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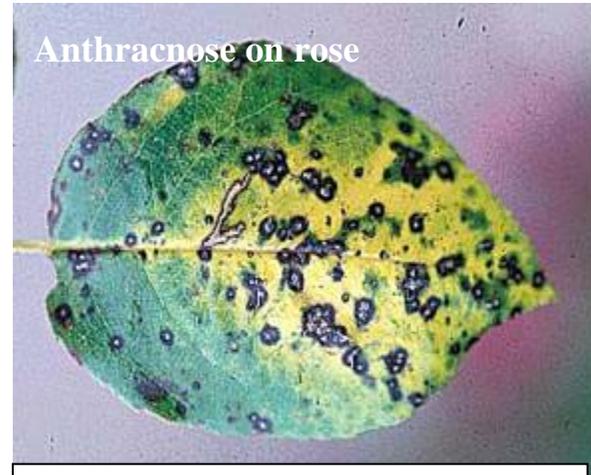
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This bulletin from the Cooperative Extension Plant Health Clinic (Plant Disease Clinic) is an electronic update about diseases and other problems observed in our lab each month. Input from everybody interested in plants is welcome and appreciated.

Roses

We have received several samples of roses with chemical burn on leaves resulting from applications of lime sulfur on plants that had already broken dormancy. Lime sulfur is useful in controlling fungal pathogens during the dormant season, but must be applied before the tender new foliage appears. We are also seeing an early season disease of rose called Anthracnose leaf spot. Symptoms are leaf spots up to 0.5 centimeters in diameter, sometimes running together, circular with dark red margins. Newly formed spots are red or purple. Older spots have white centers with a dark-red margin. A shot-hole effect may occur (the spot itself drops out of the leaf leaving a circular hole). Defoliation usually only occurs if the disease is severe. This disease is often mistaken for black spot of rose which causes severe defoliation in susceptible varieties and usually appears later in the season. Fuzzy edged rounded blackish or purplish spots on the rose leaf characterize this disease. The spots are about 1/4-1/2 inch across. On the canes it appears as raised dark reddish or black blotches. Leaves turn yellow and drop to the ground. The bush can quickly become completely defoliated. Whenever black spot is sighted it is very important to immediately remove and destroy any infected leaves, including those on the ground and remove them from the area. Winter pruning should include removing canes with red lesions as well as old leaves to reduce over-wintering fungus. Protective fungicides should be applied as soon as roses start to leaf out in the spring and every 7-10 days throughout the spring and summer. Susceptibility to black spot was introduced into modern roses via early China tea roses, the first yellow roses used in European and U.S. rose breeding. As a result, many modern yellow roses are very susceptible. Check with your local nursery for resistant varieties. Pruning is a very useful tool to control foliar diseases. Repeat-blooming roses should have already been pruned, but growers need to wait to prune once-blooming old ramblers until immediately after flowering is over. Canes that bore blooms this year should be pruned to the ground and new canes growing this summer should be trained and

tied in place for next year. Many old ramblers are particularly prone to powdery mildew. Rose sprays listed for black spot will suppress powdery mildew outbreaks as well.



Anthracnose on rose

<http://members.tripod.com/sactorose/irosepests.html#>



Black spot of rose

<http://members.tripod.com/sactorose/diseases/21fungi/21blackspot2.jpg>

Turf

St. Augustine grass has been coming into the Plant Health Clinic with several problems. Fusarium patch can



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damage nearly all grass species, and is most severe when heavily thatched turf grows slowly during periods of prolonged cool, wet weather. Circular patches may develop from 2-10 inches in diameter, rapidly changing color from orange-brown to dark brown to light gray. Red lesions may be observed on stems. Ring-like patches may occur on low-cut turf with the outer perimeter of the patch having a water-soaked greenish black margin. The disease becomes inactive as the grass dries during warm sunny weather. Management consists of avoiding heavy applications of nitrogen fertilizer in late autumn, controlling thatch build up, and improving drainage where necessary.

