

Continued from page 23

The reason for iron's popularity is its ability to enhance the synthesis of chlorophyll which results in greener color without increased nitrogen use. Putting greens in Wisconsin also respond favorably to iron applications because of cooler soil temperatures throughout much of the growing season that limit the microbial release of iron from organic sources along with pH levels that are just high enough to start limiting iron availability in the soil.

Before concluding this discussion of putting green nutrition, I feel it is necessary to stress the importance of regularly scheduled soil testing. Pick a reputable soil testing laboratory that uses extraction procedures that are calibrated to Wisconsin soils. Be sure to submit representative samples that are the depth recommended by the soil

testing laboratory. Testing every two years will assure you of staying on top of any changes in the nutrient levels in your putting greens.

The second part of this article will appear in the next issue of the *GRASS ROOTS*. It will cover the following aspects of putting green management in Wisconsin.

Aerification	Mowing
Spiking	Irrigation
Verticutting	Pesticide Applications
Rolling	Winter Protection
Turf Groomers	Snowmold Control
Top Dressing	<i>Poa annua</i> Control
Overseeding	Changing pH's
Wetting Agents	Additional Special Topics

CEDAR CREEK: Birthplace Of A Golf Course

(Part One)

By Pat Norton

Have you ever been involved in "bar talk"? Bar talk, by definition, is when avid golfers get together in post-round situations and begin discussing golf courses. I personally have had bar talk conversations with people ranging from golf professionals and club members to our pediatrician and fellow church members. They all assume that since I work in the golf course business I must really love talking about golf courses.

The conversations usually go something like this — "Have you ever played Hole in the Woods?" or "How about that third hole at Okeechobee Mounds?" Closer to home, every superintendent has probably been cornered and asked about remodeling those two or three bad greens, adding a dozen sand bunkers, and building those long needed ladies tees (now known as front tees). Usually the idea is that all of these projects will be absorbed into the existing maintenance budget, accomplished with in-house labor, and completed before the end of the year.

"Wouldn't that be great? Let's talk to the green committee about that, right guys? If they don't agree, then we should get together, buy some land, and build our own golf course! Membership here at Prairie of the Swamps is too darn expensive anyway!" That, my friends, is called bar talk.

The point is that golfers do love to talk and they do love to dream. Sometimes that's how new golf courses come into being. Cedar Creek is the result of one man's dream coming to fruition on 200 beautiful acres between Onaska and Holmen in La Crosse County.

Initial site visits involved Terry Clemons, original project developer, and Bob Chalsma, project engineer. These preliminary visits determined site suitability for residential development. After Bob Lohmann was retained as golf course architect it was soon determined that the site was very suitable for golf course as well as residential development.

This site is close to La Crosse and will be within one mile of the new freeway connecting up with I-90. It also has 120 feet of elevation change, dense woods over some of the site, sandy soil in many places, and some really spectacular views — all great features for a new golf

course project. But the key to starting this project was the availability of and accessibility to high quality residential lots on the property. These 1 to 1¼ acre lots range in price from \$40,000-\$65,000 depending on location, accessibility, and view.

After determining that the site was indeed suitable for this type of development, the golf course portion of the project began. Preliminary clearing and grading on holes four and five began in October 1987. These two holes were constructed on extremely hilly and wooded land. It seemed impossible, in my amateur view, to build golf holes through this maze of natural features. Where is the green supposed to be? Puzzlement was quite literally my attitude in the early stages of Cedar Creek. I couldn't imagine the land changing its appearance so abruptly and completely. But through the assurance of Phil Sage, project architect for Lohmann Golf Designs, I soon began to understand the grading plans and see what was happening. And there was a lot of finality in the three Cat D-6 dozers daily moving out trees and knocking down hills in enormous quantities. I got into the construction mode quickly.

Engineering, survey and layout, and construction itself continued in April 1988. As work proceeded, everybody quickly learned to trust the design plans, the layout stakes, and the earthmoving operators. Charlie Kisow and I were responsible for on-site project supervision, which meant anything from surveying, to lining up construction materials, to daily communication with the contractors. We were both relatively inexperienced at this earthmoving game, however, so it worked out best in the early stages to trust Terry Links' judgment. It was always stressed to us by Bob Lohmann that we were looking for a certain quality in the finished product. How it was achieved — the mechanics and methods — was Terry's decision as the primary earthmoving contractor. Daily cost figures were kept and periodic assessments were made — total hourly machine costs divided by total estimated yardage moved equals cost per yard. These costs were constantly compared to budget and shared between Terry Link and ourselves to insure that the earthmoving stayed on budget.

