

HOME FUNGICIDE GUIDE

Elizabeth Little, Extension Home IPM Specialist

The following is a supplemental guide to fungicides that are readily available to homes. This guide is not intended to take the place of the individual product labels which are the best resource concerning the use of any pesticide. Most, but likely not all, of the current brand names are listed here. Follow label recommendations for application rates, methods, and safety precautions when using all pesticides.

ACTIVE INGREDIENT BRAND NAME	DISEASES CONTROLLED	COMMENTS
<i>aluminum tris</i> Monterey Alette	Downy mildew on roses; Pythium and Phytophthora in ornamentals, bedding plants, conifers and turf; and fire blight on pear, pyracantha and hawthorne.	Apply as spray or drench.
<i>bordeaux mixture</i> (<i>copper sulfate + hydrated lime</i>) (May no longer be available as a ready-mixed product)		
<i>captan</i> Ortho Home Orchard Spray, Dragon Fruit Tree Spray, Ferti-lome Fruit Tree Spray, Bonide Captan 50W, Bonide Rose Insect and Disease Control, and Hi-Yield Captan 50% WP	Good general fruit fungicide used for bitter rot, black rot, Botryosphaeria rot, flyspeck, sooty blotch, frog-eye leaf spot and scab control on apples; brown rot and scab on peaches and plums; Botrytis rot on strawberries; and downy mildew and black rot of grape. Also used for black spot of rose; powdery mildew on tuberous begonias; rust and leaf spot on carnations; Botrytis flower blight on chrysanthemums; petal blight of camellias; and rot and/or damping off of cuttings (azaleas, carnations, chrysanthemums) and bulbs (gladiolus, tuberous begonias). General soil drench treatment for grass seedlings, cuttings and flower beds for damping off and root rot (Rhizoctonia spp.). Some products include grass (non-pasture/grazing) label for brown patch, leaf spot, seedling blights and melting out (Helminthosporium) on St. Augustinegrass..	Broad spectrum protectant fungicide. This is a contact fungicide. Label indicates control of difficult-to-control diseases (i.e., root rots, petal blight of camellias); product gives suppression only. Does not control cedar apple rust. Combination fruit spray home orchard products also contain insecticides (usually malathion and methoxychlor) for control of home orchard insect pests. Do not combine with lime, lime-sulfur or Bordeaux mixture as fungicidal activity will be reduced. Do not apply Captan in combination with oil or near the time of oil sprays.
<i>Chitin</i> (organic) Chitosan (May not be easy to locate product.)	Nematodes.	This is a soil amendment that increases growth of beneficial microorganisms that feed on chitin (nematode eggs and nematodes contain chitin). This is considered an ORGANIC product. A single application/year is usually sufficient.
<i>chlorothalonil</i> Ortho Garden Disease Control, Hi-Yield Vegetable, Flower, Fruit & Ornamental Fungicide, Fertilome Landscape & Garden Fungicide, Bonide Fungonil, Gardentech Daconil, Monterey Fruit Tree, Vegetable, and Ornamental Fungicide	Many common fungal diseases including anthracnose, downy mildew, gray mold (<i>Botrytis</i>), powdery mildew, early blight and late blight on many vegetables, including tomatoes. Downy mildew, anthracnose, fungal leaf spots, shot-hole, rusts, scab and powdery mildew on ornamentals. Some fruit diseases, including brown rot and scab on stone fruits. Listed vegetables, fruit trees, roses, flowers, shrubs and shade trees.	The most widely used broad spectrum protectant, contact fungicide. Not recommended for pittosporum or schefflera as phytotoxicity may result. Discoloration of blooms may occur, especially with roses. NO LONGER LABELED FOR HOME TURF USE, SEVERE EYE IRRITANT! WEAR PROTECTIVE CLOTHING. AVOID USE AROUND CHILDREN AND PETS.

