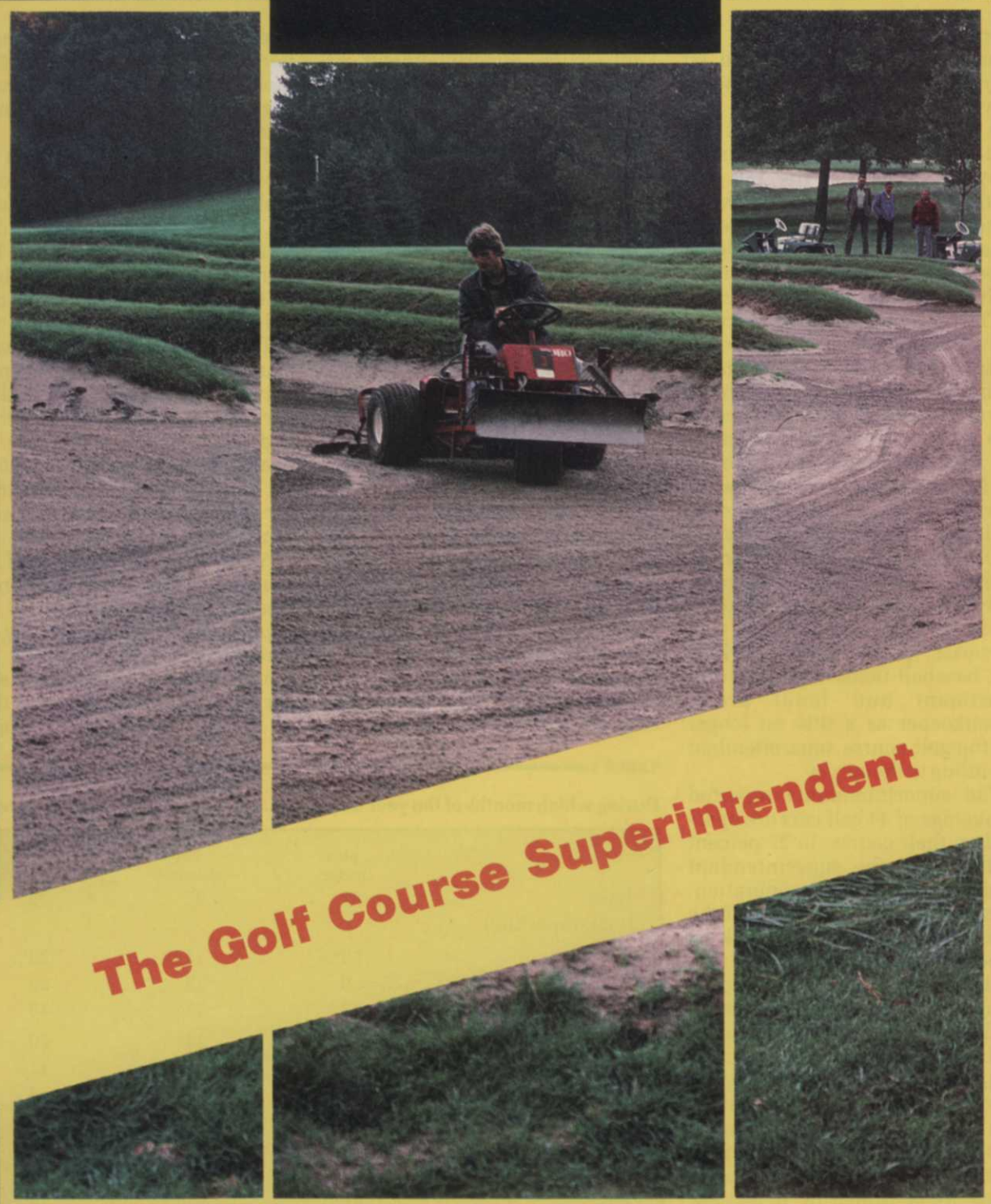


LANDSCAPE MANAGEMENT



The Golf Course Superintendent

WEEDS TREES & TURF

GOLF: THE BLUE CHIP OF THE GREEN INDUSTRY

More than 20 percent of the golf course superintendents polled by *Weeds Trees & Turf* magazine in November say their course is part of a real estate venture. Recent National Golf Foundation statistics show 80 percent of the 150 golf courses opened in 1982 were linked to real estate developments. Clearly the future of golf is highly dependent upon fairways lined with homes and condominiums.

