

to travel and to assist golf clubs in reference to turf matters, but this is out of the question until its revenues are far greater than at present . . .

"Until the Green Section enrolls every golf club in the United States, it cannot exert its greatest influence. It is recognized that many of the clubs are poor financially, but even so we believe it will be true economy for them to join the Green Section. Manifestly we must make every reasonable effort to secure the enrollment of each golf club, for every one of them has something to teach the rest of us as well as much to learn."

Superior turf grasses are characterized by their ability:

1. To thrive under close mowing.
2. To be highly resistant to diseases.
3. To form the type of turf that makes the sport more enjoyable.
4. To provide excellent turf even when very dry.
5. To heal injuries rapidly.

Other considerations might be listed but these are held to be of greatest importance.

Green Section Office Moves

Reorganization and personnel shifts at the Plant Industry Station, together with a request by the Green Section for more office space, have resulted in a move during the week of July 4 from the South Building to the Administration Building. The new room number is 331, Administration Building. The telephone number remains the same—Tower 6400, extension 277.

Dr. Grau now has a private office instead of being crowded into one room with three others. His room is 331-A. Mrs. Drennan will receive callers in 331 and will handle all phone calls. Mr. Williams will be in 329, and Agronomists Wilson and Radko will occupy 327. We appreciate the additional room but we shall miss the close association with Forage Crops and Diseases, with whom we continue to co-operate closely, as in the past.

We hope that our friends will come to see us in our new quarters. When you write, don't worry about room numbers — just address us:

USGA Green Section
Plant Industry Station
Beltsville, Md.

BROWN PATCH OBSERVATIONS ON BENTGRASSES

ABSTRACT FROM ARTICLE BY JOHN B. ROWELL, PLANT DISEASE REPORTER, MAY 15, 1951

Wounds produced by the frequent mowing of bentgrass greens and the guttation drops produced on the tips of the grass blades are important factors in the development of brownpatch (*Rhizoctonia solani*), according to research findings by Dr. Rowell at the Rhode Island Agricultural Experiment Station.

Critical greenhouse studies which included inoculation with *R. solani* in a moisture chamber under favorable temperatures (75° to 85° F.), showed severe brownpatch injury on the cut bentgrass while the uncut bentgrass remained relatively free of infection. The fungus was observed to originate at the tip of the cut blade and progress downwards towards the center of the plant.

Guttation drops appeared to be a second

important factor in contributing to the rapid spread of brownpatch. These drops occur mainly when the roots absorb water rapidly and the rate of transpiration is reduced. Such conditions are pronounced during hot, humid weather, when the sky is overcast and wind movement virtually is non-existent. Under these favorable factors the guttation drops may persist throughout the daylight hours. The drops contain dissolved salts and organic materials which serve as an ideal cultural medium for development of the disease. All severe brownpatch infections observed in these studies occurred when the turf was moist with guttation drops.

Golf course superintendents long have known that poling and hosing the greens in early morning are of definite value in

minimizing the development of disease. The protective action of these control measures readily can be explained by the dispersion and subsequent rapid drying of the moisture and nutrients of the guttation drops which no longer can give impetus to the spread of disease.

Laboratory studies further indicated that brownpatch development during periods of excessive guttation complicated fungicidal control measures. This especially was the case with phenyl mercury compounds which were inactivated by glutathione, an ingredient present in guttational water. This inactivation would explain certain inconsistencies observed by superintendents and pathologists using phenyl mercury compounds to control brownpatch.

Practical Application of Above

(Green Section Note)

1. Bent putting greens must be mowed. Sharp mowers which cut clean with a minimum of bruising and tearing should lessen the severity of a disease attack.

2. Hosing and poling to break-up "dew" and guttational drops are to be encouraged. Removal of this ideal cultural medium should lessen the development of disease.

3. Guttational drops should be removed by poling or hosing before treating with a fungicide. Guttational drops will lessen the effectiveness of a fungicidal application.

4. Good air drainage and careful water management are all-important. Rapid transpiration is encouraged by air circulation. In some instances this may call for limb or tree removal in pocketed areas. If excessive moisture is present in the greens under hot, humid conditions when there is little drying effect from the wind or sun, excessive guttation will occur and persist.

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NEW GREEN SECTION SERVICE SUBSCRIBERS

Aggeler & Musser Seed Co., Los Angeles, Calif.
Dolge, C. B., Co., (The), Westport, Conn.

COMING EVENTS

- August 7:** Turf Field Day. Rutgers University, New Brunswick, N. J. Ralph E. Engel.
- August 20:** Golf Association of Philadelphia and Philadelphia Association of Golf Course Superintendents at Plymouth Country Club. Mrs. Ralph I. Raynor, 629 Chestnut Street, Room 303, Philadelphia 6, Pa.
- August 22-23:** Twentieth Annual Greenkeepers' Field Days. University of Rhode Island, Kingston, R. I. J. A. DeFrance.
- August 27-31:** American Society of Agronomy Annual Meeting. Pennsylvania State College, State College, Pa. L. G. Monthey, Madison, Wisconsin.
- September 5-7:** Turf Field Days. The Pennsylvania State College and Turf Advisory Committee, State College, Pa. H. B. Musser.
- September 13:** Green Section Committee Meeting, Saucun Valley Country Club, Bethlehem, Pa.
- September 10-11:** Turf Field Days. Purdue University and Midwest Regional Turf Foundation. West Lafayette, Indiana. W. H. Daniel.
- October 7-9:** National Turf Field Days. Beltsville Turf Gardens, Plant Industry Station, Beltsville, Md. USGA Green Section, U. S. Department of Agriculture, and Mid-Atlantic Association of Golf Course Superintendents, co-operating. Fred V. Grau.
- October 24-26:** Turf Conference. Central Plains Turf Foundation and Kansas State College at Manhattan, Kansas. L. E. Lambert and Ray A. Keen.
- November 14:** Fall Turf Meeting of the Southern California Turf Conference. University of California, Los Angeles, Cal. V. T. Stoutemyer.

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- January 8-9:** Turf Conference. Mid-Atlantic Association of Golf Course Superintendents. Lord Baltimore Hotel, Baltimore, Md. E. N. Cory, University of Maryland.
- January 21-25:** One-Week Course in Turf Management. Rutgers University, New Brunswick, N. J. Ralph E. Engel.
- February 18-21:** Turf Conference. The Pennsylvania State College, State College, Pa. H. B. Musser.
- March 3-6:** Turf Conference. Midwest Regional Turf Foundation and Purdue University, West Lafayette, Ind. W. H. Daniel.

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