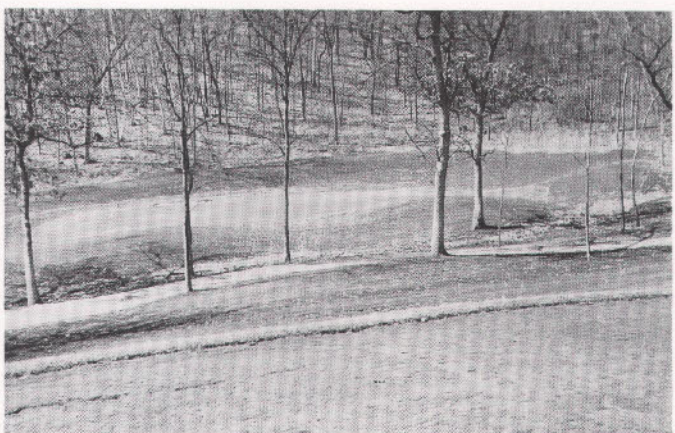
Continued on page 27



A view of the fourth and fifth holes looking back from no. four green.

The early months of the 1988 construction season involved a lot of stopping and starting on this entire project. The original developer was unable to acquire the investors necessary to finance the project and was finally forced to sell out completely. The people who took over fortunately continued on with the original plans and contractors. By this time we were staring the Fourth of July square in the eye and knew full well that we'd all have to work a lot of overtime in order to get even nine holes seeded in 1988. After reworking our construction schedule we still felt that this goal was possible, if the weather cooperated. After numerous meetings with our new clients the decision was made to go ahead with the project.

At this point we still had quite a lot of earthmoving yet to do, but also had three greens that had been shaped to subgrade by Scott Schaul of Midwest Golf Development. Scott has been in golf construction as a finish shaper for quite a number of years. He was involved with his father, Hank Schaul, in many projects in earlier years. The Reedsburg Country Club addition in the late 70's saw the involvement of both Scott and Hank, Bob Lohmann and Randy Witt, currently of the Oneida Golf and Riding Club.



No. four green is far up in a coulee (valley) — could well be a disease hotspot.

We now had construction in various stages happening over about half the site. All of this organized chaos does require careful planning and organization. We had no time to waste or rain days to lose, and fortunately for us there was a big drought in progress. Few days were lost to the weather. Usually the best planning took place at day's end over a case of Old Style. Everybody was able to hash over progress to date and examine upcoming tasks. There were



The fifth hole at Cedar Creek — a very breathtaking hole. The elevation drop 40' from tee to landing area.

also numerous midnight discussions between a "fully krauzened" Scott Schaul, the voice of experience, and me, the groggy wake-up victim.

After green sites were filled or cut to within six inches of plans by the mass grading contractor, Scott shaped the green to subgrade with a John Deere 550B dozer. This dozer was used for all green, tee, bunker, and mound shaping. The tiling crew came in next and installed four-inch tile backfilled with 1/4" washed pea gravel. Schaul then returned and ringed in the entire putting and bunker surfaces with topsoil. The next step in this process was to bring in and place a four-inch blanket of pea gravel, followed by two inches of coarse sand (in this case it was actually called rice gravel). The pea gravel was finish smoothed with a Toro Sand Pro, while the rice gravel could only be smoothed using aluminum landscape rakes.

Our rootzone mix was provided by Waupaca Materials/Greensmix in conjunction with a local contractor. We topped off all greens with 12" of mix that consisted of 80 percent medium textured sand and 20 percent Canadian sphagnum peat. The specifications for the top mix were supplied by Judith Gockel of Agri-Systems in Texas. We felt that this testing by an independent source was money well spent. We did have some problems with rocks in the delivered mix. This we attributed to loader operators picking up rocks with their huge buckets of peat. There were also a few problems working the bugs out of Waupaca's new blender, but everything was solved to mutual satisfaction. I'm very happy with the quality of the delivered mix although I am keeping my fingers crossed that there aren't many rocks hiding in my greens.

The irrigation design and equipment were provided by Reinders Irrigation. They recommended Toro 660's and 680's for this application, with the Network 8000 satellites, central controller and computer. The irrigation installation was subcontracted by Reinders to Leibold Irrigation of Dubuque. I first met John Leibold in 1987 and feel fortunate to have had him install our irrigation system. He and his men all had good previous experience, worked very hard, and throughout the job took the time to do quality installation. If anybody out there needs irrigation installation, contracting with John Leibold will not be a mistake. The jury is still out on the Toro 660's and 680's as far as I'm concerned. So far, I'm not impressed.

