hurricane (WP) | 12 + 4 | Contact 3/4 oz/100 gal (drench at seeding) 1.5 oz/100 gal (2 packets) as drench of cuttings and transplants | 48 H | Application to Impatiens, New Guinea Impatiens, Pothos, Geranium, and Easter Lily may cause stunting and/or chlorosis. DO NOT use on Leather Leaf Fern. Make only 1 application to seedling crop prior to transplanting to larger containers. For cuttings or transplants, re-treat at 21-28 day intervals if needed. For use only in greenhouses, containers, and enclosed structures. |
| <i>fluoxastrobin</i> Disarm O | 11 | Systemic 2-4 oz/100 gal (Crown spray) 0.15-0.6/100 gal (Drench or surface spray) | 12 H | Apply at 7-21 day intervals for crown spray and 14-28 day interval for drench or surface spray application. | |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--|---|---|---|---|--|
| Rhizoctonia root rot and web blight (continued) | <i>flutolanil</i> ProStar 70WP | 7 | Systemic 3-6 oz/100 gal (drench) 3-12 oz/100 gal (aerial blight) | 12 H | Drench at 1-2 pt/sq ft. Re-apply 21-28 days after initial application, if needed. Foliar spray should be reapplied at 14-21 day intervals. |
| | <i>iprodione</i> Chipco 26019 N/G | 2 | Contact Foliar spray: 1-2 lb/A Drench: 6.5 oz/100 gal | 12 H | Do not use on Spathiphyllum or as a drench on Impatiens, New Guinea impatiens or Pothos. May cause stunting and chlorosis on some geranium cultivars. Re-apply foliar spray at 7-14 day intervals. Drench on 14-day interval with 1-2 pt of solution/sq ft. |
| | Iprodione Pro 2SE | | Foliar spray: 1-2.5 qt/100 gal Drench: 13 fl oz/100 gal | | |
| | Chipco 26019 FLO | | Foliar spray: 1-2.5 qt/100 gal Drench: 13 fl oz/100 gal | | |
| | <i>iprodione + thiophanate methyl</i> 26/36 | 2 + 1 | Contact + Systemic Foliar spray: 33-84 fl oz/100 gal Drench: 13.5 fl oz/100 gal | 12 H | Drench at seeding or transplanting. Apply 1-2 pt/sq ft. Repeat at 14 day intervals. Do not make more than 6 applications/crop/year. Do not use on <i>Spathiphyllum</i> or New Guinea Impatiens. Do not drench Impatiens, Petunia or Pothos. |
| | <i>mancozeb</i> Dithane 75DF Fore 80WP Mancozeb DG Pentathlon DF Pentathlon LF Protect DF | M3 | Contact 1-2 lb/100 gal 1.5 lb/100 gal 1.5 lb/100 gal 1-2 lb/100 gal 0.8-1.6 qt/100 gal 1-2 lb/100 gal | 24 H | Addition of a spreader sticker will improve performance. Repeat application on 7-10 day intervals. Do not use Fore on Pachysandra. |
| | <i>metconazole</i> Tourney | 3 | Systemic 1-4 oz/100 gal | 12 H | Apply to the point of drip at 14-28 day intervals. |
| | <i>polyoxin D Zn salt</i> Affirm WDG Veranda O | 19 | Systemic 0.25-0.5 lb/100 gal 0.25-0.5 lb/100 gal | 4 H | Apply as full coverage foliar spray every 7-10 days or as drench every 14-28 days. Apply prior to disease development and when conditions are conducive for disease. |
| | <i>PCNB</i> Turfcide 10G | 14 | Contact Orna. beds: 15 lb/1000 sq ft Growing media: 1-1.5 lb/cu yd | 12 H | ** Do not use on Philodendron or Pilea. Apply at seeding and/or transplant. Mix into top 2-3" of soil. Apply evenly over soil and incorporate into top 2" of soil in prepared seed bed. Repeat once 4-6 weeks later, if necessary. |
| | Terraclor 400 | | Bedding/Woody/Foliage drench: 6-12 oz/100 gal Pine seedlings: 2 pt/1000 sq ft | | |
| <i>pyraclostrobin</i> Empress | 11 | Systemic 1-3 fl oz/100 gal (drench rooted cuttings, seedlings, lugs) 2-6 fl oz /100 gal (drench herbaceous/woody plants) | 12 H | Use preventively when conditions are favorable for disease and prior to symptom development. Rotate to a non-group 11 fungicide for resistance management. Do not apply more than 4.4 fl oz/1000 sq ft/year. Repeat application as needed 7-28 days after initial application. | |
| <i>pyraclostrobin + boscalid</i> Pageant | 11 + 7 | Systemic + Contact 12-18 oz/100 gal | 12 H | Use preventively. Begin applications when conditions are favorable for disease, prior to disease symptom development. Re-apply at 7-14 interval; 7-21 days for drench. The crown and base of the plant and the soil or potting medium surrounding the crown must be thoroughly covered. | |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|---|--|------------|---|--------------------|---|
| Rhizoctonia root rot and web blight <i>(continued)</i> | <i>thiophanate methyl</i> Allban Flo 3336 F, 3336 WP, SysTec 1998 WDG OHP 66724.5F 6672 50WP + many more formulations | OHP 1 | Systemic 10-14.5 fl oz/100 gal 8-16 fl oz/100 gal (drench) 16-24 oz/100 gal (Plant dip) 8-16 oz/100 gal 16-24 oz/100 gal (Plant dip) 20 fl. oz/100 gal 10-14.5 fl oz/100 gal 8-16 oz/100 gal See product labels for rates. | 12 H | Not recommended for use on Boston fern, Swedish Ivy or Easter Cactus. Apply as a heavy spray or drench at rate of 0.5-2 pt/sq ft (100 gal/1600-400 sq ft). Applications can be re-applied at 7-14 day intervals. |
| | <i>thiophanate methyl</i> + <i>mancozeb</i> Zyban WSB | M3 + 1 | Systemic/Contact 24 oz (4 bags)/100 gal | 24 H | Apply at weekly intervals. Limit to 20 applications/year. |
| | <i>trifloxystrobin</i> Compass O 50WDG | 11 | Systemic 0.5 oz/100 gal | 12 H | Do not apply to Petunia, Violet, or New Guinea Impatiens or on Poinsettia after bract formation. Do not drench Pansy. Drench to wet upper half of medium. Repeat application in 21-28 day intervals. |
| | <i>triflumizole</i> Terraguard SC | 3 | Contact 4-8 oz/100 gal | 12 H | Apply soil drenches at 2-4 week intervals. Apply foliar sprays at 7-14 day intervals. |
| Rust leaf spots <i>(Puccinia, Uromyces, etc.)</i> | <i>azoxystrobin</i> Heritage | 11 | Systemic 1-4 oz/100 gal | 4 H | Repeat every 7-28 days. |
| | <i>Bacillus subtilis</i> QST 713 strain Cease | Bio | Contact 2-8 qt/100 gal/A 4 qt/100 gal/A (typical) | 4 H | Make applications on a 3-10 day schedule. Typical interval of 7 days. Shorten under severe disease pressure. |
| | <i>benzovindiflupyr</i> + <i>azoxystrobin</i> Mural | 7 + 11 | Contact/Systemic 4-7 oz/100 gal | 12 H | Do NOT apply to apple, crabapple, flowering cherry, privet, leatherleaf fern or other fern used for cut foliage. Apply at 7-21 day intervals. |
| | <i>captan</i> -(M4) Captan 50WP | M4 | Contact 2 lb/100 gal (carnation) | 48 H | Apply at first sign of disease at 7-10 day intervals. Shorten if frequent rains or heavy dews. |
| | <i>chlorothalonil</i> Daconil Zn Daconil Ultrex Daconil Weatherstik + many other formulations | M5 | Contact 2 pt/100 gal 1.4 lb/100 gal 1 3/8 pt/100 gal See product label for rates. | 12 H | Re-apply at 7-14 day intervals. Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Do not combine with pesticides, surfactants, or fertilizers in spray tank. |
| | <i>chlorothalonil</i> + <i>thiophanate methyl</i> Spectro 90WDG | M5 + 1 | Contact/Systemic 1-2 lb/100 gal | 12 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7-day re-treatment interval. Do not exceed 2.15 lb/A of product. |
| | <i>fenarimol</i> Rubigan A.S. | 3 | Locally Systemic 4-12 fl oz/100 gal | 12 H | Re-apply every 7-14 days beginning at green tip. |
| | <i>flutolanil</i> ProStar 70WP | 7 | Systemic 3-6 oz/100 gal | 12 H | Spray 14-21 days. Make no more than 4 applications/year. |
| | <i>fluoxastrobin</i> Disarm O | 11 | 1-4 oz/100 gal | 12 H | Apply at 7-28 day intervals regularly. Under light disease pressure, use lower rates (1-2 oz /100 gal) on a 7-14 day interval or the higher rates (3-4 oz/100 gal) on a 14-28 day interval. Under high disease pressure, use the higher rates on a 7-14 day interval. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--|---|------------|---|--------------------|--|
| Rust leaf spots (<i>Puccinia</i> , <i>Uromyces</i> , etc.) (continued) | <i>kresoxim-methyl</i> Cygnus | 11 | Systemic 3.2-6.4 oz/100 gal | 12 H | Apply strictly as a protective spray and continue on a 7-10 day interval. Addition of up to 0.06% of a non-organosilicone spreader-sticker type adjuvant may improve control. |
| | <i>mancozeb</i> Dithane 75DF Fore 80WP Mancozeb DG Pentathlon DF Pentathlon LF Protect DF | M3 | Contact 1-2 lb/100 gal 1.5 lb/100 gal 1.5 lb/100 gal 1-2 lb/100 gal 0.8-1.6 qt/A/100 gal 1-2 lb/100 gal | 24 H | Addition of a spreader sticker will improve performance. Repeat application on 7-10 day intervals. Do not use Fore on Pachysandra. |
| | <i>metconazole</i> Tourney | 3 | Systemic 1-4 oz/100 gal | 12 H | Apply to the point of drip at 14-28 day intervals. |
| | <i>mancozeb + myclobutanil</i> Clevis | M3 + 3 | Contact + Systemic 2 lb/100 gal | 24 H | Begin application at first sign of disease or when plants are well leafed out. Spray at 7-10 day intervals. Addition of spreader-binder or surfactant will improve performance. |
| | <i>myclobutanil</i> Eagle 20EW | 3 | Systemic 6-12 oz/100 gal | 24 H | Repeat application at 10-14 day intervals. |
| | <i>oxycarboxin</i> Plantvax 750WP | 7 | Contact 130g/100L | 12 H | Do not mix with insecticides or miticides. For use only in enclosed structures. Re-apply at 14-day intervals. |
| | <i>propiconazole</i> Banner Maxx II Propiconazole Strider | 3 | Systemic 5-8 fl oz/100 gal 5-8 fl oz/100 gal 5-8 fl oz/100 gal | 12 H | Do not use on geranium. Do not use in greenhouses. Apply every 14-21 days during period of infection. Spray to drip. |
| | <i>propiconazole + chlorothalonil</i> Concert II | 3 + M5 | Systemic + Contact 22-35 fl oz (1.4-2.2 pt)/100 gal | 12 H | For outdoor and landscape use only. Do not use in greenhouses. Limited host plant labeling; check label. Do not apply to African violets, begonias, Boston fern, geranium, pittosporum, schefflera. Re-apply at 14-21 day intervals. Application to blooms or tender new growth may cause injury. |
| | <i>pyraclostrobin + boscalid</i> Pageant | 11 + 7 | Systemic + contact 6-12 oz/100 gal (<i>Puccinia</i> spp, <i>Uromyces</i> spp.) 12-18 oz/100 gal (<i>Coleosporium</i>) | 12 H | Use preventively. Begin applications when conditions are favorable for disease, prior to disease symptom development. Re-apply at 7-14 day interval. |
| | <i>tebuconazole</i> Torque | 3 | Systemic 4-10 fl oz/100 gal | 12 H | Apply at least 3 times per year, 14-21 days apart, and beginning with spring bud break. Rotate with a fungicide in a different class (different FRAC #) to reduce fungicide resistance development. Do not use on African violet, begonia, Boston fern, or geranium. |
| | <i>thiophanate methyl</i> Allban Flo 3336 F, 3336 WP, SysTec 1998 WDG OHP 6672 4.5F OHP 6672 50WP + many more formulations | 1 | Systemic 10.75-20 fl oz/100 gal 12-16 fl oz /100 gal 12-16 oz/100 gal 20 fl oz/100 gal 10.75-20 fl oz/100 gal 12-16 oz/100 gal See product labels for rates. | 12 H | Apply at first sign of disease. Repeat application on 7-14 day intervals. |
| | <i>thiophanate methyl + mancozeb</i> Zyban WSB | 1 + M3 | Systemic/ Contact 24 oz/100 gal (4 Bags) | 24 H | Re-apply at weekly intervals. Limit to 20 applications per year. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--|---|------------|--|--------------------|---|
| Rust leaf spots (<i>Puccinia</i> , <i>Uromyces</i> , etc.) (continued) | <i>triadimefon</i> Bayleton 50 | 3 | Systemic 5.5 oz/275-550 gal | 12 H | Apply as full coverage spray to the point of drip. |
| | <i>trifloxystrobin</i> Compass O 50WDG | 11 | Systemic 2-4 oz/100 gal | 12 H | Apply at first sign of disease and continue at 7-14 day intervals. Rotate with fungicide in different chemical class. |
| | <i>trifloxystrobin</i> + <i>triadimefon</i> Trigo | 11 + 3 | Systemic 4.8-9 oz/100 gal (<i>Puccinia</i> , <i>Coleosporium</i>) 1.2-2.4 oz/100 gal (<i>Uromyces</i>) | 12 H | Apply to the point of drip in early spring as growth starts at 14-21 days until new growth is fully expanded (<i>Puccinia</i>). Apply intervals no shorter than 30 days to avoid flower stalk length reduction. |
| | <i>triflumizole</i> Terraguard SC Terraguard SC/LS | 3 | Contact 2-8 oz/100 gal 4-8 fl oz/100 gal | 12 H | Apply foliar sprays at 7-14 day intervals. Use high rates for initial application. |
| Rust: Cedar-Apple, other <i>Gymnosporangium</i> sp. | <i>chlorothalonil</i> Daconil Ultrex Daconil Zn Daconil Weatherstik | M5 | Contact 1.4 lb/100 gal 2 pt/100 gal 1 3/8 pt/100 gal | 12 H | Apply every 7-14 days from July to August on cedar. Apply to crabapple at 7-14 day intervals. Do not use with mist blowers or high pressure sprayer equipment in greenhouses. May discolor flowers/bracts. Do not combine with pesticides, surfactants, or fertilizers in spray tank. |
| | <i>kresoxim-methyl (11)</i> Cygnus | 11 | Systemic 3.2-6.4 oz/100 gal | 12 H | Apply strictly as a protective spray and continue on a 7-10 day interval. The addition of up to 0.06% of a non-organosilicone spreader-sticker type adjuvant may improve rust control. |
| | <i>mancozeb</i> + <i>myclobutanil</i> Clevis | M3 + 3 | Contact + Systemic 2 lb/100 gal (on crabapple) | 24 H | Begin application at first sign of disease or when plants are well leafed out. Spray at 7-10 day intervals. Addition of spreader-binder or surfactant will improve performance. |
| | <i>myclobutanil</i> Eagle 20EW | 3 | Systemic 6-12 oz /100 gal | 24 H | Apply to crabapple at leaf bud break. Repeat application at 10-14 day intervals. |
| | <i>propiconazole</i> Banner Maxx II Strider | 3 | Systemic 2-4 fl oz/100 gal 2-4 fl oz/100 gal | 12 H | Apply every 14-21 days from July-August on cedar. Apply to crabapple at 14 -21 day intervals beginning at leaf bud break in spring. |
| | <i>propiconazole</i> + <i>chlorothalonil</i> Concert II | 3 + M5 | Systemic + Contact 9-17 fl oz (0.6-1.1 pt)/100 gal | 12 H | For outdoor and landscape use only. Do not use in greenhouses. Re-apply at 14-21 day intervals. Application to tender new growth may cause injury. |
| | <i>pyraclostrobin</i> + <i>boscalid</i> Pageant | 11 + 7 | Systemic + Contact 12-18 oz/100 gal | 12 H | Use preventively. Begin applications when conditions are favorable for disease, prior to disease symptom development. Re-apply at 7-14 day interval. |
| | <i>thiophanate methyl</i> Allban Flo 3336 F, 3336 WP, SysTec 1998 WDG OHP 6672 4.5F OHP 6672 50WP + many more formulations | 1 | Systemic 10.75-20 fl oz/100gal 12-16 fl oz /100 gal 12-16 oz/100 gal 20 fl oz/100 gal 10.75-20 fl oz/100 gal 12-16 oz/100 gal See product labels for rates. | 12 H | Apply to crabapple at leaf bud break in the spring. Repeat application on 7-14 day intervals. |
| | <i>trifloxystrobin</i> Compass O 50WDG | 3 | Systemic 2-4 oz/10 gal | 12 H | Apply at first sign of disease and continue at 7-14 day intervals. Rotate with fungicide with different mode. |
| | <i>trifloxystrobin</i> + <i>triadimefon</i> Trigo | 11 + 2 | Systemic 1.2 -2.4 oz/100 gal | 12 H | Apply to the point of drip when conditions favor disease. Do not apply at intervals shorter than 30 days to avoid growth reduction. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|---|---|-----------------------------|---|--|--|
| Scab (<i>Cladosporium</i> , <i>Venturia</i> , <i>Sphaceloma</i>) | <i>azoxystrobin</i> Heritage | 11 | Systemic 1-4 oz/100 gal | 4 H | Apply every 10-28. Do not apply to apple trees. See label for tolerant crabapple cultivars as some are sensitive to fungicide. Do not make more than 2 sequential applications. |
| | <i>Bacillus subtilis</i> QST 713 strain Cease | Bio | Contact 2-8 qt/100-300 gal/A 4 qt/100-300 gal/A (typical) | 4 H | Make applications on a 3-10 day schedule. Typical interval of 7 days. Shorten under severe disease pressure. |
| | <i>chlorothalonil</i> Daconil Zn Daconil Ultrex Daconil Weatherstik + many other formulations | M5 | Contact 1.5 lb/100 gal 2 pt/100 gal 1.4 lb/100 gal 1 3/8 pt/100 gal See product label for rates. | 12 H | Re-apply at 7-14 day intervals. Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. |
| | <i>chlorothalonil</i> + <i>thiophanate methyl</i> Spectro 90WDG | M5 + 1 | Contact/Systemic 1-2 lb/100 gal | 12 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7-day re-treatment interval. Do not exceed 2.15 lb/A of product. |
| | <i>copper hydroxide</i> CuPRO 2005 T/N/O Nu-Cop 50 DF Nu-Cop HB Nu-Cop 3L | M1 | Contact 0.75-2 lb A 1 lb/100 gal 0.5 lb/100 gal 1.33 pt/100 gal | 24-48 H (check label) | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette or other phosphite/phosphante fungicides. Begin application at the first sign of disease and repeat at 7-14 day intervals. |
| | <i>copper sulfate</i> Basicop | M1 | Contact 2-4 lb/100 gal | 24 H | For pyracantha only: Apply preventively. Repeat application every 7-10 days and after rains. |
| | fenarimol Rubigan A.S. | 3 | Locally systemic 4-12 fl oz/100 gal | 12 H | Re-apply every 10-14 days beginning at green tip. |
| | <i>fluoxastrobin</i> Disarm O | 11 | 1-4 oz/100 gal | 12 H | Apply at 7-28 day intervals regularly. Under light disease pressure, use lower rates (1-2 oz /100 gal) on a 7-14 day interval or the higher rates (3-4 oz /100 gal) on a 14-28 day interval. Under high disease pressure, use the higher rates on a 7-14 day interval. |
| | <i>kresoxim-methyl</i> Cygnus | 11 | Systemic 1-1.6 oz /100 gal | 12 H | Begin applications at bud break or where environmental conditions are favorable for disease development and continue on a 10-14 day interval. |
| | <i>mancozeb</i> Dithane 75DF Fore 80WP Mancozeb DG Pentathlon DF Pentathlon LF Protect DF | M3 | Contact 1-2 lb/100 gal 1.5 lb/100 gal 1.5 lb/100 gal 1-2 lb/100 gal 0.8-1.6 qt/A/100 gal 1-2 lb/100 gal | 24 H | Addition of a spreader sticker will improve performance. Repeat application on 7-10 day intervals. Do not use Fore on Pachysandra. |
| | <i>mancozeb</i> + <i>myclobutanil</i> Clevis | M3 + 3 | Contact + Systemic 2 lb/100 gal | 24 H | Begin application at first sign of disease or when plants are well leafed out. Spray at 7-10 day intervals. Addition of spreader-binder or surfactant will improve performance. |
| | <i>metconazole</i> Tourney | 3 | Systemic 1-4 oz/100 gal | 12 H | Apply to the point of drip at 14-28 day intervals. |
| <i>myclobutanil</i> Eagle 20EW | 3 | Systemic 6-12 oz/100 gal | 24 H | Repeat application at 10-14 day intervals. | |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--|---|------------|---|--------------------|--|
| Scab (<i>Cladosporium</i> , <i>Venturia</i> , <i>Sphaceloma</i>) (continued) | <i>polyoxin D Zn salt</i> Affirm WDG | 19 | Systemic 0.5 lb/100 gal | 12 H | Apply as full coverage foliar spray every 7-10 days. Apply prior to disease development and when conditions are conducive. |
| | <i>propiconazole</i> Banner Maxx II Strider | 3 | Systemic 2-4 fl oz/100 gal (<i>Venturia</i>) 8-12 fl oz/100 gal (<i>Cladosporium</i>) | 24 H | Apply every 14-21 days when conditions are favorable for disease development. |
| | <i>propiconazole + chlorothalonil</i> Concert II | 3 + M5 | Systemic + Contact 22-35 fl oz (1.4-2.2 pt)/100 gal | 12 H | For outdoor and landscape use only. Do not use in greenhouses. Limited host plant labeling; check label. Do not apply to African violets, begonias, Boston fern, geranium, pittosporum, schefflera. Re-apply at 14-21 day intervals. Application to blooms or tender new growth may cause injury. |
| | <i>potassium bicarbonate</i> MilStop | | Contact 2.5-5 lb/100 gal | 1 H | Apply by increasing 0.25 lb/application not exceeding 5 lb. Repeat applications at 1-2 week intervals. See label for precautions for use on poinsettia, impatiens, and pansy. |
| | <i>pyraclostrobin + boscalid</i> Pageant | 11 + 7 | Systemic + Contact 6-12 oz/100 gal | 12 H | Use preventively. Begin applications when conditions are favorable for disease, prior to disease symptom development. Re-apply at 7-10 day interval. |
| | <i>thiophanate methyl</i> Allban Flo 3336 F, 3336 WP, SysTec 1998 WDG OHP 6672 4.5F OHP 6672 50WP + many more formulations | 1 | Systemic 10.75-20 fl oz/100gal 12-16 fl oz/100 gal 12-16 oz/100 gal 20 fl oz /100 gal 10.75-20 fl oz/100 gal 12-16 oz/100 gal See product label for rates. | 12 H | Apply as buds break in the spring. Repeat application on 7-14 day intervals during disease period. Rotations with chlorothalonil or propiconazole can be utilized. |
| | <i>thiophanate methyl +mancozeb</i> Zyban WSB | 1 + M3 | Systemic/Contact 24 oz/100 gal (4 Bags) | 24 H | Re-apply at weekly intervals. Limit to 20 applications/year. |
| | <i>trifloxystrobin</i> Compass O 50WDG | 11 | Systemic 2-4 oz/100 gal | 12 H | Do not apply to Poinsettia. Apply at first sign of disease and continue at 7-14 day intervals. Rotate with fungicide with different mode of action. |
| | <i>triflumizole</i> Terraguard SC Terraguard SC/LS | 3 | Systemic 4-8 oz/100 gal 4-8 oz/100 gal | 12 H | Apply foliar sprays at 7-14 day intervals. Use high rate for initial application. |
| Sclerotinia blight, stem rot (<i>Sclerotinia spp.</i>) | <i>azoxystrobin</i> Heritage | 11 | Systemic 1-4 oz/100 gal (directed spray) 0.2-0.9 oz/100 gal (drench) | 4 H | Repeat every 7-21 days for directed spray. Use 1-2 pt of solution/sq ft of surface area, every 7-28 days for drench. |
| | <i>chlorothalonil</i> Daconil Zn Daconil Ultrex Daconil Weatherstik + many other formulations | M5 | Contact 2 pt/100 gal 1.4 lb/100 gal 1 3/8 pt/100 gal See product label for rates. | 12 H | Re-apply at 7-14 day intervals. Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. |
| | <i>chlorothalonil + thiophanate methyl</i> Spectro 90WDG | M5 + 1 | Contact/Systemic 1-2 lb/100 gal | 12 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7-day re-treatment interval. Do not exceed 2.15 lb/A of product. |
| | <i>cyprodinil + fludioxonil</i> Palladium | 9 + 12 | Systemic/Contact 2-4 oz/100 gal | 12 H | Begin applications prior to the onset of disease. Repeat applications at 7-14-day intervals if conditions remain favorable for disease development. Ensure full spray coverage of all stems and inner areas of plants to the soil/media level. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|---|---|------------|---|--------------------------|--|
| Sclerotinia blight, stem rot (<i>Sclerotinia spp.</i>) (continued) | <i>fluoxastrobin</i> Disarm O | 11 | 2-4 oz/100 gal | 12 H | Apply at 7-28 day intervals regularly. Under light disease pressure, use lower rates (1-2 oz/100 gal) on a 7-14 day interval or the higher rates (3-4 oz/100 gal) on a 14-28 day interval. Under high disease pressure, use the higher rates on a 7-14 day interval. |
| | <i>iprodione + thiophanate methyl</i> 26/36 | 2 + 1 | Systemic Drench: 13.5 fl oz/100 gal | 12 H | Do not use as a drench on impatiens, petunia, or Pothos. |
| | <i>metconazole</i> Tourney | 3 | Systemic 1-4 oz/100 gal | 12 H | Apply to the point of drip at 14-28 day intervals. |
| | PCNB Turficide 10G | 14 | Contact 20 lb/100 sq ft | 12 H | Do not use on Philodendron or Pilea. Apply at seeding and/or transplant. Mix into top 2-3" of soil. Apply 1 week prior to planting. Apply evenly over soil and mix into soil at a depth of 4". |
| | <i>thiophanate methyl</i> Allban Flo 3336 F, 3336 WP, SysTec 1998 WDG OHP 6672 4.5F OHP 6672 50WP + many more formulations | 1 | Systemic 10.75-20 fl oz/100gal 8-16 fl oz/100 gal (Drench) 8-16 oz/100 gal 16-24 oz/100 gal (Plant dip) 0.3-0.8 lb/100 gal 10.75-20 fl oz/100 gal 12-16 oz/100 gal See product label for rates. | 12 H | Apply as a heavy spray or drench at the rate of 0.5-2 pt/sq ft (100 gal/1,600-400 sq ft). Repeat applications may be made at 7-14 day intervals. Do not apply to plug trays or seeding flats at the time of seeding. |
| | <i>triticonazole</i> Trinity | 3 | Systemic 8-12 fl oz/100 gal | 12 H | Stem areas of the plants must be thoroughly covered until run-off. |
| Septoria leaf spot see Cercospora leaf spot as fungicides are the same. | | | | | |
| Shot Hole leaf spot (fungal and bacterial) | <i>copper sulfate</i> Basicop | M1 | Contact 2-4 lb/100 gal/A | 24 H | Apply preventively, and repeat application every 7-10 days and after rains. |
| | <i>copper hydroxide</i> CuPRO 2005 T/N/O Nu-Cop 50 DF Nu-Cop HB Nu-Cop 3L | M1 | Contact 0.75-2 lb/A 1.0 lb/100 gal 0.5 lb/100 gal 1 1/3 pt/100 gal | 24-48 H (check label) | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette or other phosphite/phosphante fungicides. Begin application at the first sign of disease and repeat at 7-14 day intervals. |
| | <i>copper hydroxide + mancozeb</i> Junction | M1 + M3 | Contact 1.5-3 lb/A | 48 H | Do not apply in spray solutions having pH less than 6.5. Re-apply at 7-14 day intervals. |
| | <i>mancozeb</i> Dithane 75DF Fore 80WP Mancozeb DG Pentathlon DF Pentathlon LF Protect DF | M3 | Contact 1-2 lb/100 gal 1.5 lb/100 gal 1.5 lb/100 gal 1-2 lb/100 gal 0.8-1.6 qt/A/100 gal 1-2 lb/100 gal | 24 H | Addition of a spreader sticker will improve performance. Repeat application on 7-10 day intervals. Do not use Fore on Pachysandra. |
| | <i>metconazole</i> Tourney | 3 | Systemic 1-4 oz/100 gal | 12 H | Apply to the point of drip at 14-28 day intervals. |
| | | | | | |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--|---|--|---|--|---|
| Southern Blight (<i>Sclerotium rolfsii</i>) | <i>azoxystrobin</i> Heritage | 11 | Systemic 1-4 oz/100 gal (directed spray) 0.2-0.9 oz/100 gal (drench) | 4 H | Repeat every 7-21 days for directed spray. Apply 1-2 pt solution/sq ft surface area, every 7-28 days for drench. |
| | <i>benzovindiflupyr + azoxystrobin</i> Mural | 7 + 11 | Contact/Systemic 5-7 oz/100 gal (directed soil spray) 2-3 oz/100 gal (drench) | 12 H | Do NOT apply to apple, crabapple, flowering cherry, privet, leatherleaf fern or other fern used for cut foliage. Apply at 7-21 day intervals for directed soil spray or 7-28 days for a drench application. |
| | <i>cyprodinil + fludioxonil</i> Palladium | 9 + 12 | Systemic/Contact 2-4 oz/100 gal | 12 H | Begin applications prior to the onset of disease. Repeat applications at 7-14-day intervals if conditions remain favorable for disease development. Ensure full spray coverage of all stems and inner areas of plants to the soil/media level. |
| | <i>flutolanil</i> ProStar 70WP | 7 | Systemic 3-6 oz/100 gal | 12 H | Drench at 1-2 pt/sq ft. Re-apply 21-28 days after initial application, if needed. |
| | <i>fludioxonil</i> Emblem Medallion WDG | 12 | Contact 2 pt/sq ft 2 pt/sq ft | 12 H | Wet entire medium. Mix with rate for Subdue MAXX. |
| | <i>fludioxonil + mefenoxam</i> Hurricane WP | 12 + 4 | Contact 0.75 oz/100 gal (drench at seeding) 1.5 oz/100 gal (2 packets) as drench of cuttings and transplants + Add 1 oz Medallion WDG fungicide/100 gal solution | 48 H | Application to Impatiens, New Guinea Impatiens, Pothos, Geranium, and Easter Lily may cause stunting and/or chlorosis. Do not use on leather leaf fern. Add Medallion fungicide at 1 oz/100 gal water as a tank mix. Make only one application to seedling crop prior to transplanting to larger containers. For cuttings or transplants, re-treat at 21-28 day intervals if needed. For use only in greenhouses, containers, and enclosed structures. |
| | <i>fluoxastrobin</i> Disarm O | 11 | Systemic 2-4 oz/100 gal (Crown spray) 0.15-0.6/100 gal (Drench or surface spray) | 12 H | Apply at 7-21 day intervals for crown spray and 14-28 day interval for drench or surface spray application. |
| | <i>PCNB</i> Terraclor 400 | 14 | Contact Drench: 3 pt/100 gal Lilies: 6-9 pt/100 gal | 12 H | Do not use on Philodendron or Pilea. Broadcast evenly on soil and incorporate into top 2-3" by roto-tilling or discing. Repeat once 4-6 weeks later, if necessary. |
| | <i>tebuconazole</i> Torque | 3 | Systemic 4-10 fl oz/100 gal | 12 H | Apply at least 3 times per year, 14-21 days apart, beginning with spring bud break. Rotate with a fungicide in a different class (different FRAC #) to reduce fungicide resistance development. Do not use on African violet, begonia, Boston fern, or geranium. |
| <i>thiophanate methyl</i> 3336 F, 3336 WP, SysTec 1998 WDG OHP 6672 4.5 F OHP 6672 50WP + many more formulations | 1 | Systemic 16-24 fl oz/100 gal 16-24 oz/100 gal 0.8 lb/100 gal 10.75-20 fl oz/100gal 12-16 oz/100 gal See product label for rates. | 12 H | Not recommended for use on Boston fern, Swedish Ivy or Easter Cactus. Apply as a heavy spray or drench at rate of 0.5-2 pt/sq ft (100 gal/1,600-400 sq ft). Applications can be re-applied at 7-14 day intervals. | |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|---|--|---|---|---|--|
| Thielaviopsis (Black root rot) | <i>etrudiazole + thiophanate methyl</i> Banrot 8G Banrot 40WP | 14 + 1 | Contact/Systemic 12 oz/cu yd Bedding: 4-8 oz/100 gal Woody/Foliage: 6-12 oz/100 gal | 12 H | Apply in volume to saturate rooting medium. Irrigate immediately. Protects against <i>Thielaviopsis</i> and <i>Pythium</i> but is not as effective against <i>Thielaviopsis</i> as thiophanate methyl only products that have a higher concentration of active ingredient. Apply at 4-8 week intervals. |
| | fludioxonil Emblem Medallion WDG | 12 | Contact 2 pt/sq ft 2 pt/sq ft | 12 H | Wet entire medium. Re-apply at 21-28 day intervals. Mix with rate for Subdue MAXX. |
| | <i>fludioxonil + mefenoxam</i> Hurricane (WP) | 12 + 4 | Contact 0.75 oz/100 gal (drench at seeding) 1.5 oz/100 gal (2 packets) as drench of cuttings and transplants + Add 1 oz Medallion WDG fungicide/100 gal solution | 48 H | Application to Impatiens, New Guinea Impatiens, Pothos, Geranium, and Easter Lily may cause stunting and/or chlorosis. Do not use on leather leaf fern. Add Medallion fungicide at 1 oz/100 gal water as a tank mix. Make only one application to seedling crop prior to transplanting to larger containers. For cuttings or transplants, re-treat at 21-28 day intervals if needed. For use only in greenhouses, containers, and enclosed structures. |
| | <i>polyoxin D Zn salt</i> Affirm WDG | 19 | Systemic 0.5 lb/100 gal | 4 H | Apply as a soil drench every 14-28 days. |
| | <i>thiophanate methyl</i> Allban Flo 3336 F 3336 WP SysTec 1998 WDG OHP 6672 4.5 F OHP 6672 50WP + many more formulations | 1 | Systemic 7.5-20 oz/100 gal 16-24 fl oz/100 gal 16-24 oz/100 gal 20 fl oz /100 gal 7.5-20 fl oz/100 gal 12-16 oz/100 gal See product label for rates. | 12 H | Not recommended for use on Boston fern, Swedish Ivy or Easter Cactus. Apply as a heavy spray or drench at rate of 0.5-2 pt/sq ft (100 gal/1,600-400 sq ft). Applications can be re-applied at 7-14 day intervals. Do not apply to plug trays or seedling flats at the time of seeding. Use highest labeled rate for better control. |
| | triflumizole Terraguard SC | 3 | Contact 2-8 oz/100 gal | 12 H | Apply soil drenches at 2-4 week intervals. Use higher rate under heavy disease pressure. |
| | Volutella blight | <i>chlorothalonil</i> Daconil Zn Daconil Ultrex Daconil Weatherstik + many other formulations | M5 | Contact 2 pt/100 gal 1.4 lb/100 gal 1 3/8 pt/100 gal See product label for rates. | 12 H |
| <i>chlorothalonil + thiophanate methyl</i> Spectro 90WDG | | M5 + 1 | Contact/Systemic 1-2 lb/100 gal | 24 H | Do not use with mist blowers or high pressure spray equipment in greenhouses. May discolor flowers/bracts. Minimum 7-day re-treatment interval. Do not exceed 2.15 lb/A of product. |
| <i>copper hydroxide</i> CuPRO 2005 T/N/O Nu-Cop 50 DF Nu-Cop HB Nu-Cop 3L | | M1 | Contact 0.75-2 lb/A 1 lb/100 gal 0.5 lb/100 gal 1 1/3 pt/100 gal | 24-48 H (check label) | Do not apply in spray solutions having pH less than 6.5. Do not tank mix with Aliette or other phosphite/phosphante fungicides. Begin application at the first sign of disease and repeat at 7-14 day intervals. |
| <i>copper sulphate pentahydrate</i> Phyton 27 | | M1 | Contact 1.5-2.5 oz/100 gal | 24 H | Re-apply at 3-5 day intervals. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DISEASE | FUNGICIDE | MOA | GENERAL RATE | REI (hours) | REMARKS |
|--|---|------------|---|------------------------|---|
| Volutella blight <i>(continued)</i> | <i>mancozeb</i> Dithane 75DF Fore 80WP Mancozeb DG Pentathlon DF Pentathlon LF Protect DF | M3 | Contact 1-2 lb/100 gal 1.5 lb/100 gal 1.5 lb/100 gal 1-2 lb/100 gal 0.8-1.6 qt/A/100 gal 1-2 lb/100 gal | 24 H | Addition of a spreader sticker will improve performance. Repeat application on 7-10 day intervals. Do not use Fore on Pachysandra. |
| | <i>mancozeb + myclobutanil</i> Clevis | M3 + 3 | Contact + Systemic 2 lb/100 gal | 24 H | Begin application at first sign of disease or when plants are well leafed out. Spray at 7-10 day intervals. Addition of spreader-binder or surfactant will improve performance. |
| | <i>thiophanate methyl + mancozeb</i> Zyban WSB | 1 + M3 | Systemic/Contact 24 oz /100 gal (4 Bags) | 24 H | Re-apply at weekly intervals. Limit to 20 applications/year. |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

