



Arkansas Plant Health Clinic Newsletter

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Wax begonia

Pythium species attack many hosts, including field crops, bedding plants, and perennials. Above ground symptoms are yellowing, stunting, and wilting. Root symptoms are blackening and rotting. When you attempt to wash the root ball under a stream of water, it will dissolve in your hand. The two begonias pictured below are from the same lot and are the same age. Note the lack of roots on the stunted plant. Wet, soggy soils are conducive for disease development. Avoid overwatering beds. It's better to water deeply twice a week, than to keep the soil saturated by watering every day. Good drainage is essential. Subdue Maxx and Monterey Alette are labeled for pythium in ornamentals. Chemical treatment is not cost effective for just a few plants and will be ineffective in any case if soil conditions remain too wet. It is a difficult disease to treat. Plants with no roots will not recover.

Begonia Pythium Root Rot- *Pythium* spp.



Photo by Sherrie Smith, University of Arkansas
Cooperative Extension

Daylily

A common disease of daylilies is daylily leaf streak, a fungal disease caused by *Collecephalus hemerocallidis*, formerly *Aureobasidium microstictum*. Symptoms start as yellowing along leaf mid-veins. The chlorosis usually starts at the tip and moves down the leaf. Reddish brown spots develop in the chlorotic areas. These spots look superficially like rust, but there are no pustules. The infected leaves end up with yellow and brown streaks and specks on the affected leaves. In susceptible cultivars, death of the infected leaves may result. The disease develops most rapidly during warm wet conditions. Overhead irrigation should be avoided as this splashes the spores to new foliage. Avoid working with the plants while



they are wet and improve air circulation. Badly damaged foliage should be removed to reduce inoculum. Compass is an effective fungicide, as is Thiophanate-methyl.

Daylily Leaf Streak- *Collecephalus hemerocallidis*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Daylily Leaf Streak- *Collecephalus hemerocallidis*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Apple

Apple scab, caused by *Venturia inaequalis*, is the most economically important disease of apples in the United States. Severe crop losses may occur in areas with wet, cool springs. Although scab lesions may occur on fruit, leaves, blossoms, petioles, and peduncles, the most obvious symptoms are on the leaves and fruit. Lesions are often found first on lower leaves, and as leaves unfurl both sides may become infected. The spots are velvety brown to olive green with feathery



edges. As the lesions age and become hardened, leaf malformation may occur. Leaves that become completely covered with lesions yellow, shrivel, and fall from the tree prematurely. Infected fruit gets the same lesions and can become deformed and cracked. The fruit lesions eventually become dark brown to black circular rough spots. Applications of Fruit tree sprays every 7-10 days should be made from the tight cluster stage until terminal shoot growth ends in midsummer. All fallen leaves and fruit should be cleaned up. Dormant pruning of infected terminals aids in removing primary inoculum but is time consuming and can affect yield.

Apple Scab o Apple Leaves- *Venturia inaequalis*



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

Apple Scab o Apple Leaves- *Venturia inaequalis*



**Photo by Sherrie Smith, University of Arkansas
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Cucumber

Scab caused by *Cladosporium cucumerinum* affects most cucurbit crops. Losses in susceptible cultivars can exceed 50%. Symptoms on leaves begin as pale green water-soaked lesions that are irregularly shaped. The lesions enlarge as they age and turn gray to brown in color. The center of the lesion eventually breaks out leaving a shot hole appearance on the leaves. The newest leaves are sometimes deformed and twisted by the



numerous lesions. Lesions on petioles are more elliptical, but otherwise look like leaf lesions. Fruit lesions begin as minute greasy looking sunken specks. These enlarge, becoming circular to oval and gray colored. Sometimes the fruit lesions ooze sticky exudates. Fungicides are helpful if applied prior to fruit infection. Quadris, Cabrio, Bravo Weathstik, Bravo Ultrix, Equus, and Mancozeb, and are labeled for scab. Practice crop rotation so that 2 or more years pass between susceptible cucurbit crops. Avoid using overhead irrigation as this makes for more favorable conditions for disease. There are resistant cultivars available.

Cucumber Scab- *Cladosporium cucumerinum*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Bermuda and Zoysia

Brown patches in Bermuda or Zoysia grass occur usually in the spring as grass is breaking dormancy, or in the autumn as fall approaches. Irregular circular patches may be several feet or more in diameter. Sometimes a smoke-colored halo may be observed early in the morning at the margins of the patch. Water soaked black to reddish brown lesions usually can be found on stolons and basal leaf sheaths. Affected shoots may be pulled easily from their points of attachment. In Zoysia, the patches occur a little later in the spring, two to eight weeks after green up, or in the autumn. Roots are discolored but not rotted. Patches can enlarge to more than 25 feet in diameter. Orange rings or patches up to 6 feet in diameter may appear. Sometimes symptoms slowly disappear during the growing season as surviving tillers start filling in the killed spots. Night irrigation and too much nitrogen increase both severity and incidence of patch diseases. Complete fertilizers with time release nitrogen should be used instead of quick release nitrogen. 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 inch 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, and Bayleton are labeled for Large Patch. Spectracide Immunox and Green Light Fung-Away Systemic fungicide are available for homeowners.



Large Patch-*Rhizoctonia solani*



Photo by Ken Combs, University of Arkansas Cooperative Extension

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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