



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.

Strawberry

Although early in the growing season, The Plant Health Clinic received a strawberry sample with White Mold. White Mold, also known as Sclerotinia Rot, caused by the fungal pathogen, *Sclerotinia sclerotiorum*, has an enormous host range, with over 400 plant species susceptible. Susceptible plants include cabbage, beans, celery, lettuce, radish, rutabaga, turnip, rhubarb, peas, sunflowers, lentils, alfalfa, chickpeas, coriander, cucumber, lettuce, melon, squash, soybean, canola, sunflower, tomato, pepper, potato, and strawberry, among others. Symptoms include stunting, chlorosis, wilting, and death of the affected plant. Infection of strawberry fruit nearly always begins at the calyx end of the fruit. The dense, white cottony growth of the fungus rapidly involves the whole fruit. Black, flat sclerotia develop in the white cottony growth. The fruit quickly rots. There are no specific control measures for White mold in strawberries. The use of chemical fumigants in commercial fields, and the immediate removal of plant debris may help to reduce the incidence and spread of this disease. Homeowners should immediately remove affected plants, along with the soil around the plant.

Strawberry White Mold- *Sclerotinia sclerotiorum*



Photo courtesy of Tauyna Ernst

White Mold sclerotia- *Sclerotinia sclerotiorum*



Terry Kirkpatrick University of Arkansas Cooperative Extension

Blackberry

Downy Mildew of *Rubus* spp., caused by *Peronospora sparsa*, can cause severe losses when pedicels and fruit are infected. Boysenberry, blackberry-raspberry hybrids, and blackberries are all susceptible. Symptoms begin on the upper side of leaves as a yellow discoloration, which soon changes to reddish-purple. The lesions are angular and restricted by leaf veins. Spore masses are produced in corresponding tan to pink lesions on the undersides of the leaf. Infections may become systemic, resulting in severe distortion of newly unfolding leaves. As the infected leaves age, the lesions often develop bright yellow margins with the centers becoming dead and brown. Suckers are stunted, and terminal leaves may develop a reddish discoloration. Infected berries shrivel and die. Downy mildew is most prevalent during wet weather when temperatures are 18-22° C. Nursery stock is particularly vulnerable. Growers should take care to plant pathogen-free stock. Removal of suckers helps to limit inoculum. Fungicides should be applied in the spring to protect new foliage, flowers, and berries. Aliette 80WDG, Fosphite, and copper fungicides are effective.



Blackberry Downy Mildew-
Peronospora sparsa



Sherrie Smith University of Arkansas Cooperative Extension

Blackberry Downy Mildew
sporangiohores- *Peronospora sparsa*



Sandra Jensen, Cornell University, Bugwood

Blackberry Downy Mildew-
Peronospora sparsa



Sherrie Smith University of Arkansas Cooperative Extension

Collards

Collards (collard greens), *Brassica oleracea*, are grown for their large edible leaves. They are widely grown in the southern United States, and are a staple of southern cooking. Collards are low in calories, and high in vitamins such as vitamin K and vitamin A and C. They have cholesterol lowering ability, as well as being naturally anti-inflammatory. While not difficult to grow, we sometimes receive samples suffering from herbicide damage, with some growers resorting to herbicides to control winter weeds. Phenoxy type herbicides such as 2-4-d cause severe leaf curling, distortion, and stem curling or curving. Plants will also sometimes develop adventitious roots on the stems, which may be abnormally thickened. Where herbicides have not been directly applied to the crop area, manures from a pasture source that has been treated with phenoxy herbicides are often the source of the damage. Phenoxy herbicides have a long residual in soil and manures. Roundup, active ingredient glyphosate, is another common herbicide problem in ornamentals, brambles, and vegetables. Symptoms are stunting, yellowing, distorted growth, and witch's broom.



**Collard plant with phenoxy damage-
note the abnormally bent stem**



Sherrie Smith University of Arkansas Cooperative Extension

Normal collard stem



Home & Garden:Yard, Garden & Outdoor Living:Flowers, Trees & Plants:Vegetables & Fruits:Plants

**Collard plant with phenoxy damage-
note distorted, cupped leaves**



Sherrie Smith University of Arkansas Cooperative Extension

Request for help from Dr. Robbins:

Root knot nematode populations are needed for our Arkansas species study. I am a nematologist in the department of Plant Pathology in Fayetteville. My student and I are trying to amass populations of as many species of Root knot nematode (*Meloidogyne* sp.) as possible for species identification using molecular techniques. At present no root knot species in Arkansas have been identified using molecular technology. We are interested in receiving populations from home gardens, shrubs, flowers, trees and grasses. For samples we need about a pint of soil and feeder roots in a sealed plastic bag that is plainly identified by plant host, location

Sherrie Smith



Department of Plant Pathology
**PLANT HEALTH
CLINIC NEWS**



(City County, physical address, collector and date of collection). Please send samples to us at the follow address:

Dr. Robert Robbins
Cralley-Warren Research Center
2601 N. Young Ave
Fayetteville, AR 72701
Phone 479-575-2555
Fax 479-575-3348
Email: rrobbin@uark.edu