PART B: PLANT USE INDEX

Jean L. Williams-Woodward, Extension Plant Pathologist

PART B: Provides a listing of fungicides labeled for use on specific plants. Plant names are listed alphabetically. To find a fungicide labeled for use on a specific plant, locate the plant name within the listing and the disease you want to control. Several fungicides may be labeled to control the same disease. Several new general categories have been added to the listing. These include “**Bedding & Flowering Plants**,” “**Herbaceous Ornamentals**,” “**Woody Ornamentals**,” “**Foliage Plants**,” “**Interiorscapes**,” and “**Bulbs**.” Fungicides labeled for use under these broad categories are listed. If it is uncertain whether a fungicide can be safely used on a plant species, a small number of plants should be treated to test for phytotoxicity prior to treating the entire crop. Always refer to the fungicide label for directions.

NONE OF THE MATERIALS LISTED IN THIS GUIDE ARE RESTRICTED USE PESTICIDES. THEY MAY BE USED BY HOMEOWNERS AND COMMERCIAL GROWERS. However, packaging and cost may be much more than a homeowner will want or ever need.

FOLLOW ALL LABEL DIRECTIONS CAREFULLY. PAY PARTICULAR ATTENTION TO RE-ENTRY PERIODS AND RE-USE INTERVALS.

General Categories:

| BEDDING & FLOWERING PLANTS (Annuals, Perennials) (Greenhouse, Nursery, Landscape) | |
|--|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Discula</i> , etc) | Cleary 3336, Daconil Ultrex, Domain, Fungo, Milstop, Protect, Spectro 90 |
| Bacterial leaf spot or blight | Aliette T&O, Alude, Prodigy |
| Black root rot (<i>Thielaviopsis basicola</i>) | Cleary 3336, Domain, Terraguard SC |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Cleary 3336, Daconil Ultrex, Decree, Domain, Milstop, Protect |
| Downy mildew | Aliette T&O, Alude, Fosphite, Prodigy, Protect, Vital |
| Fungal Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , etc. | Cleary 3336, Daconil Ultrex, Domain, Milstop, Protect, Spectro 90, Terraguard SC |
| Fusarium root or stem rot | Domain, Fosphite |
| Fusarium wilt | Cleary 3336, Spectro 90 |
| Powdery mildew | Cleary 3336, Compass O, Domain, Fosphite, Milstop, Terraguard SC, Cygnus |
| Pythium, Phytophthora diseases | Aliette, Alude, Fosphite, Resyst, Subdue GR, Subdue MAXX, Terrazole, Truban, Vital |
| Rhizoctonia root rot, web or aerial blight | Cleary 3336, Defend, Fosphite, Revere, Terraguard SC |
| Rust leaf spots | Cleary 3336, Daconil Ultrex, Protect, Spectro 90 |
| Scab (<i>Venturia</i> , <i>Sphaceloma</i> , <i>Cladosporium</i>) | Cleary 3336, Daconil Ultrex, Domain, Milstop, Protect |
| Southern blight (<i>Sclerotium rolfsii</i>) | Defend, Revere |
| Volutella blight | Protect |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| HERBACEOUS ORNAMENTALS (Greenhouse, Nursery, Landscape) | |
|--|---|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Consyst, Daconil Ultrex, Domain, Milstop, Torque |
| Bacterial leaf spot or blight | Aliette T&O, Alude, Fosphite, Prodigy |
| Black root rot (<i>Thielaviopsis</i>) | Cleary 3336, Domain, Terraguard SC |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Consyst, Daconil Ultrex, Decree, Domain, Milstop |
| Downy mildew | Aliette T&O, Alude, Fosphite, Prodigy, Vital |
| Fungal Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , etc. | Banner Maxx, Consyst, Daconil Ultrex, Domain, Milstop, Terraguard, SC, Torque |
| Fusarium root or stem rot | Domain, Fosphite |
| Fusarium wilt | Cleary 3336 |
| Powdery mildew | Banner Maxx, Compass O, Consyst, Domain, Fosphite, Milstop, Terraguard SC, Cygnus (greenhouse only), Torque |
| Pythium, Phytophthora diseases | Aliette T&O, Alude, Fosphite, Prodigy, Resyst, Subdue GR, Vital |
| Rhizoctonia root rot, web or aerial blight | Domain, Fosphite, Terraguard SC |
| Rust leaf spots | Banner Maxx, Consyst, Daconil Ultrex, Plantvax (greenhouse), Torque |
| Scab (<i>Venturia</i> , <i>Sphaceloma</i> , <i>Cladosporium</i>) | Consyst, Daconil Ultrex, Domain, Milstop, Torque |
| Southern blight (<i>Sclerotium rolfsii</i>) | Revere |
| WOODY ORNAMENTALS (Deciduous/Evergreen Shrubs) (Greenhouse, Nursery, Landscape) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Cleary 3336, Consyst, Daconil Ultrex, Daconil, Domain, Milstop, Protect, Torque |
| Bacterial leaf spot or blight, fire blight | Aliette T&O, Alude, Fosphite, Prodigy |
| Black root rot (<i>Thielaviopsis</i>) | Cleary 3336, Domain, Terraguard SC |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Cleary 3336, Consyst, Daconil, Weather Stik, Domain, Protect |
| Botryosphaeria dieback | Protect |
| Downy mildew | Aliette T&O, Alude, Fosphite, Prodigy, Protect, Vital |
| Flower blight (Ovulinia, Ciborinia) | Banner Maxx, Cleary 3336, Consyst, Daconil Ultrex, Domain, Spectro 90, Terraclor, Torque |
| Fungal Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , <i>Cristulariella</i> , etc. | Consyst, Banner Maxx, Daconil, Weather Stik, Domain, Milstop, Terraguard SC, Torque |
| Fusarium root or stem rot | Cleary 3336, Domain, Fosphite |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| WOODY ORNAMENTALS (continued) (Deciduous/Evergreen Shrubs) (Greenhouse, Nursery, Landscape) | |
|--|---|
| <i>Phomopsis</i> on junipers, twig blight | Cleary 3336, Consyst, Domain, Milstop, Protect |
| Pine needle blight/needle cast | Cleary 3336, Daconil, Weather Stik, Protect |
| Powdery mildew | Banner Maxx, Cleary 3336, Consyst, Daconil, Weather Stik, Daconil Ultrex, Domain, Fosphite, Milstop, Spectro 90, Terraguard, Torque, Cygnus (greenhouse only) |
| Pythium, Phytophthora diseases | Aliette T&O, Alude, Banol, Fosphite, Prodigy, Resyst, Subdue GR, Subdue MAXX, Vital |
| Rhizoctonia root rot, web or aerial blight | Cleary 3336, Daconil Ultrex, Defend, Domain, Fosphite, Revere, Spectro 90, Terraguard SC, Turficide 10G |
| Rust leaf spots | Cleary 3336, Consyst, Daconil, Weather Stik, Daconil Ultrex, Protect, Spectro 90, Torque |
| Scab (<i>Venturia</i> , <i>Sphaceloma</i> , <i>Cladosporium</i>) | Cleary 3336, Consyst, Daconil, Weather Stik, Daconil Ultrex, Domain, Milstop, Protect, Spectro 90 |
| Southern blight (<i>Sclerotium rolfsii</i>) | Defend, Revere, Terraclor, Torque, Turficide 10G |
| Volutella blight | Protect |
| FOLIAGE PLANTS | |
| Bacterial leaf spot or blight | Aliette T&O, Alude, Phyton 27, Prodigy |
| Black root rot (<i>Thielaviopsis</i>) | Terraguard SC |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | OHP Chipco 26019, Daconil, Weather Stik, Decree, Milstop, Phyton 27, Spectro 90 |
| Downy mildew | Aliette T&O, Alude, Prodigy, Vital |
| Fungal Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , etc. | OHP Chipco 26019, Daconil, Weather Stik, Milstop, Spectro 90, Strike, Terraguard SC |
| Powdery mildew | Milstop, Strike, Terraguard SC |
| Pythium, Phytophthora diseases | Aliette T&O, Alude, Prodigy, Subdue GR, Subdue MAXX, Terrazole, Truban, Vital |
| Rhizoctonia root rot, web or aerial blight | OHP Chipco 26019, Phyton 27, Revere, Spectro 90, Terraguard SC |
| Rust leaf spots | Daconil, Weather Stik, Strike |
| Southern blight (<i>Sclerotium rolfsii</i>) | Revere |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| INTERIORSCAPES | |
|---|--|
| Anthracnose diseases – leaf and stem spots, diebacks <i>(Colletotrichum)</i> | Cleary 3336, Daconil, Weather Stik, Milstop |
| Black root rot <i>(Thielaviopsis)</i> | Banrot, Cleary 3336, Terraguard SC |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Cleary 3336, Milstop |
| Fungal Leaf spots – <i>Phyllosticta, Septoria, Cercospora, Alternaria, etc.</i> | Banrot, Cleary 3336, Daconil, Weather Stik, Milstop, Terraguard SC |
| Fusarium root or stem rot | Banrot |
| Fusarium wilt | Cleary 3336 |
| Powdery mildew | Bayleton, Cleary 3336, Milstop, Terraguard SC |
| Pythium, Phytophthora diseases | Banrot, Subdue GR, Subdue MAXX |
| Rhizoctonia root rot, web or aerial blight | Banrot, Terraguard SC |
| Rust leaf spots | Bayleton, Cleary 3336, Daconil, Weather Stik, Plantvax |
| BULBS | |
| Anthracnose diseases – leaf and stem spots, diebacks <i>(Colletotrichum)</i> | Cleary 3336, Daconil, Weather Stik, Domain, Fungo Flo |
| Black root rot <i>(Thielaviopsis)</i> | Cleary 3336, Domain |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Cleary 3336, Daconil, Weather Stik, Domain, Ornalin |
| Fungal Leaf spots – <i>Phyllosticta, Septoria, Cercospora, Alternaria.</i> | Cleary 3336, Daconil, Weather Stik, Domain |
| Fusarium root or stem rot | Domain |
| Fusarium wilt | Cleary 3336 |
| Powdery mildew | Cleary 3336, Domain |
| Rhizoctonia root rot, web or aerial blight | Domain, Revere, Turfgo Engage |
| Rust leaf spots | Cleary 3336, Daconil, Weather Stik, |
| Southern blight <i>(Sclerotium rolfsii)</i> | Revere, Turfgo Engage |
| ABELIA | |
| Leaf spots – <i>Cercospora</i> | Camelot-O, Eagle, Heritage Pageant |
| Powdery mildew | Camelot-O, Eagle, Pageant |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

Specific Plant Categories:

| ABUTILON (Velvet leaf/Flowering Maple) <u>DO NOT APPLY: EAGLE</u> | |
|---|--|
| Anthracnose | Pentathlon |
| Leaf Spot | Pentathlon |
| Rhizoctonia root rot, web or aerial blight | Palladium |
| Rust | Pentathlon |
| ACHILLEA (See Yarrow) | |
| AFRICAN VIOLET (Saintpaulia) <u>DO NOT USE: Banner Maxx, CONCERT, TORQUE</u> | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Disarm, Insignia, Pageant, Protect |
| Bacterial leaf spot or blight | Camelot-O |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Camelot-O, Clevis, Decree, Disarm, Dithane, Fore, Mancozeb, Medallion, Pageant, Pentathlon, Phyton 27, Protect, Trinity TR |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Disarm, Empress, Hurricane, Insignia, Medallion, Pageant, Trinity TR |
| Leaf spots – <i>Corynespora</i> , <i>Myrothecium</i> | Camelot-O, Disarm, Insignia, Medallion, Pageant, Pentathlon, Protect, Trinity TR |
| Powdery mildew | Bayleton 50, Bayleton Flo, Camelot-O, Clevis, Disarm, Eagle, Insignia, Pageant, Phyton 27, Pipron, Strike 50WDG, Trinity TR |
| Pythium, Phytophthora diseases | Banol, Banrot 8G, Banrot 40WP, Disarm, Empress, Hurricane, Insignia, Orvego, Pageant, Phyton 27, Stature SC, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | Banrot 8G, Banrot 40WP, Disarm, Empress, Hurricane, Insignia, Medallion, Pageant, Protect, Trinity TR, Turfcide |
| AGERATUM | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Chipco 26019, Disarm, Dithane, Fore, Iprodione, Mancozeb, Medallion, MilStop, OHP 6672, Palladium, Protect |
| Downy Mildew | A lude, Disarm, Fosphite |
| Leaf spots – <i>Cercospora</i> , <i>Alternaria</i> , etc. | 26/36, 26GT, Allban Flo, Bayleton 50, Bayleton Flo, Chipco 26019, Disarm, Iprodione, Medallion, MilStop, OHP 6672, Palladium, Pentathlon, Protect, Strike 50WDG |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Cygnus (greenhouse only), Disarm, Eagle, Fosphite, Heritage, MilStop, OHP 6672, Palladium, Strike 50WDG |
| Pythium, Phytophthora diseases | Alude, Banol, Banrot 8G, Banrot 40WP, Disarm, Fosphite, Hurricane, Resyst, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 8G, Banrot 40WP, Chipco 26019, Disarm, Fosphite, Hurricane, Iprodione, Medallion, OHP 6672, Palladium, Pentathlon, Protec |
| Rust leaf spots | Allban Flo, Bayleton 50, Bayleton Flo, Dithane, Eagle, Fore, Heritage, Mancozeb, OHP 6672, Pentathlon, Protect, Strike 50WDG |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

Specific Plant Categories:

