

WOODY ORNAMENTALS

WOODY ORNAMENTALS (INCLUDES SHRUBS AND GROUND COVERS) HOME INSECT CONTROL

Will Hudson, Extension Entomologist

INSECTS	INSECTICIDE & FORMULATION*	AMOUNT/GALLON OF WATER	REMARKS AND PRECAUTIONS
Aphids	Insecticidal soap pyrethrins pyrethrum horticultural oils imidacloprid 1.47% (Bayer Advanced) acephate (Orthene, etc.) 75S Various pyrethroids	1-2 oz. 2 tsp.	Per label directions. Per label directions. Per label directions. Per label directions. See note below.
Azalea leaf miner	acephate (Orthene TTO) imidacloprid 1.47% (Bayer Advanced)	1 tsp.	Per label directions.
Bagworm	malathion 57EC <i>Bacillus thuringiensis</i> (Biotrol WP, Thuricide, Sok-Bt) Various pyrethroids	2 tsp.	In winter, hand-pick and burn if only a few bagworms are present. Per label directions. See note below.
Borers (various kinds)	permethrin imidacloprid (Bayer Advanced)	per label	Apply to trunk and lower limbs in Spring as per label directions. Imidacloprid is effective against flat-headed borers and some clear-winged moths only.
Boxwood leaf miner	acephate (Orthene, etc.) 75S imidacloprid 1.47% (Bayer Advanced)	2 tsp.	Per label directions.
Caterpillars (Misc. leaf feeders)	carbaryl (Sevin) 50 WP <i>Bacillus thuringiensis</i> (Biotrol WP, Thuricide, Sok-Bt) Various pyrethroids	2 Tbs.	Treat as needed. Per label directions. See note below.
Holly leaf miner	imidacloprid 1.47% (Bayer Advanced)		Spray in late spring to kill larvae in mines. Per label directions.
Japanese beetle (adults)	carbaryl (Sevin) 50WP imidacloprid (Bayer Advanced)	2 Tbs.	Treat as needed. Repeat applications as necessary.
Lace bugs	acephate (Orthene, etc.) imidacloprid 1.47% (Bayer Advanced)	1 tsp.	Apply in early spring when nymphs of first generation are present. Per label directions.
Scale Insects	malathion 57EC carbaryl (Sevin) 50WP Horticultural oils Insecticidal soap imidacloprid (Bayer Advanced)	2 tsp. 2 Tbs. 1-2 oz.	Apply in spring to control crawlers. Make applications at 2 week intervals. Per label directions. Per label directions. Per label directions.
Spider mites	Horticultural oils Insecticidal soap bifenthrin disulfoton 1.00% (Bayer Advanced)	1-2 oz.	Per label directions. Per label directions. Per label directions.

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

Most of the materials listed in the Commercial Landscape Insect Control section of this handbook are not Restricted Use Pesticides, and so are available for homeowner use. They are not marketed for homeowners, in small quantities at retail garden centers, but they could provide options for some homeowners. Consult your county Cooperative Extension Agent for advice on alternatives.

**WOODY ORNAMENTALS (INCLUDES SHRUBS AND GROUND COVERS)
HOME INSECT CONTROL (continued)**

INSECTS	INSECTICIDE & FORMULATION*	AMOUNT/GALLON OF WATER	REMARKS AND PRECAUTIONS
Slugs and snails	metaldehyde mesuroil 2B iron phosphate (Slug-Go)		Follow label directions. Follow label directions.
Thrips	carbaryl (Sevin) 50WP malathion 57EC disulfoton 1.00% (Bayer Advanced) Various pyrethroids	2 Tbs. 2 tsp.	Apply as needed. Per label directions. See note below.
Whitefly	Insecticidal soap pyrethrins pyrethrums bifenthrin imidacloprid 1.47% (Bayer Advanced) disulfoton 1.00% (Bayer Advanced)		Per label directions. Per label directions. Per label directions. Per label directions. Per label directions. Per label directions.

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

Most of the materials listed in the Commercial Landscape Insect Control section of this handbook are not Restricted Use Pesticides, and so are available for homeowner use. They are not marketed for homeowners, in small quantities at retail garden centers, but they could provide options for some homeowners. Consult your county Cooperative Extension Agent for advice on alternatives.

* Numerous products containing insecticide are available to homeowners. Products containing the same insecticide may vary in the concentration of the active ingredient. Always consult the product label for information on rate of application. The following table provides the common name, brand name and lists manufacturers that package insecticides in a product(s) for homeowner use.

COMMON NAME	BRAND NAME AND COMMONLY AVAILABLE PRODUCTS
<i>Bacillus thuringiensis</i> (Bt)	Biotrol, Dipel, Thuricide, Sok-Bt; found in various Green Light, Ortho, Ford's, Rigo and Safer products
carbaryl	Sevin; found in various KGro, Green Light, Ford's, Rigo and Dexol products
disulfoton	Bayer Advanced Garden Systemic Rose and Flower Care; Bayer Advanced Garden Azalea, Camellia and Rhododendron Care
horticultural oil	SunSpray Ultrafine, Saf-T-Side, Superior Oil, Golden Natural Spray Oil, Volck Oil; found in Green Light products and others
imidacloprid	Bayer Advanced Garden Tree and Shrub; Bayer Advanced Garden 2-in-1 Plant Spikes
insecticidal soap	M-Pede and Safer's Soap
malathion	Malathion and Cythion; found in various Ortho, KGro, Ford's, Green Light and Dexol products
pyrethrins	Pyrethrin; found in various Ortho, KGro, Green Light, Dexol, Rigo, Black Flag
pyrethrum	Pyrethrum; found in several Safer products
resmethrin	Resmethrin; found in Ortho, Dexol, Hot Shot and Rid-a-Bug products

