



Arkansas Plant Health Clinic Newsletter

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Azalea

Azaleas often look a little ragged this time of year. They may have freeze injury and older leaves that have spots. 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.

Azaleas by Keiddy Urrea

Las plantas de azaleas se ve un poco maltratadas en esta época del año, esto se puede deber a daño por las bajas temperaturas del invierno el cual se expresa en manchas color marrón en las hojas. Infecciones causadas

por el hongo *Cercospora handelii* normalmente empiezan en la primavera aunque en algunas ocasiones los síntomas se presentan hasta en el otoño o el en verano del siguiente año. Los síntomas aparecen aproximadamente dos meses después de que el hongo infecta la planta. Los primeros síntomas aparecen como manchas irregulares de color marrón con halo amarillo ubicadas en la parte inferior del follaje, a medida que pasa el tiempo en centro de las lesiones se torna blanco y diminutos puntos negros (estructuras reproductivas del hongo) se pueden observar con el uso de una lupa. Sin embargo infecciones severas causadas por el hongo *Cercospora handelii* pueden causar defoliación en el otoño, el uso de fungicidas no es necesario; pero si decide aplicar fungicidas, se recomienda aplicar fungicidas protectantes en la primavera como: thiophanate methyl, chlorothalonil, myclobutanil, or mancozeb. Se recomienda remover y destruir hojas caídas, así como evitar riego con aspersores.

Azalea *Cercospora* Leaf Spot- *Cercospora handelii*



Photo by Grant Beckwith, University of Arkansas
Cooperative Extension



Azalea Cercospora Leaf Spot- *Cercospora handelii*



Photo by Mitch Spanel Lawn Doctor of West Little Rock

Fire Blight

It's time to spray pears and apples for Fire blight if your variety is blooming. Bloom is the only effective time to spray for this serious bacterial disease. Fire blight, caused by *Erwinia amylovora*, attacks all members of the rose family, including pears, apples, crabapples, quince, cotoneaster, photinia, raspberries, blackberries, hawthorn, and roses, among others. Twig and branch cankers become active with warm, wet weather in the spring. The infected tissue begins to ooze bacterial slime that attracts insects. The bacterium is spread by pollinators such as bees that carry the bacteria from bloom to bloom and from tree to tree.

Bloom clusters wilt and die a few weeks after infection. Infection spreads down the twig and can infect a main branch. Twig and branch cankers begin as water-soaked areas, and then turn dark brown or black. The bark covering older cankers usually becomes sunken and cracked. The disease can kill blossoms, leaves, twigs, limbs, and occasionally, the entire tree. Infected petioles and young shoots form a typical shepherd's crook, brown-colored in apples, and black in pears. The dead foliage remains on the tree. Fire blight is among the most difficult of diseases to control. By far the most effective control is planting resistant cultivars. The most susceptible apples include York, Rome, Jonathan, Jonagold, Idared, Tydeman's Red, Gala, Fuji, Braeburn, Lodi and Liberty. Stayman and Golden Delicious cultivars are moderately resistant. Red Delicious, Winesap, Haralson, Liberty, Prima, Priscella, and Redfree apples are highly resistant. Susceptible pears are Bartlett, Bosc, D'Anjou and Clapp's Favorite, while Magness, Moonglow, Maxine and Seckel are highly resistant. Most Asian pears are moderately to highly susceptible with the exceptions of Seuri, Shinko and Singo pears. Susceptible pear trees should be sprayed at green tip, at 5% bloom and at 50% bloom with Mycoshield, or Firewall, or Fosphite, or a copper fungicide such as Kocide. Apples may be sprayed with Fosphite, or Firewall, or Agri-mycin seventeen. All dead tissue should be pruned out 10 – 12 inches below the damage. Cutting tools should be dipped between cuts in a 10% bleach solution, (nine cups water to one cup bleach) or



in 70% alcohol. Do not leave pruners in the solution or they will be ruined.

Pear Fire Blight-*Erwinia amylovora*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Apple Fire Blight-*Erwinia amylovora*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Photinia Fire Blight-*Erwinia amylovora*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Pyracantha Fire Blight-*Erwinia amylovora*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Raspberry Fire Blight-*Erwinia amylovora*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Blackberry Fire Blight-*Erwinia amylovora*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

Plums and cherries

With trees not yet leafed out, some homeowners are noticing black, knobby galls on the branches of their cherries or plums. The common name of the disease is Black Knot, caused by *Apiosporina morbosa* (*Dibotryon morbosum*). This is a common fungal disease of *Prunus* spp. Yield losses result from extensive dieback of girdled limbs and stunting of growth beyond the knots. Trees can be severely weakened, disfigured and, in extreme cases, killed because of infection. Prunes, plums, sweet cherries, and sour cherries are all hosts for Black Knot. Rarely do we receive a peach sample with Black Knot. Wild cherries and plums serve as continuous sources of inoculum. The first symptoms are small, light



Sherrie Smith
Keiddy Urrea

brown swellings usually located at the base of the leaf petiole or on the fruit spur. These appear during the summer and first year after infection. Young knots may have an olive-green color, but later become hard, brittle, and black in color. Older knots are coal-black in color and hard in texture. The knots often protrude more on one side of the affected branch. Control starts with pruning. Prune out and destroy all visible knots before new growth starts in the spring. The cuts should be made at least 6-8 inches below the lowest part of the knot. Cut out knots on large main branches and trunks with a knife or chisel, including an inch of healthy bark around the knot. Never purchase plants showing knots or abnormal swellings on the twigs and branches. All clippings should be burned, buried, or otherwise removed from the property. Mancozeb, Captan, Topsin M, or fungicides containing chlorothalonil are helpful in controlling Black Knot if the cultural controls are also practiced. Apply first spray in the spring just as green tissue begins to appear. Spray again just before and after bloom. Spray at 2-week intervals until new growth stops. Lime-sulfur sprayed during the dormant season is also helpful. Wild cherries and plums within 600 feet of the orchard should be removed, if possible, to prevent spores blowing into the orchard and causing new infections. Some Plum cultivars are resistant to Black knot. The cultivars Stanley, Damson, Bluefree, and Shropshire are considered highly susceptible; Fellenburg, Methley, Milton, Bradshaw, and Early Italian are moderately susceptible; Formosa, Shiro, and Santa Rose are slightly susceptible; and President is considered highly resistant. In

general, Japanese varieties are less susceptible than most American varieties.

Cherry Black Knot- *Apiosporina morbosa* (*Dibotryon morbosum*)



Photo by Sherrie Smith, University of Arkansas Cooperative Extension



Plum Black Knot- *Apiosporina morbosus* (*Dibotryon morbosum*)



Photo by Steve Kelley, 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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