

Botrytis Blight of Peony

Dawshaia Herndon, Morgan Goodnight
and Peng Tian, Plant Diagnostic Clinic



The MU Plant Diagnostic Clinic received a peony sample that was diagnosed with Botrytis Blight. It is a very common disease that tends to appear in seasons of conditions with high moisture and warm temperatures. By establishing itself in dead plant matters and forming survival structures, this disease can survive harsh weather in the winter. However, this disease can be controlled and prevented through proper management techniques.

Name: *Botrytis paeoniae*



Figure 1. Peony leaf necrosis caused by Botrytis blight disease Photo Penn State Department of Plant Pathology & Environmental Microbiology Archives

Signs and Symptoms: This disease causes symptoms on peonies such as leaf spots, wilting shoots, blackened buds, stem discoloration as well as grey mold (Figure 1). It first starts on the new shoots, causing wilting and discoloration (brown/black). As the disease progresses, it

spreads on flower buds, causing the buds to swell and die without opening in severe cases. Meanwhile, it also causes leaf spots and stems discoloration as infected leaves and buds fall off and touch healthy leaves on the way down.

Life Cycle and Damage: This disease tends to thrive and spread quickly in wet settings. It is quite common to see botrytis in the beginning stages in spring when rain fall is abundant and young shoots begin to rise. The spores are easily spreadable by wind, animals, water, infected plant materials, and contaminated soil. Botrytis blight can infect buds and flowers at any stage of the fungus. As both saprophytic and parasitic pathogens, they can infect living plants and feed on the dead tissues. In late summer, fungal structures called sclerotia develop in dead plant tissues and fungus to protect the fungus during the winter. Botrytis can infect a large variety of plants. Some commonly seen hosts are annuals, perennials, fruits, vegetables, berries, and more. If left unmanaged, Botrytis blight will decrease crop production and cause death to the crop.

Disease Management:

1. **Removal of infected or dead plant materials and tissues.** This spore-forming fungus can survive in dead or decaying plant materials. Therefore, it is essential to destroy the infected materials and avoid using them for compost.
2. **Soil space and maintaining good air circulation.** Less compact soil will help with excessive water by allowing good air circulation to promote rapid drying.
3. **Avoid overwatering.** Wet environment favors the growth of this disease. It is crucial to have the least amount of excess water in the soil to prevent and limit disease dispersal.
4. **Chemical control.** Fungicides are not the first option to treat botrytis blight. However, it can be provided as a protective basis before the disease emergence. The best time to apply fungicide is when the new shoots start to emerge from the ground.

References:

1. **Botrytis blight of peony: *Botrytis Paeoniae***, Cornell University
<http://plantclinic.cornell.edu/factsheets/botrytisblightpeony.pdf>
2. **Botrytis Blight of Peony**, Missouri Botanical Garden
<https://www.missouribotanicalgarden.org/gardens-gardening/your-garden/help-for-the-home-gardener/advice-tips-resources/pests-and-problems/diseases/fungal-spots/botrytis-blight-of-peony.aspx>
3. **Peony - botrytis - cooperative extension: Insect pests, ticks and plant diseases**, University of Maine Cooperative Extension. Cooperative Extension: Insect Pests, Ticks and Plant Diseases. <https://extension.umaine.edu/ipm/ipddl/plant-disease-images/peony-botrytis/>
4. **Peony (*Paeonia* spp.)-Botrytis blight**, OSU Extension Service - Extension and Experiment Station Communications. Pacific Northwest Pest Management Handbooks.

<https://pnwhandbooks.org/plantdisease/host-disease/peony-paeonia-spp-botrytis-blight>

5. **Peony Paeonia**, CT.gov. <https://portal.ct.gov/CAES/Plant-Pest-Handbook/pphP/Peony-Paeonia>
6. **Gray mold (Botrytis blight)**, Home & Garden Information Center, Clemson University, South Carolina. <https://hgic.clemson.edu/factsheet/gray-mold-botrytis-blight-2/>