WOODY ORNAMENTALS WEED CONTROL FOR HOMEOWNERS¹

Mark A. Czarnota, Extension Horticulturist-Weed Science

CROP AND USE STAGE	HERBICIDE FORMULATION	AMOUNT OF FORMULATION/ GAL. PER 1000 SQ. FT.	REMARKS AND PRECAUTIONS
PRE-EMERGENCE ^{2, 3, 4, 5}	dichlobenil (Casoron 4G)	2.3 - 3.4 lb	<u>USE ONLY ON ESTABLISHED WOODY ORNAMENTALS.</u> Apply between November 15 and February 15. Good product for the controlling non-seed bearing plants (i.e. Bracken fern (<i>Pteridium aquilinum</i>)), winter annuals, and Florida betony (<i>Stachys floridana</i>). After application, Casoron must be watered in with ½ to 1 inch of water. <u>DO NOT</u> apply until 4 weeks after transplanting woody ornamentals.
	isoxaben + trifluralin (Snapshot 2.5 TG)	2.3 - 4.6 lb	Controls a wide range of annual weeds in certain woody ornamentals, trees and groundcovers. <u>DO NOT</u> 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 one-half inch of irrigation water, or uniformly incorporate into the soil to a depth of 1 to 2 inches, if rainfall is not received within 3 days of application.
	oryzalin (Surflan 4 AS)	1.5 - 3.0 fl. oz	Controls annual grasses and some broadleaf weeds. Apply over-the-top to established ornamentals. One-half inch of rainfall or irrigation water immediately after application will aid in weed control. Surflan may be tank-mixed with glyphosate for control of emerged weeds. See REMARKS for glyphosate.
	trifluralin (Treflan 5 G) (Preen 1.47 G)	1.8 lb 6.25 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. <u>DO NOT</u> apply to newly planted groundcovers. <u>DO</u> apply Treflan 5G to ornamentals with wet foliage. <u>DO NOT</u> apply to seeded beds or to non-rooted plants. Use the trifluralin product that is registered for ornamental use. Preen is also available on dry fertilizer carriers.
	benefin + oryzalin (XL 2 G) (Amaze 2 G)	4.6 - 6.9 lb 4.5 lb	Apply only to established ornamentals. One-half inch of rainfall or irrigation water immediately after application will aid in weed control.
POSTEMERGENCE ¹	fluazifop-P (Grass-B-Gon and others)	See Label	Apply postemergence to actively-growing grasses, which are not drought stressed. Refer to the label to determine if a surfactant is necessary, and for a recommended list of ornamentals. Fluazifop will not control broadleaf weeds or nutsedge.
	clethodim (Envoy Plus 0.97 lb/gal)	0.3 - 0.7 fl oz	Apply to actively-growing grasses, which are not drought stressed. Make sure to add a crop oil concentrate at 1% V/V to the spray solution. Refer to label for recommended list of ornamentals. Envoy Plus will not control broadleaf weeds or nutsedges.
	imazaquin (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.
	sethoxydim (Segment) 1.0 lb./gal.	0.8 - 1.4 fl. oz	Apply postemergence to actively growing weedy grasses, which are not drought stressed. <u>DO NOT</u> add a surfactant or crop oil concentrate to Vantage. Vantage will not control broadleaf weeds or nutsedge(s).

WOODY ORNAMENTALS WEED CONTROL FOR HOMEOWNERS (continued)

CROP AND USE STAGE	HERBICIDE FORMULATION	AMOUNT OF FORMULATION/ GAL. PER 1000 SQ. FT.	REMARKS AND PRECAUTIONS
POSTEMERGENCE¹ (cont.)	fluazifop-P (Grass-B-Gon and others)	See Label	Apply postemergence to actively-growing grasses, which are not drought stressed. Refer to the label to determine if a surfactant is necessary, and for a recommended list of ornamentals. Fluazifop will not control broadleaf weeds or nutsedge.
AREAS ADJACENT TO ORNAMENTALS (POSTEMERGENCE)	glufosinate (Finale) 1 lb./gal.	2.2 - 4.4 fl. oz	Apply glufosinate to kill most emerged weeds. <u>DO NOT</u> allow spray mist to contact ornamental foliage or severe injury will occur. Avoid applications to drought stressed weeds. Ready-to-use, premixed formulations of Finale are also available. Finale is poor on well established perennial weeds with extensive underground storage systems (Florida betony, bermudagrass, nutsedge, etc.)
	glyphosate Various trade names and formulations available	See Label	Apply glyphosate to kill most emerged weeds. <u>DO NOT</u> allow spray mist to contact ornamental foliage or severe injury will occur. Avoid applications to drought stressed weeds. Glyphosate is very water soluble and can be tanked mixed with many preemergent herbicides. Refer to glyphosate label to determine compatibility with preemergent herbicides.
	halosulfuron (Manage) 75DF (SedgeHammer) 75DF	0.9 grams (spray weeds to runoff)	Apply as a post-directed application to control yellow and purple nutsedge in established woody ornamentals. Apply with 1/3 fluid ounce of nonionic surfactant. <u>DO NOT</u> allow the spray to contact foliage of desirable woody ornamentals. Wait three 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 4.2L and various other trade names are available	See label	Apply Scythe to kill most emerged weeds. <u>DO NOT</u> allow spray mist to contact ornamental foliage or severe injury will occur. Avoid applications 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

¹There are many other herbicides available to the homeowner that are not restricted use. Most of these herbicides are available in larger packaging and can be harder to attain. Moreover, most of these commercial products can pose greater potential for plant injury if used improperly.

²All preemergent herbicides require a rain or irrigation event in order for herbicide activation to occur (approximately 0.5 to 1.0 inch 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.

³Most 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).

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

⁵Do not apply preemergence herbicides to seeded beds or to non-rooted plants or in greenhouses.

ORNAMENTALS - WEED RESPONSE TO HERBICIDES

Mark A. Czarnota, Extension Horticulturist-Weed Science

	dichlo- benil	dimethe- namid	flumi- oxazin	isox- aben	nor- flurazon	oxa- diazon	sima- zine	ory- zalin	oxy- fluorfen
Time of Application	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	P-F	E	G	G	E	G
crabgrass	G	G	E	P-F	G	G	G	E	G
goosegrass	G	G	E	P	G	E		E	G
ANNUAL SMALL SEEDED BROADLEAF WEEDS (control of plants from seed with pre herbicides, control of plant with post herbicides)									
bittercresses		E	E	G	G	G	F	G	G
common chickweed	G	E	E	E	G	G	E	G	G
deadnettle	G				G		G	G	
dodder	E								
henbit	G		E	E	F	G	E	G	G
hop clovers	G			G		G	E		
knotweed	G		E		G	G	E	G	G
lespedeza	G			F		G	E		
Morningglories	F	F	G	G	F	F	G	F	G
mustards	G	G	G	F		E	E	P	G
niruri / phyllanthus		E	E	E	G	G	G	G	G
spurge	G	E	E	E	G	F	E	G	G
woodsorrel	G	E	E	E	P-F	E	E	G	G
PERENNIAL BROADLEAF WEEDS (control of plants from seed with pre herbicides, control of plant with post herbicides)									
clovers	G	G	E	G		G	E	G	G
dandelion	G		E	G		G	G	G	G
dichondra			E						
docks	G		E						G
Florida betony	E				P				
mallow			E	G	G	G	G	G	G
mouseear chickweed	G		E	G		G	G	G	G
mugwort	E								
pennywort	G								
plantain			G	G		G		G	G

