

2000 RUTGERS Turfgrass Proceedings



THE NEW JERSEY TURFGRASS ASSOCIATION

In Cooperation With

RUTGERS COOPERATIVE EXTENSION
NEW JERSEY AGRICULTURAL EXPERIMENT STATION
RUTGERS, THE STATE UNIVERSITY OF NEW JERSEY
NEW BRUNSWICK

Distributed in cooperation with U.S. Department of Agriculture in furtherance of the Acts of Congress of May 8 and June 30, 1914. Cooperative Extension work in agriculture, home economics, and 4-H. Zane R. Helsel, Director of Extension. Rutgers Cooperative Extension provides information and educational services to all people without regard to sex, race, color, national origin, disability or handicap, or age. Rutgers Cooperative Extension is an Equal Opportunity Employer.

2000 RUTGERS TURFGRASS PROCEEDINGS

of the

**New Jersey Turfgrass Expo
December 12-14, 2000
Trump Taj Mahal
Atlantic City, New Jersey**

**Volume 32
Published July, 2001**

The Rutgers Turfgrass Proceedings is published yearly by the Rutgers Center for Turfgrass Science, Rutgers Cooperative Extension, and the New Jersey Agricultural Experiment Station, Cook College, Rutgers University in cooperation with the New Jersey Turfgrass Association. The purpose of this document is to provide a forum for the dissemination of information and the exchange of ideas and knowledge. The proceedings provide turfgrass managers, research scientists, extension specialists, and industry personnel with opportunities to communicate with co-workers. Through this forum, these professionals also reach a more general audience, which includes the public.

This publication includes lecture notes of papers presented at the 2000 New Jersey Turfgrass Expo. Publication of these lectures pro-

vides a readily available source of information covering a wide range of topics and includes technical and popular presentations of importance to the turfgrass industry.

This proceedings also includes research papers that contain original research findings and reviews of selected subjects in turfgrass science. These papers are presented primarily to facilitate the timely dissemination of original turfgrass research for use by the turfgrass industry.

Special thanks are given to those who have submitted papers for this proceedings, to the New Jersey Turfgrass Association for financial assistance, and to those individuals who have provided support to the Rutgers Turfgrass Research Program at Cook College, Rutgers, The State University of New Jersey.

Dr. Ann B. Gould, Editor
Dr. Bruce B. Clarke, Coordinator

MANAGEMENT OF DOLLAR SPOT USING IMPROVED BENTGRASS CULTIVARS AND SELECTED CULTURAL AND CHEMICAL REGIMES

Jennifer N. Vaiciunas, James A. Murphy, and Bruce B. Clarke¹

Several improved bentgrass cultivars have been developed recently for use on golf course greens and fairways. Many of these cultivars have been reported to have excellent disease resistance. Although it has been suggested that these cultivars may help reduce fungicide usage, to date, little research has been conducted to support these claims. To address this issue, the current study was designed to evaluate the disease response of several commercially available bentgrass cultivars maintained under different nitrogen fertility, mowing height, and fungicide regimes.

Eight bentgrass cultivars (Crenshaw, Southshore, Penncross, L-93, SR 1020, SR 7200, Penn A-4, and Penn G-2) were evaluated under field conditions in 1999 and 2000. All cultivars were maintained at two cutting heights: 0.14 inch (greens height) and 0.375 inch (fairway height), and two nitrogen levels: 2 lb/1000 ft² and 5 lb/1000 ft². Cultivar treatments were subdivided into six fungicide application schedules (untreated, 7, 14, 28, or 56 day intervals and a threshold spray applied when disease

exceeded 0.3%) using the contact fungicide chlorothalonil (Daconil Ultrex 82.5SDG). Data were collected for turf quality, color, density, and severity of dollar spot (caused by *Sclerotinia homoeocarpa*). Other foliar diseases, including brown patch (caused by *Rhizoctonia solani*) and copper spot (caused by *Gloeocercospora sorghi*), were also evaluated.

For most cultivars, dollar spot was most severe on turf receiving the low rate of nitrogen and the lower height of cut. Cultivars Penn G2, SR 7200, and L-93 were least susceptible to dollar spot under most nitrogen and cutting height treatments. Brown patch was most severe on turf maintained at greens height and high nitrogen, while a high incidence of copper spot was only seen on SR 7200. The total number of fungicide applications in 2000 was reduced 75 to 88% for cultivars Penn G-2, L-93, and SR 7200, compared to Crenshaw, the most susceptible cultivar to dollar spot. From this research, it is apparent that many of the new bentgrass cultivars can be used to reduce fungicide inputs while maintaining acceptable turf quality.

¹Graduate Research Assistant, Associate Extension Specialist in Turfgrass Management, and Extension Specialist in Turfgrass Pathology, respectively, New Jersey Agricultural Experiment Station, Cook College, Rutgers, The State University of New Jersey, New Brunswick, NJ 08901-8520.