| AGLAONEMA, (see Chinese Evergreen) | |
|---|---|
| AJUGA (Bugleweed) | |
| Anthracnose | Compass O, Insignia, MilStop |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 40WP |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Iprodione, MilStop |
| Fusarium root or stem rot | Banrot 40WP, Empress, Insignia, Iprodione |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | 26/36, 26GT, Chipco 26019, Insignia, Iprodione, MilStop |
| Phoma basal or root rot | |
| Powdery mildew | Compass O, Heritage, Insignia, MilStop, Rubigan |
| Pythium, Phytophthora diseases | Banrot 40WP, Empress, Insignia, Terrazole, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 40WP, Chipco 26019, Compass O, Empress, Insignia, Iprodione |
| Southern blight (<i>Sclerotium rolfsii</i>) | |
| ALYSSUM (Gold Dust, Basket of Gold) | |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP, Hurricane, Medallion |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Cease, Chipco 26019, Iprodione, Medallion, MilStop, Palladium, Phytan 27, Protect |
| Downy mildew | Cease, Compass O, FenStop, Fosphite, Micora, Orvego, Phytan 27, Protect, Stature SC |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Cease, Empress, Fosphite, Heritage, Hurricane, Iprodione, Medallion, Palladium |
| Leaf spots – <i>Alternaria</i> , <i>Cercospora</i> , etc. | 26/36, 26GT, Cease, Chipco 26019, Dithane, Fore, Iprodione, Mancozeb, Medallion, MilStop, Palladium, Protect |
| Powdery Mildew | Pentathlon |
| Pythium, Phytophthora diseases | Banol, Banrot 8G, Banrot 40WP, Cease, Empress, FenStop, Fosphite, Hurricane, Micora, Orvego, Protect, Stature SC, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Cease, Chipco 26019, Compass O, Empress, Fosphite, Heritage (directed spray), Hurricane, Iprodione, Medallion, Palladium, Protect, Terrazole |
| ALTHAEA (see Hollyhock) | |
| AMORPHA (see False Indigo) | |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| ANDROMEDA (see Pieris) | |
|--|---|
| ANEMONE | |
| Rust leaf spots | Eagle |
| ANTHURIUM | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Camelot-O, Clevis, Dithane, Fore, Mancozeb, Pentathlon, Protect |
| Bacterial leaf spot or blight | Aliette WDG, Alude, Camelot-O, Resyst |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Protect |
| Downy Mildew | Alude, Fosphite |
| Pythium, Phytophthora diseases | Alude, Fosphite, Protect, Resyst, Stature SC, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | Camelot-O, Fosphite, Protect |
| ANTIRRHINUM (see Snapdragon) | |
| APHELANDRA (see Zebra plant) | |
| APPLE, Flowering (see Crabapple) | |
| Arabian Violet (see EXACUM) | |
| ARBORVITAE (Thuja) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Heritage, Insignia, Protect |
| Bacterial Blight | Alude, Fosphite |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Pentathlon, Protect |
| Botryosphaeria dieback | Protect |
| Coryneum Blight | Basicop, Bordeaux Mix, Insignia, Pentathlon |
| Downy Mildew | Alude, Fosphite, Heritage, Insignia, Micora |
| Fusarium root or stem rot | Banrot 40WP, Empress, Fosphite, Insignia |
| Needle Blight | Bordeaux Mix, Camelot-O, Clevis, CuPRO 2005, Dithane, Fore, Junction, Nu-Cop 3L, Pentathlon, Protect |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| ARBORVITAE (Thuja) (continued) | |
|--|---|
| Phomopsis or tip or needle blight | Basicop, Bordeaux Mix, Clevis, CuPRO 2005, Dithane, Fore, Insignia, Junction, Mancozeb, Nu-Cop 3L, Protect |
| Pythium, Phytophthora diseases | Alude, Banrot 40WP, Empress, Fosphite, Insignia, Micora, Protect, Resyst, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | Banrot 40WP, Empress, Fosphite, Insignia, Protect |
| ARTEMISIA (Wormwood) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Daconil Ultrex, Daconil, Weather Stik, Heritage, Spectro 90, Thalonil |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, Chipco 26019, Daconil Ultrex, Iprodione, Daconil, Weather Stik, Spectro 90, Thalonil |
| Fusarium root or stem rot | Iprodione, Spectro 90 |
| Leaf spots – <i>Cercospora</i> | Chipco 26019, Daconil Ultrex, Daconil, Weather Stik, Heritage, Iprodione, Spectro 90, Thalonil |
| Powdery mildew | Spectro 90 |
| Pythium, Phytophthora diseases | Resyst, Subdue GR, Subdue MAXX |
| Rhizoctonia root rot, web or aerial blight | 26/36, Chipco 26019, 26GT, Daconil Ultrex, Daconil, Weather Stik, Iprodione, Spectro 90, Thalonil |
| Rust leaf spots | Daconil Ultrex, Daconil, Weather Stik, Spectro 90 |
| ASH | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Banner Maxx, Clevis, Daconil Ultrex, Daconil, Weather Stik, Daconil ZN, Dithane, Fore, Junction, OHP 6672, Pentathlon, Protect, Spectro 90, Thalonil, Zyban WSB |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Daconil Ultrex, Daconil, Weather Stik, Daconil ZN, Mancozeb, OHP 6672, Phyton 27, Spectro 90, Thalonil |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Cylindrosporium</i> , <i>Actinopelte</i> , <i>Mycosphaerella</i> | Allban Flo, Banner Maxx, Clevis, Daconil Ultrex, Daconil, Weather Stik, Daconil ZN, Fore, Mancozeb, OHP 6672, Pentathlon, Protect, Spectro 90, Strike, Thalonil |
| Powdery mildew | Banner Maxx, Bayleton, Concert, Daconil ZN, OHP 6672, Spectro 90, Strike, Thalonil |
| Rhizoctonia root rot, web or aerial blight | Daconil Ultrex, Daconil, Weather Stik, Daconil ZN, Mancozeb, OHP 6672, Protect, Spectro 90, Thalonil |
| Rust leaf spots | Banner Maxx, Daconil Ultrex, Daconil, Weather Stik, Daconil ZN, Dithane, Eagle, Fore, Mancozeb, OHP 6672, Spectro 90, Strike, Systhane |
| ASTER | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Camelot, Daconil, Weather Stik, Mancozeb, Pentathlon, Protect, Spectro 90 |
| Black root rot (Thielaviopsis) | Banrot, Medallion |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, Chipco 26019, Daconil, Weather Stik, Dithane, Fore, Iprodione, Mancozeb, Medallion, Phyton 27, Protect, Spectro 90, Zyban WSB |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| ASTER (continued) | |
|--|--|
| Downy mildew | Camelot, Cupro 2005, Mancozeb, Phyton 27, Protect, Resyst, Subdue Maxx |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Cease, Fosphite, Iprodione, Medallion, Spectro 90, Zyban WSB |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , | 26/36, 26GT, Basicop, Cease, Chipco 26019, CuPRO 2005, Dithane, Fore, Iprodione, Mancozeb, Medallion, MilStop, Pentathlon, Protect, Spectro 90, Zyban WSB |
| Powdery mildew | Cease, Compass O, Cygnus, Eagle, Fosphite, Kumulus, MilStop, Phyton 27, Spectro 90 |
| Pythium, Phytophthora diseases | Alude, Banol, Banrot 8G, Banrot 40WP, Cease, Fosphite, Hurricane, Phyton 27, Protect, Resyst, Spectro 90, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Cease, Chipco 26019, Compass O, Fosphite, Hurricane, Iprodione, Medallion, Pentathlon, Protect, Spectro 90, Zyban WSB |
| Rust leaf spots | Bayleton 50, Bayleton Flo, Cease, Clevis, Compass O, Dithane, Eagle, Fore, Heritage, Mancozeb, Pentathlon, Protect, Spectro 90, Strike 50WDG |
| AUCUBA | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Clevis, Dithane, Fore, Insignia, Mancozeb, Pageant, Pentathlon, Protect |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Pageant, Protect |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Empress, Heritage, Insignia, Pageant |
| Leaf spots – <i>Alternaria</i> , <i>Cercospora</i> | Clevis, Dithane, Fore, Insignia, Mancozeb, Pageant, Pentathlon, Protect |
| Pythium, Phytophthora diseases | Banrot 8G, Banrot 40WP, Empress, Insignia, Pageant, Protect, Proturf/Progrow Pythium Control, Subdue GR, Subdue MAXX |
| Rhizoctonia root rotweb or aerial blight | Banrot 8G, Banrot 40WP, Empress, Heritage, Insignia, Pageant, Protect |
| Southern blight (<i>Sclerotium rolfsii</i>) | Heritage |
| AZALEA & RHODODENDRON | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Basicop, Cease, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Insignia, MilStop, OHP 6672, Pageant, Pentathlon, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Torque, Tourney |
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, Banrot 8G, Banrot 40WP, Hurricane, Medallion, OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Basicop, Cease, Chipco 26019, Compass, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Iprodione, Junction, Medallion, MilStop, Nu-Cop 3L, OHP 6672, Pageant, Pentathlon, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Trinity TR, Zyban WSB |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| AZALEA & RHODODENDRON (continued) | |
|---|--|
| Cylindrocladium rot | 26/36, 26GT, Chipco 26019, Clevis, Dithane, Fore, Hurricane, Iprodione, Mancozeb, OHP 6672, Pageant, Pentathlon, Phyton 27, Protect, Trinity TR |
| Flower blight (<i>Ovulinia</i>) | Allban Flo, Banner Maxx, Banner Maxx II, Basicop, Bayleton 50, Bayleton Flo, Captan 4L, Captan 50, Clevis, Concert, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Eagle, Fore, Junction, Mancozeb, OHP 6672, Pentathlon, Propiconazole, Protect, Spectro 90, Strike 50WDG, Systec 1998, Thalonil 90DF, Thalonil 6L, Torque, Zyban WSB |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Cease, Empress, Fosphite, Heritage, Hurricane, Insignia, Iprodione, OHP 6672, Pageant, Spectro 90, Trinity TR, Zyban WSB |
| Leaf gall, leaf blister (<i>Exobasidium</i>) | Basicop, Junction, Pageant, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Ramularia</i> , <i>Corynespora</i> , etc. | 26/36, 26GT, Allban Flo, Banner Maxx, Banner Maxx II, Basicop, Bayleton 50, Bayleton Flo, Bordeaux Mix, Captan 4L, Captan 50, Cease, Chipco 26019, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Iprodione, Junction, Mancozeb, MilStop, Nu-Cop 3L, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Torque, Tourney, Trinity TR, Zyban WSB |
| Phomopsis twig blight | Allban Flo, Junction, MilStop, OHP 6672, Tourney |
| Powdery mildew | Allban Flo, Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Cease, Clevis, Compass O, Concert, CuPRO 2005, Cygnus, Eagle, Fosphite, Heritage, Insignia, Junction, MilStop, Nu-Cop 3L, OHP 6672, Pageant, Propiconazole, Spectro 90, Strike 50WDG, Torque, Tourney, Trinity TR |
| Pythium, Phytophthora diseases | Adorn, Banol, Banrot 8G, Banrot 40WP, Cease, Clevis, Compass O, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Empress, FenStop, Fore, Fosphite, Heritage, Hurricane, Insignia, Mancozeb, Micora, Nu-Cop 3L, Orvego, Pageant, Pentathlon, Phyton 27, Protect, Resyst, Spectro 90, Stature SC, Subdue GR, Subdue MAXX, Terrazole, Thalonil 90DF, Thalonil 6L, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 8G, Banrot 40WP, Chipco 26019, Cease, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Fosphite, Heritage, Hurricane, Insignia, Iprodione, OHP 6672, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Trinity TR, Zyban WSB |
| Rust leaf spots | Allban Flo, Cease, Compass O, Insignia, Junction, OHP 6672, Pageant, Protect, Torque, |
| Southern blight (<i>Sclerotium rolfsii</i>) | Heritage, Hurricane, Medallion, Torque |
| BABY'S BREATH (Gypsophila) | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Dithane, Fore, Iprodione, Mancozeb, MilStop, Pentathlon, Protect, Spectro 90 |
| Downy Mildew | Alude, Fosphite, Insignia |
| Leaf spots – <i>Alternaria</i> , <i>Cercospora</i> , etc. | 26/36, 26GT, Chipco 26019, Insignia, Iprodione, MilStop, Protect, Spectro 90 |
| Pythium, Phytophthora diseases | Alude, Banrot 40WP, Empress, Fosphite, Insignia, Protect, Resyst, Spectro 90, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 40WP, Chipco 26019, Empress, Fosphite, Insignia, Iprodione, Protect, Spectro 90 |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| BARBERRY | |
|---|---|
| <u>DO NOT USE: KOCIDE or other copper hydroxide products</u> | |
| Leaf spots – <i>Phyllosticta</i> | Bordeaux Mix, Compass O, Insignia, Junction, Pageant, Trinity TR |
| Powdery Mildew | Bayleton 50, Bayleton Flo, Eagle, Heritage, Insignia, Pageant, Phyton 27, Strike 50WDG, Trinity TR |
| Rhizoctonia root rot, web, or aerial blight | Insignia, Pageant, Phyton 27, Trinity TR |
| Rust leaf spots | Bayleton 50, Bayleton Flo, Eagle, Heritage, Insignia, Pageant, Strike |
| BASSWOOD (Linden) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> ,) | Banner Maxx, Banner Maxx II, Basicop, Bordeaux Mix, CuPRO 2005, Junction, Tourney |
| Fireblight | Alude |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Banner Maxx, Banner Maxx II, Basicop, Bordeaux Mix, CuPRO 2005, Junction, Pentathlon, Propiconazole, Tourney |
| Powdery mildew | Banner Maxx, Tourney |
| Pythium, Phytophthora diseases | Alude |
| BEE BALM (see Monarda) | |
| BEGONIA | |
| <u>DO NOT USE: Banner Maxx, Banner Maxx, CONCERT, TORQUE</u> | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Cease, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Insignia, MilStop, Heritage, OHP 6672, Pageant, Palladium, Pentathlon, Protect, Spectro 90, Thalonil 90Df, Thalonil 6L |
| Bacterial leaf spot or blight | Cease, CuPRO 2005, Junction, Nu-Cop 3L, Phyton 27 |
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, Banrot 8G, Banrot 40WP, Medallion, OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Allban Flo, Cease, Clevis, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Dithane, Fore, Junction, Mancozeb, Medallion, MilStop, OHP 6672, Pageant, Palladium, Pentathlon, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Downy Mildew | Alude, Cease, Fosphite, Heritage, Insignia, Orvego, Pageant |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Disarm, Empress, Fosphite, Hurricane, Insignia, Medallion, OHP 6672, Pageant, Palladium, Spectro 90, Trinity TR, Zyban WSB |
| Leaf spots – <i>Alternaria</i> , <i>Cercospora</i> , etc. | Allban Flo, Basicop, Bordeaux Mix, Captan 4L, Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Heritage, Insignia, Medallion, MilStop, OHP 6672, Pageant, Palladium, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Cease, Clevis, Compass O, CuPRO 2005, Daconil Zn, Disarm, Eagle, Fosphite, Heritage, Insignia, MilStop, OHP 6672, Pageant, Palladium, Phyton 27, Pipron, Rubigan, Spectro 90, Strike 50WDG, Trinity TR |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| BEGONIA (continued) | |
|--|---|
| DO NOT USE: Banner Maxx, Banner Maxx, CONCERT, TORQUE | |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Cease, Disarm, Empress, Fosphite, Hurricane, Insignia, Orvego, Pageant, Protect, Resyst, Spectro 90, Stature SC, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Banrot 8G, Banrot 40WP, Cease, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Empress, Fosphite, Hurricane, Insignia, Medallion, OHP 6672, Pageant, Palladium, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR |
| Southern blight (<i>Sclerotium rolfsii</i>) | Disarm, Hurricane, Medallion, Palladium |
| BERGAMOT (see Monarda) | |
| BIRCH | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Pentathlon, Protect, Tourney |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Phyton 27, Protect, Tourney |
| Botryosphaeria dieback | Protect |
| Fire blight | Alude |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Cylindrosporium</i> , etc. | Pentathlon, Protect, Tourney |
| Powdery mildew | Bayleton 50, Bayleton Flo, Heritage, Strike 50WDG, Tourney |
| Rhizoctonia root rot, web or aerial blight | Protect, Tourney |
| Rust leaf spots | Bayleton 50, Bayleton Flo, Eagle, Heritage, Junction, Protect, Strike 50WDG, Tourney |
| BLEEDING HEART (Dicentra) | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Medallion, Palladium, Spectro 90 |
| Leaf spot (<i>Alternaria</i> , <i>Cercospora</i>) | Medallion, Palladium, Spectro 90 |
| Rhizoctonia root rot, aerial blight | Medallion (foliar application only; for drench test for phytotoxicity), Palladium, Spectro 90 |
| BOUGAINVILLEA | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | CuPRO 2005, Heritage, Nu-Cop 3L, Pentathlon, Spectro 90 |
| Bacterial leaf spot or blight | Alude, CuPRO 2005, Fosphite, Nu-cop 3L, Phyton 27, Resyst |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Phyton 27, Spectro 90 |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| BOUGAINVILLE (continued) | |
|--|--|
| Downy Mildew | Alude, Fosphite, Micora |
| Leaf spots – <i>Cladosporium</i> , <i>Septoria</i> , <i>Cercosporidium</i> , etc. | Dithane, Fore, Heritage, Mancozeb, Spectro 90 |
| Powdery mildew | Fosphite, Phyton 27 |
| Pythium, Phytophthora diseases | Alude, Fosphite, Micora, Resyst, Spectro 90 |
| Rhizoctonia root rot, web or aerial blight | Fosphite, Phyton 27, Spectro 90 |
| BOXWOOD | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Cease, Heritage, Insignia, MilStop, Pageant, Protect |
| Bacterial Blight | Alude, Cease, Fosphite |
| Black root rot (Thielaviopsis) | Banrot 8G, Banrot 40WP |
| Botryosphaeria dieback | Pageant, Protect |
| Downy Mildew | Alude, Cease, Fosphite, Heritage, Insignia, Micora, Pageant |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Cease, Empress, Fosphite, Insignia, Iprodione, Pageant, Pentathlon |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Macrophoma</i> , <i>Phoma</i> , etc. | 26/36, 26GT, Basicop, Cease, Chipco 26019, CuPRO 2005, Dithane, Fore, Heritage, Insignia, Iprodione, Mancozeb, MilStop, Pageant, Pentathlon, Protect |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Cease, Empress, Fosphite, Insignia, Micora, Pageant, Protect, Resyst, Subdue GR, Subdue MAXX, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Cease, Chipco 26019, Empress, Fosphite, Heritage, Insignia, Iprodione, Pageant, Protect |
| Southern blight (<i>Sclerotium rolfsii</i>) | |
| Volutella blight | Pentathlon, Protect |
| BUCKEYE (Aesculus spp., Horse Chestnut) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Junction, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Botryosphaeria dieback | Protect |
| Leaf spots – <i>Guignardia</i> , <i>Septoria</i> , <i>Cercospora</i> | Clevis, Daconil Ultrex, Daconil Weatherstik, Dithane, Fore, Junction, Mancozeb, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Powdery mildew | Bayleton 50, Bayleton Flo, Eagle, Spectro 90 Strike 50WDG |
| Rhizoctonia root rot, web or aerial blight | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Rust leaf spots | Protect, Spectro 90 |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| BUDDLEIA (Butterfly Bush) | |
|---|---|
| Downy mildew | Heritage, Insignia, Micora, Pageant |
| Fusarium | Empress, Pageant |
| Leaf spot- <i>Cladosporium</i> | Compass O, Heritage, Insignia, Pageant |
| Pythium, Phytophthora Diseases | Empress, Micora, Pageant |
| Rhizoctonia | Empress, Pageant |
| BUGLEWEED (see Ajuga) | |
| CACTUS | |
| DO NOT USE: CLEARY 3336 (Haitora, Easter cactus), OHP 6672 (Easter cactus) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | |
| Bacterial leaf spot or blight | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Iprodione |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Iprodione |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | 26/36, 26GT, Chipco 26019, Iprodione |
| Pythium, Phytophthora diseases | Banrot 8G, Banrot 40WP, Subdue GR, Subdue MAXX, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Chipco 26019, Iprodione |
| CACTUS, CHRISTMAS (Schumbergera, Zygocactus) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> ,) | Heritage, Pageant, Pentathlon, Protect, Spectro 90 |
| Bacterial leaf spot or blight | Fosphite, Phytan 27, Resyst |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 40WP, Hurricane, Medallion |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Medallion, Pageant, Phytan 27, Protect, Spectro 90 |
| Fusarium root or stem rot | Banrot 40WP, Heritage, Hurricane, Medallion, Pageant, Pentathlon |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | Camelot-O, Heritage, Medallion, Pageant, Pentathlon, Protect, Spectro 90 |
| Pythium, Phytophthora diseases | Banrot 40WP, Fosphite, Hurricane, Pageant, Protect, Resyst, Spectro 90, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | Banrot 40WP, Fosphite, Heritage, Hurricane, Medallion, Pageant, Protect, Spectro 90 |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| CALADIUM | |
|---|---|
| Bacterial Leaf Spot | Camelot-O |
| Black root rot (<i>Thielaviopsis</i>) | Hurricane, Medallion, OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Camelot-O, Daconil Ultrex, Medallion, OHP 6672, Pageant, Palladium, Spectro 90 |
| Downy Mildew | Alude, Fosphite, Insignia, Micora, Pageant |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Empress, Fosphite, Heritage, Hurricane, Insignia, Medallion, OHP 6672, Pageant, Palladium, Spectro 90 |
| Leaf spots – <i>Alternaria</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | Daconil Ultrex, Insignia, Medallion, OHP 6672, Pageant, Palladium, Spectro 90 |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Empress, Fosphite, Hurricane, Insignia, Micora, Pageant, Resyst, Spectro 90, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | Banrot 8G, Banrot 40WP, Camelot-O, Compass O, Daconil Ultrex, Empress, Fosphite, Heritage, Hurricane, Insignia, Medallion, OHP 6672, Pageant, Palladium, Spectro 90 |
| Southern blight (<i>Sclerotium rolfsii</i>) | Heritage, Hurricane, Medallion, Palladium |
| CALCEOLARIA (Slipper flower, Lady's purse, Slipperwort) | |
| Rhizoctonia root rot, web or aerial blight | |
| Southern blight (<i>Sclerotium rolfsii</i>) | |
| CALENDULA (Pot marigold) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> ,) | MilStop, Palladium |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP, Hurricane, Medallion |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Iprodione, Medallion, MilStop, Palladium |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Hurricane, Iprodione, Medallion, Palladium |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , etc. | 26/36, 26GT, Chipco 26019, Eagle, Iprodione, Kumulus, Medallion, MilStop, Palladium |
| Powdery mildew | Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Kumulus, MilStop, Palladium, Propiconazole, Rubigan, Strike 50WDG, |
| Pythium, Phytophthora diseases | Banrot 8G, Banrot 40WP, Hurricane, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Chipco 26019, Hurricane, Iprodione, Medallion, Palladium |
| Rust leaf spots | Bayleton 50, Bayleton Flo, Rubigan, Strike 50WDG |
| Southern blight (<i>Sclerotium rolfsii</i>) | Hurricane, Medallion, Palladium |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

CALIBRACHOA (Training petunia)-see PETUNIA

CAMELLIA

| | |
|--|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Banner Maxx, Compass O, CuPRO 2005, Heritage, Insignia, Junction, Nu-Cop 3L, Pageant, Pentathlon, Protect, Spectro 90, Torque, Tourney |
| Bacterial Leaf Spot | CuPRO 2005, Junction, Nu-Cop 3L |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90Df, Thalonil 6L, Zyban WSB |
| Botryosphaeria dieback | Bordeaux Mix, Pageant, Protect |
| Flower blight (<i>Ciborinia</i> , <i>Sclerotinia</i>) | Bayleton 50, Bayleton Flo, Captan 4L, Captan 50, Clevis, Daconil Ultrex, Daconil Weather Stik, Daconil Zn, Dithane, Fore, Insignia, Junction, Mancozeb, Protect, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L, Torque, Zyban WSB |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Empress, Insignia, Pageant, Spectro 90 |
| Leaf gall, leaf blister (<i>Exobasidium</i>) | Pageant, Pentathlon, Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Cercospora</i> , etc. | Heritage, Insignia, Pageant, Pentathlon, Propiconazole, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Torque, Tourney |
| Pythium, Phytophthora diseases | Adorn, Banrot 8G, Banrot 40WP, CuPRO 2005, Empress, Insignia, Micora, Orvego, Pageant, Protect, Spectro 90, Stature SC, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | Banrot 8G, Banrot 40WP, Compass O, Empress, Insignia, Pageant, Protect, Spectro 90, Tourney |
| Southern blight (<i>Sclerotium rolfsii</i>) | Torque |

CANDYTUFT (Iberis)

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|--------------------------------|-----------------------------|
| Pythium, Phytophthora diseases | Orvego, Pageant, Stature SC |
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CANNA

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|---|--------------------------------|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Insignia, OHP 6672 |
| Bacterial leaf spot or blight | CuPRO 2005, Nu-Cop 3L |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Allban Flo, OHP 6672 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , etc. | Allban Flo, Insignia, OHP 6672 |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| CANNA (continued) | |
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| Rhizoctonia root rot, web or aerial blight | Allban Flo, Empress, Insignia, OHP 6672 |
| Rust leaf spots | Allban Flo, Bayleton 50, Bayleton Flo, Insignia, OHP 6672, Strike 50WDG |
| Southern blight (<i>Sclerotium rolfsii</i>) | Terraclor |
| CARDINAL FLOWER (see Lobelia) | |
| CARNATION (Dianthus) | |
| Anthracnose diseases (<i>Colletotrichum</i>) | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Insignia, MilStop, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Bacterial leaf spot or blight | Agri-Mycin 17, CuPRO 2005, Junction, Nu-Cop 3L, Phytan 27 |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP, Hurricane, Medallion |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Basicop, Chipco 26019, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Iprodione, Junction, Medallion, MilStop, Nu-Cop 3L, Pageant, Palladium, Pentathlon, Phytan 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Downy mildew | Alude, Disarm, Fosphite, Insignia, Orvego, Pageant, Phytan 27, Protect, Resyst, Thalonil 90DF, Thalonil 6L, Trinity TR |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Empress, Fosphite, Hurricane, Insignia, Iprodione, Medallion, Pageant, Palladium, Pentathlon, Spectro 90, Trinity TR, Zyban WSB |
| Leaf spots – <i>Corynespora</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , <i>Heterosporium</i> | 26/36, 26GT, Captan 4L, Captan 50, Chipco 26019, Clevis, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Dithane, Fore, Insignia, Iprodione, Junction, Mancozeb, Medallion, MilStop, Nu-Cop 3L, Pageant, Palladium, Pentathlon, Protect, Spectro 90, Strike, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Powdery mildew | Bayleton 50, Bayleton Flo, Clevis, Disarm, Eagle, Fosphite, Heritage, Insignia, Kumulus, MilStop, Pageant, Palladium, Phytan 27, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L, Trinity TR |
| Pythium, Phytophthora diseases | Alude, Banol, Banrot 8G, Banrot 40WP, Disarm, Empress, Fosphite, Hurricane, Insignia, Resyst, Orvego, Pageant, Protect, Spectro 90, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Empress, Fosphite, Hurricane, Insignia, Iprodione, Medallion, Pageant, Palladium, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR |
| Rust leaf spots | Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Captan 4L, Captan 50, Clevis, Cygnus, Disarm, Dithane, Eagle, Fore, Heritage, Insignia, Mancozeb, Pageant, Pentathlon, Plantvax, Propiconazole, Protect, Spectro 90, Strike 50WDG |
| Southern blight (<i>Sclerotium rolfsii</i>) | Disarm, Hurricane, Medallion, Palladium |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| CARISSA (Natal Plum) | |
|--|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Spectro 90 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | Spectro 90 |
| Powdery mildew | Spectro 90 |
| Pythium, Phytophthora diseases | Spectro 90, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | Spectro 90 |
| CATALPA | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Eagle, Junction |
| Powdery mildew | Eagle, Pipron |
| CATHARANTHUS (Vinca—Flowering annual) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Cease, Heritage, Insignia, Pageant, Palladium, Protect |
| Bacterial leaf spot or blight | Cease |
| Black root rot (<i>Thielvaiaopsis</i>) | Cease, Hurricane, Medallion |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Cease, Compass O, Medallion, Pageant, Palladium, Protect, Zyban WSB |
| Downy mildew | Alude, Cease, FenStop, Fosphite, Heritage, Insignia, Micora, Orvego, Pageant, Protect |
| Fusarium root or stem rot | Cease, Empress, Fosphite, Hurricane, Insignia, Medallion, Pageant, Palladium, Zyban WSB |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Alternaria</i> , etc. | Cease, Compass O, Fosphite, Heritage, Insignia, Medallion, Pageant, Palladium, Protect, Zyban WSB |
| Phomopsis Stem Blight | CuPRO 2005 |
| Powdery mildew | Cease, Fosphite, Insignia, Pageant, Palladium |
| Pythium, Phytophthora diseases | Alude, Banol, Cease, Compass O, Empress, FenStop, Fosphite, Hurricane, Insignia, Micora, Orvego, Pageant, Protect, Stature SC, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | Cease, Compass O, Empress, Fosphite, Hurricane, Insignia, Medallion, Pageant, Palladium, Protect, Zyban WSB |
| Southern blight (<i>Sclerotium rolfsii</i>) | Hurricane, Medallion, Palladium |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| CEANOTHUS (Redroot) | |
|--|--|
| Bacterial Blight | Alude, Fosphite |
| Downy Mildew | Alude, Fosphite, Micora |
| Powdery mildew | Fosphite, Heritage |
| Pythium, Phytophthora diseases | Alude, Fosphite, Micora, Resyst, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP |
| CEDAR | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Heritage, Insignia, Protect |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Botran 75W, Protect |
| Botryosphaeria dieback | Protect |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Bayleton 50, Bayleton Flo, Bordeaux Mix, Clevis, Compass O, Dithane, Fore, Heritage, Insignia, Mancozeb, Protect, Strike 50WDG |
| Needle blight (<i>Phomopsis</i> , <i>Passalora</i> syn. <i>Cercosporidium</i>) | Clevis, CuPRO 2005, Dithane, Fore, Heritage, Mancozeb, Protect |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Empress, Fosphite, Insignia, Protect, Resyst |
| Rhizoctonia root rot, web or aerial blight | Banrot 8G, Banrot 40WP, Empress, Fosphite, Insignia, Protect |
| Rust (control not necessary or usually recommended) | Basicop, Bordeaux Mix, Compass O, Heritage, Insignia, Pentathlon, Protect |
| CELOSIA (Cockscomb) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Palladium, Protect |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP, Medallion |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Compass O, Medallion, Palladium, Protect |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Medallion, Palladium |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Dithane, Fore, Mancozeb, Medallion, Palladium, Pentathlon, Protect |
| Pythium, Phytophthora diseases | Banol, Banrot 8G, Banrot 40WP, Protect, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | Banrot 8G, Banrot 40WP, Compass O, Medallion, Palladium, Protect |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| CHERRY (Flowering & Sand) | |
|---|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Bordeaux Mix, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, OHP 6672, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Bacterial leaf spot or blight, fire blight | Basicop, Bordeaux Mix, CuPRO 2005 |
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Iprodione, MilStop, OHP 6672, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Botryosphaeria dieback | Pageant, Protect |
| Flower Blight | Banner Maxx, Banner Maxx II, Concert, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Pentathlon |
| Fusarium root or stem rot | Allban Flo, Empress, Insignia, Iprodione, OHP 6672, Pageant, Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Coccomyces</i> , etc. | 26/36, 26GT, Allban Flo, Banner Maxx, Banner Maxx II, Chipco 26019, Concert, Cygnus, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Eagle, Heritage, Insignia, Iprodione, MilStop, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Powdery mildew | Allban Flo, Compass O, Cygnus, Eagle, Insignia, MilStop, OHP 6672, Pageant, Spectro 90, Tourney |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Insignia, Iprodione, OHP 6672, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Rust leaf spots | Rust leaf spots Allban Flo, Insignia, OHP 6672, Pageant, Protect O, Spectro 90, Tourney |
| Scab (<i>Venturia</i> , <i>Sphaceloma</i> , <i>Cladosporium</i>) | Allban Flo, Compass O, Insignia, MilStop, Pageant, Pentathlon, Protect, Spectro 90, Tourney |
| CHERRY LAUREL | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Junction, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Botryosphaeria dieback | Protect |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Junction, Kumulus, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Powdery Mildew | Cygnus, Kumulus |
| Pythium, Phytophthora diseases | Protect, Spectro 90, Terrazole |
| Rhizoctonia root rot, web or aerial blight | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Shot hole (fungal and bacterial) | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Protect st 2/8/2015 10:38 AM |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| CHESTNUT | |
|--|--|
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | Insignia, Pageant |
| Powdery mildew | Bayleton 50, Bayleton Flo, Fosphite, Insignia, Pageant, Strike 50WDG |
| Pythium, Phytophthora Diseases | Alude, Empress, Fosphite, Insignia, Pageant |
| CHINESE EVERGREEN (Aglaonema) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Camelot-O, Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Bacterial leaf spot or blight | Alude, Camelot-O, Cease, CuPRO 2005, Fosphite, Resyst |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Downy Mildew | Alude, Cease, Fosphite, Heritage |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Cease, Fosphite, Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Myrothecium</i> , etc. | Camelot-O, Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Cease, Fosphite, Protect, Resyst, Spectro 90, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | Banrot 8G, Banrot 40WP, Camelot-O, Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Fosphite, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| CHRYSANTHEMUM and OSTEOSPERMUM (Cape Daisy) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Heritage, Insignia, MilStop, OHP 6672, Pageant, Palladium, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Bacterial leaf spot or blight or wilt | Agri-mycin 17, Cease, CuPRO 2005, Phytan 27, Resyst |
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, Banrot 8G, Banrot 40WP, Hurricane, Medallion, OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Botran 75W, Captan 50, Captan 4L, Cease, Chipco 26019, Clevis, Compass O, Cupro 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Dithane, Fore, Iprodione, Junction, Mancozeb, Medallion, MilStop, Nu-Cop 3L, OHP 6672, Pageant, Pentathlon, Phytan 27, Palladium, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Downy Mildew | Alude, Cease, Disarm, Fosphite, Heritage, Orvego, Pageant |
| Flower Blight | Banner Maxx, Banner Maxx II, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Insignia, OHP 6672 |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Cease, Disarm, Empress, Fosphite, Heritage, Hurricane, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Palladium, Spectro 90, Trinity TR, Zyban WSB |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

