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Arkansas Plant Health Clinic Newsletter

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Cedar

Cedar-quince rust, caused by *Gymnosporangium clavipes*, has a life cycle like Cedar-apple rust. In the spring perennial, spindle shaped swellings on cedar produce masses of gelatinous orange, brown teliospores. The teliospores produce basidiospores which are carried to members of the rose family, such as quince, pear, apple, crabapple, and hawthorn. The fungus stops producing the basidiospores about 30 days after the apples stop blooming. Galls on both cedar and the alternate host can cause stems to die if they are completely encircled. Unlike Cedar-apple rust, cedar-quince rust is more likely to attack the fruit and stems than the leaves. Aeciospores develop in the fruit and stem lesions and are blown to cedars where the cycle begins again. Each year the perennial rust galls become larger and more noticeable. Fruit from the alternate host infected with Quince rust are covered with protruding off-white aecia of the fungus. The fruit eventually dry out and drop from the plant. Old galls are dark brown to black in color. Prune out any galls found on alternate hosts junipers and cedars. During the winter, prune out all quince galls remaining on

branches, and twigs of apples, crabapples, quince, hawthorn, and pears. Preventive fungicide applications may be required in locations where hawthorn and quince rusts are problems. Fungicide timing is like that for cedar-apple rust. Make the first application to valuable orchard and landscape plants when the orange telial galls on junipers become noticeable, (usually at flower bloom on rosaceous species), and make additional applications at regular intervals to protect newly developing growth. Applications of a triazole fungicide such as propiconazole (Banner Maxx), myclobutanil (Immunox), or triadimefon (Bayleton, Strike, Green Light Fung-Away, Monterey Fungi-Fighter) at three-week intervals beginning shortly after bloom is effective in suppressing Quince rust.

Cedar Quince Rust on Hawthorn-*Gymnosporangium clavipes*



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Cedar Quince Rust- *Gymnosporangium clavipes*



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Azalea

Several fungi cause leaf diseases on Azalea. Infections by *Cercospora handelii* usually begin in the spring although symptoms may not appear until fall or in the following spring on one-year old leaves. At least two months pass between infection and the appearance of the lesions. Symptoms are brown circular to irregular spots on the lower leaves. Centers of the spots become gray with age. Tiny black fruiting bodies may be seen in the center of the spots with a hand lens. Although severe infections can cause leaf drop late in the season, fungicides are usually not necessary. Rake and destroy fallen leaves. Avoid overhead irrigation. If chemical control is desired, apply thiophanate methyl, chlorothalonil,

myclobutanil, or mancozeb to protect leaves before infection in the spring.

Azalea Leaf Spot-*Cercospora handelii*



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Turf

Early stages of the disease known as Yellow Tuft, (Downy mildew), are slightly stunted



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growth and thickened or broadened leaf blades. As the disease becomes more severe, small yellow spots or patches appear in the turf. Each yellow spot represents a single grass plant that is composed of a dense cluster of excessively tillered yellowed shoots with shortened roots. During cool, wet periods, a white, downy mycelia growth appears on the leaf surfaces. Proper water management is essential for control of Yellow Tuft, as this disease is caused by *Sclerophthora macrospora*, one of the water molds. Subdue Maxx is the fungicide of choice for chemical control. Avoid high rates of nitrogen.

Bermuda Yellow Tuft-*Sclerophthora macrospora*



Photo by Sherrie Smith University of Arkansas Cooperative Extension

Fescue Yellow Tuft-*Sclerophthora macrospora*



Photo by Sherrie Smith University of Arkansas Cooperative Extension

Ergot

Fungi belonging to the genus *Claviceps* attack grasses, replacing the seed ovary with a hard, fungal structure commonly known as an ergot. The ergot or sclerotium is an overwintering structure that holds the fruiting bodies that produce spores. It contains the toxic alkaloids that cause ergot poisoning. One of the first symptoms of ergot on host plants is the production of surgery sap (honeydew) from infected grain heads. In Dallisgrass the sclerotium is round, about 1/8 inch in diameter with a cream-colored center. It usually becomes gray-to-black as it ages. Ergots produced on other hosts can have an elongated, curved shape. Ergot is historically



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famous for the sometimes severe pathological and physical effects on humans and animals that ingest the fungi-infected grain. Some symptoms of ergot poisoning in humans are hallucinations, severe pain, convulsions, gangrenous limbs, and death. There are two generally recognized types of ergot poisoning in livestock. Ergot poisoning in cattle fed grain or hay infected with *Claviceps paspali* exhibit hyper excitability, belligerence, ataxia, or staggering, lying down, convulsions, and backward arching of the back. *Claviceps purpurea* causes gangrene of extremities in cattle. Control consists of several cultural practices that limit the amount of sclerotium and the accessibility of infected seed heads to livestock. Mowing the seed heads off before they can be consumed by livestock, deep tilling, burning infested fields, and crop rotation with non-hosts work to limit inoculum.

Dallisgrass Ergot-*Claviceps paspali*



Photo by Sherrie Smith University of Arkansas Cooperative Extension

Dallisgrass Ergots in grass seeds-*Claviceps paspali*



Photo by Rick Cartwright 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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