HOME FUNGICIDE GUIDE

ACTIVE INGREDIENT BRAND NAME	DISEASES CONTROLLED	COMMENTS
<p><i>copper compounds</i></p> <p>Bonide Copper Spray or Dust Bonide Liquid Copper Natural Guard Copper Soap Ortho Elementals Garden Disease Control Monterey Liqui-Cop Dupont Kocide 3000, and others</p>	<p>Many fungal and bacterial diseases, including powdery and downy mildew, fungal leaf spots, anthracnose, bacterial leaf spot and/or blight, fire blight and rust on a wide variety of fruits, vegetables and ornamentals.</p>	<p>Broad spectrum protectant fungicide.</p> <p>Some formulations are organic compatible, however, copper is toxic to humans so label directions and harvest intervals should, as always, be followed carefully. Over-use results in accumulation in the soil.</p> <p>Discoloration of blooms can occur on certain varieties of ornamentals. To avoid this problem do not spray prior to or during the flowering period. Foliage discoloration may occur with some plants as well. Refer to individual product label for plants that may be treated.</p>
<p><i>liquid lime-sulfur calcium polysulfides</i></p> <p>No longer packaged for home use due to caustic properties of this product.</p>	<p>Used in the dormant season to kill overwintering fungal spores of black spot, powdery mildew and rust of rose; leaf curl and shot-hole of peach; and cane blight and leaf spot of brambles.</p> <p>Some brands labeled for delayed dormant and/or growing season applications for scab and powdery mildew of apple; anthracnose, rust and powdery mildew of blackberry; and powdery mildew and scab on pear.</p> <p>During the growing season used for powdery mildew on many ornamentals and black spot of rose.</p>	<p>Broad spectrum protectant fungicide. This is a contact fungicide.</p> <p>Labeled for roses, peaches, pears, brambles, fruit trees, deciduous hedge plants, delphinium, lilacs, euonymus, columbine, crepe myrtle, sweet peas, zinnias, fruits, ornamentals and tuberous begonias.</p> <p>Also controls mites and scale.</p> <p>Do not spray when temperature is expected to exceed 80°F within 24 hours. Spray early in the morning or late in the evening to avoid burning of foliage.</p> <p>Lime sulfur is caustic. Use with care</p>
<p><i>mancozeb</i></p> <p>Bonide Mancozeb Flowable with Zinc</p>	<p>Many vegetable diseases, including anthracnose, fungal leaf spots, downy mildew, early blight, gummy stem blight, late blight, scab, rust and smut.</p> <p>Many ornamental diseases including anthracnose, black spot, Botrytis, cedar-apple rust, downy mildew, fungal leaf spots and other rusts.</p> <p>A few brands are labeled for common fungal lawn diseases.</p>	<p>Broad spectrum protectant fungicide. This is a contact fungicide.</p> <p>When applied to plants not on the label, the product should be tested on a small area of the plant or small area of the planting first.</p> <p>Most small container products are not labeled for use on home fruit trees. Treated ornamentals should not be used for food purposes.</p> <p>Be sure to observe harvest intervals on label when applied to vegetables.</p>
<p><i>maneb</i></p> <p>Hi-Yield Maneb Lawn and Garden Fungicide</p>	<p>Diseases of shrubs, flowers, and turfgrass in the home landscape; various diseases of the following vegetables: beans, cucumbers, peppers, tomatoes and watermelons.</p>	<p>General protectant fungicide. This is a contact fungicide.</p>
<p><i>myclobutanil</i></p>	<p>Good for powdery mildew, black spot of rose, fungal leaf spots, rusts, anthracnose and other diseases of flowers and ornamental shrubs and trees.</p> <p>Controls brown patch, dollar spot, melting out, rust, large patch, fusarium blight and anthracnose on lawns.</p> <p>Also controls powdery mildew, scab and rust on apples; brown rot and other diseases on stone fruits; and anthracnose, black rot and powdery mildew on grapes.</p>	<p>Systemic fungicide.</p> <p>Provides better powdery mildew control than most other fungicides.</p> <p>Overdosage to ornamentals can result in foliar greening, shortened internodes and/or thickened leaves.</p> <p>For use on turf, proper identification of the causal disease organism is key. Contact local county agents for more information.</p> <p>Not labeled for vegetable crops.</p> <p>Avoid exclusive use of this product for resistance management.</p>

