

Home Landscape, Lawn, and Garden Fungicides

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In general, we do not recommend routine use of chemical fungicides in the landscape and in the home garden. There are many cultural practices including sanitation, eradication, exclusion, resistant varieties that are often effective. For valuable crops and plants, gardeners who choose to use fungicides have many choices for chemical disease control. Some of the brand names having fungicides for home garden use include Black Leaf, Dragon, Green Charm, Green Light, Hi-Yield, K-Gro, Ortho, Pro Care, Rigo's Best, Safer, Security, Spectracide, and others. One or more of these brands are available at most of the local garden shops, discount chain stores, farm and garden stores, and home improvement chain stores.

General Protectant Fungicides. Look for the following active ingredients for broad-spectrum fungicides that are best used before disease begins.

- **Captan** - combination fungicide-insecticide sprays often contain captan (6.8 - 14%) combined with one or more insecticides such as malathion, carbaryl, or methoxychlor. It may be sold as Captan Garden Spray, Fruit Guard, Home Orchard Multipurpose Spray, Liquid Fruit Tree Spray, or Rose and Flower Dust, used mostly for diseases of fruit trees, but also used for grapes, strawberries, shrubs and flowers. Captan may also be sold as a single active ingredient (48.9%) in Garden Spray for a variety of garden plant diseases.
- **Chlorothalonil** (29.6%) - is found in Daconil 2787, Liquid Lawn Disease Control, and Multi-Purpose Fungicide under several brand names; it can be used for diseases of lawns, shrubs, trees, fruits, vegetables, and flowers.
- **Copper** - formulated as Bordeaux Mixture (12.5% copper) or other fixed copper products, this fungicide can be used on fruits, vegetables, shrubs, trees, and flowers and still satisfy the requirements for most organic growing uses.
- **Ferbam** (76%) - is found in Ferbam Wettable Fungicide for diseases of fruit trees, grapes, and ornamentals.
- **Lime-Sulfur** (26 - 29% calcium polysulfides) - is prepared as Dormant Disease Control or Lime Sulphur Spray; this fungicide is used for suppressing pathogens of some fruit trees, small fruits, roses, shrubs, and shade trees just before new spring growth appears. This material is suitable for most organic disease control practices.
- **Maneb** (80%) - is found in Maneb Lawn and Garden Fungicide intended for control of diseases of shrubs, flowers and turfgrass in the home landscape, and for vegetables such as beans, cucumbers, peppers, tomatoes, and watermelons.
- **Sulfur** (0.4% [ready-to-use formulation] - 90%) - is found in Garden Fungicide, and Wettable Sulfur. As a mixture with carbaryl and pyrethrin insecticides, sulfur (30%) can also be found in Multi-Purpose Rose and Floral Dust and Multi-Purpose Tomato Vegetable Dust. Sulfur can be used on fruit trees, small fruits, ornamentals, shrubs, flowers, and vegetables. It also satisfies organic disease control schemes.

Systemic Fungicides. These fungicides are often specific for certain diseases of mainly landscape plants. Although they are systemic, they also are best applied before the disease gets out of hand.

- **Benomyl** (25%) - as Benomyl Systemic Fungicide, it is used for fruits, flowers, vegetables, and lawns.
- **Myclobutanil** (1.55%) - as Immunox or Multipurpose Fungicide, this is the newest of the systemic fungicides to be available to homeowners. Immunox + (0.78% myclobutanil) is formulated in combination with permethrin insecticide. This fungicide is used on roses, lawns, flowers, and ornamental shrubs and trees.
- **Thiophanate-methyl** (50%) - available as Rose and Ornamental fungicide, it has similar activity to benomyl and is used for diseases of flowers, ornamentals, and shade trees.
- **Triforine** - sold as Rose Pride Funginex (6.5% triforine) or as Rose Pride Orthenex (3.25% triforine) when mixed with the insecticide acephate, this fungicide can be used for control of diseases of roses, certain fruit trees, ornamentals, and shrubs.

A bactericide. Some stores sell the one available effective bactericide in quantities homeowners can use.

- **Streptomycin sulfate** - Liquid Fruit Tree Spray is used for control of fire blight disease of apples and pears.

Fungicides packaged for homeowner use are generally safe to use, provided that gardeners take sensible precautions. These fungicides are usually formulated as low concentrations of active ingredient and are sold in small quantities, thus minimizing misuse of the chemicals. Follow product label instructions for correct fungicide use.

Organic Fungicide Treatments

- Organic treatments are exempt from testing needed for labeling as pesticides.
- Some organic fungicides may have a somewhat positive effect in some cases. Most will work where there is no disease pressure. Very few have actually been tested with adequate check treatments.
- Organic treatments that have been touted for their ability to control plant diseases follow:

<i>Organic treatment or remedy</i>	<i>Crop</i>	<i>Disease problem</i>
Apple Cider Vinegar	roses, all crops	leafspot, mildew, scab
Baking Soda Spray	roses, all crops	anthracnose, early blight, leaf spots, powdery mildew

Chamomile Tea	seedlings	damping-off
Chive Spray	a) apple, b) cucurbits	a) scab, b) downy mildew
Compost and Manure Tea	all crops	blight and pathogens
Corn and Garlic Spray	plants	diseases
Couch Grass Rhizome Tea	plants	mildew and fungus disease
Elder Leaf Spray	a) roses, b) other crops	a) mildew and black spot, b) mildew
Garlic Oil Spray	all crops	leaf spot and mildews
Horseradish Spray	a) apple, b) other crops	a) brown rot, b) fungal diseases
Horsetail Spray	a) peach, b) other plants, c) vegetables and roses, d) greenhouse crops	a) leaf curl, b) powdery fungi, c) mildew, d) damping-off
Hydrogen Peroxide Treatment	Outdoor plants	bacterial and fungal diseases
Milk Spray	a) aster, cucumber, squash, tomato, zinnia; b) cucumber, lettuce, tomato	a) mildews; b) mosaic virus diseases
Milk plus Antitranspirant	a) tomatoes, b) other crops	a) virus diseases, b) bacterial diseases
Seaweed Spray	seedlings	damping-off