

Control of Ornamental Diseases

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Overview

Home gardens are unique ecosystems, unlike professional nurseries. Making a beautiful home garden does not necessarily mean spraying pesticides on a preventive schedule. It is possible to use non-chemical approaches to avoid and control disease problems in home gardens.

General Cultural Controls

Many pathogens attack ornamental plants. Some, like rusts, are very aggressive but may not survive if their host plant tissues are absent. Others, like *Botrytis*, are ubiquitous and opportunistic; they attack only physiologically-weakened plants. Home gardeners can lessen the risk of disease and plant loss by reducing pathogen populations and increasing plant vigor.

- **Crop rotation:** Rotating crops is an effective way to control diseases caused by soilborne pathogens. Little is known about these pathogens, but it is a safe rule of thumb to plant different crops in a flower bed each year. Each pathogen has a host range and its population may decline if the pathogen's favorite host plants are not present. Crop rotation may not eliminate a pathogen from soil, but it slows the inoculum build-up in a flower bed.
- **Sanitation:** It is important to remove dead plants and diseased plant parts as well as to keep the tools you use clean. Removing dead plants reduces inoculum during a growing season and removing diseased plant parts avoids unintentional spreading of a pathogen from one plant to another. It is best to remove dead or severely diseased plants from a flower bed as soon as you see them; otherwise, they become sources of inoculum for disease progression. Symptomatic limbs, leaves and flowers should be pruned from plants and removed from the bed. Sterilize pruners with 70% alcohol solution regularly.
- **Fertilization and irrigation:** Fertilize and water plants only as needed. This improves plant physiology and limits the excess water pathogens need to reproduce, germinate, and attack ornamental plants.

General Biological Controls

Biological control in the home garden means using resistant plant species and beneficial microbes that outcompete or are hostile to pathogens. There are many kinds of ornamental plant species and cultivars, and some are almost disease-free while others are very prone to pathogen attack. Gardening exclusively with resistant plant species and cultivars is an option for gardeners who want to avoid and manage disease problems. Choosing the right plants is usually site-specific and should be guided by personal experience and careful research. The future of plant disease management is the use of beneficial microbes. Use composted green waste or other organic matter to enhance naturally-occurring beneficial microbes already in the soil.

General Chemical Controls

Chemical control should be the last resort for disease management in a home garden. Unlike cultural and biological controls, the efficacy of most chemicals is pathogen-specific. There are five major groups of pathogens: fungi, bacteria, oomycetes (*Phytophthora*, *Pythium*, downy mildew), nematodes, and viruses. Some chemicals control only diseases caused by fungi. These chemicals are called "fungicides". Similarly, the pesticides that control only bacterial, oomycete, and nematode diseases are regarded as "bactericides," "oomycetocides," and "nematicides," respectively. When chemical control is necessary, it is critical to first determine the nature of a disease, then select the right chemical. Review pesticide labels carefully and follow instructions strictly to avoid any health hazards and phytotoxicity. Using the same pesticide repeatedly may make the target pathogen resistant. It is best to alternate pesticides with different modes of action.

Determine the Nature of a Disease Problem by Using the Index of Ornamental Plants and Their Diseases

The index below is arranged alphabetically by the scientific name of the host plant with its common name in parentheses. Common diseases that usually require chemical treatments are in italics.

