Nebraska's Shearman leads turfgrass testing 'back to the future'

Q&A

Dr. Robert Shearman

Bob Shearman is executive director of the National Turfgrass Evaluation Program and professor of horticulture at the University of Nebraska-Lincoln, both half-time appointments. His research and extension contributions have focused on wear tolerance, water conservation, drought resistance, root growth and development, potassium nutrition and integrated pest management. He serves on the U.S. Golf Association Turfgrass and Environment Research Committee, Golf Course Superintendents Association of America Research Committee, TPI Research Committee and Musser Foundation board of directors.

Golf Course News: What is your major job as the executive director of NTEP?

Robert Shearman: I am ultimately responsible for administering the program, providing leadership and developing long-range plans for future activities. My specific activities include soliciting entries from university and commercial plant breeders for our various turfgrass trials; negotiating with universities and developing research agreements for cooperators to conduct the trials and collect performance data; coordinating with other organizations, such as the USGA, GCSAA, TPI, and Professional Lawn Care Association (PLCAA) to avoid duplication of research efforts; and developing partnerships with NTEP to better serve specific clientele needs. Some examples of the latter activity are developing on-site testing on golf courses with USGA and GCSAA as co-sponsors and equal partners in this activity, and sod tensile strength assessment in Kentucky bluegrasses with TPI.

I am also responsible for overseeing the scientific merit of our studies and ensuring quality control for data collected and reported. I also seek ways to analyze and report our data in more meaningful and useful ways for our end users.

GCN: What does NTEP hope to accomplish over the next few years?

RS: There is tremendous interest in developing new cultivars to meet the needs of the turfgrass industry. Turfgrass managers are finding it more and more difficult to determine which cultivars to choose.

We plan to continue our leadership role of providing cultivar performance evaluation information in as credible and user friendly manner as possible to interested clientele in the turfgrass industry. We want to be recognized as the primary source for this kind of information.

We recently developed a strategic action plan for NTEP. This plan provides insight and direction for future developments and will serve as a vehicle to focus NTEP activities.

The plan will continue improving data collection, analysis and reporting procedures. We have already made strides in this regard. The 1995 National Kentucky Bluegrass Cultivar Trial is our first attempt at a test that will allow us to report results on national and regional levels, and specific management regimes. Some locations will conduct ancillary trials that will supply information on such as shade traffic and disease tolerance and insect resistance.

GCN: How can NTEP be further developed to deliver its information more easily and in usable form to course superintendents?

RS: Like most organizations, we are gearing up for the information age. Superintendents will soon be able to access our web page on the internet to access reports electronically. They will also be able to obtain hard copy reports. In addition, we are changing our report procedures to make the data easier to interpret.

Many superintendents use our information as one of their sources in making decisions on cultivar selection. However, we feel there are limitations as to the usefulness of some of our data for the golf industry because it may not have been collected from trials conducted under golf course maintenance conditions.

Two things are happening with future trials that will help resolve this concern.

First, trials are being con-

Continued on next page

Q&A with Shearman

Continued from previous page

ducted at varying levels of intensity of management, and we are able to separate cultivar performance by management intensity. Superintendents will be able to use this data to select cultivars that are performing under conditions that are closer to those faced on the course.

Second, we have formed a partnership with GCSAA and USGA to conduct on-site trials specifically for golf courses. These trials will provide performance evaluations under real-world conditions.

GCN: Tell us more about these "on-site" trials? Why are they being done?

RS: Actually, I like to call the on-site testing program, "Back to the Future!" Prior to the development of strong turfgrass research programs at land-grant universities, most information about turfgrass performance came from tests conducted on golf courses. Recently, we moved away from course tests to the more controlled conditions of university research sites.

Superintendents, plant breeders and commercial seed companies have expressed interest in having data from trials conducted under conditions more closely associated with actual play. Therefore, the USGA, GCSAA and NTEP are preparing to jointly sponsor on-site putting green trials for creeping bentgrass and Bermudagrass. This is a partnership effort which will be cosponsored by each organization and administered by NTEP. On-site trials will not take the place of official NTEP trials, but will be conducted in addition to them.

GCN: What is their status?

RS: The USGA, GCSAA and NTEP have agreed to initiate putting green evaluations of creeping bentgrass cultivars in the fall of 1997 and Bermudagrass cultivars in the spring of 1998. These trials will be evaluated for five years. The plan is to conduct trials at 15 locations. Five trials with creeping bentgrass will be conducted in the cool-season turfgrass adaptation zone, five trials of Bermudagrass in the warm-season adaptation zone, and five trials each of creeping bentgrass and Bermudagrass in the transition zone.

GCN: What sites will be selected?

RS: The on-site trials will be located on a course near a land-grant university with a turfgrass research program or in a major metropolitan area readily accessible to a university turfgrass scientist. Trials will be located where golfers will practice putting. The USGA will fund the construction of USGA specification greens for the trials. Host courses will provide daily maintenance of the putting greens. Preferably the host course has a history of supporting the USGA and receiving visits from USGA agronomists. The superintendent should have demonstrated skills, a record of supporting GCSAA, and good relationships with the university scientist who will have ultimate responsibility for the trial. NTEP will collect data from the cooperators, analyze and summarize it, and prepare an annual report of the results. The yearly report and overall summary will be published jointly by the cooperating organizations.

The final decision for trial locations will be made by the GCSAA Research Manager, USGA Green Section Director of Research and the Executive Director of NTEP.

GCN: What grasses will be tested?

RS: NTEP will solicit entries for the trials from sponsoring companies and universities. Trials will be conducted with named cultivars. Experimental lines that will be released in the immediate future (i.e. before the end of the five-year test cycle) may also be entered at the discretion of the sponsor.

These studies will determine the adaptation of grasses for course use. Information from these on-site trials will be of particular value to plant breeders, researchers, extension educators, industry representatives, USGA agronomists, superintendents and architects.

GCN: What do you see as the cutting-edge characteristics of the new bentgrasses and Bermudagrasses that will be coming to the market?

RS: I'm impressed with the efforts to improve creeping bentgrass and

RELATED STORY PAGE 30

Bermudagrass. Plant breeders have emphasized improving heat tolerance, low mowing performance, and putting quality in creeping bentgrass. They have made marked improvements in this regard. The real improvement that stands out is the improved putting quality. Many new cultivars seem to offer a more uniform putting surface than cultivars like Penncross. I am concerned that as improvements are made we don't lose sight of the need for total agronomic performance, such as disease resistance, low temperature performance, seed production, etc. We need more testing to ensure proper management of these new cultivars, as well.

The primary improvement with Bermudagrass has been in the areas of low temperature tolerance. Plant breeders are really interested in making Bermudagrass a more consistent performer in the transition zone. We are probably in the early stages of this development. We will see considerable improvement as future generations are released. We really need some improved types that perform well as fairway and tee grasses for the transition zone.

We will also see renewed interest by plant breeders to improve Bermudagrasses for greens performance in the South. We can only push creeping bentgrass so far in its adaptation to Southern climates. We really need Bermudagrasses with excellent putting quality to fill this need.