The Golf Superintendent

Time, money and personnel present greater problems to today's superintendent than anything Mother Nature can dish out.

by Maureen Hrehocik, managing editor

WT&T Profile of a Superintendent

- Been a superintendent ten years
- Manages an 18-hole, privately owned, membership restricted course
- Belongs to a local golf course superintendents' association

A little more than half of the respondents have a planned replacement program for their equipment.

Yet another Midwestern golf course superintendent agreed.

"Our biggest problem is coming up with adequate funding to accomplish the standards demanded by the management and golf patron. We want to satisfy the golfer, but in the long run, do what's best for the course."

Survey results show the WEEDS TREES & TURF respondents to have, on the average, 10 years experience as a superintendent and managing a privately-owned, membership restricted 18-hole course. Eighty-seven percent are members of local golf course superintendents' associations with 66 percent of those surveyed members of the Golf Course Superintendents Association of America.

Typical Annual Budget

- Herbicides $2,396
- Fertilizers $11,245
- Fungicides $7,985
- Seed renovation/establishment $1,735
- Seed for winter overseeding $2,933

Greens fees at the courses averaged $6 for nine holes (a high of $18 and a low of $3.25) and $13 for 18 holes (a high of $50 and a low of $5). Rounds played have steadily increased, as have maintenance budgets, however not as much to offset burgeoning demands on the superintendent's time, crews and areas of responsibility. Most responses came from the South, Midwest and East.

In 1981 the average respondent's maintenance budget was around $150,000, jumping to $167,277 in 1982 and $183,568 in 1983. The range was from a high budget of $545,000 for one course to a low of $21,000 for another.

Equipment

A little more than half of the respondents have a planned replacement program for their equipment. A vast majority preferred hydraulic to mechanical drive mowers. Ninety six percent serviced and repaired their own equipment.

In the golf cart area, most superintendents were not involved in the concession with...
only a little less than 5 percent maintaining the golf cars. Courses averaged 40 cars with E-Z-Go the preferred manufacturer.

There was almost an even split of those who delayed purchasing turf equipment the past two years and those who didn’t.

None of the respondents picked up grass clippings on fairways.

Irrigation systems were mainly the newer automatic type with good controls, while some had the older quick-coupler systems. Most planned to improve the irrigation system.

**Major Turf/Weed Problems**

- Goosegrass
- Crabgrass
- Clover
- Dandelions
- Plantains

**Weeds, trees & insects**

While weather presents a perennial problem to the golf course superintendent, dandelions, crabgrass and clover add to the natural problems he must contend with. Grubs, sod webworms, cutworms and armyworms, are the most troublesome and frequently-cited turf pests. Japanese beetles, scales and webworms are the three most bothersome tree and shrub insects.

**Chemicals**

A majority of superintendents prefer liquid concentrates in the chemical formulations they use. A majority used IBDU (Par Ex) slow release fertilizer, sulfur coated urea, Scotts brand, or Milorganite. The average turf fertilizer budget is $11,245; $2,895 for insecticides, $2,396 for herbicides and $7,985 for fungicides. All budgets in the areas of herbicides, insecticides, fungicides and fertilizers have increased in the past two years.

"I would like to see longer-lasting insecticides come on the market," said one superintendent.

"There has been more turf damage over the last few years as supplies of the older hydrocarbon pesticides are being used up. Some courses are spraying insecticides routinely which not only increase hazards to spray personnel, but also may lead to resistance."

Most superintendents answering the survey base their seed purchases on variety name rather than price and budget. On the average, they spend $1,735 for seed renovation and $2,933 for winter overseeding annually.

Other superintendents and industry publications provide the best buying sources followed by extension agents, advertising, and promotional literature.

While management is expecting more from the superintendent, many respondents said the need for being recognized as a turf professional was still great.

"I find it hard to convince the management of the course that there are different conditions on the course that I must contend with and to have them view me as a professional who knows his job. Trying to control this facet of the operation is a bigger headache than any turf problems I may have."
Pinehurst

Grooming a champion takes experience, long hours and meticulous care -- three of Wayne Maples’ and Lew Metts’ specialties

by Maureen Hrehocik, managing editor

“Intense” is the name of the game at Pinehurst Country Club.

The Pinehurst, NC, vicinity has one of the highest concentrations of golf courses in one area in the world. The six-course complex (the first active golf course complex built in the U.S.) totals 850 acres with 630,000 square feet of greens with an average of 1,500 people playing a day during peak season. The club is open 12 months a year and had a whopping 1983 business increase of 126 percent.

“Intense” is a household word at Pinehurst. Ask two of its superintendents, Wayne Maples and Lewis Metts.