Herbaceous Plants

Aconitum (Monkshood) Southern blight

Aegopodium (Goutweed) leaf spot

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- Agave (Century plant)** crown rot
Ageratum (Floss flower) Southern blight
Ajuga (Bugleweed) *Phomopsis dieback*, *Phytophthora root rot*, *Pythium root rot*, *Rhizoctonia root/crown rot*, root knot nematode, *Southern blight*, viral disease, web blight
Alcea (Hollyhock) root knot nematode, *rust*
Anemone foliar nematode, *Phytophthora root rot*
Antirrhinum (Snapdragon) *Cercospora leaf spot*, downy mildew, *Phytophthora root/crown rot*, *Pythium root rot*, *Rhizoctonia stem rot*, *rust*, *Verticillium wilt*, viral diseases
Aquilegia (Columbine) *Pythium root rot*
Arisaema (Jack-in-the-pulpit) *rust*
Armeria (Sea thrift) web blight
Artemisia (Dusty miller) *Rhizoctonia root/stem rot*
Asclepias (Milkweed) anthracnose
Asclepias tuberosa (Butterfly weed) *Rhizoctonia stem rot*
Aster *powdery mildew*, *rust*
Astilbe *Pythium root rot*
Bedding plants damping-off
Begonia anthracnose, *Botrytis blight*, *Fusarium stem rot*, *powdery mildew*, *Rhizoctonia root/stem rot*, root knot nematode
Bergenia *Pythium root rot*
Cactus *Pythium root rot*
Caladium *Pythium root rot*
Calibrachoa (Million bells) *Phytophthora crown rot*, black root rot, *Rhizoctonia root rot*, Southern blight
Campanula (Bellflower) *Fusarium crown rot*
Canna (Canna lily) lesion nematodes, *Pythium root rot*
Catharanthus (Madagascar periwinkle) black root rot, *Botrytis blight*, *Phytophthora blight*, *Pythium root rot*, *Rhizoctonia stem/root rot*
Cattleya (Orchid) bacterial brown spot
Celosia (Cockcomb) *Pythium root rot*, *Rhizoctonia root rot*
Chrysanthemum (Daisy) *Pythium root rot*, bacterial blight, web blight
Chrysogonum (Goldenstar) Southern blight
Clivia (Kaffir lily) leaf spot, Southern blight
Coleus *Botrytis blight*, downy mildew
Consolida (Larkspur) *Pythium root rot*, *Rhizoctonia crown/root rot*
Coreopsis (Tickseed) *Botrytis blight*, *Rhizoctonia root/stem rot*, *rust*, viral disease
Cosmos (Mexican aster) *Botrytis blight*, *Phomopsis stem canker*, *powdery mildew*, white smut
Crassula (Jade plant) oedema, *Pythium root rot*
Cyclamen *Fusarium wilt*
Cymbidium (Orchid) viral disease
Dahlia crown gall, *powdery mildew*
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*
Digitalis (Foxglove) black root rot, *Fusarium root rot*, *Pythium root rot*
Epiphyllum (Cereus) oedema
Euphorbia (Spurge) anthracnose, *Botrytisphaeria dieback canker*
Euphorbia pulcherima (Poinsettia) bacterial blight, bacterial leaf spot, *Botrytis blight*, *powdery mildew*, *Pythium root rot*, scab
Eustoma (Lisianthus) *Botrytis blight*, *Fusarium root/stem rot*
Exacum (Persian violet) viral disease