The property of the golf course is being realized for its value. The superintendent's role in the management of the property may have increasing significance as a result. The survey showed 80 percent of the superintendents are responsible for the clubhouse landscape, 28 percent in charge of the clubhouse building, 22 percent responsible for tennis courts, and 21 percent in charge of the Pro Shop. Responsibility extended for some superintendents to pools, sod and tree nurseries, picnic areas, parking lots, baseball fields, a marina, and apartment and hotel areas. Greenkeeper as a title no longer fits the golf course superintendent according to the survey.

The superintendents reported an average of 44 golf cars are operated on their course. In 27 percent of the cases the superintendent manages the golf car operation. Pros do the job in 48 percent of the cases. Others perform the task on 25 percent of the courses.

The salesman for the turf supply company is the superintendent's leading advisor on maintenance problems, being consulted twice as frequently as the extension agent, 61 to 30 percent. Following extension agents are other superintendents as advisors in 25 percent of the cases. The technical staff of associations are consulted by 15 percent of the superintendents for maintenance problems.

Nevertheless, participation by superintendents in associations is extremely high. Nearly half the su-

perintendents belonged to both the Golf Course Superintendents Association of America and their local association. A third indicated some involvement with the United States Golf Association Green Section.

Superintendents do most of their budgeting and planning from October through December. Chemical buying is heaviest in March through May. Equipment buying is greatest in January through April.

The survey indicated a greater percentage of private and semi-private courses than NGF's figures. The percentage of municipal courses, 17 percent, agreed with NGF. Our survey respondents represented private courses in 53 percent of the cases and daily fee/semi-private in 35 percent. This may account for the 22 percent attached to real estate developments. But, the dominance of real estate venture courses may tip the scales toward private and semi-private in the future.

Two thirds of the superintendents manage 18-hole courses, 23

percent manage 9-holers, and 10 percent manage courses of 27 or more holes. On an average, the superintendents oversee 132 acres of course area.

The average crew consists of 1 foreman, 4 year-round employees and 5 seasonal workers. A fourth of the superintendents had no foreman whereas 10 percent have 2 or more foremen, a figure aligned to the percentage of 27 or more hole courses.

The message that cart paths are management assets has been received by the superintendents participating. Eighty-eight percent had cart paths of some type. Asphalt was the construction material for two-thirds of the group, gravel for 45 percent, and cement/concrete for 9 percent.

An average of 60 acres of golf course is irrigated. Greens are irrigated by 94 percent of the superintendents, tees by 92 percent, and fairways by 68 percent. Another 11 percent said some fairways are irrigated. Only three

Continued on page 26

TABLE 1 During which months of the year do you(Multiple answers)

	plan budget	buy chemicals	buy equipment
Base: (total reporting)	91	97	92
January	15%	15%	23%
February	9	22	28
March	2	33	38
April	4	34	29
May	3	25	11
June	8	16	4
July	3	19	5
August	9	14	2
September	18	20	2
October	31	20	13
November	33	22	17
December	27	9	18
As needed	-	1	9

percent said the entire course was irrigated.

To gauge the activity of golf courses we asked for rounds played each month throughout the year. Approximately half of the superintendents reported no rounds played in December, January, and February. A third reported no activity in March. But nearly half reported activity year round.

The busiest months for superintendents nationally are June, July and August with more than 4,000 rounds per month each as an average. The slowest months are December and January with an average of roughly 725 rounds played each month.