CHRYSANTHEMUM and OSTEOSPERMUM (Cape Daisy) (continued)

| | |
|--|--|
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , <i>Cylindrosporium</i> , <i>Phyllosticta</i> , etc. | 26/36, 26GT, Allban Flo, Basicop, Bordeaux Mix, Captan 4L, Captan 50, Cease, Chipco 26019, Compass O, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Heritage, Insignia, Iprodione, Junction, Mancozeb, Medallion, MilStop, Nu-Cop 3L, OHP 6672, Pageant, Palladium, Pentathlon Protect, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Cease, Disarm, Fosphite, Insignia, MilStop, OHP 6672, Pageant, Palladium, Phytan 27, Pipron, Rubigan, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L, Trinity TR |
| Pythium, Phytophthora diseases | Alude, Banol, Banrot 8G, Banrot 40WP, Cease, Disarm Empress, Fosphite, Hurricane, InsigniaOrvego, Pageant, Protect, Resyst, Stature SC, Spectro 90, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 8G, Banrot 40WP, Cease, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Empress, Fosphite, Hurricane, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Palladium, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Rust leaf spots | Allban Flo, Bayleton 50, Bayleton Flo, Cease, Clevis, Compass O, Disarm, Dithane, Eagle, Fore, Insignia, Mancozeb, OHP 6672, Pageant, Pentathlon, Plantvax, Protect, Rubigan, Spectro 90, Strike 50WDG |
| Southern blight (<i>Sclerotium rolfsii</i>) | Disarm, Hurricane, Medallion, Palladium |

CINERARIA

| | |
|--|--|
| Anthracnose | MilStop |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, Chipco 26019, 26GT, Iprodione, MilStop, Phytan 27 |
| Downy mildew | |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | 26/36, 26GT, Chipco 26019, Iprodione, MilStop |
| Powdery mildew | Bayleton 50, Bayleton Flo, MilStop, Strike 50WDG |
| Rhizoctonia root rot, web or aerial blight | 26/36, Chipco 26019, 26GT, Iprodione |

CISSUS (Grape Ivy)

| | |
|--|--|
| Anthracnose | Anthracnose Camelot-O |
| Bacterial leaf spot or blight or wilt | Alude, Camelot-O, CuPRO 2005, Fosphite, Resyst |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Camelot-O, Zyban WSB |
| Downy Mildew | Alude, Camelot-O, Fosphite |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Zyban WSB |
| Powdery mildew | Camelot-O, Fosphite |
| Pythium, Phytophthora diseases | Alude, Fosphite, Resyst |
| Rhizoctonia root rot, web or aerial blight | Camelot-O, Fosphite, Zyban WSB |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| CLEMATIS | |
|---|--|
| Leaf Spots | Kumulus, MilStop |
| Powdery mildew | Cygnus |
| CLETHRA | |
| Leaf spots – <i>Alternaria</i> , <i>Cercospora</i> | Heritage |
| COCKSCOMB (see Celosia) | |
| COLEUS | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | Allban Flo, Disarm, Heritage, MilStop, OHP 6672, Pageant, Palladium, Protect |
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, Banrot 8G, Banrot 40WP, Hurricane, Medallion, OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Compass O, Disarm, Iprodione, Medallion, MilStop, OHP 6672, Pageant, Palladium, Pentathlon, Phyton 27, Protect |
| Downy mildew | Adorn, Alude, Disarm, Fosphite, Heritage, Micora, Pageant, Phyton 27, Protect, Stature SC, Resyst |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Disarm, Fosphite, Hurricane, Iprodione, Medallion, OHP 6672, Pageant, Palladium |
| Leaf spots – <i>Phyllosticta</i> , <i>Alternaria</i> , etc. | Allban Flo, 26/36, Chipco 26019, 26GT, Disarm, Heritage, Iprodione, Medallion, MilStop, OHP 6672, Pageant, Palladium, Pentathlon, Protect |
| Pythium, Phytophthora diseases | Alude, Banol, Banrot 8G, Banrot 40WP, Disarm, Fosphite, Hurricane, Micora, Pageant, Protect, Resyst, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 8G, Banrot 40WP, Chipco 26019, Compass O, Disarm, Fosphite, Hurricane, Iprodione, Medallion, OHP 6672, Pageant, Palladium, Protect |
| COLUMBINE | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Insignia, MilStop, Protect |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Iprodione, MilStop, Pentathlon, Phyton 27, Protect |
| Downy Mildew | Alude, Fosphite, Insignia |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Ascochyta</i> , etc. | 26/36, 26GT, Chipco 26019, Insignia, Iprodione, Kumulus, MilStop, Pentathlon, Protect |
| Powdery mildew | Cygnus, Fosphite, Insignia, MilStop, Phyton 27 |
| Pythium, Phytophthora diseases | Alude, Empress, Fosphite, Insignia, Protect, Resyst |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Empress, Fosphite, Insignia, Iprodione, Pentathlon, Protect |
| Rust leaf spots | Eagle, Insignia, Pentathlon, Protect |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| CONE FLOWER (see Echinacea) | |
|--|---|
| CORAL BELLS (Heuchera) | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Iprodione, MilStop |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Ramularia</i> , etc. | 26/36, 26GT, Chipco 26019, Insignia, Iprodione, MilStop |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Empress, Insignia, Iprodione |
| Southern blight (<i>Sclerotium rolfsii</i>) | Terraclor 400 |
| CORDYLINE | |
| Anthracnose | Camelot-O |
| Cercospora leaf spot | Camelot-O, Clevis, Dithane, Fore, Mancozeb, Pentathlon, Protect |
| Downy Mildew | Orvego |
| Pythium, Phytophthora Diseases | Orvego |
| COREOPSIS (Tickseed) | |
| Botrytis blight (grey mold) | Allban Flo, Compass O, Medallion, OHP 6672, Pageant, Phytan 27 |
| Downy mildew | Compass O, Insignia, Micora, Pageant, Phytan 27 |
| Leaf spot – <i>Cercospora</i> , <i>Septoria</i> , <i>Phyllosticta</i> | Allban Flo, Compass O, Insignia, Medallion, OHP 6672, Pageant |
| Powdery mildew | Allban Flo, Compass O, Cygnus, Insignia, OHP 6672, Pageant, Phytan 27 |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Compass O, Empress, Insignia, Medallion (foliar application only; for drench test for phytotoxicity), OHP 6672, Pageant |
| CORN FLOWER | |
| Rust leaf spots | Eagle |
| COSMOS | |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | Pageant, Palladium |
| Powdery mildew | Compass O, Eagle, Kumulus, Pageant, Palladium |
| Rhizoctonia root rot and aerial/web blight | Compass O, Pageant, Palladium |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| COTONEASTER | |
|--|---|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Insignia, Protect, Tourney |
| Bacterial leaf spot or blight, fire blight | Agri-Mycin 17, Alude, Fosphite, Phyton 27, Resyst |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Basicop, CuPRO 2005, Junction, Nu-Cop 3L, Protect, Phyton 27, Tourney, Trinity TR |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Entomosporium</i> , etc. | Banner Maxx, Banner Maxx II, Insignia, Junction, Pentathlon, Propiconazole, Protect, Tourney, Trinity TR |
| Pythium, Phytophthora diseases | Alude, Empress, Fosphite, Insignia, Protect, Resyst, Subdue GR, Subdue MAXX |
| Rhizoctonia root rot, web or aerial blight | Empress, Fosphite, Heritage, Insignia, Protect, Tourney, Trinity TR |
| Rust leaf spots | Insignia, Protect, Tourney |
| CRABAPPLE (Flowering) & APPLE (Flowering) & PEAR (Ornamental) DO NOT USE: HERITAGE OR COMPASS O see label for cultivar susceptibility | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | Allban Flo, Bordeaux Mix, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, MilStop, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Torque, Tourney |
| Bacterial leaf spot or fire blight | Agri-Mycin 17, Basicop, Bordeaux Mix, Phyton 27 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Allban Flo, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, MilStop, OHP 6672, Pageant, Pentathlon, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Botryosphaeria dieback | Pageant, Protect |
| Fire blight | Agri-Mycin 17, Aliette WDG, Alude, Basicop, CuPRO 2005, Fosphite, Junction, Nu-Cop 3L, Phyton 27 |
| Fusarium root or stem rot | Allban Flo, Empress, Fosphite, Insignia, OHP 6672, Pageant, Pentathlon, Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | Allban Flo, Clevis, Compass O, Concert, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Insignia, Mancozeb, MilStop, Nu-Cop 3L, OHP 6672, Pageant, Pentathlon, Propiconazole, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Torque, Tourney |
| Powdery mildew | Allban Flo, Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Clevis, Compass O, Concert, Cygnus, Eagle, Fosphite, Insignia, MilStop, OHP 6672, Pageant, Propiconazole, Rubigan, Spectro 90, Strike 50WDG, Torque, Tourney, Zyban WSB |
| Pythium, Phytophthora Diseases | Adorn, Alude, Empress, Fosphite, Insignia, Micora, Pageant |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Fosphite, Insignia, OHP 6672, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Rust leaf spots | Allban Flo, Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Clevis, Compass O, Concert, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Eagle, Fore, Insignia, Mancozeb, OHP 6672, Pageant, Pentathlon, Propiconazole, Protect, Rubigan, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L, Torque, Tourney, Zyban WSB |
| Scab (<i>Venturia</i> , <i>Sphaceloma</i> , <i>Cladosporium</i>) | Allban Flo, Banner Maxx, Banner Maxx II, Basicop, 3336, Clevis, Compass O, Cygnus, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Eagle, Fore, Insignia, Mancozeb, MilStop, OHP 6672, Pageant, Pentathlon, Phyton 27 Protect, Rubigan, Spectro 90, Thalonil 90DF, Thalonil 6L, Torque, Tourney, Zyban WSB |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| CRAPE MYRTLE (<i>Lagerstroemia</i>) | |
|---|---|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Cease, Heritage, Insignia, MilStop, Pageant, Protect, Tourney |
| Bacterial leaf spot or blight, fire blight | Cease, Heritage |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Camelot-O, Cease, Chipco 26019, Iprodione, MilStop, Pageant, Phyton 27, Protect, Tourney |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Cease, Empress, Insignia, Iprodione, Pageant |
| Leaf spots – <i>Cristulariella</i> , <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | 26/36, 26GT, Camelot-O, Cease, Chipco 26019, Heritage, Insignia, Iprodione, MilStop, Pageant, Pentathlon, Protect, Tourney |
| Powdery mildew | Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Camelot-O, Cease, Compass O, Concert, Eagle, Heritage, Kumulus, MilStop, Pageant, Phyton 27, Propiconazole, Rubigan, Strike 50WDG, Tourney, Zyban WSB |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Cease, Chipco 26019, Empress, Insignia, Iprodione, Pageant, Tourney |
| CRASSULA (see Jade plant) | |
| CROCUS | |
| Fusarium root or stem rot | Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Thalonil 90DF, Thalonil 6L |
| Rhizoctonia root rot, web or aerial blight | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Spectro 90, Thalonil 90DF, Thalonil 6L |
| CROTON | |
| Anthracnose | Camelot-O, MilStop, Pentathlon |
| Bacterial Leaf Spot | Camelot-O |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Iprodione, MilStop, Protect, Spectro 90 |
| Fusarium root or stem rot | Banrot 40WP, Iprodione, Spectro 90 |
| Leaf spots – <i>Cercospora</i> , etc. | 26/36, 26GT, Chipco 26019, Iprodione, MilStop, Protect, Spectro 90 |
| Pythium, Phytophthora diseases | Banrot 40WP, Protect, Spectro 90 |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 40WP, Chipco 26019, Iprodione, Protect, Spectro 90 |
| Rust leaf spots | Protect |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| CYCLAMEN | |
|---|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Cease, Insignia, Pageant, Protect |
| Bacterial leaf spot or blight | Cease, Phyton 27 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Cease, Chipco 26019, Iprodione, Medallion, Pageant, Pentathlon, Phyton 27, Protect |
| Fusarium root or stem rot | Cease, Empress, Heritage, Hurricane, Insignia, Iprodione, Medallion, Pageant, Pentathlon |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Ramularia</i> , <i>Phyllosticta</i> , etc. | 26/36, 26GT, Cease, Chipco 26019, Insignia, Iprodione, Medallion, Pageant, Pentathlon, Protect |
| Pythium, Phytophthora diseases | Cease, Empress, Hurricane, Insignia, Pageant, Protect |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Cease, Chipco 26019, Empress, Hurricane, Insignia, Iprodione, Medallion, Pageant, Protect |
| CYPRESS (<i>Cupressus</i> spp.) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Protect |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Protect |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Dithane, Fore, Mancozeb, Pentathlon, Phyton 27, Protect |
| Monochaetia canker | Clevis, Dithane, Fore, Mancozeb, Pentathlon |
| Passalora (<i>Cercosporidium</i>) needle or twig blight | Basicop, Clevis, CuPRO 2005, Dithane, Fore, Heritage, Pentathlon, Protect |
| Phytophthora root rot | Protect |
| Rhizoctonia root rot, web or aerial blight | Protect |
| Rust leaf spots | Protect |
| DAFFODIL (<i>Narcissus</i>) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Pageant, Palladium, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Clevis, Daconil Ultrex, Daconi Weather Stik, Daconil Zn, Dithane, Fore, Iprodione, Mancozeb, Medallion, Pageant, Palladium, Pentathlon, Phyton 27, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Fusarium root or stem rot | Empress, Insignia, Iprodione, Medallion, Pageant, Palladium, Spectro |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , <i>Stagonospora</i> , <i>Ramularia</i> , etc. | 26/36, 26GT, Basicop, Chipco 26019, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Iprodione, Pageant, Palladium, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Pythium, Phytophthora diseases | Empress, Insignia, Pageant, Spectro 90, Terrazole |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Insignia, Iprodione, Medallion, Pageant, Palladium, Spectro 90, Terraclor 400, Thalonil 90DF, Thalonil 6L |
| Rust leaf spots | Eagle, Insignia, Pageant |
| Southern blight (<i>Sclerotium rolfsii</i>) | Palladium, Terraclor 400 |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DAHLIA | |
|---|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | Allban Flo, Disarm, Insignia, OHP 6672, Pageant, Palladium, Protect |
| Bacterial leaf spot or blight | Phyton 27 |
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, Banrot 8G, Banrot 40WP, Medallion (test for phytotoxicity), OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Basicop, Bordeaux Mix, Chipco 26019, Clevis, Cupro 2005, Disarm, Dithane, Fore, Iprodione, Junction, Mancozeb, Medallion, Nu-Cop, OHP 6672, Pageant, Palladium, Pentathlon, Phyton 27, Protect, Zyban WSB |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Disarm, Empress, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Palladium, Pentathlon, Zyban WSB |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , etc. | 26/36, 26GT, Allban Flo, Chipco 26019, CuPRO 2005, Disarm, Insignia, Iprodione, Junction, Medallion, Nu-Cop 3L, OHP 6672, Pageant, Palladium, Pentathlon, Protect, Zyban WSB |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Clevis, Cygnus, Disarm, Eagle, Insignia, Kumulus, OHP 6672, Pageant, Palladium, Phyton 27, Pipron, Rubigan, Strike 50WDG |
| Pythium, Phytophthora diseases | Banol, Banrot 8G, Banrot 40WP, Disarm, Empress, Insignia, Pageant, Protect, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 8G, Banrot 40WP, Chipco 26019, Disarm, Empress, Insignia, Iprodione, Medallion (test for phytotoxicity), OHP 6672, Pageant, Palladium, Pentathlon, Protect, Zyban WSB |
| Southern blight (<i>Sclerotium rolfsii</i>) | Disarm, Medallion (test for phytotoxicity), Palladium |
| DAISY (Various) | |
| Black root rot (<i>Thielaviopsis</i>) | Medallion (test for phytotoxicity) |
| Downy Mildew | Alude, Fosphite, Micora |
| Fusarium root or stem rot | Fosphite, Medallion (test for phytotoxicity), Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Cylindrosporium</i> , etc. | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Medallion, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Powdery mildew | Bayleton 50, Bayleton Flo, Fosphite, Phyton 27, Spectro 90, Strike 50WDG |
| Pythium, Phytophthora diseases | Alude, Fosphite, Micora, Protect, Resyst, Spectro 90, Stature SC, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Fosphite, Medallion (test for phytotoxicity), Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Rust leaf spots | Bayleton 50, Bayleton Flo |
| DAISY, GERBER (Gerbera, Transvaal) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Cease, Compass O, Disarm, Insignia, MilStop, Pageant, Palladium, Pentathlon, Protect, Spectro 90 |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP, Hurricane, Medallion |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DAISY, GERBER (Gerbera, Transvaal) (continued) | |
|---|---|
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Cease, Compass O, Disarm, Medallion, MilStop, Pageant, Palladium, Pentathlon, Phyton 27, Protect, Spectro 90 |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Cease, Disarm, Empress, Hurricane, Insignia, Medallion, Pageant, Palladium, Spectro 90 |
| Powdery mildew | Bayleton 50, Bayleton Flo, Cease, Compass O, Cygnus, Disarm, Eagle, Heritage, Insignia, MilStop, Pageant, Palladium, Phyton 27, Pipron, Spectro 90, Strike 50WDG |
| Pythium, Phytophthora diseases | Adorn, Banrot 8G, Banrot 40WP, Cease, Disarm, Empress, Hurricane, Insignia, Micora, Orvego, Pageant, Protect, Spectro 90, Stature SC, Terrazole, Truban 30WP, Truban 25eC |
| Rhizoctonia root rot, web or aerial blight | Banrot 8G, Banrot 40WP, Cease, Disarm, Empress, Hurricane, Insignia, Medallion, Pageant, Palladium, Protect, Spectro 90 |
| DAPHNE | |
| Pythium, Phytophthora diseases | Terrazole, Truban 30WP |
| DAYLILY (Hemerocallis spp.) | |
| Leaf streak (<i>Aureobasidium microstictum</i>) | Compass O |
| Rhizoctonia root rot | Compass O, Empress, Insignia, Pageant |
| Rust (<i>Puccinia hemerocallidis</i>) | Compass O, Insignia, Pageant, Pentathlon |
| DELPHINIUM (Larkspur) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Heritage, Insignia, MilStop, Protect |
| Bacterial leaf spot or blight | Phyton 27 |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Compass O, Dithane, Fore, Iprodione, Mancozeb, MilStop, Pentathlon, Phyton 27, Protect |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Empress, Fosphite, Insignia, Iprodione, Pentathlon |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Ascochyta</i> , <i>Ramularia</i> , etc. | 26/36, 26GT, Basicop, Bordeaux Mix, Chipco 26019, Compass, O, CuPRO 2005, Heritage, Insignia, Iprodione, MilStop, Pentathlon, Protect |
| Powdery mildew | Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Compass O, Cygnus, Eagle, Fosphite, Insignia, Kumulus, MilStop, Phyton 27, Propiconazole, Rubigan, Strike 50WDG |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Empress, Fosphite, Insignia, Protect, Resyst, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Chipco 26019, Compass O, Empress, Fosphite, Insignia, Iprodione, Protect |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DELPHINIUM (Larkspur) (continued) | |
|---|--|
| Rust leaf spots | Dithane, Eagle, Fore, Insignia, Mancozeb, Pentathlon, Protect |
| Southern blight (<i>Sclerotium rolfsii</i>) | |
| DEUTZIA | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Camelot-O, Chipco 26019, Iprodione |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Empress, Insignia, Iprodione |
| DIANTHUS (Sweet Williams/Pinks) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Cease, Disarm, Insignia, MilStop, OHP 6672, Pageant, Palladium, Protect |
| Bacterial leaf spot | CuPRO 2005, Nu-Cop 3L |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Cease, Chipco 26019, Compass O, Disarm, Iprodione, MilStop, OHP 6672, Pageant, Palladium, Phytan 27, Protec |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | 26/36, 26GT, Banner Maxx, Banner Maxx II, Cease, Chipco 26019, Compass O, Disarm, Insignia, Iprodione, MilStop, OHP 6672, Pageant, Palladium, Propiconazole, Protect |
| Powdery mildew | Cease, Disarm, Heritage, Insignia, MilStop, OHP 6672, Pageant, Palladium, Phytan 27 |
| Pythium, Phytophthora diseases | Cease, Disarm, Empress, Insignia, Orvego, Pageant, Protect, Stature SC, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Cease, Chipco 26019, Compass O, Disarm, Empress, Insignia, Iprodione, OHP 6672, Pageant, Palladium, Protect |
| Rust leaf spots | Bayleton 50, Bayleton Flo, Cease, Compass O, Disarm, Eagle, Heritage, Insignia, OHP 6672, Pageant, Protect, Strike 50WDG |
| Southern blight (<i>Sclerotium rolfsii</i>) | Disarm, Palladium |
| DICENTRA (see Bleeding Heart) | |
| DIEFFENBACHIA (Dumb cane) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | Allban Flo, Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Bacterial leaf spot or blight or stem rot | Agri-Mycin 17, Aliette WDG, Alude, Camelot-O, Cease, CuPRO 2005, Fosphite, Resyst |
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, Banrot 8G, Banrot 40WP, OHP 6672a |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Camelot-O, Cease, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, OHP 6672, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DIEFFENBACHIA (Dumb cane) | |
|--|---|
| Downy Mildew | Alude, Cease, Fosphite, Heritage, Orvego Pageant |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Cease, Fosphite, Iprodione, OHP 6672, Pageant, Spectro 90, Zyban WSB |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Myrothecium</i> , etc. | 26/36, 26GT, Allban Flo, Cease, Chipco 26019, Clevis, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Heritage, Iprodione, Mancozeb, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil, Zyban WSB |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Cease, Compass O, Orvego, Pageant, Protect, Resyst, Spectro 90, Stature SC, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 8G, Banrot 40WP, Camelot-O, Cease, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Fosphite, Iprodione, OHP 6672, Pageant, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Southern blight (<i>Sclerotium rolfsii</i>) | |
| DIGITALIS (see Foxglove) | |
| DIZYGOTHECA (see False Aralia) | |
| DOGWOOD | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Discula</i> , etc) | Banner Maxx, Banner Maxx II, Basicop, Bordeaux Mix, Cease, Clevis, Compass O, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Dithane, Eagle, Fore, Heritage, Insignia, Junction, Mancozeb, MilStop, Nu-Cop 3L, Pageant, Pentathlon, Phytan27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Torque, Tournay, Zyban WSB |
| Bacterial leaf spot or blight | Alude, Bordeaux Mix, Cease, Fosphite, Resyst |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Cease, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Insignia, Iprodione, MilStop, Pageant, Pentathlon, Phytan 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tournay, Zyban WSB |
| Botryosphaeria dieback | Pageant, Protect |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> Spot Anthracnose (<i>Elsinoe</i>) | 26/36, 26GT, Basicop, Cease, Chipco 26019, Clevis, Concert, CuPRO 2005 Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Dithane, Eagle, Fore, Heritage, Insignia, Iprodione, Junction, Mancozeb, MilStop, Pageant, Pentathlon, Propiconazole, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Torque, Tournay, Zyban WSB |
| Powdery mildew | Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Cease, Clevis, Compass O, Concert, Cygnus, Disarm, Eagle, Fosphite, Heritage, Insignia, MilStop, Pageant, Phytan 27, Propiconazole, Rubigan, Spectro 90, Strike 50WDG, Torque, Tournay |
| Pythium, Phytophthora diseases | Alude, Cease, Disarm, Empress, Fosphite, Insignia, Pageant, Protect, Resyst, Spectro 90, Subdue GR, Subdue MAXX |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Cease, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Empress, Fosphite, Insignia, Iprodione, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tournay, Zyban WSB |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| DRACAENA | |
|--|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, OHP 6672, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Bacterial leaf spot or blight | Camelot-O, Cease, CuPRO 2005 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Camelot-O, Cease, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, OHP 6672, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Zyban WSB |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Cease, Clevis (leaf spot), Dithane, Fore, Iprodione, OHP 6672, Pentathlon, Spectro 90, Zyban WSB |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | 26/36, 26GT, Allban Flo, Camelot-O, Cease, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, Mancozeb, OHP 6672, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Pythium, Phytophthora diseases | Banrot 8G, Banrot 40WP, Cease, Protect, Spectro 90 |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 8G, Banrot 40WP, Cease, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, OHP 6672, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Southern blight (<i>Sclerotium rolfsii</i>) | |
| DUSTY MILLER (<i>Senecio cineraria</i>) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Cygnus, Insignia, OHP 6672, Palladium, Protect |
| Bacterial leaf spot or blight | CuPRO 2005, Nu-Cop 3L |
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, Banrot 40WP, OHP 6672 |
| Downy mildew | Insignia, Orvego, Protect, Stature SC |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Allban Flo, Compass O, Insignia, OHP 6672, Palladium, Phyton 27, Protect |
| Powdery Mildew | Cygnus, Insignia, OHP 6672, Palladium |
| Pythium, Phytophthora diseases | Banol, Banrot 40WP, Empress, Insignia, Orvego, Protect, Stature SC, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Banrot 40WP, Compass O, Empress, Insignia, OHP 6672, Palladium, Protect |
| Rust leaf spots | Allban Flo, Insignia, OHP 6672, Pentathlon, Protect |
| ECHINACEA (Cone flower) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Insignia, Pageant |
| Bacterial leaf spot or blight | CuPRO 2005, Nu-Cop 3L, Phyton 27 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Pageant, Phyton 27 |
| Fusarium root or stem rot | Empress, Pageant |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| ECHINACEA (Cone flower) (continued) | |
|--|---|
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , etc. | Insignia, Pageant |
| Pythium, Phytophthora diseases | Empress, Pageant |
| Rhizoctonia root rot, web or aerial blight | Empress, Pageant |
| ELAEAGNUS (Russian Olive) | |
| Fusarium root or stem rot | Empress, Pageant |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | Bayleton 50, Bayleton Flo, Eagle, Insignia, Junction, Pageant, Pentathlon |
| Powdery mildew | Insignia, Pageant |
| Pythium, Phytophthora diseases | Empress, Pageant |
| Rhizoctonia root rot, web or aerial blight | Empress, Pageant |
| Rust leaf spots | Bayleton 50, Bayleton Flo, Eagle, Insignia, Pageant |
| ELM | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Bordeaux Mix, Junction, Protect, Tourney |
| Bacterial leaf spot | Alude, CuPRO 2005, Junction, Nu-Cop 3L, Phyton 27 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Phyton 27, Protect, Tourney |
| Botryosphaeria dieback | Pentathlon, Protect |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Cylindrosporium</i> , <i>Mycosphaerella</i> , <i>Gnomonia</i> , etc. | Bordeaux Mix, Clevis, Dithane, Fore, Junction, Mancozeb, Pentathlon, Protect, Tourney |
| Powdery mildew | Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Clevis, Eagle, Pentathlon, Propiconazole, Strike 50WDG, Tourney |
| Pythium, Phytophthora diseases | Alude |
| Rhizoctonia root rot, web or aerial blight | Protect, Tourney |
| EIPREMNUM (Pothos) DO NOT USE: 26/36 (Drench), Chipco 26019 (Drench), 26GT (Drench), Iprodione (Drench) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Heritage, MilStop, OHP 6672, Palladium, Protect, Spectro 90 |
| Bacterial leaf spot or blight | Alude, Camelot-O, CuPRO 2005, Fosphite, Resyst |
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, Banrot 8G, Banrot 40WP, Medallion, OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Chipco 26019, Iprodione, Medallion, MilStop, OHP 6672, Palladium, Protect, Spectro 90, Zyban WSB |
| Downy Mildew | Alude, Fosphite, Heritage, Micora, Orvego |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| EPIPREMNUM (Pothos) (continued) | |
|---|--|
| DO NOT USE: 26/36 (Drench), Chipco 26019 (Drench), 26GT (Drench), Iprodione (Drench) | |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Fosphite, Iprodione, Medallion, OHP 6672, Palladium, Spectro 90, Zyban WSB |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | 26/36, 26GT, Allban Flo, Chipco 26019, Compass O, Heritage, Iprodione, Medallion, MilStop, OHP 6672, Palladium, Protect, Spectro 90, Zyban WSB |
| Pythium, Phytophthora diseases | Adorn, Alude, Banrot 8G, Banrot 40WP, Compass O, Fosphite, Micora, Orvego, Protect, Resyst, Spectro 90, Subdue GR, Subdue MAXX, Terrazole, Truban 30 WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Banrot 8G, Banrot 40WP, Chipco 26019, Compass O, Fosphite, Iprodione, Medallion, OHP 6672, Palladium, Pentathlon, Protect, Spectro 90, Zyban WSB |
| EUONYMUS | |
| DO NOT USE : EMPRESS (Euonymus vegetus), INSIGNIA (Euonymus vegetus), SUBDUE GR, SUBDUE MAXX or PAGEANT (Euonymus vegetus) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Banner Maxx, Banner Maxx II, Basicop, Clevis, Compass O, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Heritage, Insignia, Junction, Mancozeb, MilStop, Nu-Cop 3L, Pageant, Pentathlon, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Zyban WSB |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 40WP |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Basicop, Chipco 26019, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, Junction, MilStop, Nu-Cop 3L, Pageant, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Trinity TR |
| Fusarium root or stem rot | Banrot 40WP, Empress, Insignia, Iprodione, Pageant, Spectro 90, Trinity TR |
| Leaf spots - <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Ramularia</i> , etc. | 26/36, 26GT, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Insignia, Iprodione, Junction, MilStop, Pageant, Pentathlon, Propiconazole, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Trinity TR |
| Powdery mildew | Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Clevis, Compass O, Cygnus, Eagle, Insignia, MilStop, Pageant, Propiconazole, Rubigan, Spectro 90, Strike 50WDG, Tourney, Trinity TR |
| Pythium, Phytophthora diseases | Banrot 40WP, Empress, Insignia, Pageant, Protect, Spectro 90, Terrazole, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 40WP, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Insignia, Iprodione, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Trinity TR |
| EUCALYPTUS | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Spectro 90 |
| Bacterial bligh | Alude |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Spectro 90 |
| Cylindrocladium stem canker | Daconil Ultrex, Daconil Weatherstik, Daconil Zn |
| Downy Mildew | Alude |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Spectro 90 |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

