



## Arkansas Plant Health Clinic Newsletter

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### Apple and pear

White rot is a common fungal disease of pear and apple in many apple growing regions worldwide, including the United States. In the United States, it is most severe in the Southeastern part of the country. The disease causes leaf spots, defoliation, cankers, and fruit rot. Lesions begin as small, circular, slightly sunken, tan-- brown spots, sometimes with a red border. The halo may be purple on red skinned cultivars. As the lesions grow, the rot extends in a cylindrical manner towards the core. Small groups of scattered pycnidia may be observed on the surface of the lesion. The rotted fruits usually drop, but some may mummify on the tree. Control should begin with good sanitary practices. All dead limbs mummified and fallen fruit, and cankers should be removed from the orchard. All pruning's should likewise be removed. A preventative spray program should begin after petal fall and continue at 10–14-day intervals throughout the growing season. Captan, Flint, and Sovran are recommended.

### Apple White Rot-*Botryosphaeria dothidea*



Photo by Sherrie Smith, University of Arkansas  
Cooperative Extension

### Pear Stony pit

Stony pit is considered the most destructive viral disease of pears. This is because the virus causes fruit distortion that makes affected fruits unmarketable. The first symptoms begin as dark green areas on the fruit 10-20 days after petal fall. Cell growth within those spots is restricted, resulting in pitting and deformed fruits. The tissue at the bottom of the pits is hard and difficult to cut, whence the name stony pit. This hard tissue differentiates stony pit from similar fruit pitting caused by boron deficiency or stinkbug damage. Anyone in confusion when presented with pitted fruit should soil and tissue test for boron



deficiencies. There is no cure for viruses. The disease is thought to be graft propagated. Insects are not believed to be a factor.

### **Pear Stony Pit-Unidentified virus**



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

### **Soybean**

Weather conditions have been very favorable for *Cercospora* blight and Purple Seed Stain, caused by *Cercospora kikuchii*. The clinic has received samples from fields showing significant damage in susceptible cultivars. The first symptoms on leaves begin at the beginning of seed set. Upper leaves develop light purple areas which can deepen and cover the entire upper leaf surface, giving them a leathery, reddish purple-bronze color. Later, angular to irregular purplish lesions appear on the leaves. The spots coalesce to form large areas of dead tissue. Plants start to defoliate beginning at the top of the plant. Stem and petiole lesions are slightly sunken, reddish purple, and up to several millimeters long. The petioles remain attached to the plant after losing their leaves. Round purplish lesions that later become black

form on the pods of susceptible varieties. Seed discoloration varies from pink or pale purple to dark purple. The lesions on the seeds may be small flecks to blotches covering most of the seed. Heavily infected seed have poor germination and result in reduced stands. Quadris, Evito, Approach, Headline, Gem, Topsin, Acropolis, Lucento, Miravis, Topguard, Custodia, Helstar, Quilt Xcel, Affiance, Brixen, Fortix, Zolera, and Stratego among others are labeled for *Cercospora* in soybean. There are resistant cultivars available

### **Soybean Purple Seed Stain-*Cercospora kikuchii***



Photo by Sherrie Smith, University of Arkansas Cooperative Extension



## Soybean Purple Seed Stain Leaf symptoms- *Cercospora kikuchii*



Photo by APS Image Library, John Rupe University of Arkansas

## Elm

Urban trees such as sycamore, red maple, dogwood, American elm, several species of oak and agricultural crops such as peach, pear, coffee, and grapes can become infected and eventually die from a disease known as Bacterial leaf scorch (BLS). This disease is caused by a vascular clogging bacterium (*Xylella fastidiosa*) that multiplies rapidly within active plant xylem. Twig and branch death follow the scorch-like leaf symptoms, leading to plant decline and death. Many other plants such as numerous shrub species and grasses become infected with BLS, but do not show symptoms and do not die. The disease is more chronic than acute, meaning some trees will have scorch symptoms for years before dying. Leaves look normal early in the season with symptoms not beginning to be evident until midsummer. Necrosis begins along the leaf margin in an irregular pattern, and spreads toward the veins and petiole. The scorched leaf

edges or tissue between veins may be bordered by a yellow or reddish-brown color. Scorch symptoms will reappear in the same limbs from one year to another and eventually spread to other limbs. Infected trees display an overall decline in vigor, branch dieback, and premature death. Trunk injections with antibiotics have been shown to suppress symptoms. Treatments must be made annually in late May or early June.

## Elm Bacterial Leaf Scorch- *Xylella fastidiosa*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

## Blackberry

Septoria leaf spot is a common and destructive disease in blackberry growing regions of the southeastern United States and the Pacific Northwest. It can cause premature defoliation in late summer and fall, reducing plant vigor and increasing susceptibility to winter injury. The fungus, *Septoria rubi*, causes frog-eye type lesions on the leaves. The lesions are roughly



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circular, tan to white, with a purple margin. Small black fruiting bodies may be seen in the center of the lesions. These leaf spots are larger than anthracnose spots and are generally seen later in the season. In the South, a delayed dormant spray of lime sulfur followed by three sprays of Captan gives good control. Disease incidence is greatly reduced by following good cultural practices. Proper plant spacing, thinning to provide recommended cane density, and maintaining narrow rows, are all helpful in controlling leaf spot diseases. The sooner old fruiting canes are removed after harvest, the better.

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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### **Blackberry Septoria Leaf Spot- *Septoria rubi***



Photo by Sherrie Smith, University of Arkansas Cooperative Extension