GOLF 'SCAPING

An open space forever & ever

▲ **The Merit Club land contains 2,200 trees, 1,400 of which are native to the area.** *Photo by Henry C. Schwenk*

■ The Merit Club in Gurnee, Ill. has received a singular honor: its 320 acres have been granted a government easement, preserving it as open space for perpetuity.

The gently rolling course, owned by Bert Getz, includes 30 acres of wetlands, a 30-acre savannah and a two-acre tree nursery. One thousand, four hundred of the course's 2,200 trees are holdovers from the original site.

"When I decided to convert our family farm into the Merit Club, the goal all along was to save the scenic and natural character of the land," says Getz. "I've owned the property for 25 years and didn't want to see it paved or roofed over. Granting a conservation easement completes my efforts to save the site's beauty for future generations."

Developing a 'unique piece of property' attracted veteran superintendent Oscar Miles to the project.

Developers had originally approached Getz about building an 1,800-home luxury golf course community on his property.

He decided to keep just 100 acres and to allow a small subdivision to be built on another 100 acres.

"I wanted to do something right," Getz told a reporter for the Chicago *Tribune* last year, "and not let the almighty dollar make the decision."

Getz began working with GorLands, a corporation for open lands and an affiliate of Open Lands Project, to establish the easement in 1991. Details were finalized last fall.

"The Merit Club is a particularly exciting project for CorLands," says director Tom Hahn. "Not only is it a model in environmentally-sensitive golf course design, but it also sets an example for other owners who realize that the open space their courses provide in areas of rapid growth is invaluable."

The easement eliminates any commercial office or residential development on the site. Buildings may only be constructed in two designated "maintenance" and "club house facility" zones (totaling 15 acres) and must be directly related to operation of the golf course. If golf course operation ceases for any reason, the land must remain open and be allowed to revert back to its natural state. These restrictions apply even if the land is sold.

A 'super' challenge—Course superintendent, Oscar Miles—a superintendent for 32 years—says he accepted the position at CorLands after he realized that here was an opportunity that doesn't come along often: a chance to develop "a unique piece of property." Miles was involved the project from the planning stages, and he and his men did the landscaping finish work.

"Each hole is a corridor," says Miles. "We think in terms of one hole at a time, from tee to green."

Pennlinks, Penneagle and Penncross varieties are used at CorLands. The turf from tee to green grows from two inches to six inches, to one-foot high roughs. Natural grasslands grow as high as four feet.

The course includes a sod nursery, and Miles recently began a native tree nursery.

ELSEWHERE

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Rolling greens: is it a help or a hindrance?

■ Rolling putting greens to enhance green speed has been practiced for a number of years.

Advanced lighter rollers that are not so prone to compacting the turf have re-ignited interest in rolling—especially on sand-based greens.

Last summer, a study was conducted by Drs. Karl Danneberger, Ed McCoy and Thomas Parobek at Ohio State University.

Two locations with different construction methods were used. The first was a 21-year-old USGA-constructed Penncross green. The second site was a 10-year-old Penncross turf established on native Brookston silty-clay loam.

Both sites were mowed at 5/32nds of an inch with a John Deere walk-behind mower. Rolling was done with a Toro Greensmaster 3000 with rolling units.

What they found out, as reported in a recent edition of OSU's "Turf News:"

● As measured by a stimpmeter, rolling increased green speed significantly on both USGA and native soil greens compared to the non-roll control.

On the USGA sand green, rolling increased green speed between 5 and 11 inches compared to the control. On the native soil green, speed increased between 5 and 13 inches compared to the control. (However, increasing speed with successive rollings was not observed on the native green, as it was on the USGA green.)

● Comparison of stimpmeter readings of the rolled vs. control plots immediately preceding the rolling treatment revealed no difference in green speed on both the USGA and native soil greens. From these data, it appears that rolling increases green speed, but the effect lasts no longer than 24 hours.

● Rolling had no effect on water infiltration over the duration of this study.

● Rolling negatively affected the overall visual quality of the turf. Rolled plots were more off-color and showed some wear.

The conclusion the research team reached was this:

"Rolling for a short duration is a means of increasing putting green speed with minimal detrimental agronomic effects. However, the long-term use of rolling may be detrimental to the turf."

GOLF COURSE MAINTENANCE

Deadline extended for book

■ "Superintendents' Handbook for Golf Course Maintenance & Construction" has extended its deadline for submission of entries until April 10th. Entries which are received will then be used to develop chapters on topics such as putting greens, fairways, roughs, wildlife management, equipment, IPM, etc.

"Contributions at all levels, from superintendents across the country, have been received," says editor Dr. Trey Rogers of Michigan State University. "This is an excellent opportunity to give back to the industry, and to receive full recognition, now and forever, in a published form."

Contributions should be one to five pages in length and include photos. To receive a contribution packet, please write: "Handbook for Superintendents," P.O. Box 799, Okemos, MI 48805-0799.

Weekend crews work

■ Frank Siple, golf course superintendent at Royal Lakes Golf and Country Club in Flowery Branch, Ga., believes in hiring part-timers for weekend maintenance work. That allows his regular crews the weekends off.

Writing in "Thru the Green," Siple says:

"We have found a better attitude on Monday mornings. Employees don't seem to be as tired, stressed out or over-worked. The weekend break acts as a buffer or even a mini-vacation, which we all need.

"Second, many overtime hours are cut out of your budget. This savings can be thousands of dollars a year. This money could be used to hire another summer crew member or simply help to lower your budget."

Quite obviously, the weekend employee will also be paid less than a regular full-time employee, further saving money.

