

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

(Editor's note: Anyone interested in data, or in viewing the test site at North Shore Country Club at 1340 Glenview Rd. in Glenview, Ill., is welcome. They should contact superintendent Dan Dinelli at 847-724-4963.

"That's what it's there for," Dinelli said, "for people who are interested to come and evaluate for themselves the different cultivars and root-zone mixes.")

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) 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 Offic-

Dan Dinelli is a certified golf course superintendent at North Shore Country Club in Glenview, Ill., and Tom Voigt is an Extension turfgrass specialist at the University of Illinois.



Root-zone mix cells at for turfgrass testing at North Shore Country Club. All the work is done by hand, ensuring no cross-contamination. The barriers, from pea gravel to the top, are permanent.

ers and 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 fairway measuring 55 yards long, 28 yards wide, and two greenside 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, aerification and established maintenance practices.

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-93/SR-1119) grown 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 hardiness, 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 members for putting. This activity will produce ball marks, wear, and compaction, and offer daily stresses seen on in-play

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Matchmaker, matchmaker

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it is working out better yet."

Williams, who had been at Bob-O'Link in Chicago for 21 years, took over the reins as superintendent of Los Angeles Country Club in the spring of 1997. Faubel is the long-time superintendent at Saginaw (Mich.) Country Club. The contacts the two men have within the golf industry are substantial.

Faubel said Executive Golf Search works with course operators, owners, general managers and search committee chairmen to define the superintendent's position at their course, then help find the individuals who best fill their needs.

"So many times they don't really know what [that definition] is," Faubel said. "We look at their needs and thoroughly discuss them and show them the importance of a well-qualified superintendent. Then we set up interviews with the employer and candidate. They negotiate the salary and other terms between themselves."

The company accepts resumes from superintendents for its database. "We now have about 3,000 resumes, but that's over a number of years," Faubel said. "Some of these people are happy where they are, but if the right job comes along we could possibly put them in a better situation."

Faubel said the Executive Golf Search work is "a good fit" with his superintendent position since he's less busy during the wintertime, when the great majority of job searching is done.

Asked if he has seen a change in what clubs are requiring in superintendents, Faubel said: "Yes, they have to know how to grow grass, but they also have to know so many more of the ancillary things. Somebody who is computer illiterate today is going to have a tough time finding a job with a major course. Superintendents at the larger clubs have to be in tune with how to grow turf, but they also probably have one or two assistants who have just as much book knowledge as they do. So, it comes down to personnel management, being able to meet the membership and talk with people on their level. That's more important today than ever before: communication, communication."

"Different courses have multifaceted needs," Williams added. "Some really are looking for working superintendents and some for superintendents who are strong administrators. One of the positive things about [EGS] is being able to match the right individual with the golf course to make the proper fit."

"There is nothing better than putting two parties together and making it an excellent association for both," Faubel said.

"I'm excited to work with Jerry," Williams said. "What we want in the long run is to put good golf course superintendents at facilities that match their skill levels and have win-win situations."

Williams can be reached at 2501 Pine Ave., Manhattan Beach, Calif. 90266; 310-546-2530; email: brucewms@ix.netcom.com.

Faubel can be reached at 699 Westchester, Saganaw, Mich. 48603; 517-797-0677; email: gfaubel@concentric.net.

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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-

structed, plot size 14-by-15 feet each.

Random sampling from these large plots may be performed for statistical analysis. All 20 root zones were permanently divided with an 80-mil high-density polyethylene, extending from the top of the pea gravel bed to the surface creating a 12-

inch deep root zone. For identification 1/2-inch rebar was permanently placed at each corner of a plot. The entire green was GPS mapped with differential. GPS is a satellite positioning system that offers accuracy to within 18 inches, and permanent location. All plots were seeded with a 50/50 blend of L-93 and SR-

1119 creeping bentgrass sown at 2 lbs. / 1000 sq. ft.