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

ORNAMENTALS - WEED RESPONSE TO HERBICIDES (continued)

	prodiamine	trifluralin	clethodim	clopyralid	diquat	fluzafop	glufosinate
Time of Application	PRE		POSTEMERGENCE				
PERENNIAL WEEDS (control of plants)							
bahiagrass	P	P	G	P	P	G	P
bermudagrass	P	P	G-E	P	P	G-E	P
dallisgrass	P	P	G	P	P	G	P
nutsedge, purple	P	P	P	P	P	P	P
nutsedge, yellow	P	P	P	P	P	P	P
tall fescue	P	P	G	P	P	F	P
wild garlic	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	E	G	E	P	G	E	G
crabgrass	E	E	E	P	G	E	G
goosegrass	G	G	E	P	G	E	G
ANNUAL SMALL-SEEDED BROADLEAF WEEDS (control of plants from seed with pre herbicides, control of plant with post herbicides)							
bittercresses	G	G	P		G	P	G
common chickweed	G	G	P		G	P	E
deadnettle	G	G	P		G	P	G
dodder	P		P			P	
henbit	G	G	P		G	P	E
knotweed			P			P	E
lespedeza	G	G	P	E	F	P	F
morningglories	G	F	P		G	P	P
mustards	F	F	P		G	P	G
niruri / phyllanthus	G	P	P		G	P	G
spurge	G	G	P		G	P	G
woodsorrel	G	F	P		G	P	G
PERENNIAL BROADLEAF WEEDS (control of plants from seed with pre herbicides, control of plant with post herbicides)							
clovers	E	G	P	E	F	P	F
dandelion	G	G	P	G	G	P	P
dichondra			P	P		P	
docks	G	G	P	G	P	P	G
Florida betony			P	P	P	P	P
mallow	G	G	P		G	P	G
mouseear chickweed	G	G	P		G	P	G
mugwort			P	E	G	P	P
pennywort			P	G	G	P	P
plantain	G	G	P	P	G	P	F

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ORNAMENTALS - WEED RESPONSE TO HERBICIDES (continued)

	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
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

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HOMEOWNER ORNAMENTAL AND TREE DISEASE CONTROL

General Fungicide Guidelines

Holly Thornton, Extension Homeowner IPM Specialist

Prevention in the home garden and landscape is the key to reducing diseases in and around your yard. Several preventive practices can be utilized for disease control before resorting to spraying pesticides. They include: 1) selecting disease free plants from accredited nurseries and garden centers, 2) selecting resistant ornamental varieties, 3) site selection and planning allows one to grow plants that are appropriate for each individual yard, 4) proper plant care in the home garden, including fertilization, irrigation, and sanitation (removing dead and diseased plant parts that could harbor pathogens), 5) growing disease-free plants, and 6) regular scouting in the yard for potential disease problems and pests. The application of pesticides should be the last option for the homeowner. It is best to properly identify the pathogen before applying/spraying a pesticide. REMEMBER TO ALWAYS READ AND FOLLOW THE LABEL CAREFULLY, if you choose to apply a pesticide.

This guide has two sections: PART A is a list of commonly occurring plant pathogens/diseases and the materials that can be used to control them (includes active ingredient/common name and trade name); PART B is a list of commonly grown herbaceous and woody ornamental plants and trees and some of the diseases that occur on them. Fungicides labeled for use are listed by active ingredient, followed by the manufacturer/ trade name in PART A. Plant names in PART B are listed alphabetically according to the scientific name of the plant. 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.

The products listed can be found at local garden retail centers and on-line at particular locations.

**Keep in mind this is not an all-inclusive list of plants or products. Contact your local county agent for more information regarding plants or pesticide control products.

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

PART A: LIST OF COMMONLY OCCURRING PLANT PATHOGENS/DISEASES AND THE MATERIALS USED TO CONTROL THEM.

DISEASE	ACTIVE INGREDIENT (COMMON NAME)	CONTACT OR SYSTEMIC	TRADE NAME
<u>OOMYCETES</u>			
Phytophthora root/crown rot	Fosetyl-Al	Systemic	Monterey Aliete
Pythium root/crown rot	Phosphorous Acid	Systemic	Monterey AGRI-FOS
Downy Mildew	Fosetyl-Al	Systemic	Monterey Aliete
Phytophthora blight/dieback	Phosphorous Acid	Systemic	Monterey AGRI-FOS
	Copper hydroxide	Contact	Hi-Yield Copper Fungicide Kocide 101
	Copper Salts	Contact	Monterey LIQUI-COP Bonide Liquid Copper Fungicide Dragon Copper Fungicide
	Chlorothalonil (Daconil)	Contact	Ferti-lome Broad Spectrum Liq. Fungicide Hi-Yield Daconil Garden Tech Fungicide Disease Control Bonide Fung-Onil Multi-Purpose Fungicide Ortho Garden Disease Control Dragon Daconil 2787 Monterey Fruit Tree, Vegetable, & Ornamental Fungicide
<u>FUNGAL</u>			
Armillaria root/stem rot	Thiophanate-methyl	Systemic	Ferti-lome Halt Systemic Fungicide
Black root rot			Scotts Lawn Fungus Control
Cylindrocladium root rot			Green Light Systemic Fungicide
Fusarium root/stem rot			Dragon Systemic Fungicide 3336 WP
Ganoderma root rot			
Rhizoctonia root/stem rot	PCNB	Contact	Hi-Yield Turf & Ornamental Fungicide
Sclerotinia root rot			Terraclor (several manufacturers)
Southern blight			
Verticillium Wilt			

HOMEOWNER ORNAMENTAL AND TREE DISEASE CONTROL (continued)

DISEASE	ACTIVE INGREDIENT (COMMON NAME)	CONTACT OR SYSTEMIC	TRADE NAME
Botrytis blight	Thiophanate-methyl	Systemic	Ferti-lome Halt Systemic Fungicide Scotts Lawn Fungus Control Green Light Systemic Fungicide Dragon Systemic Fungicide 3336WP
	Chlorothalonil (Daconil)	Contact	Ferti-lome Broad Spectrum Liq. Fungicide Hi-Yield Daconil Garden Tech Fungicide Disease Control Bonide Fung-Onil Multi-Purpose Fungicide Ortho Garden Disease Control Dragon Daconil 2787 Monterey Fruit Tree, Vegetable, and Ornamental Fungicide
Diplodia tip blight Kabatina dieback Phomopsis dieback Phomopsis needle blight Sclerotinia stem rot Tip blight	Thiophanate-methyl	Systemic	Ferti-lome Halt Systemic Fungicide Scotts Lawn Fungus Control Green Light Systemic Fungicide Dragon Systemic Fungicide 3336WP
Powdery mildew	Sulfur	Contact	Safer Garden Fungicide Monterey Sulfur 90W Bonide Sulfur Plant Fungicide Hi-Yield Wettable Dusting Sulfur Dragon Wettable or Dusting Garden Sulfur Top-Cop w/ Sulfur
	Neem oil	Contact	Green Light Powdery Mildew RTU Ferti-lome Triple Action RTU
	Jobba oil	Contact	Monterey E-Rase RTU
	Myclobutanil	Systemic	Ferti-lome F-stop Lawn Fungicide Green Light Fung-Away Systemic Granules Spectracide Immunox 3-in-1 Spectracide Immunox Fungicide Spectracide Lawn Disease Spray Spectracide Lawn Disease Control Granules Spectracide Multi-purpose Fungicide Spectracide Immunox Plus Insect and Disease Control
	Triforine (see label for plant list)	Systemic	Ortho Rose Pride-Rose and Shrub Disease Control Ortho Orthenex Insect and Disease Control
	Potassium bicarbonate soluble powder	Contact	Monterey Bi-Carb Old Fashioned Fungicide
	Chlorothalonil (Daconil)	Contact	Ferti-lome Broad Spectrum Liq. Fungicide Hi-Yield Daconil Garden Tech Fungicide Disease Control Bonide Fung-Onil Multi-Purpose Fungicide Ortho Garden Disease Control Dragon Daconil 2787 Monterey Fruit Tree, Vegetable, & Ornamental Fungicide