Finally, the weekend crew can serve as a "feeder" system to your regular roster. "These employees may show skills and interest for a full-time or summer position," Siple says.

One more hint from him: you might want to hire an extra weekend person so that crew members can rotate weekends off.

"It works for me," Siple says.

GCSAA honors pair in Dallas

■ Allan MacCurrach and John J. Spodnik received this year's Distinguished Service Awards from the Golf Course Superintendents Association of America at the opening session of last month's GCSAA conference and trade show in Dallas.

"On behalf of our members, the GCSAA board of directors is very pleased to honor these two gentlemen," said President Randy Nichols. "Allan's and John's careers embody the highest traditions of this award."

As senior agronomist for the PGA Tour, MacCurrach makes advance agronomy visits to sites for Tour, Senior Tour and Nike Tour events. He also assists Tournament Players Club superintendents in developing their agronomy programs. He has been a GCSAA member since 1962.

Spodnik has been superintendent at Westfield Country Club in Westfield Center, Ohio, for 34 years as it grew from nine to 36 holes. He has been secretary/treasurer for the Northern Ohio GCSAA chapter for 34 years. He has been a GCSAA member for 35 years.

The GCSAA also gave its Leo Feser Editorial Award to Thomas A. Christy of Riverside Golf & Country Club, Portland, Ore. The award is presented annually to the author of the best article published in the association's magazine. The article for which Christy received his award was "Redesigning Equipment Washdown Pads," which appeared in the April, 1993 issue.

Fertility management of sand as a growing medium for greens grass

by James Latham
USGA Green Section

■ The development of high sand content sports fields and golf greens has been heralded as a major step toward the multi-purpose, all-weather use once thought possible only with artificial turf. It seems, however, that these rugs have as many problems as natural turf—except inside domed stadiums.

The sands are far from foolproof; finding the right components for a mixture does not end problems in a sand-based program. Fertility management can be difficult, and the related problems as insidious as any faced by a turf manager.

The major problems are related to high leaching potential, low cation exchange capacity, nutrient balance difficulties and other problems with pH levels. These, however, were considered worthwhile trade-offs when compared to problems associated with easily-compacted, poorly-drained (and aerated) soil mixtures used in the past.

High-sand growing media are supposed to support traffic and drain readily. That same porosity makes nutrient retention quite difficult, and nitrogen is particularly subject to loss due to the very nature of the sandy substrate. Ammonium ions (NH_4) are rapidly converted to nitrate ions (NO_3) in the well-aerated sand. The nitrates have no physical attraction to negatively-charged soil or organic matter and are readily washed out of the rootzone by the sand's high permeability.

Fertility of high-sand content soil is difficult, since you lose 'the forgiveness of the soil,' Latham contends.

Slow-release?—At first, this leaching loss indicates that slow-release nitrogen sources are naturals for growing turf in porous media. This is not always the case, since sand is essentially sterile or at least has a small population cf micro-organisms.

The release of nitrogen from sources requiring microbiological breakdown is, consequently, slow for a while. These products are ureaformaldehydes, methylene ureas, process tankages, sewage sludges, etc. Encapsulated particles, IBDU, etc. are not so limited.

The restricted release does not last long, but must be considered in the early stages of use. Combinations of soluble and insoluble nitrogen sources produce the best results until the micro-organism population grows.

Another difficulty is low cation exchange capacity. We have lost the forgiveness of the soil.

Clays and organic matter had a tremendous capacity to absorb cationic nutrients, which reduced leaching loss. In sand/peat mixtures, however, the total cation exchange capacity is around five, and that means that this mode of nutrient retention is very low.

Additionally, the normally weak adsorption of potassium on clay or organic matter is readily overcome by irrigating with hard water, which contains high concentrations of calcium and magnesium ions.

Furthermore, we have always heard that phosphorus does not leach but accumulates in the upper rootzone. This does not occur in sands. The phosphates go right on through—just like the nitrates.

Trace elements may be lost in the same way, but the manner of their availability is not as clear because the chemistry of these nutrients has not been worked out in this medium or with turfgrasses.

pH problems—One of the most confounding problems with sand relates to its pH. We usually expect sand to have a neutral pH of 7.0, but this is seldom the case—at least in the central U.S. Soil tests show pH levels up to 8.0 or more, indicating high calcium levels.

Sands with alkaline reaction are subject to close observation and careful application of trace elements thought to be needed. In most cases, it is iron.

These nutrients should be applied individually to determine the turf's reaction. Shotgun mixtures are not recommended because of potential toxicity from overapplying the wrong nutrient. But don't forget that the alkalinity also offers some protection against toxicity due to excess copper and zinc levels.

Nutrients should be applied as in hydroponic gardening until the root system is well established and has cycled through death and re-establishment of new roots several times.

The residual left by dead roots has the best potential for maintaining nutrient stability throughout the rootzone. It also provides the nutrition needed to develop adequate populations of beneficial organisms. Only then can a stable plant community be established and nutrient balance based upon a well-established fertility management program be developed.

Water watch—One final word of caution on the possibility of contamination.

These growing media with little or no buffering capacity are susceptible to contamination by poor chemical water quality, overuse of pesticides, and even silting in by dust storms or muddy water.

All in all, sand as a growing medium for turf is a major advance in our field. It is imperative, however, to select the sand carefully, approach nutrition programs with knowledgeable caution, and revise almost everything you've learned about turf management using natural soils.

Since we have lost the forgiveness of the soil, we must make up for the loss with a better understanding of the material with which we now work.

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