Maples’ prestigious No. 2 course (this year named to Golf Digest’s Top 10 courses in the country), averages 260 people playing a day during peak season.

There’s more pressure here to keep the level of maintenance up because of heavy play ...”

Lew Metts, left, is in charge of Courses 1, 3 and 5 at Pinehurst.

Lofty origins
Donald J. Ross designed courses 1 through 4 at Pinehurst. It is course No. 2, though, with its small, sloping greens, deep bunkers, loose, sandy soil and rough accented with love grass, that has emerged as the architect’s tour de force.

Because of its sloping greens and fringe areas, No. 2 has earned the dubious distinction of being the most difficult course in the world to play from within 50 yards of the greens.

“Sparse-looking greens are my main problem,” said Maples.

Tees, greens and fairways are common bermudagrass. Maples

Metts, in charge of courses 1, 3 and 5, starts his day at 4:30 a.m. during the busy summer months and usually ends it around 8 p.m. There is still not enough time to get everything done.

Both men’s courses are part of an overall $1.55 million maintenance budget, with each course having its own individual budget and equipment.

Maples and Metts work with Lee Dalton, superintendent on course No. 6 and Bob Farren on course No. 4. Bill Donnelly assists Metts and Barry Carter is another Pinehurst assistant superintendent.

The club’s computerized tee time system turns people away on many days.

Because of the caliber of the course, it must be kept in tournament condition at all times. That’s pressure, pure and simple.
Par 3 on Pinehurst No. 2. Inset shows Poa annua in bermudagrass fairways.
uses a CBS perennial ryegrass overseed. Mowing is done every day or as needed. Greens vary from 1/4 inch to 4/32 inch; fairways and tees 1/2 to 3/4 inch; roughs 2 inches with 1 1/2-inch intermediate roughs. Aerifying is done from tree line to tree line with a Ryan Greensaire. Topdressing is a 3-2-1 sand, soil, sawdust mixture. The irrigation systems (Toro, Griswold and Moody) on five courses are automatic, while No. 2 is semi-automatic and manual.

“Golf is such a psychological game. An apple green color may be healthy for turf, but it won't be aesthetically pleasing to most golfers,” said Maples, a quiet 35-year-old who considers experience the best teacher.

“I was raised on the courses at Pinehurst and manages the development's most prestigious course, No. 2.
here at Pinehurst,” he said.

He worked with his uncle, Ellis Maples, who designed course No. 5.

Starting off his career as a superintendent at Pinehurst, Maples left to build a course in Alabama, worked at Lake Surf (now Woodlake) and Foxfire, both in North Carolina, and then returned to Pinehurst. Short courses at Virginia Polytechnic Institute and Clemson have rounded out Maples’ work experience.

Pinehurst uses Toro Parkmasters, Greensmasters and Groundsmaster fairway mowers, Jacobsen Greensking walking greens mowers and Cushman-Ryan trucksters and outfront mowers. The more than 500 golf carts are taken care of outside the turf maintenance operation.

**Working with Mother Nature**

The climate is Metts’ biggest problem.

“We’re in the transition zone and it’s hard to deal with,” he said.

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"Our disease program is both preventive and curative," he said. "There's a big difference growing grass here than in other parts of the country."

Metts, 40, a superintendent for the past 12 years, got his B.S. in Agronomy from Penn State, studying under Dr. Joe Duich. He has been keeping up with the golfers' divots, ball marks and raking traps.

About half of Pinehurst's players are members, the others guests and tourists.

Metts grew up in Johnstown, PA. He worked at Norfolk Golf Club in Pennsylvania, did a stint in the military, was superintendent at Oxbow in Ohio for three years and worked at Parkersburg Country Club in West Virginia before coming to Pinehurst.

Needs in the industry

Both men, while recognizing very distinct needs in their industry, are realists.

"The greatest challenge for me has been keeping up with all the changes in equipment and chemicals," said Metts. "There have been more changes in the last year than I've ever seen. The EPA has banned chemicals that I've used with success for years. The equipment, on the whole, though, is better."

Equipment-wise, Maples disagrees.

"I don't mind change," he says. "There is always going to be change, but it has to be progressive change. Some technology has surpassed its usefulness like a lot of the hydraulic junk that's on the market. Everything seems to be hydraulic and with hydraulic equipment there's more chance of damaging the turf."

Metts would like to see the market introduce a small, lightweight mower that won't compact soil and better tee mowers.

Both superintendents use extension agents and universities for advice when they have a problem they can't solve.

"I'll ask anyone for help," said Metts. "North Carolina State has been very cooperative; for that matter most turf schools across the country have been helpful. I don't even try to know everything."

"The greatest challenge for me has been keeping up with all the changes in equipment and chemicals."

Metts also says superintendents' associations are useful for the "intangible benefits" they offer.