EVALUATION OF ROOT ZONES

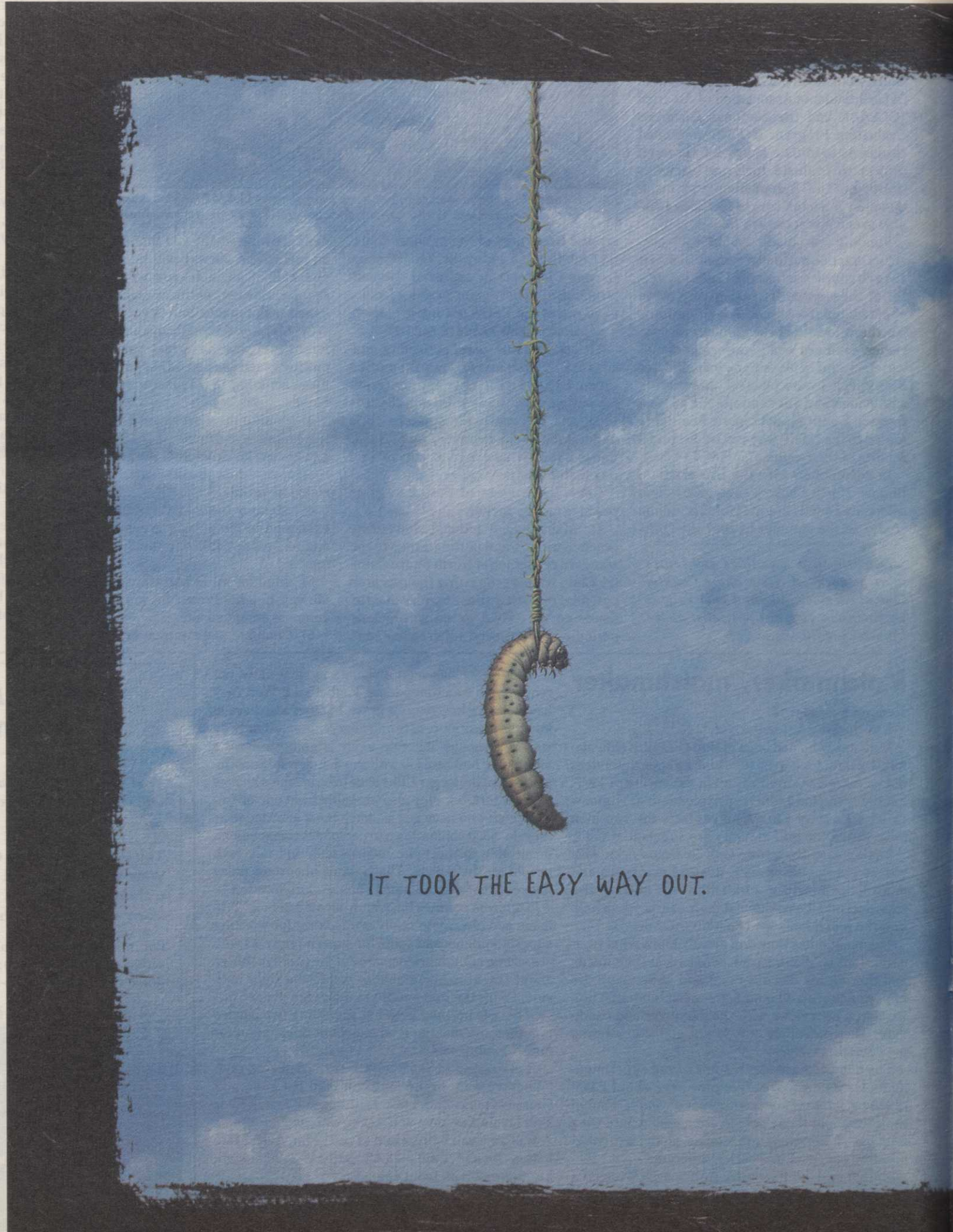
Amended root-zone plots were seeded on September 13, 1998. These plots were rated 14 days after seeding. Results are shown below as a percentage of cover. The blend of L-93 and SR-1119 covered quickly and shows good vigor.

SUBAIR SYSTEM

The putting green was de-

signed and built with four distinct gentle slopes. This configuration allows better acceptance of approach shots from four different areas around the green. These contours also provide four distinct surface and subsurface drainage patterns. Two separate subsurface drainage systems were installed. One system drains a single quadrant of approximately 1500 square

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IT TOOK THE EASY WAY OUT.

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 Bow. 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, 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. Davidheiser 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.

North Shore test plots

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feet. The companion system which drains the remaining area of the green was designed to accommodate the SubAir system.

A continuous permanent barrier of 45-mil polypropylene was installed to separate these drainage fields. This barrier extends from the clay base of the green to the surface of the green. This separation allows for the study of the impacts of forced gas exchange by SubAir through the drainage system of the putting green.

The SubAir operates in either vacuum or pressure mode, pulling, or pushing atmospheric air through the root zone. Excess water, carbon dioxide, methane, hydrogen sulfide, and other gases can be purged.

Increased concentrations of oxygen can be obtained within the root zone to encourage the growth of microbial populations, and assist in gas exchange with plant roots. The effect of air exchange on the temperature, and gas concentration in the verdure may also be documented.

FAIRWAY


The fairway was constructed to test the performance of 13 varieties of creeping bentgrass and six different root-zone amendments. Plots were randomly selected and are 5-by-5-foot, including three replications. All varieties were seeded at 25 grams per plot, or 2.2 lbs. per 1000 sq. ft.

Six plots were established to test rootzone amendments). Each plot was approximately 2300 sq. ft. Amendments were applied to native soil and disked into the top 4 to 6 inches. A 50/50 blend of L-93/SR-1119 was seeded at 2 lbs./1000 sq. ft.

BLUEGRASS VARIETIES

In addition to bentgrass varieties a bluegrass blend (is being evaluated for use on green surrounds. Evaluation will include turfgrass quality, low mowing (1 inch) tolerance, color, disease resistance, wear tolerance and recuperative ability. The blend was sown at 1.5 lbs./1000 sq. ft.

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