- Gaillardia (Blanket flower)** *Pythium* root rot, white smut
Galium (Sweet woodruff) Rhizoctonia stem/root rot, Southern blight
Gerbera (African daisy) *Pythium* root rot
Gladiolus *Botrytis* leaf blight, *Curvularia* leaf blight, *Fusarium* yellows, *Penicillium* corm rot, Rhizoctonia corm rot
Gloxinia (Sinningia) viral disease
Gomphrena (Globe amaranth) leaf spot
Gypsophila (Baby's breath) bacterial soft rot
Helianthemum (Rock rose) *Botrytis* blight
Helianthus (Sunflower) *Alternaria* leaf/stem spot
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
Heuchera (Coral bells) *Pythium* root rot
Hosta *anthracnose*, *Botrytis* blight, leaf spot, root rot, *soft rot*, *Southern blight*, virus X
Iberis (Candytuft) anthracnose, *Pythium* root rot
Impatiens *Alternaria* leaf spot, bacterial fasciation, *Botrytis* blight, downy mildew, *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*
Lamium (Yellow archangel) Rhizoctonia root/stem rot, Southern blight
Leucanthemum *Phytophthora* root rot, Rhizoctonia root rot
Lewisia soft rot
Liatris (Gayfeather) *Sclerotinia* stem rot
Lilium (Lily) anthracnose, *Botrytis* blight, *Pythium* root rot
Limnium (Statice) *Phytophthora* root rot, *Pythium* root rot, Rhizoctonia root rot
Liriope (Lilyturf) anthracnose, foliar nematodes, *Fusarium* wilt, *Mycosphaerella* leaf spot, *Phytophthora* root rot, viral disease
Lobelia *Pythium* root rot, viral disease
Lobularia (Sweet alyssum) Rhizoctonia stem rot
Lupinus (Lupine) anthracnose, brown spot, *Pythium* root rot
Lysimachia (Loosestrife) Rhizoctonia root/stem rot, *Southern blight*
Malva (Mallow) rust
Miscanthus (Ornamental grass, or Maiden grass) anthracnose
Myosotis (Forget-me-not) web blight
Nelumbo (Water lily) *Cercospora* leaf spot
Ocimum basilicum (Basil) *Alternaria* leaf spot, *Fusarium* root rot
Oenanthe javanica (Water celery) *Fusarium* crown rot
Ophiopogon (Mondo grass) anthracnose
Oxalis (Wood sorrel) rust
Pachysandra leaf spot, *Pythium* root rot, Southern blight, *Volutella* blight
Paeonia (Peony) *Botrytis* blight, *Cercospora* leaf spot, *Cladosporium* leaf/stem blotch, Rhizoctonia root rot
Pelargonium (Geranium) bacterial blight, bacterial leaf spot, bacterial wilt, *Botrytis* blight, oedema, *Pythium* root rot/black-leg, Rhizoctonia root rot, *rust*, viral disease
Petunia *Botrytis* blight, *Fusarium* root/crown rot, *Phytophthora* root/crown rot and foliage blight, *Pythium* root/crown 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
Platycodon (Balloon flower) Rhizoctonia crown rot
Polygonatum (Solomon seal) *Penicillium* rot
Portulaca (Purslane) Rhizoctonia stem rot

4-4 Home Ornamentals: Control of Ornamental Diseases

Pratia Southern blight

Ranunculus (Buttercup) bacterial blight, web blight

Rudbeckia (Black-eyed Susan) Pythium root rot, Rhizoctonia stem rot, *Septoria leaf spot*, downy mildew

Salvia bacterial leaf spot, downy mildew, Pythium root rot, Rhizoctonia stem rot

Scabiosa (Pincushion flower) Botrytis blight

Schlumbergera (Thanksgiving cactus) oedema, 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 root/stem rot, root knot nematodes, web blight

Setcreasea (Purple heart) leaf spot

Solidago (Goldenrod) rust

Syngonium (Nepthytis) bacterial leaf spot

Tagetes (Marigold) Alternaria blight, Botrytis blight, crown gall, Fusarium stem/root rot, Pythium root rot, Rhizoctonia stem rot

Tradescantia virginica (Spiderwort) Southern blight

Tulipa (Tulip) Botrytis blight, Fusarium basal rot

Verbena (Vervain) powdery mildew, Pythium root rot

Veronica (Speedwell) Phytophthora root rot

Viola (Pansy) anthracnose, black root rot, Botrytis blight, Cercospora leaf spot, Phytophthora root/crown rot, Pythium root/crown rot

Zephyranthes (Rain lily) anthracnose

Zinnia Alternaria blight, bacterial leaf spot, Botrytis stem canker, powdery mildew, Pythium root rot

Woody Ornamentals Plants

Abies (Fir) Botrytis blight, Cytospora canker, oedema, Phytophthora root/crown rot

Acer (Maple) Anthracnose, bacterial scorch, bacterial wetwood, Botrytisphaeria dieback, Cytospora canker, Ganoderma root rot, leaf spot, Nectria canker, Phomopsis dieback, purple-eye leaf spot, tar spot, Valsa canker, Verticillium wilt, zonate leaf spot

Aesculus (Buckeye) Guignardia blotch **Ailanthus (Tree-of-heaven)** Fusarium stem/root rot

