

# PLANT DISEASE CONTROL NOTES

EXTENSION DIVISION • VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

July 1978

V.P. Control Series 168

Peanut Diseases

## SCLEROTINIA BLIGHT

OCT 24 1978

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Sclerotinia blight of peanuts is caused by the soilborne fungus, *Sclerotinia sclerotiorum* (Lib.) DeBary (*S. minor* Jagger). The first report of this disease in peanuts in the United States was in Virginia in 1971. Sclerotinia blight has since become widespread in the peanut-growing areas of Virginia, northeastern North Carolina, and portions of Oklahoma.

*Symptoms* - All parts of the peanut plant, especially those in close proximity with soil, are susceptible to infection. Above-ground symptoms may closely resemble damage caused by Southern stem rot if plants are not examined carefully. Both of these diseases characteristically cause a sudden wilt and death of single branches on plants, or occasionally the death of entire plants. The infected portions of stems are first light tan and there is a distinct line of separation from green, healthy tissues. Later these light tan diseased tissues turn dark brown and have a shredded appearance.

To determine if this disease is Sclerotinia blight, an observer must find the resting structures (sclerotia) of the fungus on the surface or within the diseased tissues. Sclerotia of the Sclerotinia blight fungus are irregular in shape and black on the exterior with a white interior. Although their shape is quite variable, a common analogy to make would be to compare them with the size and appearance of rat dung. Sclerotia are produced both on the surface and inside infected tissues; i.e. stems, tap roots, pegs, and pods (Figures 1, 2 and 3). In contrast to the Sclerotinia blight fungus, the fungus causing southern stem rot produces round sclerotia primarily on the surface of infected stems and adjacent soil. These sclerotia are white initially, then turn yellow to brown and resemble mustard seed when mature.

White, cottony-appearing fungus growth is common on tissues affected by Sclerotinia blight during periods of cool, moist weather (Figure 4). This mold growth will "melt" away and disappear rapidly in sunlight, as free water evaporates from the surface of plant tissues.

*Disease Cycle* - The fungus causing Sclerotinia blight survives in soil as sclerotia. Although the longevity of these structures in soil has not been determined, current evidence suggests that sclerotia can survive in fields having at least 3-year-rotations of corn with peanuts. The fungus becomes active in soil planted to peanuts when conditions are cool and moist. The improved fungicidal control of Cercospora leafspot in peanuts, resulting in reduced defoliation and increased plant growth, has been postulated as

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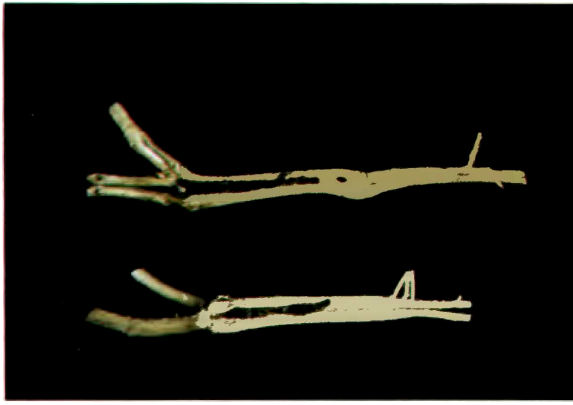


Figure 1. Peanut limb with Sclerotinia blight showing the presence of irregular-shaped black sclerotia in the central portion of stem.



Figure 2. Peanut pods with sclerotia of the blight fungus.



Figure 3. Sclerotia of the blight fungus inside diseased pods.



Figure 4. White, cottony growth of blight fungus on diseased limbs of peanut plant in cool, moist weather.

responsible for creating conditions conducive for Sclerotinia blight. Additionally, certain leafspot fungicides have been demonstrated to directly increase the severity of Sclerotinia blight in infested fields, whereas others appear not to have any effect other than to control leafspot.

Soon after tissues are infected, the fungus begins producing sclerotia. Once formed, the sclerotia may be disseminated by digging and combining operations as well as with soil adhering to equipment.

*Control* - Factors that trigger epidemics of this disease in peanuts have not been described. It has been suggested that leafspot control in infested fields should be a schedule of Benlate + Manzate 200 or Benlate + Dithane M45, since these fungicides do not increase the severity of Sclerotinia blight. Evaluations of variety performance in infested fields have shown Florigiant is more tolerant than other Virginia-types of peanut.

The immediate need for a weapon(s) to control this disease in peanuts should be answered soon by the registration of effective fungicides. County agents will be advised and prepared to give recommendations on administering any newly approved fungicides for control of this disease in peanuts. On farms where this disease has occurred, sanitation practices should be employed that prevent transport of infested soil to non-infested fields.