HOMEOWNER ORNAMENTAL AND TREE DISEASE CONTROL (continued)

DISEASE	ACTIVE INGREDIENT (COMMON NAME)	CONTACT OR SYSTEMIC	TRADE NAME
Rust	Myclobutanil	Systemic	Ferti-lome F-stop Lawn Fungicide Green Light Fung-Away Systemic Granules Spectracide Immunox 3-in-1 Spectracide Immunox Fungicide Spectracide Lawn Disease Spray Spectracide Lawn Disease Control Granules Spectracide Multi-purpose Fungicide Spectracide Immunox Plus Insect and Disease Control
	Triadimefon	Systemic	Green Light Fung-Away Fungicide Green Light Fung-Away Systemic Lawn Spray Hi-Yield Lawn Fungicide Granules
	Triforine (asters, carnations, & roses)	Systemic	Ortho Rose Pride-Rose and Shrub Disease Control Ortho Orthenex Insect and Disease Control
	Tebuconazole	Systemic	Bayer Disease Control
	Chlorothalonil (Daconil)	Contact	Ferti-lome Broad Spectrum Liq. Fungicide Hi-Yield Daconil Garden Tech Fungicide Disease Control Bonide Fung-Onil Multi-Purpose Fungicide Ortho Garden Disease Control Dragon Daconil 2787 Monterey Fruit Tree, Vegetable, and Ornamental Fungicide
Leaf spots <i>(Alternaria, Anthracnose, Cercospora, Cylindrocladium, Entomosporium, Gnomonia, Heterosporium, Macrophoma, Mycosphaerella, Phyllosticta, Purple-eye, Septoria, Zonate)</i> Black spot (ROSE) Curvularia leaf blight Leaf streak (daylily) Scab Spot anthracnose Volutella blight Web blight	Propiconazole	Systemic	Bonide Infuse Ortho Lawn Disease Control Ferti-lome Liquid Systemic Fungicide
	Chlorothalonil (Daconil)	Contact	Ferti-lome Broad Spectrum Liq. Fungicide Hi-Yield Daconil Garden Tech Fungicide Disease Control Bonide Fung-Onil Multi-Purpose Fungicide Ortho Garden Disease Control Monterey Fruit Tree, Vegetable, and Ornamental Fungicide Dragon Daconil 2787
	Mancozeb	Contact	Dragon Mancozeb Disease Control Bonide Mancozeb Flowable
	Maneb	Contact	Hi-Yield Maneb Garden Fungicide
	Captan	Contact	Bonide Captan Dragon Captan Wettable Powder
	Copper hydroxide	Contact	Hi-Yield Copper Fungicide Kocide 101 Nu-Cop 50DF
	Copper salts	Contact	Monterey LIQUI-COP Bonide Liquid Copper Fungicide Dragon Copper Fungicide
	Thiophanate-methyl	Systemic	Ferti-lome Halt Systemic Fungicide Scotts Lawn Fungus Control Green Light Systemic Fungicide Dragon Systemic Fungicide 3336 WP
	Triforine (Black spot on roses)	Systemic	Ortho Rose Pride-Rose and Shrub Disease Control Ortho Orthenex Insect and Disease Control

HOMEOWNER ORNAMENTAL AND TREE DISEASE CONTROL (continued)

DISEASE	ACTIVE INGREDIENT (COMMON NAME)	CONTACT OR SYSTEMIC	TRADE NAME
Leaf/flower gall	Chlorothalonil (Daconil)	Contact	Ferti-lome Broad Spectrum Liq. Fungicide Hi-Yield Daconil Garden Tech Fungicide Disease Control Bonide Fung-Onil Multi-Purpose Fungicide Ortho Garden Disease Control Monterey Fruit Tree, Vegetable, and Ornamental Fungicide Dragon Daconil 2787
	Mancozeb	Contact	Dragon Mancozeb Disease Control Bonide Mancozeb Flowable
Flower/petal blight	Myclobutanil	Systemic	Ferti-lome F-stop Lawn Fungicide Green Light Fung-Away Systemic Granules Spectracide Immunox 3-in-1 Spectracide Immunox Fungicide Spectracide Lawn Disease Spray Spectracide Lawn Disease Control Granules Spectracide Multi-purpose Fungicide Spectracide Immunox Plus Insect and Disease Control
	Chlorothalonil (Daconil)	Contact	Ferti-lome Broad Spectrum Liq. Fungicide Hi-Yield Daconil Garden Tech Fungicide Disease Control Bonide Fung-Onil Multi-Purpose Fungicide Ortho Garden Disease Control Monterey Fruit Tree, Vegetable, and Ornamental Fungicide Dragon Daconil 2787
Cankers (various fungal pathogens)	There are various fungal pathogens that cause cankers on woody/herbaceous ornamentals and trees. For the most part, fungicides are not an effective or practical means of control. Keeping plants healthy is the key to preventing and controlling cankers on plants. Avoid stress on the plants (over/under-watering and fertilization). PRUNE infected branches at least one inch below infected area and sterilize pruning tools between cuts (10% bleach or alcohol). AVOID WATER STRESS and TREE WOUNDING.		
<u>BACTERIAL</u>			
Fire Blight Bacterial Blight Soft rot	Copper	Contact	Bonide Copper Spray or Dust
	Copper hydroxide	Contact	Hi-Yield Copper Fungicide Kocide 101 Nu-Cop 50DF
	Copper Salts	Contact	Monterey LIQUI-COP Bonide Liquid Copper Fungicide Dragon Copper Fungicide
	Copper oxinate	Contact	Concern Copper Soap
	Fosetyl-Al	Systemic	Monterey Aliete
	Streptomycin sulfate	Contact	Bonide Fire Blight Spray Ferti-lome Fire Blight Spray
Crown gall	Important to purchase healthy plants. Biological controls are available. Check with County Agents. Can use copper compounds but may be phytotoxic.		
<u>NEMATODE</u>	Chitin		Hi-Yield Nem-A-Cide Clandosan
	This product is soil amendment that increases the growth of naturally occurring micro-organisms which feed on nematodes (nematode bodies are composed of chitin).		
<u>VIRAL</u>	No chemical controls for viral diseases.		