Ailanthus (Tree-of-heaven) Fusarium stem/root-rot

Albizia (Mimosa) Fusarium wilt

Amelanchier (Service berry) rust, Entomosporium leaf spot

Arctostaphylos (Bearberry) Pythium root rot, Phytophthora root rot

Aronia (Chokeberry) Pythium root rot

Aucuba anthracnose, Botrytisphaeria dieback, leaf spot, Phomopsis dieback, ring nematode

Bamboo Pythium root rot

Berberis (Barberry) Phytophthora root rot

Betula (Birch) anthracnose, Botrytisphaeria dieback, Botrytis blight, red heart, Septoria leaf spot

Buddleia (Butterfly bush) Phytophthora root rot, Rhizoctonia root rot

Buxus (Boxwood) Botrytisphaeria dieback, boxwood blight, boxwood decline, lesion nematode, Macrophoma leaf spot, volutella blight

Calocedrus (Incense cedar) Seiridium canker

Camellia anthracnose, Botrytisphaeria dieback, leaf/flower gall, leaf spot, oedema, petal/flower blight, Phytophthora root rot, Pythium root rot, viral disease

Campsis (Trumpet vine) anthracnose

Carpinus (Hornbeam) Pythium root rot

Carya (Hickory) downy leaf spot, Gnomonia leaf spot, phomopsis gall, powdery mildew, zonate leaf spot

Caryopteris (Bluebeard) Phytophthora stem/root rot, Pythium root rot

Catalpa bacterial wetwood, Verticillium wilt

Cedrus (Cedar) Armillaria root rot, Phomopsis needle/twig blight

Cercis (Redbud) Botrytisphaeria dieback, botrytis blight, Fusarium canker, leaf spot, Verticillium wilt

Chamaecyparis (Falsecypress) Phytophthora root rot, Seiridium canker, web blight

Chionanthus (Fringe tree) leaf spot

Cladastris (Yellow wood) anthracnose

Clematis leaf spot, Phytophthora root rot

Cleyera Armillaria root rot

Cornus (Dogwood) *anthracnose*, Armillaria root rot, Botrytisphaeria 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

Cotinus (Smoke bush) anthracnose, Verticillium wilt

Cotoneaster leaf spot, Phytophthora root rot, web blight

Crataegus (Hawthorn) Cercospora leaf spot, *Entomosporium leaf spot*, *rust*

Cryptomeria (Japanese cedar) needle blight, *Phomopsis twig blight*, Phytophthora root rot

Cupressocyparis (Leyland Cypress) phytophthora root rot

Cupressus (Cypress) Botrytisphaeria dieback, Kabatina dieback, tip blights, Phytophthora root rot, *Seiridium canker*

Daphne anthracnose, Phytophthora root/stem rot

Davidia (Dove tree) Phomopsis dieback

Dracaena Fusarium blight, Pythium root rot

Echinacea (Coneflower) aster yellows, foliar nematodes, Pythium root rot, viral disease

Elaeagnus (Autumn olive) Phytophthora root rot

Epipremnum (Pothos) Phytophthora stem rot

Erica (Heather) Phytophthora root rot

Eucalyptus anthracnose, Botrytisphaeria dieback, crown gall, Fusarium canker, Phomopsis dieback, *Phytophthora root rot*, *powdery mildew*, Pythium root rot

Euonymus *powdery mildew*

Fagus (Beech) anthracnose, Botrytisphaeria canker, Hypoxylon canker, viral disease

Fatsia leaf spot

Ficus (Fig) anthracnose, Phytophthora root rot

Ficus benjamina (Weeping fig) anthracnose, Phomopsis gall

Forsythia Botrytisphaeria dieback, crown gall, Phomopsis gall, Phytophthora root rot, ringer nematodes, Sclerotinia twig blight, web blight

Fraxinus (Ash) *anthracnose*, ash yellows, Botrytisphaeria canker, *rust*

Gardenia anthracnose

Gleditsea (Honeylocust) Botrytisphaeria canker, Thyronectria canker

Hamamelis (Witchhazel) Botrytisphaeria 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

