

Gray Mold (*Botrytis* Blight)

Botrytis blight or "gray mold" is a widely distributed disease caused by the fungus *Botrytis* species. It can infect some vegetables, soft fruits, flowers, trees and shrubs, especially when conditions are cool and damp. The fungus usually occurs on plant debris or weak plant tissue, such as old flowers, leaves and overripe fruit. It can be very destructive, since it can spread quickly to rot healthy plant tissue.

Symptoms

Gray mold can cause different symptoms on different kinds of plants. Typically, as its name suggests, gray mold causes a gray, fuzzy coating on aging flower blossoms and soft, ripe fruits. A cloud of grayish-white spores may be noticed when infected leaves or flowers are picked.

Infection usually begins as brown to gray circular spots that later become fuzzy when the fungus produces gray masses of spores. Ripe strawberries left too long in the refrigerator often develop gray mold on the surface of the fruit. The disease can cause spotting and decay of flowers, leaves, fruits and berries. In some plants such as roses, it can cause slightly sunken areas called cankers on the stems. Corms and bulbs may rot when infected with gray mold.

Plants Commonly Affected

Gray mold affects a wide range of annual and perennial plants. Flowers with thick succulent petals, such as begonias, peonies and geraniums, are particularly susceptible. The disease also commonly affects African violet, amaryllis, calendula, camellia, bulbous iris, delphinium, dahlias, larkspur, snapdragon and hyacinth.

Many fruits, vegetables, and berries are also easily infected by gray mold, especially after being harvested and moved to cool storage areas. Commonly infected are apples, pears, peaches, plums, raspberries, strawberries, blackberries, blueberries and grapes. In the vegetable garden, look for gray mold on tomatoes and beans.

Prevention & Treatment

Cultural Controls: Remember, cool, damp weather favors the development and spread of this disease. Gray mold is not difficult to control using the following cultural methods.

Sanitation: Following good sanitation practices is one of the best ways to reduce this disease. Collect and discard faded flower blossoms and fallen petals. In the vegetable garden, remove infected plants immediately after harvest. Plant tissues that are stressed, aging or inactive are great hosts for gray mold to establish itself.

Keep Leaves Dry: Avoid overhead watering and syringing of plants, since this fungus is easily spread by splashing water and wind.

Provide Good Air Circulation: Do not overcrowd plants. Use a wide spacing between plants to promote drying. Gray mold thrives in shaded and crowded plantings and in areas of poor air circulation. Plant in sites with adequate sunlight.

Maintain Healthy Plants: Follow recommended cultural practices, especially proper fertilization, irrigation and pruning practices.

Chemical Controls: Chemical control of gray mold using fungicides is rarely needed on most plants. Fungicides can be applied on a protective basis before disease develops, especially during periods of high humidity and cool temperatures. Several fungicides are approved for homeowner use to control gray mold on specific vegetables and flowers. Always check the label of the chemical to determine what is recommended for specific plants.

Annual and perennial bedding plants, flowering and foliage plants, and seedlings in beds, flats or pots may be sprayed with fungicides containing thiophanate-methyl, copper fungicides or neem oil (clarified hydrophobic extract). However, neem oil is a rather weak fungicide. Caution is recommended, however, especially with the new bedding plants developed in the past 10 years. It is best to test the fungicide on a few plants first before treating all of them. Check the label on the chemical to determine what is recommended for specific plants.

Snap and green beans infected by gray mold can be sprayed with fungicides containing chlorothalonil. In problem areas, start spraying at early bloom and continue to apply once a week. Wait a minimum of

seven days between the last fungicide application and harvest.

Tomato plants infected by the gray mold fungus have light tan or gray spots that are covered with a brown mold on the upper leaf surface. Fungicides for the home garden that contain chlorothalonil can be used in problem areas.

Gray mold on grapes, blueberries, peaches, nectarines and plums can be controlled with sprays of captan. Brambles (blackberries, raspberries, etc.), strawberries and cherries can be sprayed with either captan or copper fungicides for gray mold control.

Always check fungicide product labels for the plants that can be sprayed and the rate of application. See Table 1 for a listing of brands and products for gray mold control.

Postharvest rots can be a problem for many fruits and vegetables in the home garden. Mix 1 tablespoon of fresh bleach (sodium hypochlorite 5.25%) in one gallon of water. Dip fruit into the bleach solution, rinse in clean water and dry fruit. Change the bleach solution frequently when it gets dirty.

Table 1. Fungicides to Control Gray Mold.

| Active Ingredient | Examples of Brands & Products |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Captan | Drexel Captan 50W Bonide Captan 50% WP Southern Ag Captan Fungicide (WP) Arysta Captan 50% Wettable Powder Hi Yield Captan 50W Fungicide |
| Chlorothalonil | Ortho MAX Garden Disease Control; 29.6% GardenTech Daconil Fungicide Concentrate; 29.6% Bonide Fungonil Concentrate; 29.6%; & RTU Monterey Fruit Tree, Vegetable & Ornamental Fungicide; 29.6% Hi-Yield Vegetable, Flower, Fruit & Ornamental Fungicide; 12.5% Southern Ag Liquid Ornamental & Vegetable Fungicide; 12.5% Tiger Brand Daconil; 12.5% Ferti-lome Broad Spectrum Landscape & Garden Fungicide; 12.5%; & RTU |

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| Copper Fungicides | Bonide Liquid Copper Concentrate (copper soap) Camelot Fungicide/ Bactericide Conc. (copper soap) Natural Guard Copper Soap Liquid Fungicide Conc.; & RTU Bonide Copper Fungicide (wetable copper sulfate) Southern Ag Liquid Copper Fungicide (copper ammonium complex) Hi-Yield Bordeaux Mix Fungicide (basic copper sulfate) Monterey Liqui-Cop Copper Fungicidal Garden Spray Conc. (copper ammonium complex) Bonide Liquid Copper Fungicide RTU (copper soap) |
| Neem Oil | Southern Ag Triple Action Neem Oil Concentrate Ferti-lome Rose, Flower & Vegetable Spray Conc. Garden Safe Neem Oil Extract Concentrate Garden Safe Fungicide 3 Conc.; & RTU Concern Garden Defense Multi-Purpose Spray Conc. Safer Brand 3-in-1 Garden Spray Concentrate Monterey 70% Neem Oil Fungicide/ Insecticide/ Miticide |
| Thiophanate Methyl | Southern Ag Thiomyl Systemic Fungicide 3336-WP Turf & Ornamental Fungicide |

Pesticides updated by Joey Williamson, HGIC Horticulture Extension Agent, Clemson University, 10/16. Revised by Joey Williamson, HGIC Horticulture Extension Agent, Clemson University, 02/15. Prepared by Nancy Doubrava, HGIC Information Specialist, and James H. Blake, Extension Plant Pathologist, Clemson University. New 05/99.

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