

Botrytis Blight of Roses

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Botrytis blight is a fungal disease found worldwide that infects a wide range of plants, creating devastating losses for ornamental plant and vegetable growers. On roses, the fungus *botrytis cinerea* causes the disease also known as gray mold. Botrytis thrives in cool, humid weather, especially during the spring and fall. In Texas summers, it rarely occurs on outdoor roses when conditions are hot and dry.

Symptoms

Symptoms of Botrytis blight include flower blight, bud rot, stem rot, and leaf blight. The fungus can invade and damage almost any plant part, but prefers tender tissues such as petals and buds. Weakened or injured tissues such as wounds and aging or dying plant tissue are also susceptible to infection.

Initial symptoms on soft plant tissues (leaves or petals) appear as water-soaked brown spots that develop into gray, fuzzy mold as the tissue ages and rots (Figs. 1 and 2). Heavily infected flower petals may become matted and stick together (Fig. 3). Such blighting of blossoms and buds is common in roses when favorable conditions persist. Stem lesions can develop and eventually girdle (encircle) the stem,



Figures 1 and 2. After initial browning and water-soaked symptoms, *B. cinerea* spores cause gray mold on the rotted tissue. Source: Texas Plant Disease Diagnostic Laboratory

causing wilting and dieback on the part of the plant above that point.

Cause

B. cinerea is most aggressive in high humidity and cool and cloudy (low light) conditions. Grape-like clusters produce many tiny spores that are dispersed primarily by air or water. These spores give a fuzzy, moldy appearance to infected plant tissue. This fungus can also produce sclerotia, which look like tiny black pellets. A sclerotium is a structure that allows the fungus to survive unfavorable conditions (such as over the winter). Botrytis can also survive as mycelia

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and spores on diseased plant parts or plant debris.

Management

Because Botrytis can produce many spores in a short time under favorable conditions, the best prevention is good sanitation.

- Make sure the growing area is free from diseased plant materials.
- Remove affected blooms, canes, or stems. Bag and destroy diseased plant parts to reduce inoculum. Do not place them in a compost or trash pile near roses.
- Irrigate carefully to reduce excessive wetness and humidity on the plants.
- Plant and space rose plants so they have good air circulation.
- Avoid unnecessary wounding of the plants when pruning. These wounds create entry sites for the fungus to infect the plant.



Figure 3. Heavy Botrytis infection causes rose petals to mat together and rot. Source: Texas Plant Disease Diagnostic Laboratory.

Fungicides are available to manage this disease. Natural products such as potassium bicarbonate, when used as a preventive measure, can provide some protection when disease is not prevalent. Some biological fungicides, such as those containing *Streptomyces lydicus* (Actinovate) or *Trichoderma harzianum* (PlantShield) can also provide some protection when used preventively. Conventional chemicals labeled for use against Botrytis include chlorothalonil (OrthoMax Garden Disease Control), fludioxanil* (Medallion), and fenhexamid* (Decree). Fungicidal product labels should note the target pest and host plant. Read the label to select the proper product and for correct rate and application information.

*These products are used by the commercial industry and may not be available to homeowners.

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