Hibiscus *Phytophthora root rot*, Pythium root rot, viral disease

Hibiscus syriacus (Rose-of-Sharon) leaf spot

Hydrangea anthracnose, Armillaria root rot, bacterial leaf spot, *Botrytis blight*, Cercospora leaf spot, *Phytophthora root rot*, *Pythium root rot*, *powdery mildew*

Hypericum (St Johnswort) Phytophthora stem/root rot, *rust*, Rhizoctonia root rot

Ilex (Holly) *anthracnose*, bacterial blight, *black root rot*, Botrytisphaeria dieback, leaf spot, root knot nematodes, oedema, 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

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) Botrytisphaeria dieback, *Cercospora leaf spot*

Lagerstroemia (Crape myrtle) leaf spot, *powdery mildew*, sooty mold

Laurus nobilis (Bay laurel) Cercospora leaf spot

Lavandula (Lavender) Phytophthora root rot, Pythium root rot

Leucothoe (Drooping leucothoe) Botrytisphaeria dieback, Cyliandrocladium leaf spot, Phyllosticta leaf spot, Phytophthora root rot

Ligustrum (Privet) anthracnose, Cercospora leaf spot, Phytophthora root rot

Liquidambar (Sweetgum) Cercospora leaf spot, Endothia canker, Sphaeropsis gall

Liriodendron (Tulip tree) powdery mildew

Lonicera (Honeysuckle) Botrytisphaeria dieback, Botrytis blight, *Herpobaisdium leaf blight*, powdery mildew

Magnolia bacterial leaf spot, *powdery mildew*

Malus (Crabapple) Coniothyrium leaf spot, *fire blight*, *frog-eye leaf spot*, *powdery mildew*, *rust*, *scab*

