



Arkansas Plant Health Clinic Newsletter

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Bermuda

Spring Dead Spot, caused by *Ophiosphaerella* spp., typically occurs on Bermuda plantings three or more years old, and is the most important disease of Bermuda grass in North America. Infections begin in the fall with damaged areas becoming visible in the spring. Symptoms begin as circular, depressed areas prior to spring green-up. When the turf greens up, circular patches of dead, bleached grass are apparent. The dead spots may be from 6 inches to as large as 3 feet in diameter. After several years, the centers of active patches may contain weeds or live bermudagrass, with the patches taking the form of rings or serpentine arcs. The roots and stolons are severely rotted in these areas. Re-growth is extremely slow. Bermuda that re-colonizes the necrotic areas remains stunted due to toxins produced by the fungi. Adequate control of Spring Dead Spot is mainly through cultural practices. Recommendations are core aeration done in August or September, and practices that reduce soil compaction and improve drainage. Applications of ammonium sulfate and potassium have been found to be helpful when applied in summer. Apply at least 1.0 lbs. of Potassium (K₂O) per 1000 sq. ft. to turfgrass during June, July, or August. Some

experts recommend two fall applications three to four weeks apart. Maintain pH in the range of 5.5-6.5. Fungicide treatments are not effective unless coupled with good cultural practices. Heritage (azoxystrobin), ProPensity (propiconazole), Disarm (fluoxyastrobin), and Eagle (myclobutanil) may be used. Make applications about 30 days before dormancy in the fall when soil temperatures are between 60°F and 80°F. Follow label for specific instructions. Cultivars with good winter hardiness are less affected by Spring Dead Spot.

Bermuda Spring Dead Spot mycelial plaques on stolon- *Ophiosphaerella* spp.



Photo by Sherrie Smith, University of Arkansas
Cooperative Extension



Bermuda Spring Dead Spot- *Ophiosphaerella* spp.



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Holly

Winter Injury

Holly often carries discolored leaves this time of year. Ice and windburn can both cause purple discolorations on the leaves. So can nutritional deficiencies. Additionally, several fungi are parasitic or saprophytic on damaged leaves. When damage is caused by environmental factors, such as winter damage, new leaves will be normal. If new growth is also discolored, a soil test to eliminate pH and nutritional issues is necessary. Hollies, in general, prefer full sun to light shade and moist, well-drained soil with a pH of 5.0-6.0.

Holly Winter Injury-Abiotic



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Inkberry Leafminer

Frequently, the Plant Health Clinic receives samples of holly leaves with brown blotches that have been mistaken for disease. The Inkberry holly, *Ilex glabra*, is a popular hardy, evergreen species native to the eastern United States. It has narrow, glossy, spineless leaves and tiny black fruits. Inkberries have few problems when planted in moist but well-drained, organically rich soil in full sun. However, it is sometimes attacked by a species of tiny, leafmining fly. The Inkberry Holly Leafminer female, *Phytomyza glabricola*, typically lays eggs in the previous year's



leaves. The eggs hatch, and the first instar larva make a short linear mine. The second and third instar larvae make a blotch. They spend the winter inside the mine as a third instar larva or pupa. Adults emerge in early spring when the plant is putting on new foliage on which the adults feed. Extensive mining activity damages large portions of the leaves and can cause premature leaf drop, as well as being unsightly. There can be several generations a year. Control begins with good sanitation. Clean up all fallen leaves to prevent the larvae overwintering in them. For leaves still on the plant, small numbers of leafminers can be controlled by pressing a leaf between your fingers and crushing the larva. Foliar insecticides may be applied as adults are emerging in the spring, followed by two subsequent sprays 7-10 days apart. Insecticides containing acephate, or spinosad, or imidacloprid, or bifenthrin are among those that are effective. Homeowners may use Bayer Advanced Insect Control for Trees and Shrubs; or Merit; or Sevin. Follow the label.

Holly Inkberry Leafminer mine- *Phytomyza glabricola*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Holly Inkberry Leafminer- *Phytomyza glabricola*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Holly Inkberry Leafminer larva- *Phytomyza glabricola*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Holly Inkberry Leafminer pupa- *Phytomyza glabricola*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Strawberry

Phytophthora Crown Rot, caused by *Phytophthora cactorum*, can cause serious losses when environmental conditions are right for disease development. Phytophthora requires a warm period with prolonged soil wetness for infection. Fields with drainage problems are most susceptible. First symptoms are the youngest leaves turning blue green and suddenly wilting. Plants become chlorotic and stunted. The plant may collapse and die as the

entire crown becomes diseased. Typically, the petioles break at the crown when pulled. Dissection of the crown reveals extensive brown necrosis and disintegration. Sometimes a plant will only wilt on one side depending on the number of crowns affected. Plants with wounds are particularly susceptible. Control consists primarily of planting resistant cultivars, ensuring adequate drainage, and avoiding planting in low wet spots. Once wilting has occurred, plants will not recover. Ridomil Gold and Aliette are labeled for Phytophthora diseases in strawberries.

Strawberry Phytophthora Crown Rot-*Phytophthora cactorum*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension



Strawberry Phytophthora Crown Rot-*Phytophthora cactorum*



**Photo by Sherrie Smith, University of Arkansas
Cooperative Extension**

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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.

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