HOMEOWNER ORNAMENTAL AND TREE DISEASE CONTROL (continued)

PART B: LIST OF COMMONLY GROWN ORNAMENTAL PLANTS AND TREES AND SOME OF THE DISEASES THAT OCCUR ON THEM

***This is not an all-inclusive list.**

ORNAMENTAL PLANTS (HERBACEOUS & WOODY) and TREES & THEIR DISEASES	
PLANT - Scientific name (Common Name)	DISEASES
Abelia	No major pests...leaf spots, powdery mildew, root knot nematode
Abies (Fir)	Botrytis blight, Cytospora canker, oedema (cultural), Phytophthora root/crown rot
Abutilon (Velvet leaf/Flowering Maple)	Rhizoctonia root rot, web or aerial blight; root knot nematode; stem rot; root rot; rust
Acer (Maple, Box Elder)	Anthracnose, Bacterial scorch, Bacterial Wetwood, Botryosphaeria dieback, Cytospora canker, Ganoderma root rot, leaf spot (various fungi), Nectria canker, Phomopsis dieback, tar spot, Valsa canker, Verticillium wilt, Phyllosticta leaf spot
Achillea (Yarrow)	powdery mildew
Aconitum (Monkshood)	Southern blight
Aegopodium (Goutweed)	Leaf spot
Aesculus (Horse Chestnut, Buckeye)	Guignardia blotch
Agave (Century plant)	Crown rot, Anthracnose, Leaf spot
Ageratum (Floss Flower)	Southern blight, Pythium & Phytophthora root rots, Botrytis blight; rust; powdery mildew
Ailanthus (Tree-of-Heaven)	Fusarium stem/root rot
Ajuga (Bugleweed)	Phomopsis dieback, Phytophthora root rot, Pythium root rot, Rhizoctonia root/crown rot, root knot nematode, Southern blight, viral disease, web blight
Albizia (Mimosa)	Fusarium wilt, Crown dieback (Fusarium)
Alcea (Hollyhock)	Root knot nematode, Rust
Allium (Ornamental Onion)	White rot
Aloe	Root rot (<i>Pythium</i>)
Amelanchier (Service berry)	Rust, Entomosporium leaf spot; bacterial fire blight; powdery mildew
Anemone	Foliar nematode, Phytophthora root rot, Rust, leaf spot; downy mildew
Anise-tree	sooty mold, leaf spot (algal)
Antirrhinum (Snapdragon)	Cercospora leaf spot, downy mildew, Phytophthora root/crown rot, Pythium root rot, Rhizoctonia stem rot, Rust, Verticillium Wilt, viral diseases, Botrytis blight
Aquilegia (Columbine)	Pythium root rot, crown rot, Powdery mildew
Arctostaphylos (Bearberry)	Pythium root rot, Phytophthora root rot
Arisaema (Jack-in-the-pulpit)	Rust
Armeria (Sea thrift)	Web blight
Aronia (Chokeberry)	Pythium root rot
Artemisia (Dusty miller)	Rhizoctonia root/stem rot
Asclepias (Milkweed)	Anthracnose
Asclepias tuberosa (Butterfly weed)	Rhizoctonia stem rot
Asimina (Pawpaw)	Nectria canker; leaf spots
Aster	Powdery mildew, Rust, leaf spot
Astilbe	Pythium root rot, root knot nematodes

HOMEOWNER ORNAMENTAL AND TREE DISEASE CONTROL(continued)

PLANT - Scientific name (Common Name)	DISEASES
Aucuba	Anthracnose, Botryosphaeria dieback, leaf spots, Phomopsis dieback, ring nematode
Bamboo	Pythium root rot
Bedding plants	Damping off (Pythium)
Begonia	Anthracnose, Botrytis blight, Fusarium stem rot, Powdery mildew, Rhizoctonia root/stem rot, root knot nematode
Berberis (Barberry)	Phytophthora root rot
Bergenia	Pythium root rot
Betula (Birch)	Anthracnose, Botryosphaeria dieback, Botrytis blight, red heart, Septoria leaf spot, rust
Buddleia (Butterfly bush)	Phytophthora root rot, Rhizoctonia root rot
Buxus (Boxwood)	Botryosphaeria dieback, Boxwood decline, Lesion nematode, Macrophoma leaf spot, Phytophthora root rot, Volutella blight
Cactus	Pythium root rot
Caladium	Pythium root rot
Calibrachoa (Million bells)	Phytophthora crown rot, Rhizoctonia root rot, Southern blight
Callicarpa (Beauty berry)	No serious problems
Calocedrus (Incense Cedar)	Seiridium canker
Camellia	Anthracnose, Botryosphaeria dieback, leaf/flower gall, leaf spot, oedema (nutritional), petal/flower blight, Phytophthora root rot, Pythium root rot, viral disease
Campanula (Bellflower)	Fusarium crown rot, leaf spots
Campsis (Trumpet vine)	Anthracnose; mistletoe; powdery mildew
Canna (Canna lily)	Lesion nematodes, Pythium root rot, bacterial bud rot
Carpinus (Hornbeam)	Pythium root rot, cankers
Capsicum (Ornamental pepper)	Verticillium wilt
Carya (Hickory)	Downy leaf spot, Gnomonia leaf spot, phomopsis gall, Powdery mildew, Zonate leaf spot
Caryopteris (Bluebeard)	Phytophthora stem/root rot, Pythium root rot
Castanea (Chestnut)	Chestnut blight canker
Catalpa	Bacterial wetwood, Verticillium wilt, Cercospora leaf spot
Catharanthus (Madagascar periwinkle)	Black root rot, Botrytis blight, Phytophthora blight, Pythium root rot, Rhizoctonia stem/root rot
Cattleya (Orchid)	Bacterial brown spot
Cedrus (Cedar)	Armillaria root rot, Phomopsis needle/twig blight
Celosia (Cockscomb)	Pythium root rot, Rhizoctonia root rot, leaf spot
Cercis (Redbud)	Botryosphaeria dieback, Botrytis blight, Fusarium canker, leaf spot, Verticillium wilt
Chamaecyparis (Falsecypress)	Phytophthora root rot, Seiridium canker, web blight
Chionanthus (Fringe tree)	Leaf spot
Chrysanthemum (Shasta Daisy, Mum)	Pythium root rot, web blight, Rust, powdery mildew, foliar nematode, Verticillium wilt
Chrysogenum (Goldenstar)	Southern blight

