



## Arkansas Plant Health Clinic Newsletter

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### Dianthus

Pinks, or perennial dianthus, require full sun and extremely well-drained soils. On heavy or water-logged soils, they develop root rot and rapidly decline. The plants shown here were diagnosed with Phytophthora Root and Crown Rot, caused by *Phytophthora* spp. There is no cure for wilted plants because their root system has already been destroyed by the pathogen. Plants that are still alive may be helped by allowing the soil to dry between watering and the application of fungicides designed to treat Phytophthora. Homeowners may use Aliette or Mancozeb. Commercial applicators may use Subdue Maxx, or Adorn, or Banrot, or Hurricane, or Segway, or Stature.

### Dianthus Root and Crown Rot- *Phytophthora* spp.



Photo by Jim Robbins, University of Arkansas  
Cooperative Extension

### Dianthus Root and Crown Rot- *Phytophthora* spp.



Photo by Jim Robbins, University of Arkansas  
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### English Ivy

#### Anthracnose

English ivy, *Hedera helix*, is a popular perennial evergreen vine grown extensively for its ability to thrive in dry shade once established. English ivy grows well in part to full shade and tolerates poor soils and air pollution. It grows from 6-8 inches high and forms a dense mat. When offered support such as a tree or wall it will ascend as high as 80 ft. Ivy doesn't climb by twining as do honeysuckles and clematis. It climbs by using root-like structures on the

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stems called holdfasts. It is a myth that ivy can kill large trees that it uses as a support. However, small trees and shrubs may be overwhelmed so they cannot photosynthesize properly. Brick and stucco walls may also be eventually damaged. Anthracnose, caused by *Colletotrichum trichellum*, is a common fungal disease of English Ivy. Leaf symptoms are circular to irregular, dry, brown to reddish brown or black spots with concentric rings. Stem lesions are elongated, black to brown spots that may girdle the stem. The lesions on stems and leaves develop small black fruiting bodies easily seen with a hand lens. The symptoms resemble those of bacterial spot, but the bacterial lesions lack the black fruiting bodies. Ivy Anthracnose can be devastating to stands of ivy under conditions favorable to the disease. Defoliation and shoot dieback are common. Good cultural practices are important in controlling Anthracnose. Dead leaves and stems should be removed frequently. Avoid overhead irrigation, especially late in the day. Ornamental fungicides labeled for ivy are mancozeb and copper compounds. Chlorothalonil is effective but has been reported to cause leaf distortion and spotting on some cultivars.

### **Ivy Anthracnose acervuli-** *Colletotrichum trichellum*

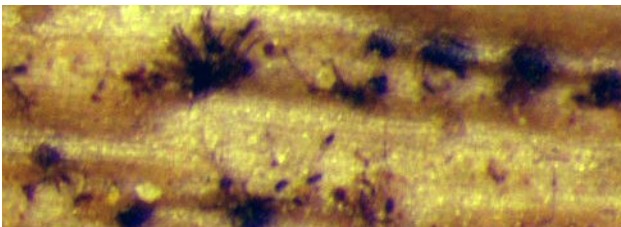


Photo by Sherrie Smith, University of Arkansas Cooperative Extension

### **English Ivy Anthracnose-** *Colletotrichum trichellum*



Photo by Sherrie Smith, University of Arkansas Cooperative Extension

### **Bacterial Leaf Spot**

Perhaps the most common disease problem of English ivy is Bacterial Leaf Spot, caused by *Xanthomonas hortorum* pv. *hederae*. Lesions appear on the lower surfaces of leaves as water-soaked spots that turn reddish brown to black colored, often with a bright yellow halo. Sometimes orange-red oozing from the lesions may be observed during prolonged moist conditions. The spots can expand to large lesions 2-10 mm (1/16-3/8 inch) in diameter. Older lesions will dry and crack during dry periods. Infected stems and petioles will get elongated, dark lesions. When a stem is girdled, wilting occurs. Bacterial infections are spread by overhead irrigation, rain splash, and contaminated tools. Kocide is the chemical





treatment of choice but must be used in conjunction with minimizing overhead irrigation and the use of resistant cultivars.

## **English Ivy Bacterial Spot-** *Xanthomonas hortorum* pv. *hederae*



Photo by Allen Bates, University of Arkansas Cooperative Extension

## **Tomato**

by Jason Pavel

Tomato Pith Necrosis, caused by the bacterium *Pseudomonas corrugata*, is widespread in some tomato growing regions. It primarily affects older plants, and symptoms usually do not show until fruit begin to develop. Early symptoms are wilting of young foliage, and chlorosis and wilting of older leaves. Leaves often curl up and turn brown on their margins. Dark-brown to black lesions develop on the surfaces of lower stems. Inside the affected stems, the pith tissue is darkly discolored and eventually becomes chambered and hollow. Adventitious roots may grow from these sections of symptomatic stems.

The symptoms may advance up the stems with eventual collapse and death of the plant. Pith Necrosis is more common with low night temperatures, high nitrogen levels, and high humidity. It is thought that the disease might be seed borne. Control recommendations include avoidance of excessively high nitrogen fertilizers and avoidance of overhead sprinkler irrigation. Workers should avoid working among the plants while foliage is wet. Crop rotation is perhaps the best tool; though do not rotate your tomatoes with alfalfa, since it is another host for the disease.

## **Tomato Pith Necrosis-** *Pseudomonas corrugata*



Photo by Jason Pavel, University of Arkansas Plant Pathology Graduate Student



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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