EUCALYPTUS (continued)

| | |
|--|------------|
| Powdery mildew | Spectro 90 |
| Pythium, Phytophthora diseases | Alude |
| Rhizoctonia root rot, web or aerial blight | Spectro 90 |
| Rust leaf spots | |
| Scab (<i>Venturia, Sphaceloma, Cladosporium</i>) | |

EUPHORBIA (see Poinsettia)

EXACUM (Arabian Violet)

| | |
|--|---|
| Botrytis blight | Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Phyton 27, Spectro 90 |
| Leaf spot | Spectro 90 |
| Phytophthora root rot, aerial blight | Orvego, Spectro 90 |
| Rhizoctonia root rot, web or aerial blight | Spectro 90 |

FALSE ARALIA (*Dizygotheca* spp.)

| | |
|---|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> ,) | MilStop, Spectro 90 |
| Bacterial leaf spot or blight | CuPRO 2005, Nu-Cop 3L |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Iprodione, MilStop, Spectro 90 |
| Leaf spots – <i>Phyllosticta, Septoria, Cercospora, Algal</i> , etc. | 26/36, 26GT, Chipco 26019, Iprodione, MilStop, Spectro 90 |
| Powdery mildew | MilStop |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Chipco 26019, Iprodione, Spectro 90 |
| Rust leaf spots | |
| Scab (<i>Venturia, Sphaceloma, Cladosporium</i>) | |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| FALSE INDIGO (<i>Amorpha</i>) | |
|--|---|
| Leaf spots – <i>Cercospora</i> , etc. | Eagle |
| Powdery mildew | Eagle |
| Rust leaf spots | Eagle |
| FATSHEDERA (Tree ivy) | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Iprodione, MilStop |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | 26/36, 26GT, Chipco 26019, Iprodione, MilStop |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Iprodione |
| FATSIA | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Clevis, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Heritage, Mancozeb, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 40WP |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Botryosphaeria dieback | Protect |
| Downy mildew | Heritage, Protect |
| Flower blight (<i>Ovulinia</i> , <i>Ciborinia</i>) | Protect |
| Fusarium root or stem rot | Banrot 40WP, Spectro 90, Zyban WSB |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Camelot-O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Pentathlon, Protect, Spectro90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Powdery mildew | |
| Pythium, Phytophthora diseases | Banrot 40WP, Protect, Spectro 90 |
| Rhizoctonia root rot, web or aerial blight | Banrot 40WP, Camelot-O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Scab (<i>Venturia</i> , <i>Sphaceloma</i> , <i>Cladosporium</i>) | Protect |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| FERN | |
|--|--|
| DO NOT USE: Banner Maxx, Banner Maxx II, CLEARY 3336, CONCERT, OHP 6672, or TORQUE on Boston Fern | |
| DO NOT USE: COMPASS O, HERITAGE, MEDALLION, or PALLADIUM on Leather leaf fern | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Cease, Insignia, MilStop, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Bacterial leaf spot or blight | Alude, Camelot-O, Cease, CuPRO 2005, Fosphite, Nu-Cop 3L, Phyton 27, Resyst |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP, Medallion |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Camelot-O, Cease, Medallion, MilStop, Pentathlon, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR |
| Downy Mildew | Alude, Cease, Fosphite, Insignia |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Cease, Empress, Fosphite, Insignia, Medallion, Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , <i>Cylindrocladium</i> , etc. | Cease, Insignia, Medallion, MilStop, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Pythium, Phytophthora diseases | Alude, Banol, Banrot 8G, Banrot 40WP, Cease, Empress, Fosphite, Insignia, Protect, Resyst, Spectro 90, Terrazole |
| Rhizoctonia root rot, web or aerial blight | Banrot 8G, Banrot 40WP, Camelot-O, Cease, Clevis, Dithane, Eagle, Empress, Fosphite, Fore, Insignia, Mancozeb, Medallion, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR |
| Rust leaf spots | Bayleton 50, Bayleton Flo, Cease, Insignia, Protect, Strike 50WDG |
| FICUS (Ornamental Fig) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Bacterial leaf spot or blight | Aliette WDG, Alude, CuPRO 2005, Fosphite, Phyton 27, Resyst |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Camelot-O, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Downy Mildew | Alude, Fosphite, Heritage, Orvego |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Fosphite, Iprodione, Pentathlon, Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , <i>Corynespora</i> , etc. | 26/36, 26GT, Camelot-O, Chipco 26019, Clevis, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Heritage, Iprodione, Mancozeb, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Fosphite, Orvego, Protect, Resyst, Spectro 90, Stature SC, Subdue GR, Subdue MAXX, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weather Stik, Daconil Zn, Fosphite, Iprodione, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Rust leaf spots | Protect |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| FIR (Pseudotsuga, Abies) | |
|---|---|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Insignia, MilStop, OHP 6672, Pageant, Protect, Tourney |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Allban Flo, Botran 75W, MilStop, OHP 6672, Pageant, Protect, Tourney |
| Botryosphaeria dieback | Pageant, Protect |
| Needle cast | Allban Flo, Bordeaux Mix, Champion, Clevis, CuPRO 2005, Dithane, Fore, Junction, Kocide, Mancozeb, Nu-Cop 3L, OHP 6672, Pentathlon, Protect |
| <i>Phomopsis</i> or twig blight | Allban Flo, Heritage, Junction, MilStop, OHP 6672, Pentathlon, Protect, Tourney |
| Pythium, Phytophthora diseases | Adorn, Aliette WDG, Alude, Banrot 8G, Banrot 40WP, Empress, Fosphite, Insignia, Orvego, Pageant, Protect, Stature SC, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Banrot 8G, Banrot 40WP, Empress, Insignia, OHP 6672, Pageant, Protect, Tourney |
| Rust leaf spots | Allban Flo, Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Eagle, Heritage, Insignia, OHP 6672, Pageant, Propiconazole, Protect, Strike 50WDG, Tourney |
| FITTONIA | |
| Leaf spots – <i>Myrothecium</i> , <i>Cercospora</i> , etc. | Protect, Spectro 90 |
| Rhizoctonia root rot, web or aerial blight | Banrot 8G, Banrot 40WP, Camelot-O, Pentathlon, Protect, Spectro 90 |
| FORSYTHIA | |
| Bacterial leaf spot or blight | Agri-Mycin 17 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Camelot-O, Chipco 26019, Iprodione, MilStop, Phyton 27 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , etc. | 26/36, 26GT, Camelot-O, Chipco 26019, Heritage, Insignia, Iprodione, Junction, MilStop |
| Phytophthora root rot | Empress, Insignia, Micora |
| Powdery mildew | Camelot-O, Insignia, MilStop, Phyton 27 |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Empress, Insignia, Iprodione, Phyton 27 |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| FOXGLOVE (<i>Digitalis</i>) | |
|--|--|
| Anthracnose (<i>Colletotrichum</i>) | Allban Flo, Heritage, Insignia, OHP 6672 |
| Downy Mildew | Alude, Compass O, Fosphite, Heritage, Insignia |
| Powdery Mildew | Allban Flo, Fosphite, Heritage, Insignia, OHP 6672 |
| Pythium, Phytophthora diseases | Alude, Empress, Fosphite, Insignia, Resyst, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Empress, Fosphite, Insignia, OHP 6672 |
| Southern blight (<i>Sclerotium rolfsii</i>) | |
| FREESIA | |
| Bacterial leaf spot or blight | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Phyton 27 |
| Powdery mildew | |
| FUSCHIA | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Mancozeb, OHP 6672, Palladium, Protect |
| Bacterial leaf spot or blight | Phyton 27 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Allban Flo, Clevis, Dithane, Fore, Mancozeb, Medallion, OHP 6672, Palladium, Pentathlon, Protect, Trinity TR |
| Leaf spots – <i>Septoria</i> , <i>Alternaria</i> , etc. | Allban Flo, Medallion, OHP 6672, Palladium, Pentathlon, Protect, Trinity TR |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Medallion (test for phytotoxicity), OHP 6672, Palladium, Protect, Trinity T |
| Rust leaf spots | Allban Flo, Clevis, Dithane, Eagle, Fore, Mancozeb, OHP 6672, Plantvax, Protect |
| GAILLARDIA (Blanket flower) | |
| Downy Mildew | Alude, Fosphite, Heritage, Micora |
| Powdery mildew | Eagle, Fosphite |
| Pythium, Phytophthora diseases | Alude, Fosphite, Micora, Resyst, Subdue GR, Subdue MAXX |
| Rust leaf spots | Eagle, Heritage |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| GARDENIA | |
|---|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | Insignia, Pageant |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | CuPRO 2005, Nu-Cop 3L, Pageant, Pentathlon, Phyton 27 |
| Leaf spots – <i>Phyllosticta</i> , <i>Myrothecium</i> , <i>Algal</i> , etc. | Basicop, CuPRO 2005, Insignia, Nu-Cop 3L, Pageant, Pentathlon |
| Powdery mildew | Bayleton 50, Bayleton Flo, Eagle, Heritage, Insignia, Pageant, Phyton 27, Strike 50WDG |
| Pythium, Phytophthora diseases | Adorn, Banrot 8G, Banrot 40WP, Empress, Insignia, Micora, Pageant |
| Rhizoctonia root rot, web or aerial blight | Banrot 8G, Banrot 40WP, Empress, Insignia, Pageant, Pentathlon, Phyton 27 |
| Rust leaf spots | Eagle, Insignia, Pageant |
| GAZANIA (Treasure flower) | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Iprodione, MilStop |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | 26/36, 26GT, Chipco 26019, Cygnus, Insignia, Iprodione, MilStop |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Empress, Insignia, Iprodione |
| GERANIUM <u>(DO NOT USE: MEDALLION, Banner Maxx, CONCERT, HURRICANE, TORQUE)</u> | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Insignia, MilStop, OHP 6672, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Bacterial leaf spot or blight | Agri-Mycin 17, Cease, Phyton 27 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Basicop, Botran 75W, Cease, Chipco 26019, Compass O, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Decree, Disarm, Heritage, Iprodione, Junction, Nu-Cop 3L, MilStop, OHP 6672, Pageant, Pentathlon, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Downy Mildew | Alude, Basicop, Cease, Compass O, FenStop, Fosphite, Insignia, Micora, Orvego, Pageant |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Cease, Empress, Fosphite, Insignia, Iprodione, OHP 6672, Pageant, Spectro 90, Trinity TR, Zyban WSB |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| GERANIUM (DO NOT USE: MEDALLION, Banner Maxx, CONCERT, HURRICANE, TORQUE) | |
|--|---|
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , etc. | 26/36, 26GT, Allban Flo, Basicop, Bordeaux Mix, Cease, Chipco 26019, Compass O, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Insignia, Iprodione, Junction, MilStop, Nu-Cop 3L, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Cease, Clevis, Compass O, Cygnus, Disarm, Eagle, Fosphite, Heritage, Insignia, MilStop, OHP 6672, Pageant, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L, Trinity TR |
| Pythium, Phytophthora diseases | Adorn, Alude, Banol, Banrot 8G, Banrot 40WP, Cease, Disarm, Empress, FenStop, Fosphite, Insignia, Micora, Orvego, Pageant, Protect, Resyst, Stature SC, Spectro 90, Subdue GR, Subdue MAXX, Terrazole, Truban 30 WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot, Cease, Chipco 26019, Daconil Ultrex, Daconil Weather Stik, Daconil Zn, Disarm, Empress, Fosphite, Insignia, Iprodione, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Rust leaf spots | Allban Flo, Bayleton 50, Bayleton Flo, Cease, Clevis, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Dithane, Eagle, Fore, Heritage, Insignia, Mancozeb, OHP 6672, Pageant, Pentathlon, Plantvax, Phyton 27, Protect, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L |
| GERBER DAISY (see Daisy, Gerber) | |
| GINKGO | |
| Bacterial leaf spot or blight | Phyton 27 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Phyton 27 |
| Powdery mildew | Phyton 27 |
| GLADIOLUS | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, MilStop, Nu-Cop 3L, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Bacterial leaf spot or blight | CuPRO 2005, Junction, Nu-Cop 3L |
| Black root rot (<i>Thielaviopsis</i>) | OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Basicop, Bordeaux Mix, Botran 75W, Chipco 26019, Clevis, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Iprodione, Junction, Mancozeb, MilStop, Nu-Cop 3L, OHP 6672, Pageant, Pentathlon, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Fusarium root or stem rot | 26/36, Compass O, Empress, Insignia, Iprodione, OHP 6672, Pageant, Spectro 90 |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| GLADIOLUS (continued) | |
|--|--|
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , <i>Heterosporium</i> , <i>Curvularia</i> , etc. | 26/36, 26GT, Captan 4L, Captan 50, Chipco 26019, Clevis, CuPRO 2005, Cygnus, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Insignia, Iprodione, Junction, Mancozeb, MilStop, Nu-Cop 3L, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Powdery mildew | Insignia, MilStop, Kumulus, Pageant |
| Pythium, Phytophthora diseases | Empress, Insignia, Pageant |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Insignia, Iprodione, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Terraclor, Thalonil 90DF, Thalonil 6L |
| Southern blight (<i>Sclerotium rolfsii</i>) | Terraclor 400 |
| GLOXINIA (Sinningia) DO NOT USE: ZYBAN WSB | |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Dithane, Fore, Iprodione, Mancozeb, MilStop, Pentathlon, Phyton 27 |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Fosphite, Iprodione |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Myrothecium</i> , etc. | 26/36, 26GT, Chipco 26019, Iprodione, MilStop |
| Pythium, Phytophthora diseases | Alude, Banol, Banrot 8G, Banrot 40WP, Fosphite, Resyst, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Chipco 26019, Fosphite, Iprodione |
| GOMPHRENA (Globe Amaranth) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Protect |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Banner Maxx, Medallion, Pentathlon, Propiconazole, Protect |
| Powdery mildew | |
| Pythium, Phytophthora diseases | Hurricane, Protect |
| Rhizoctonia root rot, web or aerial blight | Hurricane, Medallion, Protect |
| Rust leaf spots | Protect |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| GOURD, ORNAMENTAL | |
|--|---|
| Powdery mildew | Eagle |
| Rust leaf spots | |
| GRASS, ORNAMENTAL | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Compass O, Zyban WSB |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Captan 4L, Captan 50, Compass O, Heritage |
| Powdery mildew | Compass O, Heritage, Phyton 27, Zyban WSB |
| Rhizoctonia root rot, web or aerial blight | Zyban WSB |
| Rust leaf spots | Compass O, Zyban WSB |
| GYPSOPHILIA (See Baby’s Breath) | |
| HACKBERRY (Celtis spp.) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | |
| Bacterial leaf spot or blight, fire blight | Phyton 27 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Phyton 27 |
| Downy mildew | |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Cylindrosporium</i> , etc. | Eagle |
| Powdery mildew | Eagle |
| Rhizoctonia root rot, web or aerial blight | |
| HAWTHORN (Crataegus spp.) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, MilStop, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Bacterial leaf spot or blight, fire blight | |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| HAWTHORN (<i>Crataegus</i> spp.) (continued) | |
|---|--|
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, MilStop, OHP 6672, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Botryosphaeria dieback | Pageant, Protect |
| Fusarium root or stem rot | Allban Flo, Iprodione, OHP 6672, Pageant, Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Cylindrosporium</i> | 26/36, 26GT, Allban Flo, Chipco 26019, Clevis, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Eagle, Fore, Iprodione, Mancozeb, MilStop, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Clevis, Cygnus, Eagle, MilStop, OHP 6672, Pageant, Rubigan, Spectro 90, Strike 50WDG, Tourney, Zyban WSB |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, OHP 6672, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Rust leaf spots | Allban Flo, Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Clevis, Concert, Cygnus, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Eagle, Fore, Mancozeb, OHP 6672, Pageant, Pentathlon, Propiconazole, Protect, Rubigan, Spectro 90, Strike 50WDG, Tourney, Zyban WSB |
| Scab (<i>Venturia</i> , <i>Fusiododium</i>) | Allban Flo, 3336, Clevis, Compass O, Cygnus, Dithane, Eagle, Fore, Mancozeb, MilStop, OHP 6672, Pageant, Pentathlon, Protect, Rubigan, Spectro 90, Tourney |
| HEATHER | |
| Leaf spots | Heritage, Medallion, Palladium |
| Pythium, Phytophthora diseases | Terrazole, Truban 30WP |
| Rhizoctonia root rot and aerial/web blight | Compass O, Medallion, Palladium, Pentathlon |
| HEMLOCK (<i>Tsuga</i>) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Insignia, Pageant, Tourney |
| Black root rot (<i>Thielaviopsis</i>) | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Botran 75W, Pageant, Pentathlon, Tourney |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Insignia, Pageant, Pentathlon, Tourney |
| Powdery mildew | Insignia, Pageant, Tourney |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| HEMLOCK (<i>Tsuga</i>) (continued) | |
|---|--|
| Pythium, Phytophthora diseases | Empress, Insignia, Pageant, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | Empress, Insignia, Pageant, Pentathlon, Tourney |
| Rust leaf spots | Empress, Insignia, Pageant, Pentathlon, Tourney |
| HENS & CHICKS (<i>Sempervivum</i>) | |
| Leaf spots | Heritage |
| Pythium, Phytophthora diseases | |
| Rhizoctonia root rot and aerial/web blight | Compass O |
| HIBISCUS | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Cease, Compass O, Heritage, MilStop, OHP 6672, Palladium, Pentathlon, Protect |
| Bacterial leaf spot or blight | Alude, Cease, CuPRO 2005, Fosphite, Nu-Cop 3L, Phytan 27, Resyst |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Allban Flo, Cease, Compass O, MilStop, OHP 6672, Palladium, Phytan 27, Protect, Trinity TR |
| Botryosphaeria dieback | Protect |
| Leaf spots – <i>Phyllosticta</i> , <i>Cercospora</i> , <i>Alternaria</i> , etc. | Allban Flo, Cease, Heritage, MilStop, OHP 6672, Palladium, Pentathlon, Protect, Trinity TR |
| Powdery mildew | Allban Flo, Cease, Eagle, Fosphite, Heritage, MilStop, OHP 6672, Palladium, Trinity TR |
| Pythium, Phytophthora diseases | Alude, Cease, Compass O, Fosphite, Micora, Protect, Resyst |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Cease, Compass O, Fosphite, OHP 6672, Palladium, Protect, Trinity TR |
| Rust leaf spots | Allban Flo, Cease, OHP 6672, Protect |
| HOLLY (<i>Ilex</i>) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | Allban Flo, Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Junction, MilStop, OHP 6672, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Bacterial leaf spot or blight | Alude, Cease, CuPRO 2005, Fosphite, Phytan 27, Resyst |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| HOLLY (Ilex) (continued) | |
|---|---|
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, Banrot 8G, Banrot 40WP, OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Cease, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, MilStop, OHP 6672, Pageant, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Trinity TR |
| Botryosphaeria dieback | Pageant, Protect |
| Downy Mildew | Alude, Cease, Fosphite, Insignia, Micora, Pageant |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Cease, Empress, Fosphite, Insignia, Iprodione, OHP 6672, Pageant, Spectro 90, Trinity TR |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Cylindrocladium</i> , etc. | 26/36, 26GT, Allban Flo, Cease, Chipco 26019, Clevis, Compass O, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Insignia, Iprodione, Junction, Mancozeb, MilStop, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Trinity TR |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Cease, Eagle, Fosphite, Heritage, Insignia, MilStop, OHP 6672, Pageant, Phyton 27, Spectro 90, Strike 50WDG, Tourney, Trinity TR |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Cease, Empress, Fosphite, Insignia, Micora, Pageant, Protect, Resyst, Spectro 90, Subdue GR, Subdue M AXX |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banner Maxx, Banner Maxx II, Banrot 8G, Banrot 40WP, Cease, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Fosphite, Insignia, Iprodione, OHP 6672, Pageant, Phyton 27, Protect, Spectro 90, Terraclor 400, Thalonil 90DF, Thalonil 6L, Tourney, Trinity TR |
| Southern blight (<i>Sclerotium rolfsii</i>) | |
| HOLLYHOCK (Althaea or Alcea) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Bordeaux Mix, Clevis, Disarm, Dithane, Fore, Mancozeb, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Bacterial leaf spot or blight | Nu-Cop 3L, CuPRO 2005 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Allban Flo, Disarm, OHP 6672, Pageant, Phyton 27, Protect, Spectro 90 |
| Downy mildew | Disarm, Pageant, Protect |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , <i>Ascochyta</i> , <i>Myrothecium</i> , etc. | Allban Flo, Bordeaux Mix, Clevis, Disarm, Dithane, Fore, Kumulus, Mancozeb, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90 |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Clevis, Disarm, Eagle, Kumulus, OHP 6672, Pageant, Phyton 27, Spectro 90, Strike 50WDG |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Disarm, OHP 6672, Pageant, Protect, Spectro 90 |
| Rust leaf spots | Allban Flo, Bayleton 50, Bayleton Flo, Clevis, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Dithane, Eagle, Fore, Mancozeb, OHP 6672, Pageant, Pentathlon, Phyton 27, Protect, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| HONEYSUCKLE (<i>Lonicera</i>) | |
|---|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Pageant |
| Bacterial leaf spot or blight | Agri-Mycin 17, CuPRO 2005 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Pageant |
| Downy mildew | Micora, Orvego, Pageant, Stature SC |
| Leaf spots - <i>Colletotrichum</i> , <i>Cercospora</i> , <i>Algal</i> , <i>Herpobasidium</i> , etc. | Clevis, Dithane, Eagle, Fore, Junction, Mancozeb, Pageant, Pentathlon, |
| Powdery mildew | Clevis, Cygnus, Eagle, Pageant |
| Pythium, Phytophthora diseases | Micora, Orvego, Pageant, Stature SC, Subdue GR, Subdue MAXX |
| HOYA (Wax plant) | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Camelot-O, Chipco 26019, Iprodione, MilStop, Spectro 90 |
| Leaf spot- <i>Myrothecium</i> | 26/36, 26GT, Camelot-O, Chipco 26019, Iprodione, MilStop, Spectro 90 |
| Pythium, Phytophthora diseases | Banrot 40WP, Spectro 90, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 40WP, Camelot-O, Chipco 26019, Iprodione, Spectro 90 |
| HYACINTH | |
| Rhizoctonia root rot, web or aerial blight | Pageant, Terraclor 400 |
| HYDRANGEA | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Insignia, MilStop, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Bacterial leaf spot or blight | Agri-Mycin 17, Cease |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Botran 75W, Camelot-O, Cease, Chipco 26019, Clevis, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Iprodione, Junction, Mancozeb, MilStop, OHP 6672, Pageant, Pentathlon, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Downy Mildew | Heritage, Micora, Pageant |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Cease, Empress, Insignia, Iprodione, OHP 6672, Pageant, Spectro 90 |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| HYDRANGEA (continued) | |
|---|---|
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Ascochyta</i> , etc. | 26/36, 26GT, Allban Flo, Camelot-O, Cease, Chipco 26019, Clevis, Cygnus, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Eagle, Fore, Heritage, Insignia, Iprodione, Junction, Mancozeb, MilStop, OHP 6672, Pageant, Pentathlon, Phytan 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Camelot-O, Cease, Compass O, Cygnus, Heritage, Insignia, MilStop, OHP 6672, Pageant, Phytan 27, Pipron, Rubigan, Spectro 90, Strike 50WDG |
| Pythium, Phytophthora diseases | Banrot 8G, Banrot 40WP, Cease, Empress, Insignia, Micora, OHP 6672, Pageant, Protect, Spectro 9 |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 8G, Banrot 40WP, Cease, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Insignia Iprodione, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Rust leaf spots | Allban Flo, Camelot-O, Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Junction, OHP 6672, Pageant, Protect, Rubigan, Thalonil 90DF, Thalonil 6L |
| HYPERICUM (St. John's Wort) | |
| Powdery mildew | Insignia, Pageant |
| Rhizoctonia root rot, web or aerial blight | Empress, Insignia, Pageant |
| Rust leaf spots | Compass O, Insignia, Pageant |
| IBERIS (see Candytuft) | |
| IMPATIENS | |
| DO NOT USE: 26/36(drench), 26GT (drench), CHIPCO 26019 (drench), IPRDIONE (drench), TERRAGUARD (on plugs), MEDALLION (as drench or to seedlings), HURRICANE, PAGEANT(when flowering) | |
| Bacterial leaf spot or blight | Agri-Mycin 17, Camelot-O, Cease, CuPRO 2005, Junction, Nu-Cop 3L, Phytan 27 |
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, Banrot 8G, Banrot 40WP, OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Cease, Chipco 26019, Disarm, Dithane, Fore, Iprodione, Mancozeb, MilStop, OHP 6672, Pageant, Phytan 27, Protect, Spectro 90, Trinity TR, Zyban WSB |
| Downy mildew | Alude, Cease, Compass O, Disarm, Fosphite, Micora, Orvego, Pageant, Protect, Resyst, Stature SC, Trinity TR |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Cease, Disarm, Empress, Fosphite, Insignia, Iprodione, OHP 6672, Pageant, Spectro 90, Trinity TR, Zyban WSB |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | 26/36, 26GT, Allban Flo, Banner Maxx, Banner Maxx II, Cease, Chipco 26019, Compass O, Cygnus, Disarm, Heritage, Insignia, Iprodione, Junction, MilStop, OHP 6672, Pageant, Pentathlon, Phytan 27, Propiconazole, Protect, Spectro 90, Zyban WSB |
| Powdery mildew | Allban Flo, Banner Maxx, Banner Maxx II, Cease, Daconil Ultrex, Disarm, Fosphite, Insignia, MilStop, OHP 6672, Pageant, Phytan 27, Propiconazole, Trinity TR |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| IMPATIENS (continued) | |
|--|---|
| DO NOT USE: 26/36(drench), 26GT (drench, CHIPCO 26019 (drench), IPRODIONE (drench), TERRAGUARD (on plugs), MEDALLION (as drench or to seedlings), HURRICANE, PAGEANT(when flowering) | |
| Pythium, Phytophthora diseases | Alude, Banol, Banrot 8G, Banrot 40WP, Cease, Disarm, Empress, Fosphite, Insignia, Micora, Orvego, Pageant, Protect, Resyst, Spectro 90, Stature SC, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 8G, Banrot 40WP, Cease, Chipco 26019, Compass O, Disarm, Empress, Fosphite, Heritage, Insignia, Iprodione, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Trinity TR, Zyban WSB |
| Rust leaf spots | Allban Flo, Cease, Disarm, Insignia, OHP 6672, Pageant, Protect, Spectro 90 |
| Southern blight (<i>Sclerotium rolfsii</i>) | Disarm |
| INDIAN HAWTHORNE (Raphiolepis) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Banner Maxx, Banner Maxx II, Cease, CuPRO 2005, Heritage, Insignia, Junction, MilStop, Pageant |
| Fireblight | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Cease, MilStop, Pageant, Phyton 27, Zyban WSB |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Entomosporium</i> | Banner Maxx, Banner Maxx II, Cease, Compass O, CuPRO 2005, Heritage, Insignia, Junction, MilStop, Nu-Cop 3L, Pageant, Pentathlon, Phyton 27, Propiconazole, Zyban WSB |
| Rhizoctonia root rot, web or aerial blight | Cease, Compass O, Empress, Insignia, Pageant, Zyban WSB |
| IRIS | |
| Bacterial leaf spot or blight | CuPRO 2005, Phyton 27 |
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, Medallion, MilStop, OHP 6672, Pageant, Palladium, Pentathlon, Phyton 27, Protect, Spectro 90, Thaloni 90DF, Thaloni 6L |
| Fusarium root or stem rot | Allban Flo, Empress, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Palladium, Pentathlon, Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Alternaria</i> , <i>Didymellina</i> , etc. | 26/36, 26GT, Allban Flo, Basicop, Bayleton 50, Bayleton Flo, Bordeaux Mix, Chipco 26019, Clevis, Compass O, Cygnus, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Eagle, Fore, Insignia, Iprodione, Mancozeb, MilStop, Pageant, Palladium, OHP 6672, Pentathlon, Protect, Spectro 90, Strike 50WDG, Systec 1998, Thaloni 90DF, Thaloni 6L |
| Pythium, Phytophthora diseases | Empress, Insignia, Pageant, Protect, Spectro 90 |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Palladium, Pentathlon, Protect, Spectro 90, Terraclor 400, Thaloni 90DF, Thaloni 6L |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| IRIS (continued) | |
|--|--|
| Rust leaf spots | Allban Flo, Banner Maxx, Banner Maxx II, Clevis, Eagle, Heritage, Insignia, OHP 6672, Pageant, Pentathlon, Plantvax, Propiconazole, Protect, Spectro 90 |
| Southern blight (<i>Sclerotium rolfsii</i>) | Palladium, Terraclor 400 |
| IVY (Hedera) DO NOT USE: CLEARY 3336 (Plectranthus – Swedish Ivy) OHP 6672 (Plectranthus - Swedish Ivy) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Banner Maxx, Banner Maxx II, Camelot-O, Cease, Compass O, Heritage, Insignia, MilStop, OHP 6672, Palladium, Pentathlon, Protect |
| Bacterial leaf spot or blight | Agri-Mycin 17, Aliette WDG, Alude, Basicop, Camelot-O, Cease, CuPRO 2005, Nu-Cop 3L, Phytan 27, Resyst |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Camelot-O, Cease, Chipco 26019, Compass O, Insignia, Iprodione, MilStop, Palladium, Phytan 27, Protect, Trinity TR |
| Downy Mildew | Alude, Cease, FenStop, Fosphite, Heritage, Insignia, Micora |
| Leaf spots – <i>Phyllosticta</i> , <i>Cercospora</i> , <i>Ramularia</i> , <i>Macrophoma</i> , etc. | 26/36, 26GT, Allban Flo, Bordeaux Mix, Camelot-O, Cease, Chipco 26019, Heritage, Insignia, Iprodione, Kumulus, MilStop, Palladium, Pentathlon, Protect, Strike 50WDG, Trinity TR |
| Powdery mildew | Allban Flo, Cease, Fosphite, Insignia, MilStop, OHP 6672, Palladium, Trinity TR |
| Pythium, Phytophthora diseases | Adorn, Alude, Banrot 8G, Banrot 40WP, Cease, Compass O, Empress, FenStop, Fosphite, Insignia, Micora, Protect, Resyst, Subdue GR, Subdue MAXX, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 8G, Banrot 40WP, Camelot-O, Cease, Chipco 26019, Compass O, Empress, Fosphite, Insignia, Iprodione, OHP 6672, Palladium, Pentathlon, Protect, Trinity TR |
| Southern blight (<i>Sclerotium rolfsii</i>) | Palladium |
| JADE PLANT, Chinese Rubber Plant (Crassula) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | MilStop, Pentathlon, Protect, Spectro 90 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Iprodione, MilStop, Protect, Spectro 90 |
| Leaf spots – <i>Phomopsis</i> | 26/36, 26GT, Chipco 26019, Iprodione, MilStop, Pentathlon, Protect, Spectro 90 |
| Powdery mildew | Bayleton 50, Bayleton Flo, MilStop, Spectro 90, Strike 50WDG |
| Pythium, Phytophthora diseases | Protect, Spectro 90, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Iprodione, Protect, Spectro 90 |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| JASMINE | |
|--|---|
| Anthracnose diseases (<i>Colletotrichum</i>) | Compass O |
| Rhizoctonia root rot, web or aerial blight | Compass O |
| JUNIPER | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Champion, CuPRO 2005, Insignia, Junction, Kocide, MilStop, Nu-Cop 3L, Pageant, Protect, Tourney |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Iprodione, MilStop, Pageant, Phyton 27, Protect, Tourney, Trinity TR |
| Botryosphaeria dieback | Pageant, Protect |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Empress, Fosphite, Insignia, Iprodione, Pageant, Trinity TR |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | 26/36, 26GT, Bordeaux Mix, Chipco 26019, Cygnus, Insignia, Iprodione, Junction, MilStop, Pageant, Pentathlon, Protect, Tourney, Trinity TR |
| Tip blight (<i>Phomopsis</i>) | Banner Maxx, Banner Maxx II, Basicop, Champion, Clevis, CuPRO 2005, Dithane, Fore, Heritage, Junction, Kocide, Mancozeb, MilStop, Pentathlon, Propiconazole, Protect, Tourney |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Empress, Fosphite, Insignia, Micora, Pageant, Protect, Resyst, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Chipco 26019, Compass O, Empress, Fosphite, Insignia, Iprodione, Pageant, Phyton 27, Protect, Tourney, Trinity TR, Zyban WSB |
| Rust leaf spots | Bayleton 50, Bayleton Flo, Bordeaux Mix, Eagle, Fosphite, Heritage, Insignia, Junction, Pageant, Pentathlon, Protect, Strike 50EDG, Tourney, Zyban WSB |
| Southern blight (<i>Sclerotium rolfsii</i>) | |
| KALANCHOE | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Cease, MilStop, Protect |
| Bacterial leaf spot or blight | Cease, Phyton 27 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Cease, Chipco 26019, Iprodione, MilStop, Phyton 27, Protect, Trinity TR, Zyban WSB |
| Downy mildew | Cease, Protect, Trinity TR |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| KALANCHOE (continued) | |
|---|---|
| Fusarium root or stem rot | Banrot 40WP, Cease, Iprodione, Trinity TR, Zyban WSB |
| Leaf spots – <i>Cercospora</i> , etc. | 26/36, 26GT, Cease, Chipco 26019, Iprodione, MilStop, Pentathlon, Protect, Trinity TR, Zyban WSB |
| Powdery mildew | Bayleton 50, Bayleton Flo, Cease, MilStop, Phyton 27, Pipron, Strike 50WDG, Trinity TR, Zyban WSB |
| Pythium, Phytophthora diseases | Banrot 40WP, Cease, Protect, Terrazole, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 40WP, Cease, Chipco 26019, Iprodione, Protect, Trinity TR, Zyban WSB |
| Rust leaf spots | Cease, Protect |
| KALMIA (Mountain Laurel) | |
| Botryosphaeria dieback | Protect |
| Flower blight | Bayleton 50, Bayleton Flo, Clevis, Dithane, Eagle, Fore, Insignia, Mancozeb, Protect, Spectro 90 |
| Leaf gall, leaf blister (<i>Exobasidium</i> , <i>Taphrina</i>) | Spectro 90, Strike 50WDG |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Mycosphaerella</i> , etc. | Bayleton 50, Bayleton Flo, Bordeaux Mix, Clevis, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Eagle, Fore, Insignia, Kumulus, Mancozeb, Pentathlon, Protect, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L, Tourney |
| Powdery mildew | Bayleton 50, Bayleton Flo, Eagle, Insignia, Spectro 90, Strike 50WDG, Tourney |
| Pythium, Phytophthora diseases | Empress, Insignia, Micora, Protect, Spectro 90, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| LANTANA | |
| Bacterial leaf spot or blight | CuPRO 2005, Nu-Cop 3L, Phyton 27 |
| Leaf spots – <i>Cercospora</i> , <i>Alternaria</i> , etc. | Disarm, Insignia, Medallion, Pageant, Palladium, Trinity TR |
| Rust leaf spots | Compass O, Disarm, Insignia, Pageant |
| Rhizoctonia root rot or web blight | Compass O, Disarm, Empress, Insignia, Medallion (test drench for phytotoxicity), Pageant, Palladium, Trinity TR |
| Southern blight (<i>Sclerotium rolsii</i>) | Disarm, Medallion (test drench for phytotoxicity), Palladium |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| LARKSPUR (see Delphinium) | |
|---|---|
| LEYLAND CYPRESS | |
| Needle blight (<i>Passalora sequioae</i> , syn. <i>Cercosporidium</i>) | Champion, CuPRO 2005, Eagle, Heritage, Kocide |
| LEUCOTHOE | |
| Leaf gall (<i>Exobasidium</i>) | |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Rhytisma</i> , <i>Guignardia</i> , <i>Cylindrocladium</i> | Bayleton 50, Bayleton Flo, Eagle, Strike 50WDG |
| Powdery mildew | |
| Pythium, Phytophthora diseases | Banrot 40WP, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | Banrot 40WP |
| LIATRIS | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Phyton 27 |
| LIGUSTRUM (Privet) <u>DO NOT USE: HERITAGE</u> | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Cease, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Junction, MilStop, OHP 6672, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Fusarium root or stem rot | Allban Flo, Banrot 40WP, Cease, Empress, Insignia, Iprodione, OHP 6672, Spectro 90 |
| Leaf spots – <i>Cercospora</i> , <i>Algal</i> , <i>Phyllosticta</i> , etc. | 26/36, 26GT, Allban Flo, Bayleton 50, Bayleton Flo, Cease, Chipco 26019, Clevis, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Eagle, Fore, Insignia, Iprodione, Junction, Mancozeb, MilStop, OHP 6672, Pentathlon, Protect, Spectro 90, Strike 50WDG, Systec 1998, Thalonil 90DF, Thalonil 6L |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Cease, Eagle, Insignia, Kumulus, MilStop, OHP 6672, Spectro 90, Strike 50WDG |
| Pythium, Phytophthora diseases | Banrot 40WP, Cease, Empress, Insignia, Micora, Protect, Spectro 90, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Banrot, 26/36, Chipco 26019, 6GT, Compass O, Daconil Ultrex, Daconil, Weather Stik, Daconil Zn, Domain, Fore, Iprodione, Mancozeb, OHP 6672, Protect, Spectro 90, Thalonil |
| Southern blight (<i>Sclerotium rolfsii</i>) | Terraclor 400, OHP 6672 |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| LILAC (Syringae) | |
|--|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Cease, Insignia, Pageant, Pentathlon, Spectro 90, Tourney |
| Bacterial leaf spot or blight | Basicop, Bordeaux Mix, Cease, CuPRO 2005, Junction, Phyton 27 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Cease, Compass O, Pageant, Pentathlon, Phyton 27, Spectro 90, Tourney |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | Basicop, Cease, CuPRO 2005, Insignia, Nu-Cop 3L, Pageant, Pentathlon, Spectro 90, Tourney |
| Powdery mildew | Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Bordeaux Mix, Cease, Compass O, Concert, Cygnus, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Eagle, Insignia, Pageant, Phyton 27, Pipron, Propiconazole, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L, Tourney, Zyban WSB |
| Phytophthora and Pythium diseases | Cease, Empress, FenStop, Insignia, Junction, Micora, Pageant, Spectro 90 |
| Rhizoctonia root rot, web or aerial blight | Cease, Compass O, Empress, Insignia, Pageant, Spectro 90, Tourney |
| Rust leaf spots | Cease, Insignia, Pageant, Tourney |
| LILY | |
| <u>DO NOT USE: HURRICANE (Easter Lily)</u> | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Nu-Cop 3L, OHP 6672, Pageant, Pentathlon, Palladium, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Bacterial leaf spot or blight | Cease, Phyton 27 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Basicop, Bordeaux Mix, Cease, Chipco 26019, Clevis, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Iprodione, Junction, Mancozeb, Medallion, Nu-Cop 3L, OHP 6672, Pageant, Palladium, Pentathlon, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR |
| Downy Mildew | Alude, Cease, FenStop, Fosphite, Insignia, Pageant |
| Fusarium root or stem rot | Allban Flo, Banrot 40WP, Cease, Empress, Fosphite, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Pentathlon, Palladium, Spectro 90, Trinity TR |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | 26/36, 26GT, Allban Flo, Cease, Chipco 26019, Cygnus, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Iprodione, OHP 6672, Pageant, Palladium, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR |
| Powdery mildew | Allban Flo, Cease, Fosphite, Insignia, OHP 6672, Pageant, Palladium, Trinity TR |
| Pythium, Phytophthora diseases | Alude, Banol, Banrot 40WP, Cease, Empress, FenStop, Fosphite, Insignia, Pageant, Protect, Spectro 90, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 40WP, Cease, Chipco 26019, Daconil Ultrex, Daconil Weather Stik, Daconil Zn, Empress, Fosphite, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Palladium, Pentathlon, Protect, Spectro 90, Terraclor 400, Thalonil 90DF, Thalonil 6L, Trinity TR |
| Rust leaf spots | Allban Flo, Cease, Insignia, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90 |
| Southern blight (<i>Sclerotium rolfsii</i>) | Palladium, Terraclor 400 |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| LINDEN (see Basswood) | |
|--|--|
| LIRIOPE (Lilyturf) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Heritage, Insignia, Pageant, Pentathlon, Protect |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Heritage, Insignia, Pageant, Pentathlon, Protect, Zyban WSB |
| Rhizoctonia root rot, web or aerial blight | Compass O, Empress, Insignia, Pageant, Protect, Zyban WSB |
| Rust leaf spots | Insignia, Pageant, Protect |
| Phytophthora crown and root rot | Adorn, Empress, Insignia, Micora, Pageant |
| LISIANTHUS (Eustoma) | |
| Botrytis blight | Cease, Pageant, Palladium, Phytan 27 |
| Leaf spots – <i>Alternaria</i> | Cease, Insignia, Pageant, Palladium |
| Phytophthora aerial blight, root rot | Cease, Empress, Insignia, Orvego, Pageant, Stature SC |
| Rhizoctonia root rot, aerial/web blight | Cease, Empress, Insignia, Medallion, Pageant, Palladium |
| LOBELIA (Cardinal Flower) | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Cease, Disarm, Pentathlon, Phytan 27, Protect |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | Cease, Disarm, Insignia, Pentathlon, Protect |
| Pythium, Phytophthora diseases | Banol, Banrot 40WP, Cease, Disarm, Empress, Insignia, Protect |
| Rhizoctonia root rot, web or aerial blight | Banrot 40WP, Cease, Disarm, Empress, Insignia, Pentathlon, Protect |
| Rust leaf spots | Cease, Disarm, Insignia, Pentathlon, Protect |
| LOCUST | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Phytan 27 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Cylindrosporium</i> , etc. | |
| Powdery mildew | Bayleton 50, Bayleton Flo, Eagle, Strike 50WDG |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| LOQUAT | |
|--|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | CuPRO 2005, Nu-Cop 3L, Pentathlon, Protect |
| Botrytis blight | Fosphite |
| Leaf spots – <i>Algal, Phyllosticta, Entomosporium</i> , etc. | CuPRO 2005, Pentathlon, Protect |
| Rhizoctonia root rot, web or aerial blight | Fosphite, Protect |
| Scab (<i>Spilocaea, Fusidodium</i>) | Cygnus, Pentathlon, Protect |
| LUPINE | |
| Anthracnose diseases | Compass O, Disarm, Insignia |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Compass O, Disarm, Phyton 27 |
| Powdery Mildew | Compass O, Disarm, Insignia |
| Rhizoctonia root rot, web or aerial blight | Compass O, Disarm, Empress, Insignia |
| MAGNOLIA | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Banner Maxx, Banner Maxx II, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Insignia, Junction, Nu-Cop 3L, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Bacterial leaf spot or blight | CuPRO 2005, Fosphite, Junction, Nu-Cop 3L, Phyton 27 |
| Leaf spots – <i>Septoria, Cercospora, Algal, Cristulariella, Phyllosticta</i> , etc. | Clevis, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Heritage, Insignia, Junction, Mancozeb, Nu-Cop 3L, Pentathlon, Propiconazole, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Powdery Mildew | Banner Maxx, Banner Maxx II, Cygnus, Fosphite, Insignia |
| Pythium, Phytophthora diseases | Empress, Fosphite, Insignia, Micora, Protect, Spectro 90, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Fosphite, Insignia, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Scab (<i>Cladosporium</i>) | Insignia, Pentathlon, Protect, Spectro 90, Tourney |
| MAHONIA (see Oregon Grape) | |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

