North Shore CC short-game complex: exercise in innovation, evaluation

By DAN DINELLI and TOM VOIGT

GLENVIEW, Ill. — The United States Golf Association (USGA), the Golf Course Superintendents Association of America (GCSAA), and the National Turfgrass Evaluation Program (NTEP) have combined resources to initiate a national research project to evaluate turfgrass varieties grown on USGA rootzones and maintained by host golf course facilities as in-play green surfaces.

Funding was made available to construct practice putting greens at 16 different golf courses across the United States. All of these experimental greens were constructed to USGA specifications. Northern locations sowed bentgrass varieties, southern locations Bermudagrass varieties, and in transition-zone climates both species were planted. Monitoring and evaluation will continue for at least five years, with annual reports being submitted to the NTEP who will issue annual reports of the results.

In conjunction with the University of Illinois, North Shore Country Club was selected as one of the sites for this unique study. In the summer of 1997 the Office of the Governors of North Shore Country Club (NSCC), led by Mr. Van Salmans, Greens Chairperson approved the construction of a short-game practice facility to augment the USGA putting green.

SHORT-GAME PRACTICE FACILITY

The short-game practice facility consists of a 7,200 square foot (sq. ft.) putting green, a 14,098 sq. ft. creeping bentgrass putting green, and 14,500 sq. ft. sand-capped bunkers. It is understood by the membership of NSCC this is a functional complex with several research objectives.

General purposes of the short-game practice facility include:

1) Maintain a functional short-game practice facility, and putting green to the standards expected at North Shore Country Club, while recognizing the research potential of such a site. Regular maintenance on the USGA green will include periodic straight sand topdressing, and daily mowing at 120-130 thousandths of an inch. The fairway will be mowed at one half of an inch, and will undergo regular mowing, aeration and fertilization plus the impacts of forced gas exchange in the putting green rootzone and turf canopy utilizing the SubAir system.

2) Monitor the performance of 21 different creeping bentgrass varieties for putting green use on USGA rootzone profiles, including 18 NTEP entries, and two blends.

3) Monitor the performance of a creeping bentgrass blend (L-83/SR-1119) on 20 amended putting green rootzones within the context of a USGA rootzone profile.

4) Monitor the impacts of forced gas exchange in the putting green rootzone and turf canopy utilizing the SubAir system.

5) Monitor 13 bentgrass varieties at fairway height, grown on a yard-waste compost amended site.

6) Compare and contrast organic soil amendments to native soil for fairway use.

7) Evaluate a bluegrass blend for use on green surrounds.

The major emphasis of the practice facility is to observe turfgrass performance, integrating cultivars and rootzone amendments with management techniques. Field observations, along with detailed monitoring will help develop a better understanding of turfgrass science and ecology. Information gained will further IPM strategies, and foster a holistic philosophy of turfgrass management towards maintaining high-quality playing conditions.

Disease susceptibility, nutrient requirements, infiltration rates, moisture stress, and moisture retention will be noted. Possible areas of interest and potential study include but not limited to: segregation with genetic dominance in varieties, color, texture, density, thatching tendency, recuperative potential, wear tolerance, heat and cold tolerance, ball roll speed, growth habit, localized dry spot severity, nematode assay (beneficial and plant parasitic), resiliency for desired ball bounce, microbial ecology, turfgrass-microbe interactions, stability of soil amendments, dynamics of percolation rates over time, fluctuations of soil and turf canopy gases (i.e. oxygen, carbon dioxide and methane), relative soil temperatures, Poa annua encroachment, inoculation potential of beneficial microorganisms, winter hardness, fate of rootzone amendments over time, and root mass.

PUTTING GREEN

The putting green site is unique. This will be a functional green receiving approach shots, and being used by the membership for putting. This activity will produce ball marks, wear, and compaction, and offer daily stresses seen on in-play greens.

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North Shore CC's tests expected to be revealing

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greens at many golf courses. Comparison On one green, under consistent management and similar environmental conditions, field evaluations of bentgrass varieties and amended root-zone mixes can be made. The effects of the SubAir system can be documented.

UNIQUE CLIMATIC ZONE

The test facility is located in USDA growing zone 5B. This represents the Chicago region, a unique region that is prone to weather patterns influenced by Lake Michigan.

BENTGRASS BLENDS

Blends of turfgrass varieties are frequently thought of as advantageous, offering genetic diversity for adaptation potential. Blends of bentgrass with similar growth requirements and growth characteristics like texture, growth habit, and color will be grown and evaluated relative to their respective varieties in pure stands.

PLOT SIZE

On the putting green each variety was planted in a random order, replicated three times in five 5-by-10-foot plots. Plots this large offer better sampling and ability to measure ball roll speeds via modified or standard Stimpmeter readings.

GREEN ROOT-ZONE EVALUATION

Relative performance of creeping bentgrass varieties grown on two popular root zones, native soil 'push-up' type root zones, and USGA sand-based root zones within the same climatic environment and under similar management practices can be made. At North Shore Country Club several bentgrass variety trials already exist, maintained to putting green standards in 'push-up' style root-zone profiles, with an amended upper 3-inch layer of high sand content via frequent sand topdressing. In total there are 17,852 square feet of 'push-up' green, consisting of 26 varieties of creeping bent, one velvet bentgrass, seven blends of bentgrass, and one creeping species of Poa annua var. reptans (Hausskn.) Timm. The new USGA green has many of the same varieties.

USGA ROOT-ZONE TRIAL

A list of 20 different root-zone mixes were used in the construction of USGA-profile putting green plots. More detailed information on amendments is available. All amendments, unless noted, were professionally blended off site at Feltes Sand and Gravel. With one exception, the same USGA approved sand was used in all mixes. For ease of construction and to minimize cross contamination, a non-replicated plot design was con-
New York sets turf show
SYRACUSE, N.Y.—The New York State Turfgrass Association (NYSTA), in cooperation with Cornell University, will hold its annual Turf and Grounds Exposition, Nov. 10-13, at the OnCenter here.

The conference will feature business and technical sessions, with speakers from across the country. A trade show with more than 350 exhibitors will bring new technology and innovative ideas to an estimated 2,000 attendees.

The keynote speaker will be Dr. Jim Tunney, former NFL referee whose officiating career ran from 1960-1991. He is the only NFL referee assigned consecutive Super Bowl games (1977 and 1978), and has officiated at the Fog Bowl, The Catch and the Ice Bowl. Tunney also served as a world team tennis umpire and linesman from 1977-1979.

To obtain conference information, program, registration form, or exhibitor trade show material, people may call NYSTA at 800-873-8873, 518-783-1229, fax 518-783-1258 or e-mail nysta@capital.net, or write NYSTA, P.O. Box 612, Latham, N.Y. 12110.

Penn Turf Council awards scholarships
BELLEFONTE, Penn.—The Pennsylvania Turfgrass Council has awarded scholarships to students majoring in the four-year Turfgrass Management Program at Penn State. The seven $2,000 scholarships were provided based on high academic achievements in turfgrass management. The recipients are Brian A. Bachman of Tripoli; Ryan F. Davidee of Gilbertsville; John E. Kaminski of Upper Marlboro, Md.; Reid H. Mitchell of Jarrettsville, Md.; Bradley S. Park of Pittsburgh; Heather A. Shoener of Pine Grove; and Darryl T. Sparta of McAfee, N.J. The scholarships were presented by Dr. Thomas Watschke, professor of turfgrass science at Penn State.

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