HOMEOWNER ORNAMENTAL AND TREE DISEASE CONTROL(continued)

PLANT - Scientific name (Common Name)	DISEASES
Cladastris (Yellow wood)	Anthracnose
Clematis	Leaf spot, Phytophthora root rot
Clivia (Kaffir lily)	leaf spot, Southern blight
Coleus	Botrytis blight, downy mildew
Consolida (Larkspur)	Pythium root rot, Rhizoctonia root/crown rot
Coreopsis (Tickseed)	Botrytis blight, Rhizoctonia root/stem rot, rust, viral disease
Cornus (Dogwood)	Anthracnose, Botryosphaeria dieback/canker, Botrytis blight, Discula anthracnose, Fusarium canker, leaf spot, phomopsis dieback, powdery mildew, Pythium root rot, Septoria leaf spot, spot anthracnose, viral disease
Corylus (Filbert)	Eastern Filbert blight
Cosmos (Mexican aster)	Botrytis blight, Phomopsis stem canker, powdery mildew, white smut
Cotinus (Smoke tree)	Anthracnose, Verticillium wilt
Cotoneaster	Leaf spot, Phytophthora root rot, web blight, fire blight
Crassula (Jade plant)	Oedema, Pythium root rot
Crataegus (Hawthorn)	Cercospora leaf spot, Entomosporium leaf spot, rust, fire blight
Cryptomeria (Japanese cedar)	Needle blight, Phomopsis twig blight, Phytophthora root rot
Cupressus (Cypress)	Botryosphaeria dieback, Kabatina dieback, tip blights, Phytophthora root rot, Seiridium canker
Cyclamen	Fusarium Wilt
Cymbidium (Orchid)	Viral disease
Dahlia	Crown gall, powdery mildew, tuber rot (fungal-Fusarium and Botrytis), root rot, viral disease (mosaic)
Daphne	Anthracnose, Phytophthora root/stem rot, crown rot (Sclerotium spp.)
Davidia (Dove tree)	Phomopsis dieback
Delosperma (Ice plant)	Pythium root rot
Dendranthema (Chrysanthemum)	Bacterial leaf spot, Botrytis blight, Mycosphaerella ray blight, Phytophthora root rot, powdery mildew, Pythium root/stem rot, Rhizoctonia root rot, Septoria leaf spot, leaf rust, Verticillium wilt
Dianthus (Carnation)	Alternaria leaf spot, Botrytis blight, Fusarium stem rot, powdery mildew, Rhizoctonia stem rot, rust, aster yellows, viral disease
Digitalis (Foxglove)	Black root rot, Fusarium root rot, Pythium root rot, Anthracnose
Dimorphotheca (African Daisy)	Botrytis blight
Dracaena	Fusarium blight, Pythium root rot
Duchesnea (Indian Strawberry)	Rust
Echinacea (Coneflower)	Aster yellows, foliar nematodes, Pythium root rot, viral disease
Eichhornia (Water hyacinths)	Leaf spots
Elaeagnus (Autumn Olive)	Phytophthora root rot
Epiphyllum (Cereus)	Oedema (nutritional)

HOMEOWNER ORNAMENTAL AND TREE DISEASE CONTROL(continued)

PLANT - Scientific name (Common Name)	DISEASES
Epipremnum (Pothos)	Phytophthora stem rot
Erica (Heather)	Phytophthora root rot
Eucalyptus	Anthracnose, Botryosphaeria dieback, crown gall, Fusarium canker, Phomopsis dieback, Phytophthora root rot, powdery mildew, Pythium root rot
Euonymus	Powdery mildew
Euphorbia (Spurge)	Anthracnose, Botryosphaeria dieback
Euphorbia pulcherima (Poinsettia)	Bacteria blight, bacterial leaf spot, Botrytis blight, powdery mildew, Pythium root rot, scab
Eustoma (Lisianthus)	Botrytis blight, Fusarium stem/root rot
Exacum (Persian violet)	Viral disease
Fagus (Beech)	Anthracnose, Botryosphaeria canker, Hypoxylon canker, viral disease
Fatsia	Leaf Spot
Fatshedra (Bush ivy)	Botrytis blight, Fusarium root/stem rot, Phomopsis blight, Rhizoctonia root rot, Powdery mildew, scab
Ficus (Fig)	Anthracnose, Phytophthora root rot
Ficus benjamina (Weeping fig)	Anthracnose, Phomopsis gall
Forsythia	Botryosphaeria dieback, crown gall, Phomopsis gall, Phytophthora root rot, ringer nematodes, Sclerotinia twig blight, web blight
Fraxinus (Ash)	Anthracnose, ash yellows, Botryosphaeria canker, rust
Gaillardia (Blanket flower)	Pythium root rot, White smut
Galium (Sweet woodruff)	Rhizoctonia stem/root rot, Southern blight
Gardenia	Anthracnose
Gerbera (African daisy)	Pythium root rot, Botrytis blight
Gladiolus	Botrytis leaf blight, Curvularia leaf blight, Fusarium yellows, Penicillium corm rot, Rhizoctonia corm rot, aster yellows, scab
Gleditsea (Honeylocust)	Botryosphaeria canker, Thyronectria canker
Gloxinia (Sinningia)	Viral disease
Gomphrena (Globe amaranth)	Leaf spot, root knot nematode
Gypsophila (Baby's breath)	Bacterial soft rot
Hamamelis (Witchhazel)	Botryosphaeria dieback, leaf spot, powdery mildew
Hedera helix (English ivy)	Anthracnose, Bacterial leaf spot, oedema, Phyllosticta leaf spot, Phytophthora root rot, Pythium root rot, Rhizoctonia root rot
Helianthemum (Rock rose)	Botrytis blight
Helianthus (Sunflower)	Alternaria leaf/stem spot, powdery mildew
Helichrysum (Strawflower)	Fusarium stem rot
Helleborus (Hellebore)	black leaf spot, Botrytis blight, Pythium root rot, Rhizoctonia root rot, Southern blight
Hemerocallis (Daylily)	Anthracnose, rust, leaf streak, Southern blight

HOMEOWNER ORNAMENTAL AND TREE DISEASE CONTROL(continued)