The clinic also received St. Augustine samples with *Pythium* root rot. Symptoms include small, bleached patches in the turf that may progress to large dead areas. Affected roots of plants were rotted with blackened areas on crowns, roots and stolons. *Pythium* diseases are almost always associated with wet turf and poor drainage. Improving drainage is key to controlling this disease. Turf should be watered before 6 AM so it has a chance to dry early in the day, and should not be mowed while wet as this can spread the disease. Thatch buildup should be controlled and over fertilization avoided.

The clinic received a picture this week of fairy ring in a lawn. Circular or arc shaped rings of darker green or faster growing grass may appear in the spring and early summer. These rings are usually 3 – 20 ft across. Basidiomycete fungi in the order Agaricales (certain mushroom fungi) are the cause of fairy rings. When environmental conditions are favorable, mushrooms may be produced in the outer zone of lush grass. There are three types of fairy rings, but control measures are the same for all three types. Control includes soil wetting, fungicide drenches, soil mixing, and replacement of infested soil. Mushrooms may be pulled or raked up and discarded. In many instances control measures are too expensive or inconvenient to the homeowner. In these cases promoting a healthy green lawn through irrigation and proper fertilization may mask the problem.



Fairy ring

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Fairy ring mushrooms

http://www.lawnfox.com/diseases/fairy_ring.htm



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Fusarium patch

<http://www.uoguelph.ca/~thsiang/turf/fuspat2.jpg>

Pythium root rot



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twigs may be pruned out and discarded. (picture of damaged twigs in a healthy branch here?)



Cicada egg

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Cicada twig damage

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Arborvitae

We received arborvitae samples last week with tip and twig dieback. The twigs had numerous lesions resembling canker disease, but under closer examination periodical cicada eggs were observed. The female cicada uses her bladelike ovipositor to insert rows of eggs into twigs. This produces a splintering type wound. Nymphs emerge from these eggs 6-10 weeks later, drop to the ground, and begin feeding on roots. They remain underground for 13-17 years, depending on species, before emerging and molting into the flying adult stage. Chemical control is not generally recommended, as damage is usually minor. Damaged

Camellias

Cottony cushion scale can be a problem on camellias this time of year. Heavy infestations produce chlorotic spots on the upper surface of the leaf. The scale insects will be found on the underside of the leaf. Insecticidal soap may be used to control scale as well as fine horticultural oil, and malathion. Check MP144 for recommendations.



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Chlorosis on upper leaf surface of camellia caused by scale



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Scale on underside of camellia leaf



Leaf Rust of Wheat Increasing, but too late

We have had a number of reports and samples of leaf rust of wheat. This fast-moving disease appears to be on the increase, although most wheat fields in the state have probably outrun any major yield loss risk. Because of the unpredictability of this disease, and Arkansas spring weather, it is important to plant wheat varieties that are resistant to leaf and stripe rust. Fungicides are available to control the disease, if needed, and can be found in the latest MP 154 publication through the county cooperative extension service office.

While on the subject of rust diseases, THERE ARE MANY in Arkansas. While much of the publicity in the

last year has been about Asian soybean rust, many other rusts are yearly problems on Arkansas plants. A rust that is showing up now is orange rust of blackberry.

Orange rust on blackberry



Orange rust of wild blackberry – S.R. Vann, UA Division of Ag

This rust disease is easily observed on wild blackberries along roadsides and pastures during the spring. This disease is sometimes a problem in commercial blackberries but most times is more of a curiosity than a serious problem.

Another rust that generates questions this time of year is cedar-apple rust. The over-wintering stage occurs on cedar trees as a gall that oozes bright orange, jelly-like tentacles (telial horns) during or right after wet weather in the spring. (photos)

Cedar apple rust on cedar tree



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Cedar apple rust on cedar

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Wheat leaf rust

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Special airborne spores form on these horns, and blow to nearby apple trees, where they can infect leaves and fruit – causing unsightly spots (photo). The fungus spends the summer on apples, and then in the fall produces spores that again infect cedar twigs – completing the life cycle for this complex fungus. Cedar apple rust can be controlled with preventative fungicide sprays before noticeable infection of leaves has occurred. Refer to the MP 154 or contact the local county extension office for more information.



Cedar apple rust on apple leaf