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- Metasequoia (Dawn redwood)** *Dothiorella canker*, needle blight
Microbiota decussata (Russian arborvitae) *Phytophthora* root rot
Morus (Mulberry) berry blight
Myrica (Bayberry) *Botrytisphaeria dieback*, *Phytophthora* root rot
Myrica cerifera (Waxmyrtle) anthracnose, *Botrytisphaeria dieback*, *Phytophthora* root rot, *Septoria* leaf spot
Nandina (Heavenly bamboo) *Cercospora* leaf spot, *Phytophthora* root rot, *Pythium* root rot
Nerium oleander (Oleander) bacterial gall
Nyssa sylvatica (Black gum) anthracnose, *Botrytisphaeria dieback*, leaf spot
Oxydendrum arboreum (Sourwood) leaf spot
Parthenocissus (Boston ivy) *Phyllosticta* leaf spot
Paxistima *Phytophthora* root rot
Photinia (Japanese photinia red-tip) *Armillaria* root rot, bacterial blight, *Botrytisphaeria canker*, *Entomosporium leaf spot*, *powdery mildew*
Physocarpus (Ninebark) *powdery mildew*, *Rhizoctonia* root rot
Picea (Spruce) *Cytospora canker*, *Phytophthora* root rot, *Pythium* root rot, needle blight, tip blight
Pieris (Japanese pieris) *Botrytisphaeria dieback*, *Phomopsis canker*, *Phytophthora* root rot
Pinus (Pine) *Armillaria* root rot, *Atropellis* twig canker, *Cenangium dieback*, *Cytospora canker*, *Diplodia tip blight*, *Dothistroma* needle blight, Eastern gall rust, *Fusiform rust*, needle cast, needle rust, *Phacidiopycnis canker*, *Phytophthora* root rot, *pine-wood nematodes*
Pistacia (Pistache) *Verticillium* wilt
Platanus (Sycamore) *anthracnose*, bacterial scorch, *Botrytisphaeria dieback*, *powdery mildew*
Populus (Poplar) *Botrytisphaeria canker*, leaf spot
Potentilla (Cinquefoil) foliar nematodes
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, *Botrytisphaeria dieback*, *Phomopsis dieback*, leaf spots, *Phytophthora* root rot, *Pythium* root rot, zonate leaf spot
Pseudotsuga (Douglas fir) *Botrytisphaeria canker*, Swiss needle cast
Pyracantha (Firethorn) *Botrytisphaeria dieback*, *fire blight*, *Phomopsis dieback*, *scab*
Pyrus calleryana (Flowering pear) *Botrytisphaeria canker*, *Entomosporium leaf spot*, *fire blight*, rust
Quercus (Oak) *anthracnose*, *Armillaria* root rot, bacterial scorch, *bacterial wetwood*, *Botrytisphaeria canker*, *Cylindrocladium* root rot, *Discula anthracnose*, *Hypoxylon canker*, *leaf blister*, *Phomopsis dieback*, *powdery mildew*, rust, smooth patch, spot anthracnose, *Tubakia leaf spot*
Rhaphiolepis (Indian hawthorn) *Entomosporium leaf spot*
Rhododendron (Azalea) anthracnose, *Armillaria* root rot, *Botrytisphaeria dieback*, *Botrytis blight*, *Cercospora leaf spot*, *Colletotrichum* leaf spot, *leaf and flower gall*, lesion nematodes, oedema, *Pestalotia* leaf spot, *petal blight*, *Phomopsis dieback*, *Phyllosticta* leaf spot, *Phytophthora dieback*, *Phytophthora root/stem rot*, *powdery mildew*, *web blight*
Rosa (Rose) anthracnose, *black spot*, *Botrytisphaeria 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
Salix (Willow) *Armillaria* root rot, *Botrytisphaeria dieback*, *Botrytis blight*, black canker, *Cercospora* leaf spot, *crown gall*, rust, scab, white rot
Santolina (Lavender cotton) *Rhizoctonia* root rot
Schefflera (Umbrella tree) oedema, *Pythium* root rot
Sequoia (Redwood) *Cercospora* needle blight, *Phomopsis* needle blight
Spiraea leaf spot
Styrax (Silverbell) leaf spot
Syringa (Lilac) anthracnose, *bacterial blight*, *Botrytis blight*, *Cercospora* leaf spot, *Phytophthora* root rot, *powdery mildew*
Taxus (Yew) *Botrytisphaeria dieback*, *Phytophthora* root rot
Teucrium (Germander) *Rhizoctonia* root rot, Southern blight
Thuja (Arborvitae) *Armillaria* root/stem rot, *Cytospora canker*, *Kabatina* tip blight, *Phomopsis* twig/needle blight, *Phytophthora* root rot, *Pythium* root rot, *Seiridium* twig canker, web blight
Thymus (Thyme) *Pythium* root rot

Tilia (Linden) spot anthracnose, white rot

Ulmus (Elm) bacterial wetwood, bacterial leaf scorch, Botryospheraeria canker, Cytospora canker, Dutch elm disease, Verticillium wilt

Viburnum (Snowball bush) spot anthracnose, bacterial scorch, Botryospheraeria dieback, Botrytis blight, phoma leaf spot, Phytophthora root rot, Rhizoctonia root rot

Vinca minor (Periwinkle) oedema, Phoma dieback, Phomopsis dieback, Phyllosticta stem rot/leaf spot, Pythium root rot, Rhizoctonia root/stem rot, Southern blight

Weigela Phytophthora root rot, Pythium root rot

Wisteria Botryospheraeria dieback

Xanthoceras sorbifolium (Yellowhorn) Botrytis blight

Yucca bacterial soft rot, Mycosphaerella leaf spot

When to call a professional

The index of ornamental plants and their diseases is designed to help those who use this PMG to narrow down the targets quickly. It is also the starting point for further research, as gardeners can compare and determine the exact causes of disease problems. Consult a professional when a final diagnosis cannot be determined with the information available online.