Superintendents have a high regard for education with only 5 percent saying a turf, agronomy or horticulture degree was unnecessary. Nearly 60 percent felt such a degree was a great help and more than a third felt it was helpful. Compare this to a 16 percent figure for landscape contractors who indicated such education was some-

TABLE 2

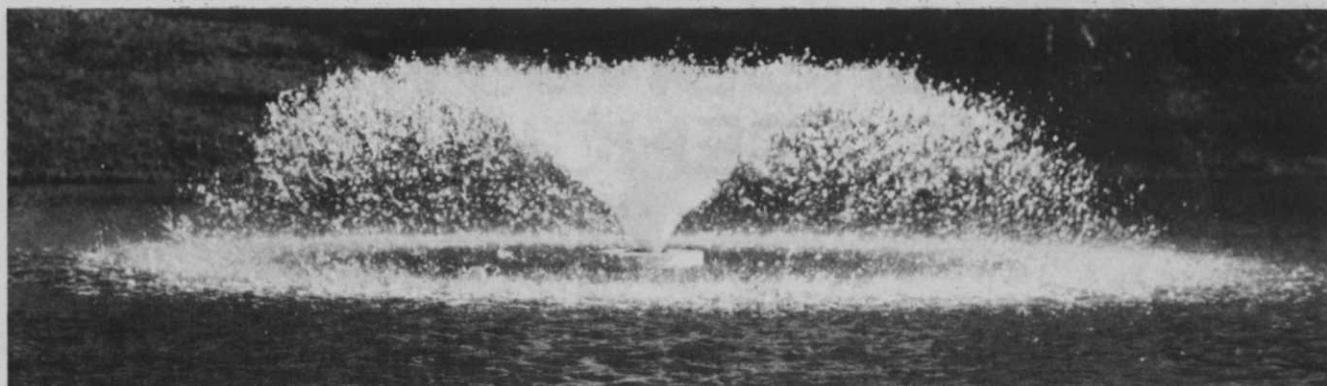
Please list by month the estimated number of rounds played on your course.

Base: 72 (total reporting)	Number of rounds played:					
	Mean	0	1 — 1000	1001 — 3000	3001 — 5000	Over 5000
January	698	51%	35%	7%	3%	4%
February	793	50	35	6	6	4
March	1274	33	36	17	10	4
April	2109	7	38	31	17	8
May	3271	-	24	36	24	17
June	4018	-	15	33	28	24
July	4336	-	14	28	35	24
August	4137	-	14	31	33	22
September	2987	1	22	36	31	10
October	2017	3	40	38	11	8
November	1220	22	46	19	10	3
December	711	46	36	11	4	3

thing they look for in hiring.

Between the National Golf Foundation's figures, the GCSAA and USGA educational support, and now a forum of organizations determined to protect the vitality of the game of golf, this prime Green

Industry is in good hands. It may not be experiencing the same phenomenal growth of the 1960's, but it's foundation is so strong it enjoys a security not found in other fields. It's the blue chip stock of the Green Industry. **WTT**



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Woehrle's Wonderland **EXPERIENCE COUNTS AT OAKLAND HILLS**

By George L. Zeis



The latest mower at Oakland Hills is hydraulically and electrically operated and used extensively on fairways and greens. (Inset) **Communication** is the only way to make sure members know how you maintain and improve their course. Woehrle keeps in touch with members.

Experience counts in the business of golf course management. Each day Oakland Hills Country Club, 20 miles north of Detroit, draws from the experience of Ted Woehrle, former president of the Golf Course Superintendents Association of America.

Woehrle started his career with a degree in agriculture from Purdue University and then built his base through superintendent positions at Chicago's Beverly Country Club, The Country Club of Florida in Delray Beach, and Point-O-Woods in Benton Harbor, Michigan. He has held the head job at Oakland Hills for 14 years.

The posh club was completed in 1919. There are currently 300 acres

under his care. The two courses, one par 70 and the other par 72, contain 118 sand traps. The longest fairway is 577 yards.

Woehrle reports directly to the Oakland Hills Country Club's General Manager. He operates on a job description basis. In other words, all his major responsibilities are spelled out in writing and have been approved by the Board of Directors.