PLANT - Scientific name (Common Name)	DISEASES
Heuchera (Coral bells)	Pythium root rot, leaf spot, downy mildew
Hibiscus	Phytophthora root rot, Pythium root rot, viral disease
Hibiscus syriacus (Rose-of-sharon)	Leaf spot
Hosta	Anthrachnose, Botrytis blight, leaf spot, root rot, soft rot, Southern blight, virus X
Hyacinth (<i>Hyacinthus</i>)	bacterial soft rot, root rot, gray mold
Hydrangea	Anthrachnose, Armillaria root rot, bacterial leaf spot, Botrytis blight, Cercospora leaf spot, Phytophthora root rot, Pythium root rot, powdery mildew
Hypericum (St Johnswort)	Phytophthora root/stem rot, rust, Rhizoctonia root rot, leaf spots
Iberis (Candytuft)	Anthrachnose, Pythium root rot
Ilex (Holly)	Anthrachnose, Bacterial Blight, Black root rot, Botryosphaeria dieback, leaf spot, root knot nematodes, oedema (nutritional), Phomopsis dieback, Phytophthora root rot, Pythium root rot, Rhizoctonia root rot, rust, tar spot, web blight
Ilex glabra (Inkberry)	Black root rot, Phytophthora root rot
Impatiens	Alternaria leaf spot, bacterial fasciation, Botrytis blight, Fusarium crown rot, powdery mildew, Pythium root/stem rot, Rhizoctonia root/stem rot, root knot nematodes, Verticillium wilt, viral diseases
Ipomoea (Morning glory)	Rust, white rust
Iris	Botrytis blight, Heterosporium leaf spot, soft rot, viral disease (mosaic)
Juniperus (Juniper)	Kabatina tip blight, Pestalotia dieback, Phytophthora root rot, Pythium root rot, rust
Juniperus virginiana (Eastern red cedar)	Cercospora blight, Kabatina tip blight, Pestalotia blight, Phomopsis tip blight, rust
Kalmia (Mountain laurel)	Botryosphaeria dieback, Cercospora leaf spot
Lagerstroemia (Crape myrtle)	Leaf spot, powdery mildew, sooty mold
Lantana	Leaf spot; root knot nematode; fusarium wilt
Laurus nobilis (Bay laurel)	Cercospora leaf spot
Lavandula (Lavender)	Phytophthora root rot, Pythium root rot
Leucothoe (Drooping Leucothoe)	Botryosphaeria dieback, Cylindrocladium leaf spot, Phyllosticta leaf spot, Phytophthora root rot
Ligustrum (Privet)	Anthrachnose, Cercospora leaf spot, Phytophthora root rot
Lilium (Lily)	Anthrachnose, Botrytis blight, Pythium root rot, viral disease (mosaic)
Limonium (Statice)	Phytophthora root rot, Pythium root rot, Rhizoctonia root rot
Liquidambar (Sweet gum)	Cercospora leaf spot, Sphaeropsis gall
Liriodendron (Tulip tree)	Powdery mildew, sooty mold
Liriope (Lilyturf)	Anthrachnose, foliar nematodes, Mycosphaerella leaf spot, Phytophthora leaf spot, viral disease
Lobelia	Pythium root rot, viral disease
Lobularia (Sweet alyssum)	Rhizoctonia root rot
Lonicera (Honeysuckle)	Botryosphaeria dieback, Botrytis blight, Herpobasidium leaf blight, powdery mildew, witches' broom

HOMEOWNER ORNAMENTAL AND TREE DISEASE CONTROL(continued)

PLANT - Scientific name (Common Name)	DISEASES
Lupinus (Lupine)	Anthracnose, brown spot, Pythium root rot
Lysimachia (Loosestrife)	Rhizoctonia root/stem rot, Southern blight
Magnolia	Bacterial leaf spot, powdery mildew
Malus (Crapapple)	Coniothyrium leaf spot, fire blight, frog-eye leaf spot, powdery mildew, rust, scab
Malva (Mallow)	Rust
Miscanthus	Blight
Morus (mulberry)	Berry blight, bacterial leaf blight, bacterial wetwood
Myosotis (Forget-me-not)	Web blight
Myrica (Bayberry)	Botryosphaeria dieback, Phytophthora root rot
Myrica cerifera (Wax myrtle)	Anthracnose, Botryosphaeria dieback, Phytophthora root rot, Septoria leaf spot
Myrtle (Myrtus)	Leaf spot; stem rot (Sclerotinia)
Nandina (Heavenly bamboo)	Cercospora leaf spot, Phytophthora root rot, Pythium root rot
Narcissus (Daffodil, Jonquil)	Fusarium bulb rot & various other fungal bulb rots; leaf spot & blight; virus
Nelumbo (Water lily)	Cercospora leaf spot
Nerium (Oleander)	Leaf spot; anthracnose; bacterial blight; sooty mold
Nyssa sylvatica (Black gum)	Anthracnose, Botryosphaeria dieback, leaf spot
Ocimum basilicum (Basil)	Alternaria leaf spot, Fusarium crown rot
Ophiopogon (Mondo grass)	Anthracnose
Oxalis (Wood sorrel)	Rust; leaf spots; root knot nematode
Oxydendrum arboreum (Sourwood)	Leaf spots
Pachysandra	Leaf spot, Pythium root rot, southern blight, Volutella blight; virus
Paeonia (Peony)	Botrytis blight, Cercospora leaf spot, Cladosporium leaf/stem blotch, Rhizoctonia root rot, Phytophthora blight
Parthenocissus (Boston ivy)	Phyllosticta leaf spot
Parthenocissus quinquefolia (Virginia creeper)	Downy mildew; leaf spots
Pelargonium (Geranium)	Bacterial blight, bacterial leaf spot, bacterial wilt, Botrytis blight, oedema (nutritional), Pythium root rot, blackleg, Rhizoctonia root rot, rust, viral disease
Petunia	Botrytis blight, Fusarium root/crown rot, Phytophthora root/crown rot and foliage blight, Pythium crown/root rot, Rhizoctonia root/stem rot, viral disease
Phalaris (Canarygrass)	Web blight
Phlox	Bacterial leaf spot, black root rot, Colletotrichum stem canker, powdery mildew, Pythium root rot, southern blight, viral disease, web blight
Photinia (Japanese photinia red-tip)	Bacterial blight, Botryosphaeria canker, Entomosporium leaf spot, powdery mildew, Armillaria root rot
Physocarpus (Ninebark)	Powdery mildew, Rhizoctonia root rot
Picea (Spruce)	Cytospora canker, Phytophthora root rot, Pythium root rot, needle blight, tip blight

HOMEOWNER ORNAMENTAL AND TREE DISEASE CONTROL(continued)

