



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.

## Blueberry

The blueberry terminal borer, *Recurvaria* spp. attacks growing terminals and laterals in the spring. The moth is grayish white with numerous black and brown markings, and a wingspread of 6 mm. Larvae are smooth, 8 mm long, dark red on most of body, with a dark brown head. Eggs are laid early in the season in tips of expanding terminals, and the small larvae bore into these tips. Larvae feed and grow during April and May. They pupate during late May or June, probably in the soil. The damage occurs when the larvae hollow out the tender terminals for distance of about 2-4 inches. Terminal leaves wilt, dry, and turn purplish brown. These symptoms are easily confused with primary mummy berry or Phomopsis twig canker. Unless plants are heavily infested with terminal borers, the injury apparently has little effect on productivity. Wilted stems should be promptly pruned out and destroyed to reduce populations. Insecticides applied in the spring for the major blueberry pests also cause a sharp decrease in terminal borer populations. Liquid Sevin or Malathion may be used when infestations are severe. Two sprays, one applied at petal fall and the other at first cover, help control this pest.

### Blueberry terminal borer



Sherrie Smith University of Arkansas Cooperative Extension

### Borer damage on blueberry



Sherrie Smith University of Arkansas Cooperative Extension

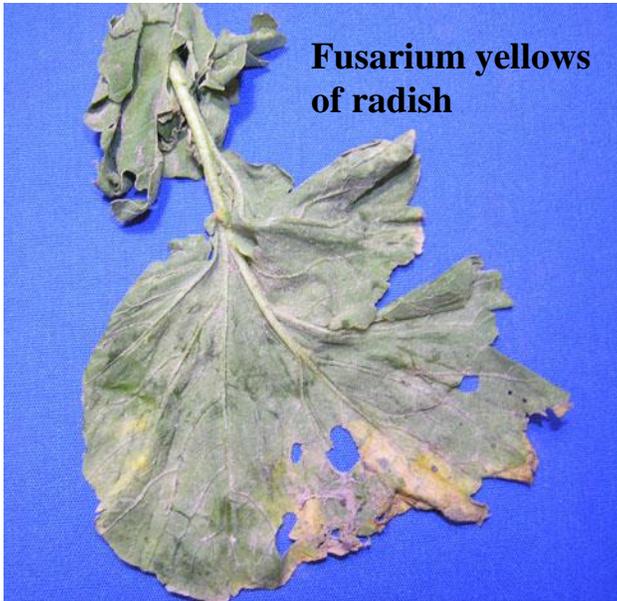
## Radish

Fusarium yellows is a damaging disease of radish in the United States. The causal agent is *Fusarium oxysporum* f. sp. *conglutinans*. Symptoms start as a dull yellow-green chlorosis of the leaves. The entire plant eventually turns yellow. Individual leaves may die and prematurely abscise. Plants are stunted and may die. The most prominent symptom is a brown to black discoloration in the central core of the radish root. Potassium deficiency may increase disease severity. The best defense is to plant resistant cultivars.