There is also a Greens Committee which functions as a monitoring, recommending and advisory group responsible to the Board of Directors only. This committee is appointed by the Board to serve at the pleasure of the Board of Directors. It consists of a chairman, eight

Class A members, two lady golfers, Greens Superintendent and the Club Golf Professional. The Club Manager and one member of the Board of Directors are officio members of the Greens Committee. The committee meets each month from March through October.

Woehrle is a firm believer in communicating with all groups involved. "I cannot assume that Club Board members are fully aware of the maintenance and improvements being made," he pointed out.

"For example, work was needed on our large water hazard. Pictures were taken before improvement

Continued on page 32

work was started, while it was being done and after the job was completed. There is nothing that will beat pictorial reporting on situations like this."

What does it take to operate and maintain the Oakland Hills Country Club? "Lots of money, lots of planning and a lot of attention to detail," Woehrle pointed out. "Our budget is about \$400,000 annually."

Woehrle points with pride to the tournaments that have been held at Oakland Hills. They include four U.S. Opens—the fifth to be played on this course in 1985; a Western Open and two PGA Tournaments. In 1981 the Second Annual Senior U. S. Open (for those over 50 years of age) was held at Oakland Hills Country Club and attracted a number of professional golfers.

During the peak summer months, 25 people are on the golf course payroll. The season runs from April 1 to December 1. Peak employment starts in June and tapers off gradually in September. College students constitute the largest number of part-time workers during the summer months.

Ten of these employees work about 10 months of the year. This group functions as a skeleton crew during the off-peak work season. Three remain on the payroll the entire year.

Top wage scale for the longer period workers is \$6.25 per hour. Summer help is paid \$3.75 per hour. Full time employees are covered with Blue Cross/Blue Shield

"I can't assume that Club Board members are fully aware of maintenance and improvements."

insurance, have paid holidays and come under the Teamsters Retirement Program.

While Oakland Hills may not have the difficult layout of Pebble Beach, it has real eye appeal. All fairways are creeping bentgrass. Automated irrigation of all fairways is available during dry periods. Fifty-five thousand feet of irrigation line, starting with eight-inch



Careful attention to cutting equipment minimizes down time. Woehrle takes a personal interest in equipment maintenance.

mains down to one-and-one-half-inch lines carry water down all fairways. Heads are spaced 90 feet apart.

"We have three wells," Woehrle pointed out, "from which water is pumped into two reservoirs, one of which is an acre-and-a-half. "During dry periods we use as much as a million gallons of water per night. Watering is done three times per week during drought periods. This means we could use as much as 12 million gallons of water per month. We had a dry 1982 summer and did a lot of irrigating."

Approximately 400 pounds of bentgrass seed are used per year to maintain the excellent quality of fairway turf. Barring loss of turf, for whatever reasons, Woehrle pointed out that his bent turf withstands considerable wear and tear but holds up well.

Approximately 45 tons of various analysis fertilizer are used per year. Ordering is done in October; delivery is made in November and payment is made in December. Handling fertilizer purchases this way, Woehrle pointed out, gives him a savings of about nine percent.

Approximately 50 gallons of herbicide are used each year and in-

cludes dicamba, MCPP and 2,4-D. Applications of herbicide are made in the spring when plant growth is at its best.

Mowing and maintenance equipment take a good share of the annual budget. Seventy mowers are owned by the Oakland Hills Country Club. Most are the reel type. Rotary mowers are used only for trimming along fence rows and similar areas.

Seven gang mowers of the reel type are used, each cutting a swath 18 feet wide. Fairway mowers, including the tractors, cost approximately \$25,000 each. The reel mower attachment, alone, costs about \$9,000 each.

A special Toro reel mower was purchased in 1982 for \$16,000. It is hydraulically and electronically operated (via a gas engine) and is used extensively on fairways and greens. It cuts an 84 inch swath. Another special feature of the mowing unit is the attachment for catching grass clippings.

Mowers are purchased from local dealers and include Toro, Jacobsen and Roseman.