After irrigation installation the green area is then finish graded and smoothed for sodding and seeding. This step is very much a transitional one. Up to this point the entire

Continued on page 29

area is still a construction zone, but once finish grading takes place, the area has to stay perfectly smooth. Add in the time pressure to get the seed or sod in place during the optimal seeding period and you can probably guess how frustrating the seeding phase can be.

Sodding of these green, tee, and bunker areas is really enjoyable. During this phase everybody gets their first taste of how the features will look. We sodded around the edge of each tee, green, and bunker with two widths of bluegrass sod in order to give exact definition to the various shapes of the features. In this phase the idea is to be liberal, using sod instead of seed where possible. For example, all bunker fingers are sodded, as is the entire surrounding area. Our sodding budget allowed for 16,000 square yards of bluegrass sod, of which 9,000 square yards were used in 1988. In 1989 we'll probably go far over budget due to some very severe areas needing to be sodded.



Four year old John Ryan looks back and says, "Give me a ride on your shoulders, Dad, that hill is too big."

Actual seeding began on September 1 with hydroseeding of severely sloped, hard-to-reach roughs and hillsides with a Kellogg blend of fine leafed fescues. The hydro-

mulching then followed in a completely separate operation, as we didn't want any seed getting caught in the mulch instead of the soil. Roughs were seeded with a different Kellogg blend of 40 percent perennial ryegrass, 30 percent Kentucky bluegrass, and 30 percent fescues — all improved varieties. Greens, tees, and fairways were all seeded with certified Pennncross treated with NutriKote plus Apron. Pennncross may give us some heartaches down the road on our fairways, but should perform nicely on tees and greens. All seeding, except for hydroseeding and putting surfaces, was accomplished with Brillion seeders. All Pennncross was blended with Milorganite to insure accuracy and ease of handling. Seeding straight Pennncross without Milorganite as a carrier is not advisable.

Overall, this project made great strides in 1988. Many times it seemed as if there would be no Cedar Creek. But, with good planning and design, good construction technique, and great on-site supervision by Midwest Golf Development, the project prevailed. Midwest Golf had no easy task controlling this project. We were under the guidance of Lohmann Golf Designs, but had big responsibilities in our own right. These responsibilities included project supervision, layout, shaping and feature construction, drain tile installation, finish grading (with tractors, culti-mulchers, harrows) of all large areas, finish grading of all small areas (with rakes and a lot of effort), brushing, and all seeding operations. That's a lot of responsibility. Then add in the fact that I left Midwest Golf in September to become the superintendent for Cedar Creek. That gave even more responsibility to Charlie Kisow, who replaced me. Charlie proved up to the challenge and did a fine job.

The original construction schedule called for completion of the entire course in 1988, but due to financial delays, we scaled back to finishing nine holes in '88 with completion of seeding in spring 1989. We hope to open our first nine around August 1, 1989. The second nine will be seeded this spring, which I dread. But we have no choice. The second nine should be ready to open by May of 1990. Progress on the finishing of this project will be reported on in a future issue.

Reinders Brothers Turf Conference and Show

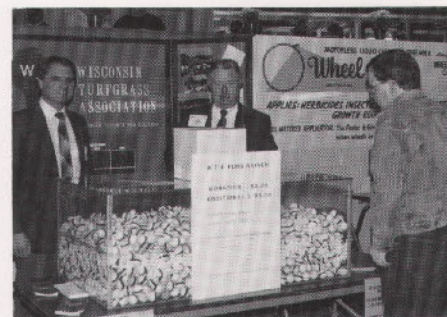
By Randy Smith

"The customers made it possible" were the words from Reinders Sales Manager Ed Devinger in describing Wisconsin's largest turf and irrigation conference, equipment show, and service clinics. The conference and show was sponsored by Reinders Brothers, Inc. from Elm Grove, Wisconsin and was "staged" in the Waukesha County Expo Center this past March.

The Center was literally "bulging at its seams" with an attendance of over

1600 persons for the two day event. Weather cooperated too! In addition to the educational sessions, workshops, and clinics, over 34 exhibitors displayed their products and equipment.

The sessions began with the ever popular coffee and donuts and ended with door prizes, refreshments, and conversation. All in all, it was a very successful event to help prepare us for the long season ahead.



How many?



"This is serious business!"



Reinders sales staff.