



This bulletin from the Cooperative Extension Plant Health Clinic (Plant Disease Clinic) is an electronic update about diseases and other problems observed in our lab each month. Input from everybody interested in plants is welcome and appreciated.

Peony Red Spot

Perhaps the most common disease we find on peonies is Red Spot (Blotch), caused by *Cladosporium paeoniae*. This is an unsightly disease that does not significantly damage the plant, as it does not cause early leaf drop or stem dieback. Symptoms begin as small, circular, red to purple spots on the upper surface of young leaves. These spots become a burnished dark purple. The undersides of the leaves become a chestnut brown color. Later in the season, the lesions coalesce, becoming large, irregular purple blotches. Susceptibility to Red spot is quite variable, with many older cultivars being the most susceptible. It's important to clean up peony debris. In the fall, prune all spent top growth to ground level, and remove it from the garden. Begin spraying on a weekly schedule when new growth is just breaking the soil in the spring, continuing until the flowers begin to open. Fungicides containing mancozeb, maneb, thiophanate-methyl, or copper are effective.

Peony Red Spot-*Cladosporium paeoniae*



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Peony Red Spot-*Cladosporium paeoniae*



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Peony Phytophthora Blight

Peonies generally have few serious disease problems when planted in a sunny location in good garden soil with adequate drainage. They require at least six hours of direct sun, and prefer a pH of 6.5-7.0. When offered ideal conditions, peonies can live for decades, some documented to reach one hundred years. However, in locations with heavy, poorly drained soils, they are prone to Phytophthora blight caused by *Phytophthora cactorum*. Peonies are especially susceptible on such soils during unusually wet, cool springs. Symptoms begin as small water-soaked spots on emerging shoots, stems, petioles, buds, or leaves. The spots become dark brown to black, leathery elongated lesions. A wet rot occurs when crowns and roots are infected, causing the collapse and death of the entire plant. Once symptoms are noticed, chemical treatments are usually not effective. All parts of the infected plant, and the immediate soil should be removed from the planting. Peonies should not be replanted in that location until drainage issues are resolved and infested soil has been replaced.



Peony Phytophthora Blight- *Phytophthora cactorum*



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Peony Cercospora Leaf spot- *Cercospora paeoniae*



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Peony Cercospora leaf spot

Cercospora leaf spot, caused by *Cercospora paeoniae* is a disease usually seen mid to late season. Lesions on the leaf are roughly circular, tan to brown, with dark stromata (spore bearing structures) of the fungus appearing as black specks within the lesion. The lesions sometimes resemble a bull's-eye. Older lesions may crack and the centers fall out. Fungicides applied for control of Red spot will also control Cercospora leaf spot. All diseased plant parts should be removed and destroyed at the end of the growing season. Watering at ground level reduces splash inoculum.



Peony Botrytis blight

Botrytis blight can affect peonies any time of year. However, we receive the most complaints in the spring at bloom time because flowers can be completely ruined by the fungus. Symptoms on young shoots begin as water-soaked lesions. Shoots rot off at the ground when they are 5 to 8 inches tall. The rotted areas become covered with a grayish brown mass of spores and fungal hyphae. Wind and rain or irrigation splash carry the spores up into the canopy where they cause leaf blight and bud rot. Flower buds turn black or brown and fail to open. Occasionally, open flowers become infected and turn brown. Small, black overwintering structures (sclerotia) may be seen on decayed peony debris. Fungicides containing mancozeb, or thiophanate-methyl, or Captan, or chlorothalonil, should be applied as a soil drench early in the spring, and on newly emerging shoots at 10-14 day intervals. As with other peony diseases, good sanitation practices should be followed.

Peony Botrytis blight- *Botrytis paeoniae*



Michelle Grabowski, University of Minnesota Extension - Horticulture, Bugwood.org.jpg

Peony Botrytis blight- *Botrytis paeoniae*



Department of Plant Pathology Archive, North Carolina State University, Bugwood.org.jpg

St. Augustine

Gray leaf spot, caused by *Pyricularia grisea* (syn. *P. oryzae*), can be a destructive disease on grasses such as St. Augustine, perennial ryegrass, Italian ryegrass, and tall fescue. Symptoms begin as small brown lesions on the leaves and stems. These lesions grow rapidly and turn into elongated oval to oblong spots that are tan to gray with purple to brown borders. Lesions may coalesce to kill the leaves. In hot humid weather, the spots develop a grayish, felty mass of conidia (spores). Infected leaves have a twisted or fishhook appearance. Gray leaf spot is most severe in warm, humid weather between 82 to 90°F and on newly established plantings. High nitrogen rates increase the severity of the disease. Management practices for gray leaf spot include limiting drought stress, extended periods of leaf wetness, excess nitrogen, soil compaction, herbicide stress, and plant growth regulators. Avoid overseeding turf until cooler weather. If possible grow a variety of grass that has a high level of resistance to the disease. Preventative fungicides that can be used by commercial growers include Compass 50WG (trifloxystrobin), Banner MAXX (propiconazole), Fungo 50, Cleary's 3336F (thiophanate-methyl), Daconil Ultrex (chlorothalonil), or Bayleton 50WSP (triadimefon). Home growers can use products that are specific for leaf spot diseases on turf with active



ingredients that include trifloxystrobin, or propiconazole, or thiophanate-methyl, chlorothalonil, or triadimefon. Applications should be made at first sign of disease, then at 14 day intervals.

Gray Leaf spot on St. Augustine- *Pyricularia grisea*



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Corn pollination failure-abiotic



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Corn pollination failure-abiotic



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Corn

Failure to pollinate can be due to adverse conditions such as wind, storms, drought, and nutritional issues to name a few.