

Research Committee, have sent, during the past year, specimens of Cynodon transvaalensis to Dr. Burton. One came from an elevation of 7000 feet above sea level and should carry an unusual amount of winter hardiness. These grasses may be the ones Dr. Burton has been so anxious to find in South Africa.

Cross pollinations between the winter hardy bermudagrass discovered by Dr. Burton in Berlin, Germany with the most winter hardy hybrid tested for several years in New Jersey were made. It is hoped a number of improved hybrids will develop from this cross. Seeds will be greenhouse planted this December for evaluation tests in the spring of 1986.

Irradiated dormant sprigs of Midiron bermudagrass (in 1984) have produced 67 promising mutants. These will now be field tested for winter hardiness on a golf course in Blairsville, Georgia where winter temperatures below 0° F. are common.

MICHIGAN STATE UNIVERSITY - Dr. Richard E. Chapin,  
Principal Investigator

Turfgrass Information File

1985 Grant - \$68,000 (Third year  
of ongoing support)

In the spring of 1984, the USGA and Michigan State University signed an agreement whereby the MSU Library would design and develop a bibliographic computer database to provide access to published materials reporting the results of research that affects turfgrass and its maintenance.

The original statement of purpose of the USGA Turfgrass Information File was to provide efficient and effective access to all published and processed materials reporting the results of research affecting turfgrass and its maintenance. Three goals were identified as necessary for the successful completion of the Project.

1. Michigan State University will continue to acquire, maintain, and preserve all appropriate printed and processed materials reporting on research related to turfgrass growth, development, and maintenance.
2. Bibliographic access to the turfgrass collection is provided by on-line access to the Project's retrieval system, supplemented by appropriate printed reports. The Turfgrass Information File is housed in an ALPHA MICRO computer, using STAR software. Both the hardware and software work well. By June 30, 1985, 6000 records were in the database.

3. Michigan State University Library will provide loans and/or appropriate photocopies to all users who have reason to need access to the turfgrass collections. MSU Library is in the process of preparing a descriptive brochure that explains the project and services available. The brochure will explain how to acquire and use software to access the file with an IBM compatible personal computer. Also, the Library will continue to search telephone requests on demand.

MICHIGAN STATE UNIVERSITY - Dr. Paul E. Rieke,  
Principal Investigator

Comparing Core Cultivation with  
Hollow and Solid Tines

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of support)

Core Cultivation (or aerification) of a creeping bentgrass putting green with traditional hollow tines was compared with the use of solid tines. Solid tine coring (also called "Shattercoring") removes no soil, reducing interference with play. But there is concern about compactive effects when no soil is removed from the rootzone. Both hollow and solid tine coring caused some loosening of the surface 2-inches of soil, but a zone of greater compaction tended to develop just below the bottom of the coring hole. There was also some indication that this compactive influence was enhanced if the soil was cored while wet compared to treatment when the soil was more dry, although differences were small. Data taken during the fall of 1985 should enhance our understanding of solid tine coring.

Based on evidence to-date, coring with hollow tines is still considered the standard practice to be used in the industry, particularly when there is need to fill the coring holes with topdressing, when larger coring holes are needed to alleviate surface compaction or when the topsoil from the cores is considered an important part of the thatch control program. But there may be a place for the use of solid tine coring during the summer when relief from surface compaction is needed, especially when runoff of irrigation water occurs. The use of small diameter solid tines will leave small openings which will heal over quickly and do not leave the turf as open to rapid desiccation. This practice could result in more efficient water use on sloping greens. Additional research is needed to determine the long term effects of regular use of solid tine coring on soil properties.