

PLANT DISEASE CONTROL NOTES

EXTENSION DIVISION • VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

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Lawn Diseases

Control Series 59

STRIPE SMUT

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Stripe smut is caused by the fungus *Ustilago striiformis*. The disease occurs most commonly on bent-grasses, bluegrasses, tall and meadow fescue and rye-grass.

SYMPTOMS.- Infected grass plants usually make slow growth. Long, yellow-green streaks develop on the leaves. As the disease progresses, these streaks become gray in color. In the final stages of disease development, the cuticle and epidermal cells covering these streaks rupture --exposing the underlying black spore masses of the pathogen. With this, the leaves split into ribbons and curl from the tips downward. The leaf blades then turn light brown, wither and die (see photograph).



In overall view, when the disease is severe, the lawn takes on a brown to blackish-brown appearance. When a white cloth is rubbed over the surface of the grass, it becomes discolored by the erupting black spore masses.

Symptom expression is more readily apparent in the late spring and early fall. Plants growing at 90°F for prolonged periods usually do not show symptoms. On the other hand, extended growing periods in the 50°-60°F range are very favorable for symptom expression.

DISEASE CYCLE.- The fungus that causes stripe smut survives the winter months in a dormant state in infected grass plants and as resting bodies (spores) in the soil or on seed. The spores resume growth under conditions that are favorable for plant growth, germinate and infect the below-ground plant parts. After infection has been accomplished, the fungus grows throughout the entire grass plant. It is this feature of the cycle of development that makes this disease difficult to control.

CONTROL.- Resistant Varieties - Of the varieties of Kentucky bluegrass, Merion is the most susceptible to stripe smut. Kenblue and Troy are moderately susceptible, while Park and Newport are most resistant.

Cultural Practices - Lawns severely diseased with stripe smut should be managed on optimum fertilizer and watering programs. This will facilitate more rapid recovery of the grass when the air temperatures become less conducive to the leaf striping and splitting phase of the disease. For optimum lawngrass management, consult Virginia Cooperative Extension Service Circular 818. (over)

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Chemical Control - For most effective control, spray 1,000 sq. ft. with either 6 oz. Fungo 50 50% WP, OR 6 oz. Tersan 1991 50% WP, OR 6 oz. Spot Kleen 70% WP. The fungicidal treatment should be made in either October or in early spring before grass growth begins.

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KEYS TO PROPER USE OF PESTICIDES

1. Read the label on each pesticide container before each use. Follow instructions to the letter; heed all cautions and warnings, and note precautions about residues.
2. Keep pesticides in the containers in which you bought them. Put them where children or animals cannot get to them, preferably under lock and away from food, feed, seed, or other material that may become harmful if contaminated.
3. Dispose of empty containers in the manner specified on the label.

SEE YOUR DOCTOR IF SYMPTOMS OF ILLNESS OCCUR DURING OR AFTER USE OF PESTICIDES.