General Chemical Recommendation

Table 4.1 - General Guidelines for Pesticide Selection			
Disease	Common Name	Trade Name	Manufacturer
Oomyceteous diseases			
Phytophthora root rot	Fosetyl-Al	Monterey Aliette	Monterey
Pythium root/crown rot	Phosphorous acid	AGRI-FOS	Monterey
Downy mildew	Fosetyl-Al	Monterey Aliette	Monterey
Phytophthora blight/ dieback	Phosphorous acid	AGRI-FOS	Monterey
	Copper hydroxide	Copper Fungicide	Hi-Yield
	Copper salts	LIQUI-COP	Monterey
		Liquid Copper Fungicide	Bonide
		Copper Fungicide	Dragon
Fungal			
Black root rot	Thiophanate-methyl	Halt Systemic Fungicide	Ferti-lome
Cylindrocladium root rot		Lawn Fungus Control	Scotts
		Systemic Fungicide	Green Light
		Systemic Fungicide 3336WP	Dragon
Rhizoctonia root/stem rot	fludioxonil	Medallion	Southern Agriculture Insecticides
Web blight	Pentachloronitrobenzene	Turf & Ornamental Fungicide	Hi-Yield
Sclerotinia root rot		Terraclor	Southern Agriculture Insecticides
Southern blight		Azalea, Camellia, Crape Myrtle Spray	Ferti-lome
Botrytis blight	Thiophanate-methyl	Halt Systemic	Ferti-lome
Diplodia tip blight		Lawn Fungus Control	Scotts
Kabatina dieback		Systemic Fungicide	Green Light
Phomopsis dieback		Systemic Fungicide 3336WP	Dragon
Phomopsis needle blight			
Sclerotinia stem rot			
Tip blight			
Fungal (cont.)			

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Table 4.1 - General Guideline for Pesticide Selection (cont.)

Disease	Common Name	Trade Name	Manufacturer
Powdery mildew	Potassium bicarbonate	Remedy	Bonide
	Sulfur	3-in-1 Rose & Flower Care	Ortho
		Garden Fungicide	Safer
		Sulfur 90W	Monterey
		Sulfur Plant Fungicide	Bonide
		Wettable Dusting Sulfur	Hi-Yield
		Wettable or Dusting Garden Sulfur	Dragon
	Neem oil	Powdery mildew killer Ready To Use	Green Light
		Triple Action Ready-To-Use	Ferti-lome
	Joboba oil	E-Rase RTU	Monterey
	Sesame oil	Organocide	Organic Lab
	Myclobutanil	F-Stop Lawn Fungicide	Ferti-lome
		Fung-Away systemic Granules	Green Light
		Immunox 3-in-1	Spectracide
		Immunox Fungicide	
		Immunox Lawn Disease Spray	
		Immunox Lawn Disease Control Granules	
		Immunox Multi-Purpose Fungicide	
		Immunox Plus Insect and Disease Control	
		Triforine	Rose Pride Disease Control
Orthenex-Garden Insect & Disease Control			
Rust	Myclobutanil	F-Stop Lawn Fungicide	Ferti-lome
		Fung-Away systemic Granules	Green Light
		Immunox 3-in-1	Spectracide
		Immunox Fungicide	
		Immunox Lawn Disease Spray	
		Immunox Lawn Disease Control Granules	
		Immunox Multi-Purpose Fungicide	
		Immunox Plus Insect and Disease Control	
	Triadimefon	Fung-Away Fungicide	Green Light
		Fung-Away Systemic Lawn Spray	
Fung-Away Systemic Lawn Spray			
Hose-End Concentrate			
	Lawn Fungicide Granules	Hi-Yield	
Fungal (cont.)			

Table 4.1 - General Guideline for Pesticide Selection (cont.)