MAPLE

| | |
|--|---|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Banner Maxx, Banner Maxx II, Basicop, Bordeaux Mix, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Insignia, Junction, OHP 6672, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Zyban WSB |
| Bacterial leaf spot or blight | Bordeaux Mix, Fosphite, CuPRO 2005, Phyton 27 |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Rhytisma</i> , <i>Actinopelte</i> , <i>Phyllosticta</i> , <i>Cristulariella</i> , etc. | Allban Flo, Basicop, Clevis, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Heritage, Insignia, Junction, Mancozeb, OHP 6672, Pageant, Pentathlon, Propiconazole, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Powdery mildew | Allban Flo, Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Clevis, Cygnus, Eagle, Fosphite, Insignia, OHP 6672, Pageant, Propiconazole, Spectro 90, Strike 50WDG, Tourney |
| Pythium, Phytophthora diseases | Empress, Fosphite, Insignia, Pageant, Protect, Spectro 90, Terrazole, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Banrot, Daconil Ultrex, Daconil, Weather Stik, Daconil Zn, Mancozeb, OHP 6672, Pageant, Protect, Spectro 90, Thalonil, Tourney |

MARANTA (see Prayer Plant)

MARIGOLD

(DO NOT USE: PROTECT-French marigold)

| | |
|---|---|
| Bacterial leaf spot or blight | Cease, Phyton 27 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Basicop, Cease, Chipco 26019, Clevis, Compass O, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Iprodione, Junction, Mancozeb, Medallion, MilStop, Nu-Cop 3L, OHP 6672, Pageant, Palladium, Phyton 27, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR |
| Downy Mildew | Alude, Cease, Fosphite, Insignia, Micora, Pageant |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Cease, Empress, Fosphite, Hurricane, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Palladium, Spectro 90, Trinity TR |
| Leaf spots – <i>Alternaria</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | 26/36, 26GT, Allban Flo, Banner Maxx, Banner Maxx II, Basicop, Bayleton 50, Bayleton Flo, Cease, Chipco 26019, Clevis, Compass O, CuPRO 2005, Cygnus, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Eagle, Heritage, Insignia, Iprodione, Junction, Medallion, MilStop, Nu-Cop 3L, OHP 6672, Pageant, Palladium, Propiconazole, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L, Trinity TR |
| Powdery Mildew | Cease, Compass O, Fosphite, Insignia, OHP 6672, Pageant, Palladium |
| Pythium, Phytophthora diseases | Adorn, Alude, Banol, Banrot 8G, Banrot 40WP, Cease, Empress, Fosphite, Hurricane, Insignia, Micora, Pageant, Resyst, Spectro 90, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 8G, Banrot 40WP, Cease, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Fosphite, Hurricane, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Palladium, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR |
| Rust leaf spots | Allban Flo, Bayleton 50, Bayleton Flo, Cease, Clevis, Eagle, Insignia, OHP 6672, Pageant, Spectro 90, Strike 50WDG |
| Southern blight (<i>Sclerotium rolfsii</i>) | Hurricane, Medallion, Palladium |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| MOCK ORANGE | |
|---|---|
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Ramularia</i> , etc. | Camelot-O |
| Powdery mildew | Bayleton 50, Bayleton Flo, Camelot-O, Eagle, Heritage |
| Rust leaf spots | Bayleton 50, Bayleton Flo, Camelot-O, Eagle, Heritage |
| MONARDA (Bee Balm) | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Cease, Chipco 26019, Compass O, Iprodione, MilStop, Pageant, Phyton 27, Trinity TR |
| Leaf spots – <i>Cercospora</i> , <i>Phyllosticta</i> , <i>Ramularia</i> , etc. | 26/36, 26GT, Cease, Chipco 26019, Insignia, Iprodione, MilStop, Pageant, Trinity TR |
| Powdery mildew | Banner Maxx, Banner Maxx II, Cease, Compass O, Cygnus, Insignia, MilStop, Pageant, Phyton 27, Pipron, Propiconazole, Trinity TR |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Cease, Chipco 26019, Empress, Insignia, Iprodione, Pageant, Trinity TR |
| Pythium and Phytophthora root rot | Cease, Empress, FenStop, Insignia, Pageant |
| Southern blight (<i>Sclerotium rolfsii</i>) | |
| MORNING GLORY (Ipomoea) | |
| Fusarium root or stem rot | Empress |
| Leaf spots – <i>Alternaria</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Phyllosticta</i> , etc. | Insignia |
| Pythium, Phytophthora diseases | Empress |
| Rust leaf spots | Insignia |
| MOTHER-IN-LAWS TONGUE (see Sansevieria) | |
| MOUNTAIN LAUREL (see Kalmia) | |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| NANDINA | |
|--|---|
| Anthracnose (<i>Colletotrichum, Glomerella</i>) | Compass O, Heritage, Pageant |
| Leaf spots – <i>Cercospora</i> | Heritage, Pageant |
| Powdery Mildew | Compass O, Pageant |
| Rhizoctonia root rot and aerial/web blight | Pageant |
| NARCISSUS (see Daffodil) | |
| NASTURTIUM | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Pentathlon, Protect |
| Leaf spots – <i>Cercospora</i> , etc. | Pentathlon, Protect |
| Pythium, Phytophthora diseases | Banrot 8G, Banrot 40WP, Protect |
| Rhizoctonia root rot, web or aerial blight | Banrot 8G, Banrot 40WP, Protect |
| Rust leaf spots | Pentathlon, Protect |
| NEPHTHYTIS (see Syngonium) | |
| NICOTIANA (Ornamental Tobacco) | |
| Downy mildew | Protect |
| Leaf spots – <i>Alternaria, Septoria, Cercospora</i> , etc. | Medallion, Pentathlon, Protect |
| Rhizoctonia root rot, web or aerial blight | Medallion, Protect |
| NINEBARK (Physocarpus) DO NOT USE: INSIGNIA | |
| Leaf spots – <i>Cercospora, Phyllosticta, Ramularia</i> | |
| Powdery mildew | Bayleton 50, Bayleton Flo, Strike 50WDG |
| Rust leaf spots | Eagle |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

OAK

| | |
|--|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Elsinoe</i> , <i>Discula</i> , etc) | Allban Flo, Basicop, Bordeaux Mix, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Insignia, Junction, OHP 6672, Pageant, Pentathlon, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Leaf gall, leaf blister (<i>Taphrina</i>) | Clevis, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Mancozeb, Pentathlon, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Actinopelte</i> , <i>Cylindrosporium</i> , <i>Algal</i> , etc. | Allban Flo, Banner Maxx, Banner Maxx II, Basicop, Bordeaux Mix, Clevis, Concert, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Heritage, Insignia, Junction, Mancozeb, Nu-Cop 3L, OHP 6672, Pageant, Pentathlon, Propiconazole, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Trinity TR |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Cygnus, Eagle, Fosphite, Heritage, Insignia, OHP 6672, Pageant, Spectro 90, Strike 50WDG, Tourney, Trinity TR |
| Phytophthora root, crown, stem rot, canker | Alude, Empress, Fosphite, Insignia, Orvego Pageant, Protect, Spectro 90, Stature SC |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Fosphite, Insignia, OHP 6672, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Trinity TR |
| Rust leaf spots | Allban Flo, Insignia, OHP 6672, Pageant, Protect, Tourney |

OLEANDER (*Nerium*)

| | |
|--|---|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Heritage, Insignia, Nu-Cop 3L |
| Bacterial leaf spot or blight | CuPRO 2005 T/N/O, Nu-Cop 3L |
| Fusarium root or stem rot | Empress |
| Leaf spots – <i>Alternaria</i> , <i>Phyllosticta</i> , <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | CuPRO 2005, Heritage, Insignia, Nu-Cop 3L |
| Pythium, Phytophthora diseases | Empress |
| Rhizoctonia root rot, web or aerial blight | Empress |

