

Is golf getting greener?

Edit note: On March 12, Scientists and representatives of the golfing industry recently attended the second "Is Golfing Greener?" workshop at the University of North Carolina at Wilmington. The following highlights the presentation given by Todd Miller, executive director of the North Carolina Coastal Federation.

By TODD MILLER

Since our first conference, there is now a much better understanding of how golf courses and the environment can be compatible. Aiding in this better understanding is the work of a national committee of golfing and environmental interests. It

has worked to: Organize two national conferences that served as a catalyst for discussing golfing and environmental issues; prepared Environmental Principles for Golf Courses in the United States that provides a framework for how golf can co-exist with a healthy environment; and drafted performance measures and a collaboration guide that should assist in the use of

the principles.

Membership on this national committee is diverse. It includes representatives of the U.S. Golf Association, the Golf Course Superintendents Association, the U.S. Environmental Protection Agency, National Wildlife Federation, NC Coastal Federation, and others. The Center for Resource Management, based in Salt Lake City, has coordinated

the work of this project.

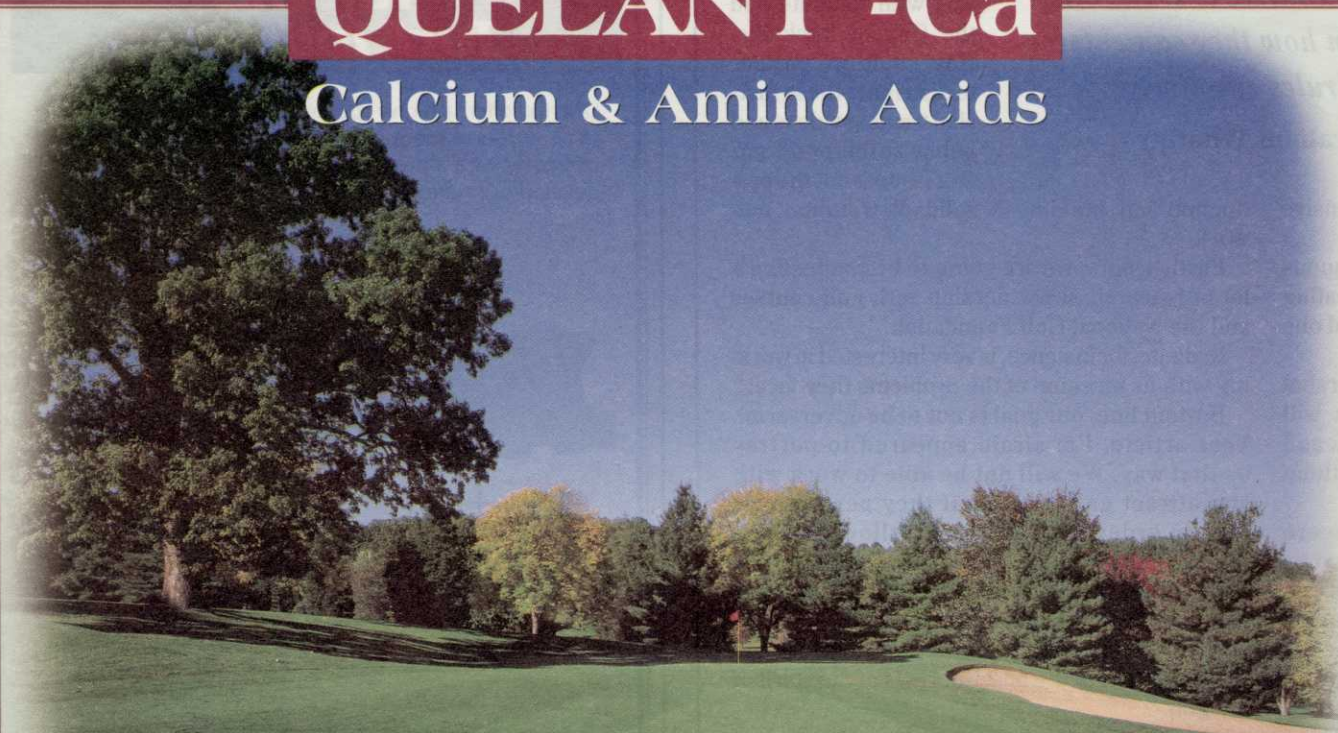
The committee made substantial progress by advocating environmental principles for planning and siting of golf courses, design, construction, maintenance, facility operations, and golfer education. Golfers and environmentalists involved in this effort agree that there are two basic ways to prevent environmental damage from golf courses.

First, golf courses must be properly planned, sited, and designed. They acknowledged that the presence and extent of some types of sensitive environments may render certain locations unsuitable for a golf course.

Second, once the golf course is designed, it must be con-

QUELANT™-Ca

Calcium & Amino Acids



CALCIUM DEFICIENCY CORRECTOR

Addition of calcium to the soil by traditional means is not usually efficient or effective in treating the calcium deficiency of turfgrass. Once applied, the common forms of liming materials can rapidly change to compounds that are insoluble in water and not readily available to the plant. Continuous applications over long time periods are necessary to effect even modest improvements in calcium uptake.