Disease	Common Name	Trade Name	Manufacturer	
Rust (cont.)	Triforine	Rose Pride – Rose & Shrub Disease Control	Ortho	
		Orthenex-Garden Insect & Disease Control		
	Tebuconazole	Disease Control for Roses, Flowers, and Shrubs	Bayer	
		All-In-One Rose and Flower Care		
Alternaria leaf spot	Propiconazole	Lawn & Garden Disease Control	Bonide	
Anthracnose		Lawn Disease Control	Ortho	
Black spot (rose)		Liquid Systemic Fungicide	Ferti-lome	
Cercospora leaf spot	Chlorothalonil	Lawn & Garden Fungicide	Ferti-lome	
Curvularia leaf blight		Daconil	Hi-Yield	
Cylindrocladium leaf spot		Daconil 2787	Dragon	
Entomosporium leaf spot		Daconil Fungicide Ready-to-Use	Garden Tech	
Gnomonia leaf spot		Fung-Onil Multi-Purpose Fungicide	Bonide	
Heterosporium,		Garden Disease Control	Ortho	
Leaf streak (daylily)		Multipurpose Fungicide	Tiger Brand	
Macrophoma leaf spot		Mancozeb	Mancozeb Disease Control	Dragon
Mycosphaerella leaf spot			Mancozeb Flowable	Bonide
Phyllosticta leaf spot		Maneb	Maneb Garden Fungicide	Hi-Yield
Purple-eye leaf spot		Captan	Captan	Bonide
Scab			Captan Wettable Powder	Dragon
Septoria leaf spot		Copper hydroxide	Copper Fungicide	Hi-Yield
Spot anthracnose	Copper salts	LIQUI-COP	Monterey	
Volutella blight		Liquid Copper Fungicide	Bonide	
Web blight		Copper Fungicide	Dragon	
Zonate leaf spot	Thiophanate-methyl	Halt Systemic	Ferti-lome	
		Lawn Fungus Control	Scotts	
		Systemic Fungicide	Green Light	
		Systemic Fungicide 3336 WP	Dragon	
		Tebuconazole	Disease Control for Roses, Flowers, and Shrubs	Bayer
		All-In-One Rose and Flower Care		
Leaf/flower gall	Chlorothalonil	Broad Spectrum Liquid Fungicide	Ferti-lome	
Boxwood blight		Daconil	Hi-Yield	
		Daconil	Garden Tech	
		Daconil 2787	Dragon	
		Fungicide Disease Control	Garden Tech	
		Fung-Onil Multi-Purpose Fungicide	Bonide	
		Garden Disease Control	Ortho	
		Multipurpose Fungicide	Tiger Brand	
	Tebuconazole	Advanced Garden Disease Control	Bayer	
Fungal (cont.)				

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Table 4.1 - General Guideline for Pesticide Selection (cont.)

Disease	Common Name	Trade Name	Manufacturer	
Leaf/flower gall (cont.)	Mancozeb	Mancozeb Disease Control	Dragon	
Boxwood blight		Mancozeb	Bonide	
Flower/petal blight	Myclobutanil	F-Stop Lawn Fungicide	Ferti-lome	
		Fung-Away systemic Granules	Green Light	
		Immunox 3-in-1	Spectracide	
		Immunox Fungicide		
		Immunox Lawn Disease Spray		
		Immunox Lawn Disease Control Granules		
		Immunox Multi-Purpose Fungicide		
		Chlorothalonil	Lawn & Garden Fungicide	Ferti-lome
			Daconil	Hi-Yield
			Daconil	Garden Tech
			Daconil 2787	Dragon
			Daconil Fungicide Ready-to-Use	Garden Tech
			Fung-Onil Multi-Purpose Fungicide	Bonide
			Garden Disease Control	Ortho
Bacterial				
Fire blight	Copper	Copper Spray or Dust	Bonide	
Soft rot	Copper hydroxide	Copper Fungicide	Hi-Yield	
	Copper salts	LIQUI-COP	Monterey	
	Copper ammonium	Liquid Copper Fungicide	Southern Agriculture Insecticide	
	Copper oxinate	Copper Soap	Concern	
	Copper octanoate	Garden Disease Control	Ortho	
	Fosetyl-Al	Monterey Aliette	Monterey	
	Streptomycin sulfate	Fire Blight Spray	Bonide, Ferti-lome	
Crown gall	Purchase healthy plants			
Nematode - No nematicide available for homeowner use.				
Viral - No chemicals for control of viral diseases.				