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Arkansas Plant Health Clinic Newsletter

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Shrubs/trees

It has been a wet winter in many parts of Arkansas. Shrubs and trees planted last season on heavy soils with poor drainage are showing up at the lab with Phytophthora Root Rot, caused by several or more Phytophthora sp. Many species of plants including annuals, perennials, vegetables, field crops, and ornamentals are susceptible. Symptoms may begin as a general yellowing of the entire plant, followed by wilting and browning. Roots will be rotted with black to gray areas inside. A large plant that begins healthy may take several years to die while smaller plants may be killed within a few months. Plants that are only slightly affected may be saved if drainage is improved and excessive amounts of water are avoided. Chemical treatment by professionals may be attempted using fungicides designed to treat oomycetes. Aliette, Mural, Segway, Stature SC, Banrot, Fenstop, Hurricane, Adorn, Subdue Maxx, Segovis, Insignia, Compass O, Strike, and Micora are labeled for treatment of ornamentals. RootShield WP is an organic fungicide available online that homeowners may purchase. Keep in mind that nothing will work if the site remains consistently flooded, and that plants that seem mostly dead will not recovered

no matter what chemical is used. It may be wise to use resistant species of plants in areas where Phytophthora has been a problem. Chinese hollies, Winterberry, Yaupon, Burford Holly, River birch, Sweetshrub, Spicebush, Abelia, Dawn redwood, Bald cypress, Honey locust, Ginkgo, Currants, Gooseberry, Sweetgum, Magnolias, Blackgum, Roses, and Willows are considered resistant. Keep in mind that resistant does not mean immune. We had a rose test positive this morning for Phytophthora.

Arborvitae Phytophthora Root Rot-*Phytophthora* sp.



Photo by Matt Lane, University of Arkansas Cooperative Extension

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Maple Phytophthora Butt and Root Rot-*Phytophthora* sp.



Photo by Jessica Rice

Yew Phytophthora Root Rot-*Phytophthora* sp.



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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Aucuba Phytophthora Butt and Root Rot-*Phytophthora* sp.



Photo by Robin Bridges, University of Arkansas Cooperative Extension

Fire Blight

Ornamental pears and early cultivars of fruiting pears and apples are blooming. **Now** is the time to spray for control of Fire Blight. Cultivars of ornamental pears highly susceptible to Fire Blight, caused by the bacterium *Erwinia amylovora*, include Aristocrat, Autumn Blaze, Capital, Fauriei, and Redspire, with Bradford

being “moderately” resistant. Fire Blight attacks all members of the rose family, except for the stone fruits, including pears, apples, crabapples, quince, cotoneaster, pyracantha, photinia, raspberries, blackberries, hawthorn, spirea, and roses. 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. The most effective control is planting resistant cultivars. An ornamental flowering pear with excellent resistance is *Pyrus ussuriensis* ‘Prairie Gem’. Resistant apples are Red Delicious, Winesap, Haralson, Liberty, Prima, Priscella, and Redfree. 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. Susceptible fruiting 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 trees should be sprayed at green tip, at 5% bloom and at 50% bloom with Agri-strep, Agri-mycin or a copper fungicide such as Kocide. 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). Recommendations are slightly different for brambles, as there are no registered products specifically for Fire Blight. Rely on sanitation.

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Issue 2, March 6, 2018

Apple Fire Blight Rot-*Erwinia amylovora*



Photo by Sherrie Smith, 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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Pear Fire Blight Rot-*Erwinia amylovora*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

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