### Fusarium yellows

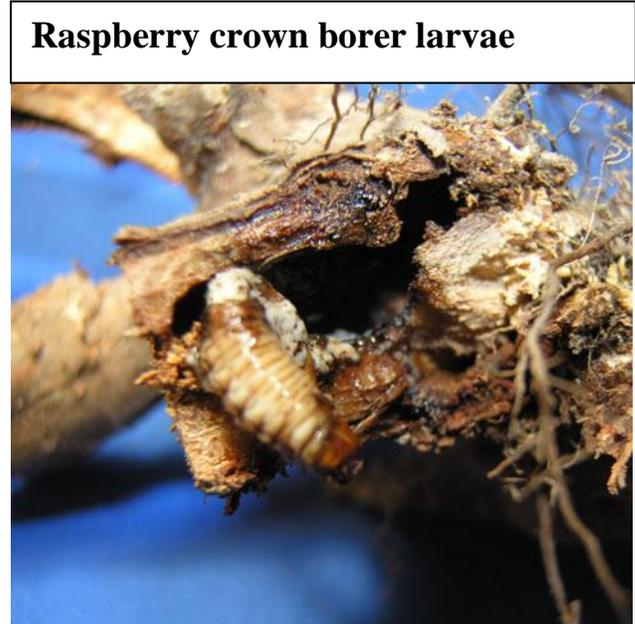


Sherrie Smith University of Arkansas Cooperative Extension



**Fusarium yellows  
of radish**

Sherrie Smith University of Arkansas Cooperative Extension



**Raspberry crown borer larvae**

Sherrie Smith University of Arkansas Cooperative Extension

## **Blackberry**

The Raspberry crown borer is one of the most damaging pests of blackberries and raspberries. The adult is a clearwing moth, black with yellow stripes, that resembles a yellowjacket. It lays its eggs singly on the underside of leaves near the edge in late summer. The larvae migrate to the base of the stem where they spend the winter just below the soil. In the spring, the larvae bore galleries in the crown. By the second summer of their 2-year life cycle, the crowns may be seriously damaged. Obvious symptoms are individual canes that are wilted, withered, and bent over with dying or dead foliage. This commonly occurs when the fruit is about half-grown. Canes infested by the borer will break off easily when given a sharp tug. Borer damage will be obvious at the point of breakage. Digging the crown up and cutting it open will reveal galleries, larvae, and pupae. Commercial growers may use Capture 2E applied in a 50 gallon solution at the base of canes in late October to early November. Homeowners have fewer options. Some states recommend drenching the lower two feet of the canes and the crowns with pyrethrins or rotenone when blossom buds first appear through when flowers show white.





## Adult Raspberry cane borer laying eggs

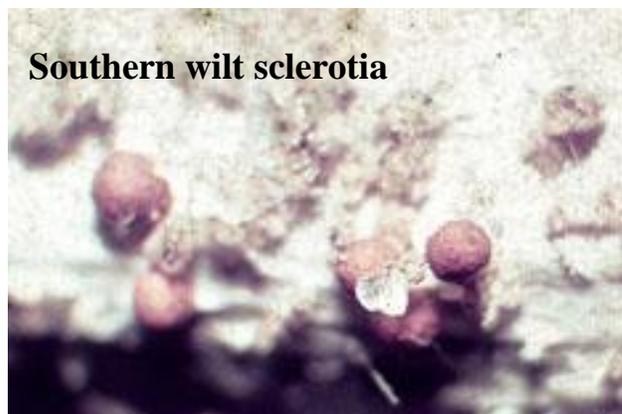


University of Georgia Plant Pathology Archive, University of Georgia, Bugwood.org



Sherrie Smith University of Arkansas Cooperative Extension

## Southern wilt sclerotia



Division of Plant Industry Archive, Florida Department of Agriculture and Consumer Services, Bugwood.org

## Green Beans

Southern blight, caused by *Sclerotium rolfsii*, is a fungus that attacks beans, peas, peppers, potatoes, tomatoes, and numerous other vegetable crops and perennials. Plants rapidly wilt when a water-soaked lesion on the stem at or near the soil line rapidly expands, turns brown, and girdles the stem. The disease is often referred to as White mold because of the white fungal mycelium that eventually covers the stem lesion and surrounding moist soil. Small, uniformly round structures about 1/16 inch in diameter, called sclerotia, form on the mycelium. Sclerotia are first white, later becoming brown, and resembling small brown seeds. This is a soil-borne disease that is difficult to control. Crop rotation with a nonsusceptible crop such as corn or other small grains can help reduce inoculum. Deep plowing of crop debris also helps by removing inoculum from contact with crop plants. There is very little resistance to Southern blight.

## Onion

Onion thrips *Thrips tabaci*, are found worldwide. They prefer to feed on onions, but feed on many field crops, vegetables, flowers, and bedding plants. They may cause heavy damage to mums and carnations. Symptoms are yellowing, early abscission of leaves, buds, or flowers, stunted growth, white blotches, silvery white areas, malformation. The youngest growth often shows crinkly surfaces, sunken and raised thin areas, and curling. They are often found feeding inside flower buds. Thrips are very small insects, difficult to see. Adult females of onion thrips are about 1.1 to 1.2 mm long, yellow, with brownish blotches on the thorax and the median portion of abdomen. They may produce 6-10



generations a year depending on temperatures. Control is difficult as there are some populations resistant to certain insecticides. In addition to resistance, they are hard to reach while feeding within buds and emerging terminals. Malathion, Mustang Max, Pen-cap are labeled for onion.



Sherrie Smith University of Arkansas Cooperative Extension



Whitney Cranshaw, Colorado State University, Bugwood.org



Alton N. Sparks, Jr., University of Georgia, Bugwood.org