And on days off will you find Maples' out playing the course he nurtures during the week? An emphatic "no."

"I really don't have enough time to become a good golfer. Besides I go out and see everything that's wrong or that I'd like to do better. I can't help but look at it from the maintenance angle."
Danny Quast and arborist Dennis Fermenich stand in the Club's nursery.

Milwaukee Country Club

Dan Quast delegates responsibility and encourages ideas to turn turf graduates into great superintendents.

by Bruce F. Shank, executive editor

Danny Quast and arborist Dennis Fermenich stand in the Club's nursery.
When the Golf Course Superintendents Association of America coined the term “thinking superintendent” for information-sharing sessions at its conference and show, it may have been thinking of Dan Quast, superintendent at Milwaukee Country Club, Milwaukee, Wisconsin.

Quast, a 20-year veteran superintendent, enjoys the respect of MCC’s 350 members, and consequently their support for his “thinking”. They support a full-time arborist and crew, a tree replacement program to counteract losses from Dutch Elm Disease, a tree nursery, a student training program, an annual bluegrass reduction program, and Quast’s time away from the Club to travel to national turf conferences and to be an instructor at Jacobsen Manufacturing Company’s student seminars in Racine, WI.

After graduating from the turf program at the University of Massachusetts, Quast was hired by W.A. Cleary Chemical Corp. to work on its golf course, then became superintendent at Troy Country Club in Troy, OH, and later superintendent at Springfield Country Club in Springfield, OH. He moved to MCC in the fall of 1973 to help implement a number of improvements in the course recommended by golf course architect Robert Trent Jones.

Milwaukee Country Club was founded in 1926. The course, designed by Colt Allison, served its members faithfully for more than 42 years when the decision was made to host the Walker Cup in 1968. Fairways were narrowed and permanent bridges were built to cross the Milwaukee River. About this time the membership started to feel the course was too rewarding to the low handicapper and too punishing to the high handicapper. “The course needed to be updated,” says Quast. “In three short years we made all the changes Jones suggested. We repositioned and added traps. We expanded tees to withstand increased play and to make the golf shot more challenging. Aprons around greens were eliminated and some greens were expanded and traps added. Trees were planted along certain fairways to create doglegs. In general, the hazards were made more realistic for today’s golfer.”

Reducing Poa annua
Tees, fairways, and greens at Milwaukee Country Club are a mixture of South German and Seaside bentgrass. A major problem with annual bluegrass appears to be solved by a program put together by Quast, USGA Green Section Director Stan Zontek, and Jim Latham of the Milwaukee Sewerage Commission. It combines clipping removal, reduced compaction by use of light-weight equipment on fairways, low fertilization levels, an improved irrigation system, and use of Rubigan on greens.

Fairways are mowed with a prototype Jacobsen HF-5 with baskets to remove clippings. Tractors and reel gangs are confined to the bluegrass roughs. Milorganite is the only fairway fertilizer. A two-row Toro Irrigation system was installed in 1981. Fairways are aerified once per year in September.

Quast uses Cleary’s FLUF on the greens. He is very pleased at the new turf fungicides (Bayleton, Subdue and Rubigan) and uses them all for his greens depending upon the problem. “No one chemical is a panacea for all turf diseases,” Quast says. “I mix the new fungicides with Thiram to cover as many diseases as I need.” Quast is especially pleased with the secondary benefit of Rubigan as a suppressant to annual bluegrass.

Arborist on location
When Quast arrived at Milwaukee Country Club he was faced by the casualties of Dutch Elm Disease (DED) and massive defoliation by cankerworms. Since he had his hands full with the redesign and knew the elms lining the fairways would eventually fall to DED, Quast proposed the club hire a full-time arborist to develop a treatment and replacement program for trees, and to be responsible for the plantings around the clubhouse.

Quast had discussed his tree problems with Dennis Fermenich who was completing work for the North Shore Elm Research Project. The challenge interested Fermenich so much he applied for the job and got it.

The first year Fermenich cut down 102 elms on the course and took counts of the elm bark beetle using pheromone traps. He used weak elms to attract the beetles, then killed them with tree-killing injections of cacodylic acid. Removal of dead and dying trees, dormant oil sprays, injection of Arbotect, and fertilization of healthy elms has reduced the loss to one or two trees per year.

Fermenich replaced the elms with a variety of trees, including zelkova, plane tree, maple, linden, honeylocust, pin oak, red oak, and ash. These younger trees act as a frame for the remaining, majestic elms.

Many of the trees come from the nursery established by Fermenich behind the maintenance building. Whips are purchased and grown in the club’s nursery to adapt to local conditions. They are moved onto the course when they reach three- to four-inch caliper.
Fermenich and his crew of two keep the clubhouse grounds immaculate and act as a reserve to the golf course crew when necessary.