Quelant™-Ca is a newly available amino acid chelated calcium product that corrects calcium deficiencies in turfgrass upon application. Quelant™-Ca provides readily available calcium chelated with amino acids so that it is easily absorbed by the leaves and/or the roots of the plant regardless of most soil and water conditions. The unique formulation of amino acids used for chelation was



developed not only to facilitate absorption by the leaves and roots, but to increase mobility of the calcium within the plant as well.

Quelant™-Ca is normally applied as a foliar spray and may also be applied through fertigation. Either way, it is tank-mix compatible with herbicides, soluble fertilizers, insecticides, fungicides and plant growth regulators. It will even help improve the efficiency of most of these treatments by increasing their absorption and translocation within the plant.

Best of all, Quelant™-Ca is economical to use and it protects the environment.

Quelant™-Ca — a true systemic. It's new...it's unique...and nothing else works quite like it!

For more information about Quelant™-Ca call Nutramax Laboratories' at: 800-925-5187

The Nutramax Company
nutramax
LABORATORIES, INC.
AGRICULTURE DIVISION
Baltimore, Maryland



'Over the last five years, I have been extremely impressed by the commitment of golf course superintendents to minimize the impact their courses have on the environment.'

—Todd Miller

structed, maintained and operated based upon local environmental conditions. Even golf courses that are well constructed, managed and operated can have unacceptable negative environmental impacts if they are located in the wrong place.

Over the last five years, I have been extremely impressed by the commitment of golf course superintendents to minimize the impact their courses have on the environment.

I've also had the opportunity to work with some of the leading golf course designers in the country.

They have demonstrated to me that good design can avoid environmental damage. The initiative shown by many leaders in the golfing industry could serve as a role model for other industries once tangible environmental results are demonstrated. But translating the environmental principles into real environmental protection is still a formidable task, particularly since we have made no progress improving the process by which sites are selected for new courses in coastal North Carolina.

For example, a golf course currently under construction in

Continued on next page

Is golfing greener?

Continued from previous page

Brunswick County illustrates the need for better siting, design and construction standards. This course was sited and designed before the environmental principles adopted by the golfing industry became available.

It is located immediately adjacent to a primary fish nursery area and open shellfishing waters. It was approved by the state with standard requirements for erosion control. Since construction started, the course has received repeated State inspection reports stating that it is out of compliance with erosion control standards. One report states that the degree of damage to the environment has been severe.

Recent water quality studies in Sunset Beach and Calabash indicate that golf courses are contributing nutrients to coastal waters. Estuaries are susceptible to nutrient pollution. Nutrients can accelerate eutrophication resulting in algal blooms, reduced transparency, undesirable shifts in algal and fish populations, and even fish kills.

These studies found that Chlorophyll Total Nitrogen, and Total Phosphorus values in areas which drain golf courses are comparable to areas which drain high density, septic tank dependent areas.

If courses are sited directly adjacent to fragile estuaries without significant vegetated buffers, the impact of fertilizer use even at agronomic rates can be unacceptable.

The environmental benefits of improved operation and management will never compensate for poor site selection since it only takes minimal disturbance to alter the productive ecological balance of coastal estuaries. Coastal waters simply have little tolerance for pollution.

Golf courses attract associated real estate development. The magnitude of this attraction is described in the *Wilmington Morning Star* (October 19, 1997) article entitled, "Land Rush: Sales Boom at Brunswick County Golf Communities."

The article quotes a local realtor saying, "There's still a lot of dirt to sell in Brunswick County." This additional development magnifies the environmental damage to the coastal environment. If better sites for golf courses are selected, then it is likely that this development will also be attracted to more environmentally compatible locations.

Significant progress has been made in the last five years in our understanding of golf courses and the environment. It is my impression that the operation and management practices at golf courses have improved with the help of this new information. The focus should now be on improving the selection of sites for new golf courses.

Voluntary measures that encourage improved site selection will only be marginally effective as long as conscientious developers are forced to compete with developers who profit by taking advantage of rules that allow significant environmental degradation. The only way to level the playing field is to adopt minimum rules for avoiding the environmentally sensitive coastal areas.

This is an objective that the environmental and golfing community should accomplish together over the next five years.

Golf Course Classifieds

To reserve space in this section, call 207-846-0600 ext. 230

HELP WANTED

SHAPERS WANTED

Golf Course Construction Shaper Needed. Must be willing to travel. **Fax resume and date available to 616-547-7009.**

● SHAPERS AND FINISHERS ●

Quality and experienced individuals needed. Minimum of 3 years experience.

Excellent potential to grow with aggressive company.