HOME FUNGICIDE GUIDE

ACTIVE INGREDIENT BRAND NAME	DISEASES CONTROLLED	COMMENTS
PCNB	<p>Turf, ornamental and vegetable diseases caused by basidiomycetes, including brown patch, dollar spot, southern blight (white mold), <i>Helminthosporium</i> leaf spot and melting out, damping off (<i>Rhizoctonia</i> spp. only), <i>Sclerotinia</i>, azalea (<i>Ovulinia</i>) and camellia flower blight, <i>Rhizoctonia</i> root and crown diseases.</p> <p>Specific vegetable diseases on label include <i>Rhizoctonia</i> root and stem rot of beans; Southern blight of peanuts, tomatoes and peppers; club root (<i>Plasmodiophora</i>) of broccoli, Brussels sprouts, cabbage and cauliflower; and scab and <i>Rhizoctonia</i> of potatoes.</p>	<p>Protectant preventative fungicide, specific for basidiomycetous fungi. Usually formulated as wettable powder or granules.</p> <p>Should be lightly watered in after applying to turf.</p> <p>For ornamentals, drench or incorporate the product thoroughly into the soil for best results.</p> <p>Do not apply to <i>Philodendron</i> or <i>Pilea</i>.</p> <p>For vegetables, application must be at planting or transplanting either by soil drench, incorporation or in furrow.</p>
<i>propiconazole</i>	Turf, ornamental, flower, shrub care against powdery mildew, dollar spot, anthracnose, rust, scab, tip blight, brown spot, etc.	<p>A water-based systemic fungicide that prevents major diseases on roses, flowers, lawns, trees and shrubs.</p> <p>Do not apply this product to African violets, Begonia, Boston ferns or Geraniums.</p>
<i>phosphorous acid</i> Monterey AGRI-FOS Helena ProPhyt	Certain <i>Phytophthora</i> , downy mildew and <i>Pythium</i> diseases in ornamentals and turf; root disease in fruit trees (apples, avocados, citrus, mangos pear, nut trees, stone fruits); downy mildew of grape; downy mildew and <i>Phytophthora</i> in vegetables.	Systemic fungicides, should be tested on a limited number of plants first to check for phytotoxicity. Read label for full list of diseases and crops.
<i>streptomycin sulfate</i> Ferti-lome Fire Blight spray Bonide Fire Blight spray Agri-mycin 17	<p>Controls fire blight of apple and pear.</p> <p>Some brands also labeled for fire blight of pyracantha; bacterial wilt of chrysanthemum; bacterial stem rot of Dieffenbachia cuttings; bacterial leaf spot on philodendron; crown gall on roses; and bacterial spot on tomatoes and peppers.</p>	<p>Actually a bactericide/antibiotic compound. Has no fungicidal activity.</p> <p>When used for fire blight control of apples and pears, it must be applied during bloom prior to symptoms appearing to be effective. Sprays should begin at 20-30% bloom and continue every 3-4 days until petals fall.</p> <p>Do not apply when fruit is visible.</p> <p>Do not apply within 30 days of harvest for pears.</p> <p>Do not apply within 50 days of harvest for apples.</p>
<i>sulfur</i> Ferti-lome Dusting Sulfur Bonide Liquid Sulfur Bonide Sulfur Plant Fungicide Hi-Yield dusting wettable sulfur Safer Garden Fungicide, others	<p>Controls diseases of fruit including powdery mildew, cedar apple rust and scab of apples, brown rot and scab of peach, plum and nectarine, powdery mildew on brambles and strawberry.</p> <p>Also labeled for powdery mildew, leaf spots, rust and Botrytis on many vegetables and ornamentals (including black spot of rose).</p>	<p>Broad spectrum protectant fungicide. This is a contact fungicide.</p> <p>Formulated as a wettable powder or dust. Should not be used when the temperature is above 90 degrees or within four weeks of an oil spray as injury to the foliage may occur. Refer to individual product label for plants that may be treated. Do not use on apricots, cucumbers, d'Anjou pears, melons, spinach, squash or viburnum as sulfur causes injury and defoliation to these plants.</p> <p>May suppress mites.</p> <p>Residue may be a problem.</p>

HOME FUNGICIDE GUIDE

ACTIVE INGREDIENT BRAND NAME	DISEASES CONTROLLED	COMMENTS
<p><i>tebuconazole</i></p> <p>Bayer Advanced All-in-One Rose & Flower Care</p> <p>Bayer Advanced 3-in-1 Insect, Disease, & Mite Control</p> <p>Bayer Advanced Disease Control for Flowers, Roses and Shrubs</p>	<p>Controls black spot, powdery mildew, rust, and Southern blight on roses, flowers, azaleas, rhododendrons, camellias, and other landscape ornamental shrubs.</p>	<p>Systemic fungicide, insecticide, fertilizer-all-in-one.</p> <p>Protects against insects and disease for up to 6 weeks.</p> <p>No spraying, just mix and pour.</p>
<p><i>thiophanate methyl</i></p> <p>Cleary's 3336</p> <p>Ferti-lome Halt Systemic Rose and Flower Fungicide</p> <p>Scott's Lawn Fungus Control</p> <p>Green Light Systemic Fungicide</p>	<p>Anthracnose, dollar spot, Rhizoctonia (Brown Patch), Helminthosporium leaf spot (melting out) and Fusarium patch on lawns.</p> <p>Foliar diseases of ornamentals, including anthracnose, black spot of rose, Botrytis, fungal leaf spots, powdery mildew, Ovipositor blight and Phomopsis blight on juniper</p> <p>Soil/root diseases of flowering and bedding plants and woody ornamentals caused by Fusarium, Rhizoctonia, Sclerotinia and Thielaviopsis spp.</p> <p>Bulb diseases caused by Botrytis, Fusarium, Rhizoctonia, Sclerotinia, Fusarium and Penicillium spp.</p>	<p>Broad spectrum systemic fungicide. Usually available as wettable powder. Does not control <i>Pythium</i> or <i>Phytophthora</i> spp.</p> <p>A preliminary trial is suggested on a small scale when applying to a plant not listed on the label but for a listed disease problem. Wait 5-7 days before evaluating any potential injury.</p> <p>Not recommended for <i>Nephrolepis exalta</i>, <i>Plectranthus australis</i>, and <i>Hatiora gaertneri</i>.</p> <p>Repeated, exclusive use of thiophanate methyl may lead to buildup of resistant fungi and loss of control.</p>
<p><i>triforine</i></p> <p>Ortho Rose Pride</p> <p>Orthenex Insect & Disease Control</p> <p>Ortho Rose Pride Funginex</p>	<p>Black spot, powdery mildew and rust of roses; powdery mildew on azaleas, begonias, delphinium, alanchoe, plane tree, calendula, crepe myrtle, dahlia, euonymous, Jerusalem thorn, lilac, phlox, snapdragons, Photinia and zinnias; rust on aster, carnation and oxalis; petal blight on azaleas and rhododendron; and Entomosporium leaf spot on Photinia.</p>	<p>Locally systemic fungicide.</p> <p>Triforine has been voluntarily cancelled by manufacturer and may become increasingly difficult to find as existing product supply is used.</p>