PLANT - Scientific name (Common Name)	DISEASES
Pieris (Japanese Pieris)	Botryosphaeria dieback, Phomopsis canker, Phytophthora root rot
Pinus (pine)	Armillaria root rot, Atropellis twig canker, Cenangium dieback, Cytospora canker, Diplodia tip blight, Dothiostroma needle blight, Eastern gall rust, Fusiform rust, needle cast, needle rust, Phacidiopycnis canker, Phytophthora root rot, pinewood nematodes
Pistacia (Pistache)	Verticillium wilt
Platanus (Sycamore)	Anthracnose, Bacterial scorch, Botryosphaeria dieback, powdery mildew
Platycodon (Balloon flower)	Rhizoctonia crown rot
Polygonatum (Solomon seal)	Penicillium rot
Populus (Poplar)	Botryosphaeria canker, leaf spot
Portulaca (Purslane)	Rhizoctonia stem rot; root knot nematode
Potentilla (Cinquefoil)	Foliar nematodes, rust
Pratia	Southern blight
Primula (Primrose)	Leaf spots, Pythium and Rhizoctonia root/stem rot
Prunus (flowering apricot/cherry/peach/plum)	Bacterial blossom blight, bacterial leaf spot, bacterial shot hole, bacterial scorch, black knot, blossom blight/brown rot, Cytospora canker, Nectria canker, peach leaf curl, Phomopsis canker, white rot
Prunus laurocerasus (Cherry laurel)	Anthracnose, bacterial leaf spot, bacterial shot hole, Botryosphaeria dieback, Phomopsis dieback, leaf spots, Phytophthora root rot, Pythium root rot, zonate leaf spot
Pseudotsuga (Douglas fir)	Botryosphaeria canker, Swiss needle cast
Pyracantha (Firethorn)	Botryosphaeria dieback, fire blight, Phomopsis dieback, scab
Pyrus calleryana (Flowering pear)	Botryosphaeria canker, Entomosporium leaf spot, fire blight, rust
Quercus (Oak)	Anthracnose, Armillaria root rot, bacterial scorch, bacterial wetwood, Botryosphaeria canker, Cyliandrocladium root rot, Discula anthracnose, Hypoxylon canker, leaf blister, Phomopsis dieback, powdery mildew, rust, smooth patch, spot anthracnose, Tubakia leaf spot
Ranunculus (Buttercup)	Bacterial blight, web blight, viral disease (mosaic), Verticillium wilt
Rhapiolepis (Indian hawthorn)	Entomosporium leaf spot
Rhododendron (Azalea)	Anthracnose, Armillaria root rot, Botryosphaeria dieback, Botrytis blight, Cercospora leaf spot, Colletotrichum leaf spot, leaf and flower gall, lesion nematodes, oedema (nutritional), Pestalotia leaf spot, petal blight, Phomopsis dieback, Phyllosticta leaf spot, Phytophthora dieback, Phytophthora root/stem rot, powdery mildew, web blight
Rhus (Sumac)	Verticillium wilt; Bot canker & dieback; powdery mildew, root rot
Rosa (Rose)	Anthracnose, black spot, Botryosphaeria dieback, Botrytis blight, crown gall, downy mildew, Phomopsis Canker, powdery mildew, Pythium root rot, rose rosette disease, viral disease
Rosmarinus (Rosemary)	Botrytis blight, crown gall, Phytophthora root rot, Pythium root rot
Rudbeckia (Black-eyed susan)	Pythium root rot, Rhizoctonia stem rot, Septoria leaf spot
Sagittaria (Arrowhead)	Leaf spot; leaf smut
Salix (Willow)	Armillaria root rot, Botryosphaeria dieback, Botrytis blight, black canker, Cercospora leaf spot, crown gall, rust, scab, white rot
Salvia	Bacterial leaf spot, downy mildew, Pythium root rot, Rhizoctonia stem rot, Botrytis blight

HOMEOWNER ORNAMENTAL AND TREE DISEASE CONTROL(continued)

PLANT - Scientific name (Common Name)	DISEASES
Sansevieria (Snake Plant)	Bacterial soft rot; leaf spots; root knot nematode; Fusarium rot
Scabiosa (Pincushion flower)	Botrytis blight
Schefflera (Umbrella tree)	oedema (nutritional), Pythium root rot
Sedum (Stone crop)	Anthracnose, bacterial soft rot, bacterial stem rot, Diplodia stem rot, leaf spot, Phytophthora stem rot, Pythium root rot, Rhizoctonia stem/root rot, root knot nematodes, web blight
Setcreasea (Purple heart)	Leaf spot
Solidago (Goldenrod)	Rust; powdery mildew; leaf spot
Spiraea	Leaf spot
Styrax (Silverbell)	Leaf spots
Syringa (Lilac)	Anthracnose, bacterial blight, Botrytis blight, Cercospora leaf spot, Phytophthora root rot, powdery mildew
Tagetes (Marigold)	Alternaria blight, Botrytis blight, crown gall, Fusarium stem/root rot, Pythium root rot, Rhizoctonia stem rot
Taxus (Yew)	Botryosphaeria dieback, Phytophthora root rot
Thuja (Arborvitae)	Armillaris root/stem rot, Cytospora canker, Kabatina tip blight, Phomopsis twig/needle blight, Phytophthora root rot, Pythium root rot, Seiridium twig canker, web blight; Diplodia canker/dieback
Thymus (Thyme)	Pythium root rot
Tilia (Linden)	Spot anthracnose, white rot
Tradescantia virginica (Spiderwort)	Southern blight
Tsuga (Hemlock)	Armillaria root rot, damping-off, rust
Tulipa (Tulip)	Botrytis blight, Fusarium basal rot, bulb rot (various fungi), virus color breaking
Ulmus (Elm)	Bacterial wetwood, bacterial leaf scorch, Botryosphaeria canker, Cytospora canker, Dutch elm disease, Verticillium wilt
Verbena (Vervain)	Powdery mildew, Pythium root rot, bacterial wilt
Veronica (Speedwell)	Phytophthora root rot; rust; powdery mildew
Viburnum (Snowball bush)	Spot anthracnose, bacterial scorch, Botryosphaeria dieback, Botrytis blight, phoma leaf spot, Phytophthora root rot, Rhizoctonia root rot
Vinca minor (Periwinkle)	Oedema (nutritional), Phoma dieback, Phomopsis dieback, Phyllosticta stem rot/leaf spot, Pythium root rot, Rhizoctonia root rot, Southern blight, Botrytis blight,
Viola (Pansy)	Anthracnose, black root rot, Botrytis blight, Cercospora leaf spot, Phytophthora root/crown rot, Pythium root/crown rot
Weigala	Phytophthora root rot, Pythium root rot
Wisteria	Botryosphaeria dieback
Yucca	Bacterial soft rot, Mycosphaerella leaf spot
Zinnia	Alternaria blight, bacterial leaf spot, Botrytis stem canker, powder mildew, Pythium root rot