Fax resume with references to:

EAGLE GOLF CONSTRUCTION, INC.
(810) 632-6270



MARKETING MANAGER

The Milwaukee Metropolitan Sewerage District seeks a professional to manage its Milorganite marketing department. **Requirements:** BA in agronomy, marketing, horticulture or soil science with emphasis in turfgrass management or a related field required. Experience in marketing management desirable. Excellent written and verbal communication skills as well as demonstrated analytic and research capabilities are needed for successful performance in this position. Equivalent combinations of education and experience may also be acceptable. Residency within MMSD boundaries required within one year. **Salary:** \$55,012-\$91,320, excellent employee benefits. Applicants should submit application material (including completed supplemental application) to MMSD by May 15, 1998; however, MMSD will continue to accept applications until the position is filled. Application material can be requested by calling (414) 225-2114, e-mailing tdeleon@mmsd.com, or visiting the MMSD web site at www.mmsd.com.

MMSD is committed to equal employment opportunity and to non-discrimination in all aspects of the employment relationship.

FOR SALE

PERSONALIZED GOLF FLAGS

by DuPont Solar Max Nylon

BRITISH POLES

Buy Direct and Save

1-800-476-7005

FOR SALE

Quality Used Landscape-Irrigation Equipment

- 1985 Finn T150H Hydroseeder (2000hrs) mounted on 1982 GMC Topkick
- 1995 Case 1845C (1100hrs)
- 1994 Toro Workman 4300-4WD (650hrs)
- 1995 Ty-Crop MH-400 Material Delivery Unit
- 1989 Vermeer 1250 Chipper (1039hrs)
- 1995 Vermeer LM40 Pipe Puller (826hrs)
- 1991 Vermeer TC-4 Trench Compactor (460hrs)
- 1991 Vermeer AB-12 Auger Backfiller

FOB Detroit, MI. Call (248) 624-1700

FOR SALE

ARCH STYLE STEEL BUILDINGS

Build it yourself and save money! For cart and equipment storage. Factory direct. Save money on buildings in stock. 30 x 40; 40 x 50; 42 x 76; 51 x 90. Easy to erect. **Archway Steel Buildings: 1-800-344-2724.**

GOLF COURSE FOR LEASE

Nine hole golf course located on Lake Travis near Austin, Texas is seeking an on-site manager/lessee to run an established course. For more information contact:

Mr. Jack Tyler, General Manager,
Venture Yacht & Country Club
(512) 267-1128.

SERVICES

ARCHITECTURAL SERVICES

Shindler & Associates

New design • Renovations • Restorations
Affordable on site architectural assistance.

Call Brian Schindler

(207) 324-4829

(207) 793-2478

GRUND GUIDE

SINCE 1987

Complete Marker Systems

- Sprinkler Yardage • Practice Range
- Cart Path • Fairway & Tee Plaque
- NEW • Sprinkler ID (zone, control box, recycled water)

Laser Measurement Services

- We Measure • Laser Rental

Golf Print Services



"The Yardage Detectives"

(800) 971-7233 FAX (626) 969-3724

LASER MEASURING

Laser measuring and sprinkler yardage markers. We do it all! Laser measure & installation of custom metal yardage markers for all types of sprinkler heads. **Fairway Yardage Designs: 1-800-368-2448.**

POND & LAKE LINERS

- Buy Direct from fabricator 20, 30, 40 mil PVC, Hypalon, HDPE, & P.P.
- Custom fabricated panels of up to 25,000 S.F. available.
- Material Only, Material & Supervision, or Complete Installation service.
- Your inside line on containment.



Colorado Lining
INTERNATIONAL

1-800-524-8672

1062 Singing Hills Road • Parker, CO 80134
303-841-2022 • Fax 303-841-5780

HOW TO ORDER A CLASSIFIED AD

RATES: \$90 per column inch (25-35 words, including a bold headline). Each additional 1/4 inch is \$30. If ordering a logo, please include an extra \$45; for a blind box, please include an extra \$20. All line ads must be prepaid. All rates are per insertion. To place your classified ad, mail your ad copy with payment to: **Golf Course News, P.O. Box 997, Yarmouth, ME 04096.**

SERVICES

SOLID BRONZE SIGNAGE

- Yardage Markers
- Tee Signs
- 100, 150, 200
- Commemorative
- Laser Measuring
- Sprinkler Tagging
- Yardage Books

FROM TEE TO GREEN, INC.

(800) 932-5223

Fax: (219) 637-6874

MARK ELIOT DESIGN LANDSCAPE & GOLF COURSE DESIGN

CLUB LANDSCAPING

Design

New Construction

Renovation

&

GOLF COURSE DESIGN

Master Planning

Renovation

Construction Management

MARK E. SOSNOWITZ, ASLA

MARK ELIOT DESIGN

PO BOX 11188

GREENWICH, CT 06831

203-972-9131 Fax: 203-972-9132

We'll Seal Your Lake Empty or Full!

ESS-13 Eliminates
The Need For A
Synthetic Lake Liner

Seepage
Control, Inc.

P.O. Box 51177
Phoenix, Arizona 85076-1177
800-214-9640 Fax 602-829-1106

Since 1958