The next challenge for Fermenich is the tussock moth which has doubled each of the last three years. He has already established a prevention program using Bacillus thuringiensis. He hopes to catalog each tree in the next

"We had to cut down 102 elm trees the first year," said Fermenich

The Milwaukee River separates one tee from a green. Wire baskets filled with rock stabilize shoreline.
Nestled in the shadow of Mt. Hood, a Salem country club is becoming more picturesque and efficient with Bill Swancutt's renovations.

Renovation tops Bill Swancutt's list of priorities for his Salem, OR, course, Illahe. The superintendent of the 18-hole, private course who's Indian name means "country" or "place," says the William Bell design has caused some problems that he is working on correcting. Rebuilding tees are a top priority.

"Some of the tees have settled and we're in the process of rebuilding those," Swancutt said. "We've also worked on hole No. 4 which is a par 5 hole."

Other changes aren't as drastic. Off the first and the tenth tee there is an 80-foot drop to the fairway. "It's very hard to keep mowed," Swancutt said. "I'm going to try using Embark (growth regulator) to keep the turf under control. I've used growth regulators before and they worked well."

Swancutt also uses Toro Turf Pro 84 triplex mowers on his predominantly annual bluegrass course and says the time they save is worth the extra cost to him. He likes the idea of being able to add attachments to the machines.

Greens are mowed six times a week at 1/8 inch; fairways are mowed three to four times a week at 5/8 inch depending on conditions; tees are also mowed three to four times a week at 4/16 inch. He
aerifies in the spring and fall with a Ryan Greensaire. He also overseeds twice a year, once in the spring and once in the fall with a CBS blend, "to stress the poa we have," Swancutt says.

Tees are overseeded and top-dressed with Penneagle bentgrass in the spring and summer and are aerified once a year.

Greens are fertilized with 6 to 6.5 pounds of nitrogen per thousand square feet; tees with 3.5 pounds and fairways with 2.8 pounds. Roughs are not fertilized.

**Disease prevention**

"I use more water solubles in the spring and fall," Swancutt explained.

His disease prevention program consists of treating an affected area with a contact solution and then retreatting it with a systemic.

"Our biggest problems are fusarium in the winter and anthracnose in the summer," he said.

He contracts out all spraying "that way we only interrupt play for a day. I don't use chemicals for poa control because it's too expensive."

Fairways are irrigated with a Rainbird automatic maxi control system. Roughs are irrigated 35 feet out. Swancutt is trying to reduce his expenses to keep his $200,000 maintenance budget in line by overseeding fairways with ryegrass to cut water usage. He sometimes uses Aquagro as a wetting agent.

"Our fairways aren't real wide and we don't mow all the way up to the tees so that saves time," he said.

**Challenges**

Swancutt graduated from Oregon State in 1976 with a degree in agronomy. He worked part-time for awhile at the Eugene Country Club. He then moved to Tualatin Country Club before coming to Illahe three years ago. He is a member of the Golf Course Superintendents Association of America and the Oregon GCSA.

"The biggest challenge I face here is communicating with the membership," Swancutt said. "I have a good rapport with the greens committee and we discuss improvements to the course. We have a long list of priorities for improvements."

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**Bill Swancutt**, superintendent of Illahe Country Club, Salem, OR.
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year to predict other problems and needs.

The golfization of turf grads
When Quast graduated from the University of Massachusetts turf program he knew little about becoming a superintendent. Leo Cleary, brother of W.A. Cleary of Somerset, NJ, hired Quast to work on the company course. He taught him the ropes of being a superintendent. Now Quast tries to do the same thing for recent turf graduates at MCC.

Each year Quast meets some of the best turf graduates in the country when he attends state and national turf shows and teaches at Jacobsen's student seminars. He picks one or two at a time to learn the ropes at his course. After two years they are ready to be superintendent almost anywhere says Quast.

Steve Blendell, a graduate of the University of Massachusetts, recently left the assistant superintendent position at MCC to be superintendent of another Milwaukee area course. Mike van Sistine, a Michigan State University graduate moved up to assistant superintendent. His previous responsibility was to manage the installation of the new irrigation system. Karen Bruning, a graduate of ABAC, Tifton, GA, is quarter-backing the Poa annua reduction program.

Quast believes strongly in the GCSAA certification program for superintendents. He is also editor of the newsletter of the Wisconsin chapter of GCSAA. He knows that much is gained by working with other superintendents and with suppliers, such as the Jake HF-5 basket arrangement which is now on the market. He not only wants superintendents to think for themselves, but to think together.

"No one chemical is a panacea for all turf diseases." Quast

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