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Arkansas Plant Health Clinic Newsletter

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Turf

One of the most important diseases of turf is Large Patch, caused by the fungus *Rhizoctonia solani*. Zoysia, Bermuda, St. Augustine, and Centipede are all susceptible. Even though the actual damage occurred earlier in the year, we are seeing the visible signs of the disease now. Stolons and basal leaf sheaths develop water soaked black to reddish brown lesions. Irregular circular patches develop that may be from several feet to more than 25 feet in diameter. Sometimes a smoke-colored or orange halo may be observed early in the morning at the margins of the patch. Diseased shoots are easily detached from their points of attachment. Roots are discolored but not rotted. In the most badly affected turf, entire lawns may be blighted. Symptoms on Bermuda usually occur earlier in the spring than on Zoysia. Symptoms in Zoysia occur two to eight weeks after green up, or in the autumn. Sometimes symptoms slowly disappear during the growing season as surviving tillers start filling in the killed spots. Night irrigation, shade, and excessive amounts of nitrogen increase both severity and incidence of patch diseases. Complete fertilizers with time-release nitrogen should be used instead of quick release nitrogen. Apply 0.5 pound of

nitrogen per thousand square feet approximately three weeks after the grass turns green in late May. No more than two pounds of nitrogen total should be applied per growing season to Zoysia. A soil test is useful to see where fertility levels are. Good drainage is essential for a healthy lawn. The turf should be de-thatched if thatch accumulates to more than 0.5" thick. De-thatching should be done while grass is actively growing. Fungicides may be applied once in the spring between March 15 and April 15, and again in the fall between September 20 and October 10. Heritage, Prostar, Eagle, Instrata, and Bayleton are labeled for Large Patch. Soil test for pH and nutrients. Avoid night watering. Homeowners may use Spectracide Immunox Plus Insect Control for Lawns, or Scotts Lawn Fungus Control, or Bonide Infuse Systemic Disease Control for lawn and Landscape.

Zoysia Large patch-*Rhizoctonia solani*



Photo by Michelle Mobley, University of Arkansas Cooperative Extension

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Bermuda Large patch-*Rhizoctonia solani*



Photo by Mark Brown, formerly University of Arkansas Cooperative Extension

Pumpkin

The unusually cool, moist weather conditions have been favorable for the development of Downy Mildew of cucurbits, caused by *Pseudoperonospora cubensis*. This is a devastating fungal disease of cucurbits including cucumber, squash, pumpkin, and watermelon. On all hosts, upper leaf symptoms begin as chlorotic flecks or spots on the surface of the leaves. Gray, brown to purplish-black downy sporulation occurs on the corresponding spots on the underside of the leaves. Downy mildew can progress extremely rapidly within a field, causing the leaves to turn brown, necrotic, and curl upwards. Older leaves are typically infected first. As the disease progresses, they become burned looking, shrivel, and die. Although fruit and blooms are occasionally infected, the leaf loss results in reduced yields.

Misshapen fruit and damaged fruit from sunburn occur as the leaves die and the fruit lose their protective shade. It is important to begin control measures as soon as Downy Mildew is confirmed in your field. Homeowners may use Bonide Mancozeb Flowable w/Zinc in rotation with a vegetable fungicide containing chlorothalonil. The use of resistant cultivars helps delay infection. Commercial growers may use Cabrio or Quadris in rotation with Maneb or Bravo Ultrex or Bravo WeatherStik.

Pumpkin Downy Mildew-*Pseudoperonospora cubensis*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension



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Squash Downy Mildew- *Pseudoperonospora cubensis*



Photo by Sherrie Smith, University of Arkansas
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Privet

Wax-leaf privet (*Ligustrum japonicum*) is an easy to grow shrub in most of Arkansas. Wax-leaf privet does very well in full sun or partial shade, and can grow in dry, medium, or average soil types. One thing it resents is soggy soil. The most common disease we see is a fungal leaf spot caused by *Cercospora* and *Pseudocercospora* species. *Cercospora adusta*, *C. ligustricola*, *C. lilacis*, and *Pseudocercospora ligustri* have been identified on Wax-leaf privet. Symptoms begin as small circular yellow spots that turn brown with purple margins. Premature leaf drop may occur. The disease is worse in dense plantings with poor air circulation. All fallen leaves should be removed from the planting. Homeowners may use Fertilome Broad Spectrum Lawn and Garden Fungicide, (chlorothalonil), or Hi-Yield

Vegetable, Flower, Fruit, and Ornamental Fungicide,(chlorothalonil) or Ortho Maxx Garden Disease Control, (chlorothalonil), or Ortho Disease B Gon Garden Fungicide, (chlorothalonil), or Garden Tech Daconil Fungicide,(chlorothalonil), or Bonide Fung-onil Multipurpose Fungicide, (chlorothalonil), or Spectracide Immunox Plus, (myclobutanil & permethrin), or Bonide Rose Rx Systemic Drench, (tebuconazole), or Bio Advanced Garden-Disease Control for Roses, Flowers, Shrubs, (tebuconazole), or Bio Advanced Garden-All-in-One

Fungicide/Insecticide/Fertilizer, (tebuconazole & imidacloprid), or Fertilome 2-N-1 Systemic Fungicide,(tebuconazole & imidacloprid),or Bonide Infuse Systemic for Turf and Ornamentals, (thiophanate-methyl), or Ortho Rose and Flower Insect and Disease Control, (triticonazole & acetamiprid). Commercial applicators may use Heritage or several products containing chlorothalonil.

Privet *Cercospora* Leaf Spot- *Cercospora* sp.



Photo by Sherrie Smith, University of Arkansas
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Privet Cercospora Leaf Spot- *Cercospora* sp.



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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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