ORCHID

| | |
|--|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Cease, Protect (Cymbidium, Phalaenopsis) |
| Bacterial leaf spot or blight | Agri-Mycin 17, Alude (Cattleya), Cease, Fosphite (Cattleya skinneri), Phyton 27 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Cease, Clevis (Dendrobium), Dithane (Dendrobium), Fore (Dendrobium), Mancozeb (Dendrobium), Pentathlon, Phyton 27, Protect (Cymbidium, Phalaenopsis), Trinity TR |
| Downy Mildew | Alude, Cease |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Phyllosticta</i> , etc. | Cease, Pentathlon, Protect (Cymbidium, Phalaenopsis), Trinity TR |
| Pythium, Phytophthora diseases | Alude, Cease, Fosphite (Cattleya skinneri), Protect, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | Cease, Fosphite (Cattleya skinneri), Protect (Cymbidium, Phalaenopsis), Trinity TR |
| Rust leaf spots | Cease, Pentathlon, Protect (Cymbidium, Phalaenopsis) |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| OREGON GRAPE (Mahonia) | |
|---|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Pentathlon, Protect, Spectro 90 |
| Leaf spots – <i>Cylindrocladium</i> , <i>Cercospora</i> , <i>Phyllosticta</i> , etc. | CuPRO 2005, Pentathlon, Protect, Spectro 90 |
| Rhizoctonia root rot, web or aerial blight | Protect, Spectro 90 |
| Rust leaf spots | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| OSMANTHUS (Sweet Tea Olive) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | Insignia, Pentathlon, Protect |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Protect |
| Leaf spots | Pentathlon |
| Rhizoctonia root rot, web or aerial blight | Empress, Insignia, Protect |
| Scab (<i>Venturia</i> , <i>Sphaceloma</i> , <i>Cladosporium</i>) | Insignia, Protect |
| OXALIS (Shamrock Plant) | |
| Anthracnose (<i>Colletotrichum</i>) | Palladium |
| Botrytis blight (grey mold) | Palladium |
| Rust leaf spots | Dithane, Fore, Mancozeb |
| Rhizoctonia root rot, web blight | Palladium |
| OYSTER PLANT (Rhoeospathacea) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Camelot-O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Rhizoctonia root rot, web or aerial blight | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Spectro 90, Thalonil 90DF, Thalonil 6L |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| PACHYSANDRA (Mountain Spurge) | |
|--|---|
| Anthracnose diseases – leaf and stem spots, diebacks | MilStop, Pageant, Palladium, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Leaf spots or blights – Phyllosticta, Septoria | 26/36, 26GT, Basicop, Chipco 26019, Iprodione, MilStop, Pageant, Palladium, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Iprodione, Pageant, Palladium, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Volutella twig blight | Basicop, Clevis, CuPRO 2005, Nu-Cop 3L, Phytan 27, Protect |
| PALM | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Bordeaux Mix, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, MilStop, Penathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP |
| Fusarium root or stem rot | Banrot 8G, Banrot40WP, Fosphite, Heritage, Iprodione, Pentathlon, Spectro 90 |
| Leaf spots – <i>Cercospora</i> , <i>Bipolaris</i> , <i>Cylindrocladium</i> , <i>Exosporium</i> , <i>Epicoccum</i> , <i>Alternaria</i> , <i>Exserohilum</i> | 26/36, 26GT, Bordeaux Mix, Camelot-O, Chipco 26019, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Heritage, Iprodione, Mancozeb, MilStop, Nu-Cop 3L, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Pythium, Phytophthora diseases | Banrot 8G, Banrot 40WP, Fosphite, Micora, Nu-Cop 3L, Protect, Spectro 90, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Fosphite, Heritage, Iprodione, Mancozeb, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| PANSY | |
| <u>DO NOT USE: COMPASS O (as a drench)</u> | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Basicop, Cease, Clevis, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Heritage, Insignia, Junction, Mancozeb, MilStop, OHP 6672, Pageant, Palladium, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, Banrot 8G, Banrot 40WP, Hurricane, Medallion, OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Basicop, Cease, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Iprodione, Medallion, MilStop, OHP 6672, Pageant, Palladium, Pentathlon, Phytan 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Downy mildew | Alude, Basicop, Bordeaux Mix, Cease, Compass O, Fosphite, Heritage, Insignia, Junction, Micora, Nu-Cop 3L, Orvego, Pageant, Pentathlon, Protect, Stature SC, Trinity TR |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Cease, Empress, Fosphite, Hurricane, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Palladium, Spectro 90, Trinity TR, Zyban WSB |
| Leaf spots – <i>Cercospora</i> , <i>Alternaria</i> , <i>Phyllosticta</i> , <i>Ramularia</i> , <i>Myrothecium</i> , <i>Mycocentrospora</i> | 26/36, 26GT, Allban Flo, Basicop, Cease, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Insignia, Iprodione, Medallion, MilStop, OHP 6672, Pageant, Palladium, Pentathlon, Phytan 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| PANSY (continued) | |
|---|--|
| DO NOT USE: COMPASS O (as a drench) | |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Cease, Compass O, Cygnus, Eagle, Fosphite, Insignia, MilStop, OHP 6672, Pageant, Palladium, Phytan 27, Spectro 90, Strike 50WDG, Trinity TR |
| Pythium, Phytophthora diseases | Adorn, Alude, Banol, Banrot 8G, Banrot 40WP, Cease, Empress, Fosphite, Hurricane, Insignia, Micora, Orvego, Pageant, Phytan 27, Protect, Spectro 90, Stature SC, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 8G, Banrot 40WP, Cease, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Fosphite, Hurricane, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Palladium, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Rust leaf spots | Allban Flo, Bayleton 50, Bayleton Flo, Cease, Eagle, Insignia, OHP 6672, Pageant, Protect, Spectro 90, Strike 50WDG |
| Scab (<i>Sphaceloma</i>) | Allban Flo, Cease, Insignia, MilStop, Protect |
| PAULOWNIA (Princess Tree) | |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , <i>Ascochyta</i> , <i>Phyllosticta</i> , etc. | |
| Powdery mildew | Bayleton 50, Bayleton Flo, Strike 50WDG |
| PEACH (Ornamental) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, MilStop, Pageant, Pentathlon, Protect, Spectro 90, Tourney |
| Bacterial leaf spot | Champion, CuPRO 2005, Junction |
| Blossom blight (<i>Monilinia</i> , <i>Coryneum</i> , etc) | Banner Maxx, Banner Maxx II, Basicop, Champion, Concert, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Junction, Pageant, Pentathlon |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Chipco 26019, Compass O, Junction, MilStop, Pageant |
| Botryosphaeria dieback | Pageant, Protect |
| Fusarium root or stem rot | Empress, Insignia, Iprodione, Pageant, Pentathlon, Spectro 90 |
| Leaf curl (<i>Taphrina</i>) | Basicop, Champion, Junction, Pentathlon |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Phyllosticta</i> , etc. | 26/36, 26GT, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Iprodione, Junction, MilStop, Pageant, Protect, Spectro 90, Tourney |
| Powdery mildew | Cygnus, Insignia, MilStop, Pageant, Spectro 90, Tourney |
| Pythium, Phytophthora diseases | Empress, Insignia, Pageant, Protect |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Insignia, Iprodione, Pageant, Spectro 90, Protect, Tourney |
| Rust leaf spots | Insignia, Pageant, Protect, Tourney |
| Scab (<i>Cladosporium</i>) | Junction, MilStop, Pageant, Pentathlon, Protect, Spectro 90, Tourney |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| PEAR, ORNAMENTAL (see Crabapple) | |
|--|---|
| PECAN (Ornamental) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Insignia, Junction, Pageant, Tourney |
| Fusarium root or stem rot | Champion, Empress, Fosphite, Pageant |
| Leaf spots – <i>Phyllosticta</i> , <i>Mycosphaerella</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Banner Maxx, Banner Maxx II, Champion, Insignia, Junction, Pageant, Tourney |
| Powdery mildew | Banner Maxx, Banner Maxx II, Fosphite, Insignia, Pageant, Tourney |
| Pythium, Phytophthora diseases | Champion, Empress, Fosphite, Pageant |
| Rhizoctonia root rot, web or aerial blight | Champion, Empress, Fosphite, Pageant |
| Scab (<i>Cladosporium</i>) | Banner Maxx, Banner Maxx II, Basicop, Insignia, Pageant, Tourney |
| PEONY | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Pentathlon, Protect |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Basicop, Clevis, CuPRO 2005, Dithane, Fore, Junction, Mancozeb, Nu-Cop 3L, Pentathlon, Protect |
| Leaf spots – <i>Alternaria</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Phyllosticta</i> , etc. | Bordeaux Mix, Junction, Pentathlon, Protect |
| Phytophthora root rot and aerial blight | Clevis, Dithane, Mancozeb, Protect |
| Rhizoctonia root rot, web or aerial blight | Protect |
| PEPEROMIA | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, MilStop, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Bacterial leaf spots | Alude, Fosphite, Resyst |
| Downy Mildew | Alude, Fosphite, Heritage |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Heritage, Iprodione, Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Myrothecium</i> , etc. | 26/36, 26GT, Camelot-O, Chipco 26019, Clevis, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Heritage, Iprodione, Mancozeb, MilStop, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Fosphite, Protect, Resyst, Spectro 90, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Camelot-O, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Fosphite, Heritage, Iprodione, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| PERIWINKLE (<i>Vinca</i> sp. – Vine) | |
|--|---|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Cease, Compass O, Heritage, Insignia, Junction, MilStop, Pageant, Palladium, Pentathlon, Protect, Torque |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Cease, Chipco 26019, Iprodione, Medallion, Pageant, Palladium, Pentathlon, Phyton 27, Protect, Zyban WSB |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> | 26/36, 26GT, Cease, Chipco 26019, Heritage, Insignia, Iprodione, Medallion, MilStop, Pageant, Palladium, Pentathlon, Protect, Torque, Zyban WSB |
| Phomopsis blight | CuPRO 2005, MilStop, Nu-Cop 3L, Palladium, Pentathlon |
| Phytophthora (aerial) shoot blight | Adorn, Cease, Compass O, Empress, FenStop, Fosphite, Heritage, Hurricane, Insignia, Micora, Orvego, Pageant, Phyton 27, Protect, Resyst, Stature SC, Subdue GR, Subdue MAXX, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Cease, Chipco 26019, Empress, Fosphite, Hurricane, Insignia, Iprodione, Medallion, Pageant, Palladium, Pentathlon, Protect, Zyban WSB |
| Rust leaf spots | Cease, Insignia, Pageant, Pentathlon, Protect, Torque |
| Volutella blight | Protect |
| PETUNIA and CALIBRACHOA | |
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, Banrot 8G, Banrot 40WP, Hurricane, Medallion, OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Allban Flo, Cease, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn Decree, Disarm, Dithane, Fore, Mancozeb, Medallion, OHP 6672, Pageant, Palladium, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Downy Mildew | Alude, Cease, Disarm, Fosphite, Insignia, Micora, Orvego, Pageant |
| Leaf spots – <i>Ascochyta</i> , <i>Cercospora</i> | Allban Flo, Cease, Cygnus, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Insignia, Kumulus, Medallion, OHP 6672, Pageant, Palladium, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Cease, Disarm, Eagle, Fosphite, Insignia, OHP 6672, Pageant, Palladium, Phyton 27, Spectro 90, Strike 50WDG, Trinity TR |
| Pythium, Phytophthora diseases | Alude, Banol, Banrot 8G, Banrot 40WP, Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Empress, Fosphite, Heritage (foliage blight), Hurricane, Insignia, Micora, Orvego, Pageant, Resyst, Spectro 90, Stature SC, Subdue GR, Subdue MAXX, Terrazole, Thalonil 90DF, Thalonil 6L, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Banrot 8G, Banrot 40WP, Cease, Compass O, Daconil Ultrex, Daconil Weather Stik, Daconil Zn, Disarm, Empress, Fosphite, Hurricane, Insignia, Medallion, OHP 6672, Pageant, Palladium, Pentathlon, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Rust leaf spots | Bayleton 50, Bayleton Flo, Cease, Disarm, Empress, Insignia, OHP 6672, Pageant, Pentathlo |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| PHILODENDRON (DO NOT USE: TERRACLOR 400) | |
|--|---|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Camelot-O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, MilStop, OHP 6672, Palladium, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Bacterial leaf spot or blight or leaf rot | Agri-Mycin 17, Alude, Basicop, CuPRO 2005, Fosphite, Nu-Cop 3L, Resyst |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Camelot-O, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, MilStop, OHP 6672, Palladium, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Downy Mildew | Alude, Fosphite, Heritage |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Fosphite, Iprodione, OHP 6672, Palladium, Spectro 90, Trinity TR, Zyban WSB |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | 26/36, 26GT, Allban Flo, Camelot-O, Chipco 26019, Clevis, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Heritage, Iprodione, Mancozeb, MilStop, OHP 6672, Palladium, Spectro 90, Protect, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Fosphite, Protect, Resyst, Spectro 90, Subdue GR, Subdue MAXX, Terrazole, Thalonil 90DF, Thalonil 6L, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 8G, Banrot 40WP, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Fosphite, Iprodione, OHP 6672, Palladium, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| PHLOX | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Bordeaux Mix, Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, MilStop, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Basicop, Cease, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, MilStop, Pageant, Pentathlon, Phytan27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Downy mildew | Alude, Cease, Compass O, Fosphite, Insignia, Micora, Pageant, Phytan 27, Protect |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Ramularia</i> , <i>Phyllosticta</i> , <i>Ascochyta</i> | 26/36, 26GT, Basicop, Bayleton 50, Bayleton Flo, Bordeaux mix, Cease, Chipco 26019, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Eagle, Fore, Insignia, Iprodione, Mancozeb, MilStop, Nu-Cop 3L, Pageant, Pentathlon, Protect, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Powdery mildew | Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Cease, Compass O, Cygnus, Eagle, Fosphite, Heritage, Insignia, MilStop, Pageant, Phytan 27, Pipron, Propiconazole, Rubigan, Spectro 90, Strike 50WDG, Zyban WSB |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Cease, Daconil Ultrex, Empress, Fosphite, Insignia, Micora, MilStop, Pageant, Protect, Resyst, Spectro 90, Subdue GR, Subdue MAXX, Terrazole, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Cease, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Fosphite, Insignia, Iprodione, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Rust leaf spots | Bayleton 50, Bayleton Flo, Cease, Eagle, Insignia, Pageant, Pentathlon, Protect, Spectro 90, Strike 50WDG |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| PHOTINIA (Redtip) | |
|---|---|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Cease, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Insignia, Junction, Mancozeb, Nu-Cop 3L, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Pageant, Spectro 90, Protect, Thalonil 90DF, Thalonil 6L, Tourney, Zyban WSB |
| Downy Mildew | Alude, Cease, Fosphite, Heritage, Insignia, Pageant |
| Fire blight | Fosphite, Resyst |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Entomosporium</i> , <i>Pestalotia</i> , <i>Phyllosticta</i> | Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Cease, Clevis, Compass O, Concert, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Eagle, Fore, Heritage, Insignia, Junction, Mancozeb, Nu-Cop 3L, Pageant, Pentathlon, Phyton 27, Propiconazole, Protect, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L, Tourney, Zyban WSB |
| Powdery mildew | Bayleton 50, Bayleton Flo, Cease, Clevis, Compass O, Eagle, Fosphite, Heritage, Insignia, Junction, Pageant, Rubigan, Spectro 90, Strike 50WDG, Tourney |
| Pythium, Phytophthora diseases | Alude, Banrot 40WP, Cease, Empress, Fosphite, Insignia, Pageant, Protect, Resyst, Spectro 90, Subdue GR, Subdue MAXX, Terrazole |
| Rhizoctonia root rot, web or aerial blight | Banrot 40WP, Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Fosphite, Insignia, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Zyban WSB |
| Rust leaf spots | Bayleton 50, Bayleton Flo, Cease, Clevis, Eagle, Heritage, Insignia, Pageant, Pentathlon, Protect, Rubigan, Spectro 90, Strike 50WDG, Tourney |
| PIERIS (Andromeda, Lily of the Valley Bush) | |
| Bacterial leaf spot or blight | Alude, Fosphite, Pentathlon |
| Downy Mildew | Alude, Fosphite, Heritage, Orvego |
| Leaf spots – <i>Phyllosticta</i> , <i>Alternaria</i> | 26/36, 26GT, Chipco 26019, CuPRO 2005, Heritage, Iprodione, MilStop, Pentathlon, Protect, Spectro 90 |
| Pythium, Phytophthora diseases | Alude, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Fosphite, Orvego, Protect, Resyst, Spectro 90, Stature SC, Subdue GR, Subdue MAXX, Thalonil 90DF, Thalonil 6L |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Fosphite, Heritage Iprodione, Protect, Spectro 90 |
| PILEA | |
| DO NOT USE: DEFEND, REVERE, TERRACLOR | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Camelot-O |
| Leaf spots – <i>Septoria</i> , <i>Myrothecium</i> | 26/36, 26GT, Camelot-O, Chipco 26019, Iprodione, MilStop, Pentathlon, Protect |
| Pythium, Phytophthora diseases | Banrot 8G, Banrot 40WP, Protect, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Camelot-O, Chipco 26019, Iprodione, Protect |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| PINE | |
|--|--|
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Chipco 26019, Insignia, Iprodione, Mancozeb, MilStop, OHP 6672, Pentathlon, Protect, Tourney, Trinity TR |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Empress, Fosphite, Insignia, Iprodione, OHP 6672, Pentathlon, Trinity TR |
| Leaf spots – <i>Septoria</i> | 26/36, 26GT, Allban Flo, Chipco 26019, Insignia, Iprodione, MilStop, OHP 6672, Pentathlon, Protect, Tourney, Trinity TR |
| Pine needle blight/needle cast | Allban Flo, Banner Maxx, Banner Maxx II, Basicop, Bayleton 50, Bayleton Flo, Bordeaux Mix, Camelot-O, Champion, CuPRO 2005, Dithane, Fore, Heritage, Junction, Kocide, Mancozeb, OHP 6672, Pentathlon, Propiconazole, Protect, Strike 50WDG, Tourney |
| Pythium, Phytophthora diseases | Aliette WDG, Alude, Banrot 8G, Banrot 40WP, Empress, Fosphite, Insignia, Micora, Protect, Resyst, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 8G, Banrot 40WP, Chipco 26019, Empress, Fosphite, Insignia, Iprodione, OHP 6672, Pentathlon, Protect, Terraclor 400, Tourney, Trinity TR |
| Rust leaf spots | Allban Flo, Bayleton 50, Bayleton Flo, Eagle, Heritage, Mancozeb, Insignia, OHP 6672, Pentathlon, Protect, Strike 50WDG, Tourney |
| PITTOSPORUM | |
| <u>DO NOT USE: DACONIL Ultrex, DACONIL Weather Stik, DACONIL Zn. or CONCERT</u> | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Insignia, MilStop, Pageant, Protect |
| Bacterial leaf spot or blight | Alude, Fosphite |
| Downy Mildew | Alude, Fosphite, Insignia, Pageant |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | 26/36, 26GT, Chipco 26019, Compass O, Dithane, Fore, Insignia, Iprodione, Mancozeb, MilStop, Pageant, Pentathlon, Protect, Zyban WSB |
| Powdery Mildew | Heritage, MilStop, Pageant |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Empress, Fosphite, Insignia, Pageant, Protect, Resyst, Subdue GR, Subdue MAXX |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Chipco 26019, Compass O, Empress, Fosphite, Insignia, Iprodione, Medallion, Pageant, Pentathlon, Phyton 27, Protect, Zyban WSB |
| Rust leaf spots | Heritage, Pageant |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| PLUM (Ornamental) | |
|--|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Bordeaux Mix, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Insignia, MilStop, Pageant, Protect, Spectro 90, Tourney |
| Black root rot (<i>Thielaviopsis</i>) | |
| Blossom blight and Shot hole | 26/36, 26GT, Banner Maxx, Banner Maxx II, Basicop, Chipco 26019, Concert, CuPRO 2005, Daconil, Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Iprodione, Junction, Pageant, Pentathlon |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Chipco 26019, Compass O, Heritage, Junction, MilStop, Pageant, Pentathlon |
| Fusarium root or stem rot | Empress, Insignia, Iprodione, Pageant, Spectro 90 |
| Leaf gall, leaf blister, leaf curl (<i>Taphrina</i>) | Junction, Pentathlon |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Coccomyces</i> , <i>Phyllosticta</i> | 26/36, 26GT, Chipco 26019, Cygnus, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Insignia, Iprodione, Junction, MilStop, Pageant, Pentathlon, Protect, Spectro 90, Tourney |
| Powdery mildew | Compass O, Cygnus, Insignia, MilStop, Pageant, Spectro 90, Tourney |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Insignia, Iprodione, Pageant, Protect, Spectro 90, Tourney |
| Rust leaf spots | Insignia, Pageant, Protect, Tourney |
| Scab (<i>Cladosporium</i>) | Compass O, Insignia, Junction, MilStop, Pageant, Pentathlon, Protect, Spectro 90, Tourney |
| PODOCARPUS | |
| Pythium, Phytophthora diseases | Banrot 40WP, Micora, Terrazole |
| Rhizoctonia root rot, web or aerial blight | Banrot 40WP |
| Southern blight (<i>Sclerotium rolfsii</i>) | |
| POINSETTIA (Euphorbia) <u>DO NOT USE: COMPASS O (after bract color development)</u> | |
| Bacterial leaf spot or blight | Agri-Mycin 17, Cease, Phyton 27 |
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, Banrot 8G, Banrot 40WP, Medallion, OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Cease, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Decree, Iprodione, Medallion, MilStop, OHP 6672, Pageant, Palladium, Pentathlon, Phyton 27, Protect, Spectro 90, Thaloniil 90DF, Thaloniil 6L, Trinity TR, Zyban WSB |
| Downy Mildew | Alude, Cease, FenStop, Fosphite, Insignia, Micora, Orvego, Pageant |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Cease, Empress, Fosphite, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Palladium, Pentathlon, Spectro 90, Trinity TR, Zyban WSB |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| POINSETTIA (Euphorbia) (continued) DO NOT USE: COMPASS O (after bract color development) | |
|---|--|
| Leaf spots – <i>Cercospora</i> | 26/36, 26GT, Allban Flo, Cease, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Insignia, Iprodione, MilStop, OHP 6672, Pageant, Palladium, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Cease, Clevis, Compass O, Cygnus, Eagle, Fosphite, Insignia, MilStop, OHP 6672, Pageant, Palladium, Phytan 27, Pipron, Spectro 90, Strike 50WDG, Trinity TR |
| Pythium, Phytophthora diseases | Alude, Banol, Banrot 8G, Banrot 40WP, Cease, Empress, FenStop, Fosphite, Insignia, Micora, Orvego, Pageant, Protect, Resyst, Spectro 90, Stature SC, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 8G, Banrot 40WP, Camelot-O, Cease, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Fosphite, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Palladium, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Trinity TR, Zyban WSB |
| Scab (<i>Sphaceloma</i>) | Allban Flo, Cease, Clevis, Compass O, Dithane, Eagle, Fore, Insignia, Mancozeb, MilStop, Pageant, Pentathlon, Phytan 27, Protect, Zyban WSB |
| POPLAR | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Bordeaux Mix, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Marsonina</i> , <i>Phyllosticta</i> | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Junction, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Powdery mildew | Bayleton 50, Bayleton Flo, Insignia, Spectro 90, Strike 50WDG, Tourney |
| Rhizoctonia root rot, web or aerial blight | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Insignia, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Rust leaf spots | Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Concert, Dithane, Eagle, Fore, Insignia, Junction, Mancozeb, Pentathlon, Propiconazole, Protect, Strike 50WDG, Tourney |
| Scab (<i>Sphaceloma</i>) | Insignia, Pentathlon, Protect, Tourney |
| POPPY | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | MilStop |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Compass O, Iprodione, MilStop, Phytan 27 |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> | 26/36, 26GT, Chipco 26019, Iprodione, MilStop |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Iprodione |
| Rust leaf spots | |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| PORTULACA (Moss Rose/Purslane) | |
|--|---|
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Cease, Medallion, Palladium, Protect |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Cease, Cygnus, Insignia, Medallion, Palladium, Protect |
| Pythium, Phytophthora diseases | Banol, Cease, Empress, Insignia, Protect, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | Cease, Empress, Insignia, Medallion (test drench for phytotoxicity), Palladium, Pentathlon, Protect |
| Rust-white rust (<i>Albugo</i>) | Cease, Insignia, Protect |
| POTHOS (see Epipremnum) | |
| PRAYER PLANT (Maranta) | |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Glomerella</i> | Camelot-O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Pythium, Phytophthora diseases | Banrot 8G, Banrot 40WP, Protect, Spectro 90, Terrazole, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | Banrot 8G, Banrot 40WP, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Rust leaf spots | Pentathlon, Protect, Spectro 90 |
| PRIMROSE (Primula) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Heritage, Insignia, MilStop, OHP 6672, Pentathlon, Pageant |
| Bacterial leaf spot or blight | Phyton 27 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Chipco 26019, Compass O, Dithane, Fore, Iprodione, Mancozeb, MilStop, OHP 6672, Pageant, Pentathlon, Phyton 27 |
| Downy Mildew | Alude, Fosphite, Heritage, Insignia, Orvego, Pageant |
| Leaf spots – <i>Ascochyta</i> , <i>Cercospora</i> , <i>Alternaria</i> , etc. | 26/36, 26GT, Allban Flo, Chipco 26019, Heritage, Insignia, Iprodione, MilStop, OHP 6672, Pageant, Pentathlon |
| Powdery mildew | Allban Flo, Fosphite, Insignia, MilStop, OHP 6672, Pageant, Phyton 27 |
| Pythium, Phytophthora diseases | Alude, Emperss, Fosphite, Insignia, Orvego, Pageant, Resyst, Stature SC, Subdue GR, Subdue MAXX |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Chipco 26019, Empress, Fosphite, Insignia, Iprodione, OHP 6672, Pageant |
| Rust leaf spots | Allban Flo, Insignia, OHP 6672, Pageant, Penathlon |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| PRIVET (see Ligustrum) | |
|--|--|
| PROTEA | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | MilStop, Protect |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Dithane, Fore, Iprodione, Mancozeb, MilStop, Pentathlon, Protect |
| Leaf spots – <i>Cercospora</i> , <i>Ascochyta</i> , <i>Alternaria</i> | 26/36, 26GT, Chipco 26019, Iprodione, MilStop, Protect |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Iprodione, Protect |
| PYRACANTHA (Firethorne) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, MilStop, OHP 6672, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Bacterial leaf spot or blight | Agri-Mycin 17, Phyton 27 |
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, OHP 6672 |
| Botryosphaeria dieback | Protect |
| Fire blight | Agri-Mycin 17, Alette WDG, Alude, Basicop, CuPRO 2005, Nu-Cop 3L, Phyton 27 |
| Leaf spots – <i>Septoria</i> , <i>Cercospora</i> , <i>Entomosporium</i> , etc. | 26/36, 26GT, Allban Flo, Banner Maxx, Banner Maxx II, Camelot-O, Chipco 26019, Concert, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, MilStop, OHP 6672, Pentathlon, Propiconazole, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Camelot-O, MilStop, OHP 6672, Spectro 90, Strike 50WDG, Tourney |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, OHP 6672, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Scab (<i>Fusicladium</i>) | Allban Flo, Basicop, 3336, Clevis, CuPRO 2005, Dithane, Eagle, Fore, Junction, Mancozeb, MilStop, Nu-Cop 3L, OHP 6672, Protect, Systec 1998, Tourney, Zyban WSB |
| QUINCE (Flowering) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Pageant |
| Blossom and twig blight | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Eagle, Fosphite, Insignia, Pageant |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Camelot-O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Eagle, Fore, Insignia, Mancozeb, Pageant, Pentathlon |
| Powdery mildew | Camelot-O, Fosphite, Insignia, Pageant |
| Rhizoctonia root rot, web or aerial blight | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Fosphite, Insignia, Pageant |
| Rust leaf spots | Camelot-O, Dithane, Eagle, Empress, Fore, Insignia, Mancozeb, Pageant, Pentathlon |
| Scab (<i>Venturia</i> , <i>Sphaceloma</i> , <i>Cladosporium</i>) | Dithane, Fore, Insignia, Mancozeb, Pageant, Pentathlon |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| RANUNCULUS | |
|--|--|
| Botrytis blight (Gray mold) | Cease, Compass O, Decree, Phyton 27 |
| Downy Mildew | Cease, Compass O, Insignia |
| Fusarium root or stem rot | Cease, Empress |
| Powdery Mildew | Cease, Compass O, Insignia |
| Pythium, Phytophthora diseases | Cease, Empress |
| Rhizoctonia root rot, web, or aerial blight | Cease, Empress |
| REDBUD | |
| Downy Mildew | Heritage, Insignia |
| Fusarium roor or stem rot | Empress |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Heritage, Insignia, Junction |
| Pythium, Pytophthora diseases | Empress |
| Rhizoctonia | Empress |
| REDTIP (see Photinia) | |
| REDWOOD (Sequoia) | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Botran 75W, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Pentathlon |
| Botryosphaeria dieback | Protect |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Pentathlon, Protect, Spectro 90 |
| Phomopsis or Cercospora on junipers, twig blight | Pentathlon, Protect |
| Pine needle blight/needle cast | Pentathlon, Protect |
| RHAPHIOLEPIS (see Indian Hawthorne) | |
| RHODODENDRON (see Azalea) | |
| RHOEO (see Oyster Plant) | |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| ROSE | |
|--|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Insignia, Junction, MilStop, OHP 6672, Pageant, Palladium, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Bacterial blast and blight | Agri-Mycin 17, Alude, Cease, Fosphite, Phyton 27, Resyst |
| Black root rot (<i>Thielaviopsis</i>) | Allban Flo, Compass O, Hurricane, OHP 6672 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Botran 75W, Captan 50, Captan 4L, Cease, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Decree, Disarm, Iprodione, Junction, Medallion, MilStop, OHP 6672, Pageant, Phyton 27, Palladium, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Trinity TR, Zyban WSB |
| Botryosphaeria dieback | Pageant, Protect |
| Downy mildew | Aliette WDG, Alude, Cease, Compass O, Cygnus, Disarm, Fosphite, Insignia, Micora, Orvego, Pentathlon, Pageant, Phyton 27, Protect, Resyst, Stature SC, Thalonil 90DF, Thalonil 6L, Trinity TR |
| Fusarium root or stem rot | Allban Flo, Cease, Disarm, Empress, Fosphite Hurricane, Insignia, Iprodione, OHP 6672, Pageant, Medallion, Palladium, Spectro 90, Trinity TR, Zyban WSB |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , <i>Black spot</i> , etc. | 26/36, 26GT, Allban Flo, Banner Maxx, Banner Maxx II, Bordeaux Mix, Captan 4L, Captan 50, Cease, Chipco 26019, Clevis, Concert, CuPRO 2005, Cygnus, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Dithane, Eagle, Fore, Heritage, Insignia, Iprodione, Junction, Kumulus, Mancozeb, MilStop, Nu-Cop 3L, OHP 6672, Pageant, Palladium, Pentathlon, Propiconazole, Protect, Spectro 90, Systec 1998, Thalonil 90DF, Thalonil 6L, Tourney, Trinity TR, Zyban WSB |
| Powdery mildew | Allban Flo, Banner Maxx, Banner Maxx II, Basicop, Bayleton 50, Bayleton Flo, Bordeaux Mix, Cease, Clevis, Compass O, CuPRO 2005, Cygnus, Disarm, Eagle, Fosphite, Heritage, Insignia, Junction, Kumulus, MilStop, Nu-Cop 3L, OHP 6672, Pageant, Palladium, Phyton 27, Pipron, Propiconazole, Rubigan, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L, Torque, Tourney, Trinity TR, Zyban WSB |
| Pythium, Phytophthora diseases | Alude, Cease, Disarm, Empress, Fosphite, Hurricane, Insignia, Micora, Orvego, Pageant, Protect, Resyst, Spectro 90, Stature SC, Subdue GR, Subdue MAXX |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Cease, Chipco 26019, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Empress, Fosphite, Hurricane, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Palladium, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Trinity TR, Zyban WSB |
| Rust leaf spots | Allban Flo, Banner Maxx, Banner Maxx II, Cease, Clevis, Compass O, Concert, Cygnus, Disarm, Dithane, Eagle, Fore, Heritage, Insignia, Junction, Mancozeb, OHP 6672, Pageant, Pentathlon, Plantvax, Propiconazole, Protect, Spectro 90, Torque, Tourney |
| Scab or leaf mold (<i>Cladosporium</i>) | Cease, Compass O, Insignia, MilStop, Pageant, Pentathlon, Protect, Tourney |
| Southern blight (<i>Sclerotium rolfsii</i>) | Disarm, Hurricane, Palladium |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| ROSEMARY | |
|---|---|
| Downy Mildew | Alude, Fosphite, Heritage |
| Rhizoctonia root rot and web blight | Dithane, Fore, Fosphite, Mancozeb, Pentathlon |
| Powdery Mildew | Cygnus, Fosphite |
| Pythium, Phytophthora diseases | Alude, Fosphite, Resyst, Subdue GR, Subdue MAXX |
| RUDBECKIA (Black-eyed Susan) | |
| Downy mildew | Heritage, Insignia, Micora, Pageant, Phytan 27, Trinity TR |
| Leaf spots – <i>Cercospora</i> , <i>Septoria</i> , | Heritage, Insignia, Pageant, Trinity TR |
| Pythium and Phytophthora diseases | Empress, Insignia, Micora, Pageant |
| SALVIA | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Cease, Chipco 26019, Compass O, Medallion, OHP 6672, Pageant, Palladium, Phytan 27 |
| Downy mildew | Alude, Cease, Compass O, Fosphite, Insignia, Micora, Pageant, Phytan 27, Resyst |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Cease, Empress, Fosphite, Hurricane, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Palladium |
| Leaf spots – <i>Ramularia</i> , <i>Cercospora</i> , etc. | 26/36, 26GT, Allban Flo, Cease, Chipco 26019, Compass O, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Palladium, Pentathlon |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Cease, Compass O, Eagle, Fosphite, Heritage, Insignia, OHP 6672, Pageant, Palladium, Phytan27, Strike 50WDG |
| Pythium, Phytophthora diseases | Alude, Banol, Banrot 8G, Banrot 40WP, Cease, Empress, Fosphite, Hurricane, Insignia, Micora, Pageant, Resyst, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 8G, Banrot 40WP, Cease, Chipco 26019, Compass O, Empress, Fosphite, Hurricane, Insignia, Iprodione, Medallion, OHP 6672, Pageant, Palladium |
| Rust leaf spots | Allban Flo, Bayleton 50, Bayleton Flo, Cease, Compass O, Eagle, Heritage, Insignia, OHP 6672, Pageant, Pentathlon, Strike 50WDG |
| SANSEVIERIA (Snake Plant, Mother-in-law tongue) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | Pentathlon, Protect, Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | Camelot-O, Protect, Spectro 90 |
| Pythium, Phytophthora diseases | Protect, Spectro 90, Terrazole, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | Protect, Spectro 90 |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| SAND CHERRY (see Cherry) | |
|--|--|
| SCABIOSA | |
| Fungal leaf spots | Insignia |
| Rhizoctonia root rot, web or aerial blight | Empress, Insignia |
| Southern blight (<i>Sclerotium rolfsii</i>) | Terraclor 400 |
| SCHEFFLERA (Umbrella Tree) | |
| Bacterial leaf spot or blight, fire blight | Aliette WDG, Alude, Camelot-O, Fosphite, Resyst |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, CuPRO 2005, Iprodione, MilStop, Protect, Trinity TR |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Fosphite, Iprodione, Trinity TR |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , <i>Alternaria</i> , etc. | 26/36, 26GT, Camelot-O, Chipco 26019, Clevis, Dithane, Fore, Iprodione, Mancozeb, MilStop, Pentathlon, Protect, Trinity TR |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Fosphite, Protect, Resyst, Subdue MAXX |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Chipco 26019, Fosphite, Iprodione, Protect, Trinity TR |
| SCHLUMBERGERA (see Cactus, Christmas) | |
| SEDUM | |
| Leaf spots – <i>Septoria</i> , etc. | Camelot-O, Heritage, Insignia, Pageant |
| Pythium, Phytophthora diseases | Alude, Empress, Fosphite, Insignia, Pageant, Resyst, Subdue GR, Subdue MAXX |
| Rhizoctonia root rot, web or aerial blight | Empress, Fosphite, Insignia, Pageant |
| Powdery mildew | Bayleton 50, Bayleton Flo, Eagle, Fosphite, Insignia, Pageant, Strike 50WDG |
| Southern blight (<i>Sclerotium rolfsii</i>) | |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| SENECIO (Groundsel or Dusty Miller) | |
|--|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Palladium, Pentathlon, Protect |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Palladium, Protect |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Pentathlon, Protect |
| Powdery mildew | |
| Rhizoctonia root rot, web or aerial blight | Palladium, Protect |
| Rust leaf spots | Pentathlon, Protect |
| SNAKE PLANT, MOTHER IN LAW TONGUE (See Sansevieria) | |
| SNAPDRAGON | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Basicop, Cease, Compass O, CuPRO 2005, Disarm, Insignia, MilStop, Pageant, Palladium, Pentathlon, Protect |
| Bacterial leaf spot or blight | Cease |
| Black root rot (<i>Thielaviopsis</i>) | Banrot 8G, Banrot 40WP, Hurricane, Medallion |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Basicop, Cease, Chipco 26019, Compass O, Disarm, Iprodione, Medallion, MilStop, Pageant, Palladium, Pentathlon, Phytan 27, Protect, Zyban WSB |
| Downy mildew | Alude, Basicop, Cease, Compass O, CuPRO 2005, Cygnus, Disarm, Fosphite, Insignia, Micora, Orvego, Pageant, Pentathlon, Phytan 27, Protect, Resyst, Stature SC, Zyban WSB |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Cease, Disarm, Empress, Fosphite, Hurricane, Insignia, Iprodione, Medallion, Pageant, Palladium, Pentathlon |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | 26/36, 26GT, Basicop, Cease, Chipco 26019, Compass O, Disarm, Heritage, Insignia, Iprodione, Medallion, MilStop, Pageant, Palladium, Pentathlon, Protect, Zyban WSB |
| Powdery mildew | Bayleton 50, Bayleton Flo, Cease, Clevis, Compass O, Cygnus, Disarm, Eagle, Fosphite, Heritage, Insignia, MilStop, Pageant, Palladium, Strike 50WDG |
| Pythium, Phytophthora diseases | Adorn, Alude, Banol, Banrot 8G, Banrot 40WP, Cease, Disarm, Empress, Fosphite, Hurricane, Insignia, Micora, Orvego, Pageant, Protect, Resyst, Stature SC, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Cease, Chipco 26019, Compass O, Disarm, Empress, Fosphite, Hurricane, Insignia, Iprodione, Medallion, Pageant, Palladium, Pentathlon, Protect, Zyban WSB |
| Rust leaf spots | Banner Maxx, Banner Maxx II, Bayleton 50, Bayleton Flo, Cease, Clevis, Compass O, Cygnus, Disarm, Dithane, Eagle, Fore, Heritage, Insignia, Mancozeb, Pageant, Pentathlon, Phytan 27, Plantvax, Propiconazole, Protect, Strike 50WDG |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| SPATHIPHYLLUM | |
|---|--|
| <u>DO NOT USE: 26/36, 26GT, Chipco 26019, IPRODIONE, or TERRAGUARD</u> | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Cease, Junction, Pageant, Palladium, Protect |
| Bacterial leaf spot or blight, | Aliette WDG, Alude, Cease, CuPRO 2005, Fosphite, Junction, Resyst |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Cease, Medallion, Pageant, Palladium, Phytan 27, Protect, Zyban WSB |
| Cylindrocladium crown rot and leaf blight | Compass O, Hurricane, Medallion, Pageant, Palladium, Phytan 27, Protect |
| Downy Mildew | Alude, Cease, FenStop, Fosphite, Heritage, Orvego, Pageant |
| Leaf spots – <i>Myrothecium</i> , <i>Cercospora</i> , <i>Septoria</i> , etc. | Camelot-O, Cease, Compass O, Dithane, Fore, Junction, Mancozeb, Medallion, Pageant, Palladium, Pentathlon, Protect, Zyban WSB |
| Pythium, Phytophthora diseases | Alude, Cease, Compass O, FenStop, Fosphite, Hurricane, Orvego, Pageant, Phytan 27, Protect, Resyst, Stature SC |
| Rhizoctonia root rot, web or aerial blight | Camelot-O, Cease, Fosphite, Heritage, Hurricane, Medallion, Pageant, Palladium, Protect, Zyban WSB |
| SPEEDWELL (see Veronica) | |
| SPIREA | |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , <i>Cylindrosporium</i> , etc. | Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Pageant, Pentathlon, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Trinity TR |
| Powdery mildew | Bayleton 50, Bayleton Flo, Cease, Compass O, Cygnus, Eagle, Heritage, Insignia, Pageant, Phytan 27, Spectro 90, Strike 50WDG, Tourney, Trinity TR |
| Rhizoctonia root rot, web or aerial blight | Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Insignia, Pageant, Phytan 27, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Trinity TR |
| SPRUCE | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Allban Flo, Botran 75W, MilStop, OHP 6672, Pentathlon, Protect, Tourney, Trinity TR |
| Fusarium root or stem rot | Allban Flo, Banrot 8G, Banrot 40WP, Empress, Insignia, OHP 6672, Trinity TR |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Allban Flo, Insignia, MilStop, OHP 6672, Pentathlon, Protect, Tourney, Trinity TR |
| Phomopsis or Cercospora on junipers, twig blight | Allban Flo, Heritage, Insignia, MilStop, OHP 6672, Protect, Tourney, Trinity TR |
| Needle cast | Basicop, Bordeaux Mix, Champion, CuPRO 2005, Kocide, OHP 6672, Protect |
| Pythium, Phytophthora diseases | Aliette WDG, Alude, Banrot 8G, Banrot 40WP, Empress, Fosphite, Insignia, Micora |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Banrot 8G, Banrot 40WP, Empress, Insignia, OHP 6672, Pentathlon, Protect, Tourney, Trinity TR |
| Rust leaf spots | Allban Flo, Insignia, OHP 6672, Protect, Tourney |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| STATICE (Limonium) | |
|---|---|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | Allban Flo, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, MilStop, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Allban Flo, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, MilStop, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Downy mildew | Orvego, Pageant, Protect, Stature SC, Thalonil 90DF, Thalonil 6L |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , <i>Phyllosticta</i> , etc. | 26/36, 26GT, Allban Flo, Chipco 26019, Clevis, Cygnus, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Fore, Iprodione, Mancozeb, MilStop, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Pythium, Phytophthora diseases | Banrot 40WP, Orvego, Pageant, Protect, Spectro 90, Stature SC, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Allban Flo, Banrot 40WP, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Rust leaf spots | Allban Flo, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90 |
| STOCK (Matthiola) | |
| Downy mildew | Cease, Micora, Orvego, Pageant, Stature SC |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , <i>Myrothecium</i> , etc. | Ceas, Pageant, Zyban WSB |
| Rhizoctonia root rot, web or aerial blight | Cease, Pageant, Zyban WSB |
| Phytophthora root rot, aerial blight | Cease, Micora, Orvego, Pageant, Stature SC |
| STOKESIA (Stokes Aster) | |
| Pythium, Phytophthora diseases | |
| STRAWFLOWER (Helichrysum) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Palladium, OHP 6672, Protect |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Allban Flo, Palladium, OHP 6672, Protect |
| Downy mildew | Protect |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Allban Flo, OHP 6672, Palladium, Protect |
| Rhizoctonia root rot, web blight | Allban Flo, OHP 6672, Palladium, Protect |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| SUNFLOWER | |
|---|---|
| Botrytis blight (grey mold) | Medallion, Palladium |
| Downy mildew | Micora |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Alternaria</i> , etc. | Eagle, Medallion, Palladium, Pentathlon |
| Powdery mildew | Bayleton 50, Bayleton Flo, Eagle, Kumulus, Palladium, Strike 50WDG |
| Rhizoctonia stem rot, aerial blight | Medallion (test drench for phytotoxicity), Palladium |
| Rust leaf spots | Bayleton 50, Bayleton Flo, Eagle, Pentathlon, Strike 50WDG |
| SWEET GUM (Liquidambar) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | Tourney |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Banner Maxx, Banner Maxx II, Propiconazole, Tourney |
| Powdery mildew | Tourney |
| SWEET PEA | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | |
| Bacterial leaf spot or blight | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Phyton 27 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | |
| Powdery mildew | Kumulus, Rubigan |
| Rhizoctonia root rot, web or aerial blight | |
| SWEET WILLIAM/PINKS (see Dianthus) | |
| SYCAMORE (London Plane Tree) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , <i>Gnomonia</i> , etc) | Allban Flo, Banner Maxx, Banner Maxx II, Basicop, Bordeaux Mix, Camelot-O, Champion, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Junction, Kocide, Nu-Cop 3L, OHP 6672, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Zyban WSB |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Mycosphaerella</i> , etc. | Allban Flo, Basicop, Bordeaux Mix, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Junction, OHP 6672, Propiconazole, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Eagle, Fosphite, OHP 6672, Spectro 90, Strike 50WDG, Tourney |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Fosphite, OHP 6672, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| SYNGONIUM (Nephthytis) | |
|--|---|
| Bacterial leaf spot | Aliette WDG, Alude, Camelot-O, CuPRO 2005, Resyst |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Medallion, Palladium, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , <i>Cephalosporium</i> , etc. | Bayleton 50, Bayleton Flo, Camelot-O, Clevis, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Dithane, Eagle, Fore, Mancozeb, Medallion, Palladium, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Myrothecium leaf blight, crown rot | Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Medallion, Palladium, Spectro 90 |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Protect, Resyst, Spectro 90, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | Banrot 8G, Banrot 40WP, Camelot-O, Compass O, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Medallion (test drench for phytotoxicity), Palladium, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| TAXUS (Yew) | |
| Phomopsis twig blight | Basicop, Bordeaux Mix, CuPRO 2005, Trinity TR |
| Pythium, Phytophthora diseases | Alude, Fosphite, Resyst, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP |
| Rhizoctonia root rot, web or aerial blight | Fosphite, Heritage, Phytan 27, Trinity TR |
| TICKSEED (see Coreopsis) | |
| TRADESCANTIA (see Wandering Jew) | |
| TULIP | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Junction, Nu-Cop 3L, Pageant, Palladium, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Bacterial leaf spot or blight | |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Basicop, Bordeaux Mix, Chipco 26019, Clevis, Daconil Ultrex, Daconil Weather Stik, Daconil Zn, Dithane, Fore, Iprodione, Junction, Mancozeb, Medallion, Nu-Cop 3L, Pageant, Palladium, Pentathlon, Phytan 27, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Fusarium root or stem rot | Empress, Insignia, Iprodione, Medallion, Pageant, Palladium, Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | 26/36, 26GT, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Insignia, Iprodione, Pageant, Palladium, Propiconazole, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Empress, Insignia, Iprodione, Medallion, Pageant, Palladium, Spectro 90, Terraclor 400, Thalonil 90DF, Thalonil 6L |
| Southern blight (<i>Sclerotium rolfsii</i>) | Palladium, Terraclor 400 |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| VENUS FLY TRAP | |
|---|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Clevis, Dithane, Fore, Mancozeb, Pentathlon, Spectro 90 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Spectro 90 |
| Rhizoctonia root rot, web or aerial blight | Spectro 90 |
| VERBENA | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Allban Flo, Cease, Disarm, Insignia, MilStop, OHP 6672, Pageant, Palladium, Protect |
| Bacterial leaf spot or blight | Cease, CuPRO 2005, Nu-Cop 3L, Phytan 27 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | Allban Flo, Cease, Compass O, Disarm, Medallion, MilStop, OHP 6672, Pageant, Palladium, Pentathlon, Phytan 27, Protect, Zyban WSB |
| Downy mildew | Alude, Cease, Compass O, Disarm, Fosphite, Insignia, Micora, Orvego, Pageant, Phytan 27, Protect, Resyst, Stature SC |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Phyllosticta</i> , etc. | Allban Flo, Cease, Disarm, Insignia, Medallion, MilStop, OHP 6672, Pageant, Palladium, Pentathlon, Protect, Zyban WSB |
| Powdery mildew | Allban Flo, Cease, Compass O, Cygnus, Disarm, Fosphite, Heritage, Insignia, MilStop, OHP 6672, Pageant, Palladium, Phytan 27, Pipron, Rubigan |
| Pythium, Phytophthora diseases | Alude, Banol, Banrot 8G, Banrot 40WP, Cease, Disarm, Empress, Fosphite, Hurricane, Insignia, Micora, Orvego, Pageant, Protect, Resyst, Stature SC, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Banrot 8G, Banrot 40WP, Cease, Compass O, Disarm, Empress, Fosphite, Hurricane, Insignia, Medallion, OHP 6672, Pageant, Palladium, Pentathlon, Protect, Zyban WSB |
| Rust leaf spots | Allban Flo, Cease, Disarm, Insignia, OHP 6672, Pageant, Pentathlon, Protect |
| Southern blight (<i>Sclerotium rolfsii</i>) | Disarm, Hurricane, Medallion, Palladium |
| VERONICA (Speedwell) | |
| Downy mildew | Insignia, Pageant, Phytan 27, Trinity TR |
| Powdery mildew | Compass O, Cygnus, Insignia, Pageant, Phytan 27, Trinity TR |
| Phytophthora root rot, aerial blight | Empress, Insignia, Pageant |
| Rhizoctonia root rot, web or aerial blight | Empress, Insignia, Pageant, Trinity TR |
| VIBURNUM (DO NOT USE: SULFUR FUNGICIDES) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | Compass O, CuPRO 2005, Heritage, Insignia, Junction, MilStop, Nu-Cop 3L, Pageant, Spectro 90, Protect |
| Bacterial leaf spot or blight | Agri-Mycin 17 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Chipco 26019, Iprodione, Junction, MilStop, Pageant, Pentathlon, Phytan 27, Protect, Spectro 90, Trinity TR |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| VIBURNUM (continued) (DO NOT USE: SULFUR FUNGICIDES) | |
|--|---|
| Downy mildew | Clevis, Dithane, Fore, Heritage, Insignia, Mancozeb, Micora, Orvego, Pageant, Protect, Stature SC, Trinity TR, Zyban WSB |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , etc. | 26/36, 26GT, Chipco 26019, Clevis, Compass O, Dithane, Fore, Heritage, Insignia, Iprodione, Mancozeb, MilStop, Pageant, Pentathlon, Phyton 27, Protect, Spectro 90, Trinity TR |
| Powdery mildew | Bayleton 50, Bayleton Flo, Clevis, Cygnus, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Eagle, Heritage, Insignia, MilStop, Pageant, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L, Trinity TR |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Chipco 26019, Compass O, Empress, Insignia, Iprodione, Pageant, Protect, Spectro 90, Trinity TR |
| Rust leaf spots | Bayleton 50, Bayleton Flo, Eagle, Heritage, Insignia, Pageant, Protect, Spectro 90, Strike 50WDG |
| VINCA (<i>Vinca</i> sp. –see Periwinkle [groundcover]; Flowering annual-see Catharanthus) | |
| VIOLET (<i>Viola</i>) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | Basicop, Cease, Insignia, MilStop |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Basicop, Cease, Chipco 26019, Iprodione, MilStop |
| Downy mildew | Basicop, Cease, CuPRO 2005, Insignia, Micora |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | 26/36, 26GT, Basicop, Cease, Chipco 26019, Insignia, Iprodione, MilStop |
| Powdery mildew | Cease, Insignia, Kumulus, MilStop |
| Pythium, Phytophthora diseases | Banol, Cease, Empress, Insignia, Micora |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Cease, Chipco 26019, Empress, Insignia, Iprodione |
| Rust leaf spots | Cease, Insignia |
| Southern blight (<i>Sclerotium rolfsii</i>) | |
| VITEX (Chaste tree) | |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Bayleton 50, Bayleton Flo, Strike 50WDG |
| Powdery mildew | |
| Rust leaf spots | |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| WALNUT (Black) | |
|---|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | Allban Flo, Banner Maxx, Banner Maxx II, Clevis, Dithane, Fore, Insignia, Junction, Mancozeb, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney, Zyban WSB |
| Bacterial leaf spot or blight | Junction |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Allban Flo, Concert, Insignia, Junction, OHP 6672, Pageant, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Powdery mildew | Allban Flo, Bayleton 50, Bayleton Flo, Clevis, Eagle, Fosphite, Insignia, OHP 6672, Pageant, Spectro 90, Strike 50WDG, Tourney |
| Rhizoctonia root rot, web or aerial blight | Allban Flo, Empress, Fosphite, Insignia, OHP 6672, Pageant, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Tourney |
| Scab (<i>Venturia</i> , <i>Sphaceloma</i> , <i>Cladosporium</i>) | Allban Flo, Insignia, Pageant, Pentathlon, Protect, Tourney |
| WANDERING JEW (Tradescantia) | |
| Botrytis blight | Medallion, Palladium |
| Leaf spots | Medallion, Palladium |
| Rhizoctonia root rot, web or aerial blight | Banrot 40WP, Medallion (test drench for phytotoxicity), Palladium |
| WAX MYRTLE (Myrica cerifora) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | Insignia, Pageant, Pentathlon |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Phyllosticta</i> , <i>Phomopsis</i> , etc. | Banner Maxx, Banner Maxx II, Insignia, Pageant, Pentathlon, Propiconazole |
| Rhizoctonia root rot, web or aerial blight | Empress, Insignia, Pageant |
| Rust leaf spots | Insignia, Pageant |
| WILLOW (Salix) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i> , <i>Gloeosporium</i> , etc) | CuPRO 2005, Nu-Cop 3L, Pageant, Pentathlon, Protect |
| Botryosphaeria dieback | Protect |
| Leaf gall, leaf blister (<i>Exobasidium</i> , <i>Taphrina</i>) | Pentathlon |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , <i>Cylindrosporium</i> , <i>Marssonina</i> , etc. | Pentathlon, Protect |
| Powdery mildew | Bayleton 50, Bayleton Flo, Eagle, Strike 50WDG |
| Rhizoctonia root rot, web or aerial blight | Protect |
| Rust leaf spots | Bayleton 50, Bayleton Flo, Protect, Strike 50WDG |
| Scab (<i>Venturia</i> , <i>Sphaceloma</i> , <i>Cladosporium</i>) | Bordeaux Mix, Junction, Pentathlon, Protect |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| YARROW (<i>Achillea</i>) | |
|--|--|
| Powdery mildew | Eagle, Insignia |
| Rhizoctonia root rot, web or aerial blight | Empress, Insignia |
| Rust leaf spots | Eagle, Insignia |
| YEW (see <i>Taxus</i>) | |
| YUCCA | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Pentathlon, Protect, Spectro 90 |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | Camelot-O, CuPRO 2005, Nu-Cop 3L, Pentathlon, Protect, Spectro 90 |
| Rhizoctonia root rot, web or aerial blight | Heritage, Protect, Spectro 90 |
| Rust leaf spots | Pentathlon, Protect, Spectro 90 |
| ZEBRA PLANT (<i>Aphelandra</i>) | |
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, MilStop, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Camelot-O, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Iprodione, MilStop, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Leaf spots – <i>Phyllosticta</i> , <i>Septoria</i> , <i>Cercospora</i> , <i>Algal</i> , etc. | 26/36, 26GT, Camelot-O, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Heritage, Iprodione, MilStop, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Pythium, Phytophthora diseases | Alude, Fosphite, Protect, Resyst, Spectro 90, Subdue GR, Subdue MAXXa |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Camelot-O, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Fosphite, Iprodione, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |

ORNAMENTALS AND SHADE TREE DISEASE CONTROL

| ZINNIA | |
|--|--|
| Anthracnose diseases – leaf and stem spots, diebacks (<i>Colletotrichum</i>) | Cease, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Insignia, MilStop, Pageant, Palladium, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L |
| Bacterial leaf spot or blight | Cease, Phyton 27 |
| Botrytis blight (grey mold of leaves, flowers and/or fruit) | 26/36, 26GT, Cease, Chipco 26019, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Iprodione, Junction, Medallion, MilStop, Pageant, Palladium, Pentathlon, Phyton 27, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Fusarium root or stem rot | Banrot 8G, Banrot 40WP, Cease, Disarm, Empress, Fosphite, Hurricane, Insignia, Iprodione, Medallion, Pageant, Palladium, Zyban WSB |
| Leaf spots – <i>Alternaria</i> , <i>Cercospora</i> , etc. | 26/36, 26GT, Bayleton 50, Bayleton Flo, Cease, Chipco 26019, Clevis, Compass O, CuPRO 2005, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Dithane, Eagle, Fore, Heritage, Insignia, Iprodione, Junction, Mancozeb, Medallion, MilStop, Pageant, Palladium, Pentathlon, Protect, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Powdery mildew | Banner Maxx, Banner Maxx II, Basicop, Bayleton 50, Bayleton Flo, Cease, Clevis, Compass O, Cygnus, Daconil Ultrex, Daconil Weatherstik, Daconil Zn, Disarm, Eagle, Fosphite, Heritage, Insignia, Kumulus, MilStop, Pageant, Palladium, Phyton 27, Pipron, Propiconazole, Rubigan, Spectro 90, Strike 50WDG, Thalonil 90DF, Thalonil 6L, Zyban |
| Pythium, Phytophthora diseases | Alude, Banrot 8G, Banrot 40WP, Cease, Disarm Empress, Fosphite, Hurricane, Insignia, Pageant, Protect, Resyst, Spectro 90, Subdue GR, Subdue MAXX, Terrazole, Truban 30WP, Truban 25EC |
| Rhizoctonia root rot, web or aerial blight | 26/36, 26GT, Banrot 8G, Banrot 40WP, Cease, Chipco 26019, Daconil Ultrex, Daconil Weather Stik, Daconil Zn, Disarm, Empress, Fosphite, Hurricane, Insignia, Iprodione, Medallion, Pageant, Palladium, Pentathlon, Protect, Spectro 90, Thalonil 90DF, Thalonil 6L, Zyban WSB |
| Southern blight (<i>Sclerotium rolfsii</i>) | Disarm, Hurricane, Medallion, Palladium |