

PLANT DISEASE CONTROL NOTES

EXTENSION DIVISION • VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

revised July 1976

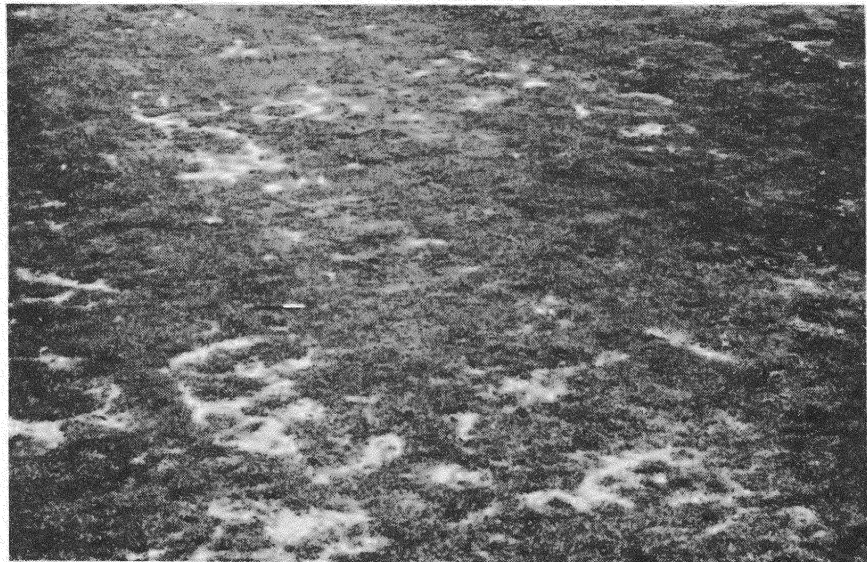
Lawn Diseases

Control Series 114

PYTHIUM BLIGHT (COTTONY BLIGHT)Houston B. Couch
Professor, Plant Pathology

Pythium blight is caused by the fungi *Pythium ultimum* and *P. aphanidermatum*. Affecting all commonly cultivated lawn grasses, with warm, wet weather conditions, outbreaks of the disease may result in complete destruction of the stands within 24 hours from the first evidence of symptoms.

SYMPTOMS.— Pythium blight first appears as small, irregular shaped spots ranging from 1/2 to 4 inches in diameter. At first water-soaked in appearance, the leaves soon shrivel and the color of these patches fades to a light brown.



Groups of affected patches frequently join together. At times, the shape of the affected areas resembles elongate streaks. This disease development pattern is apparently the result of the fungus being washed over the surface of the soil. The presence and pattern of these streaks are determined, mostly, by the surface water drainage flow of the area.

Diseased leaves are at first water-soaked, soft, and slimy. When walked on, they mat together. If the growth of the pathogen is checked before an entire leaf is blighted, distinct, straw-colored spots of varying size develop. In general, these spots are quite similar to those produced by the *Sclerotinia* Dollar Spot fungus--except that the reddish margins characteristic of the latter disease are missing.

In early morning, or if high humidity exists throughout the day, diseased leaves may be covered with the white, cobwebby, mold-like growth form of the pathogen.

DISEASE CYCLE.— Both species of *Pythium* may live for long periods as soil inhabitants. In grass with a past history of Pythium blight, plants infected the previous season serve as the chief source of infection centers.

Further disease development from the infection centers occurs by growth of the fungus from plant to plant. Under favorable conditions for disease development, the rate of this movement can be very rapid.

Issued in furtherance of Cooperative Extension work, Acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture. W. E. Skelton, Dean, Extension Division, Cooperative Extension Service, Virginia Polytechnic Institute and State University, Blacksburg, Virginia 24061.

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Long distance spread occurs by movement of either diseased grass plant parts or infested soil on maintenance equipment and by surface water.

Primarily a warm, wet weather disease, grass blighting and disease development will be most rapid and severe at air temperatures of 85° to 95°F. Minimum temperature for disease development is 68°F. As the air temperature increases to 95°F, a much shorter time is required for complete destruction of a grass stand.

Disease development on Highland bentgrass is greater at high nitrogen fertility or high balanced fertility and less under conditions of low fertility.

CONTROL. Pythium blight may be controlled by the use of certain fungicides. For specific control recommendations, see Control Series 76.