"With the rather delicate nature of the mowers," Woehrle pointed out, "it is important to have the same operator use the same ma-

A Job for the Golden Bear and Larry Pakkala

SAVING ST. ANDREWS

By Thomas Paciello



Triplex mower is much advanced compared to mowing methods when the course opened in 1888.



Holes like this will be preserved to maintain the historic and scenic value of the original course.

"There's too much waste. Golf course superintendents should be looking for ways to save money." That is the attitude that helped Larry Pakkala revive a financial sagging Mid-Ocean Country Club in Bermuda. His talent for cutting costs and still producing top quality landscapes landed him the superintendent job at St. Andrews Golf Club, Hastings-on-Hudson, NY.

For many years St. Andrews G.C.'s claim to fame was its founding date of 1888, making it the oldest golf club in the country. It has recently drawn much publicity when an attempt to subdivide and sell it was forestalled by golf legend Jack Nicklaus. With the club in poor financial shape members were planning to sell off the club real estate. Nicklaus was contacted and rescued the club from devel-

Members were planning to sell off the oldest golf club in the U.S.

opers and bankruptcy by purchasing it through his company, Golden Bear Enterprises.

With the historical legacy of St. Andrews intact, Nicklaus and his associates proceeded to develop a plan to bring the club back to solvency. The result was "St. Andrews Village," as the new complex will be called. St. Andrews Village will be a totally redesigned 18-hole golf course and condominium complex. The original 18 holes (on 130 acres) will be remodeled into 14 holes while four new holes are constructed on the 70 acres of newly-purchased land. The 210 planned condominiums will also be built on the new land which overlooks the course.

The conversion from near-bankruptcy to St. Andrews Village

Continued on page 36

has not been an easy one. Zoning regulations, planning boards and local politicians and environmentalists have set construction back, but Nicklaus hasn't flagged in his support. "This is a hard place to build," said Pakkala. "The costs are high and there is a lot of bureaucracy. There hasn't been any golf course construction in Westchester county in 20 years." St. Andrews is planned to shut down on October 31, 1982, and reopen in April, 1984. With construction being planned for November, 1982, golf course construction should take 15 months and condominium construction three years to complete.

During the club's down-time Pakkala will don his construction hat to supervise and oversee the numerous contractors. "I'll be particularly responsible for those contractors who haven't done golf course work before," said Pakkala. He'll also be coordinating the grading, seeding and sodding efforts. The course will be rebuilt to USGA specifications and the putting green and driving range will be enlarged. A godsend for any superintendent, automatic irrigation, will also be installed. The club had been using a manual system.

With membership at St. Andrews down to 100 (from 300) cash flow was a major problem and Pakkala's attitude of fiscal efficiency was just what the doctor (at St. Andrews) ordered: "I pride myself in cutting corners and still delivering a good product," said Pakkala. "With the money you save you can help bring your club back to better shape."

"I pride myself in cutting corners and still delivering a good product."

That was just what he had done at Mid-Ocean Country Club. Pakkala restructured the maintenance operation at Mid-Ocean and helped put the course on firm financial ground. His accomplishments there did not go unnoticed.



Pakkala, who even drives compact trucks, will oversee and supervise the contractors during reconstruction.

Golf Force, the golf course construction and maintenance subsidiary of Golden Bear Enterprises, learned of Pakkala while doing business with Mid-Ocean. When Nicklaus took over St. Andrews, Golf Force didn't have to look far for a fiscally responsible superintendent. After four years at Mid-Ocean Pakkala joined St. Andrews in March 1981.

"You should spend money to accomplish specific goals," said Pakkala. "A lot of superintendents tag on an inflation figure to their budgets each year and expect them to be boosted accordingly. Every year you should look at your budget and your course and decide what has to be done."

When a problem pops up that has not been budgeted for, Pakkala gets the money somehow; if its not readily available (as is often the case) he'll cut out a lower priority program.

In some ways, Pakkala points out, the golf course superintendent has been his own worst enemy. "The American golfer has been spoiled by the lush, plush condi-

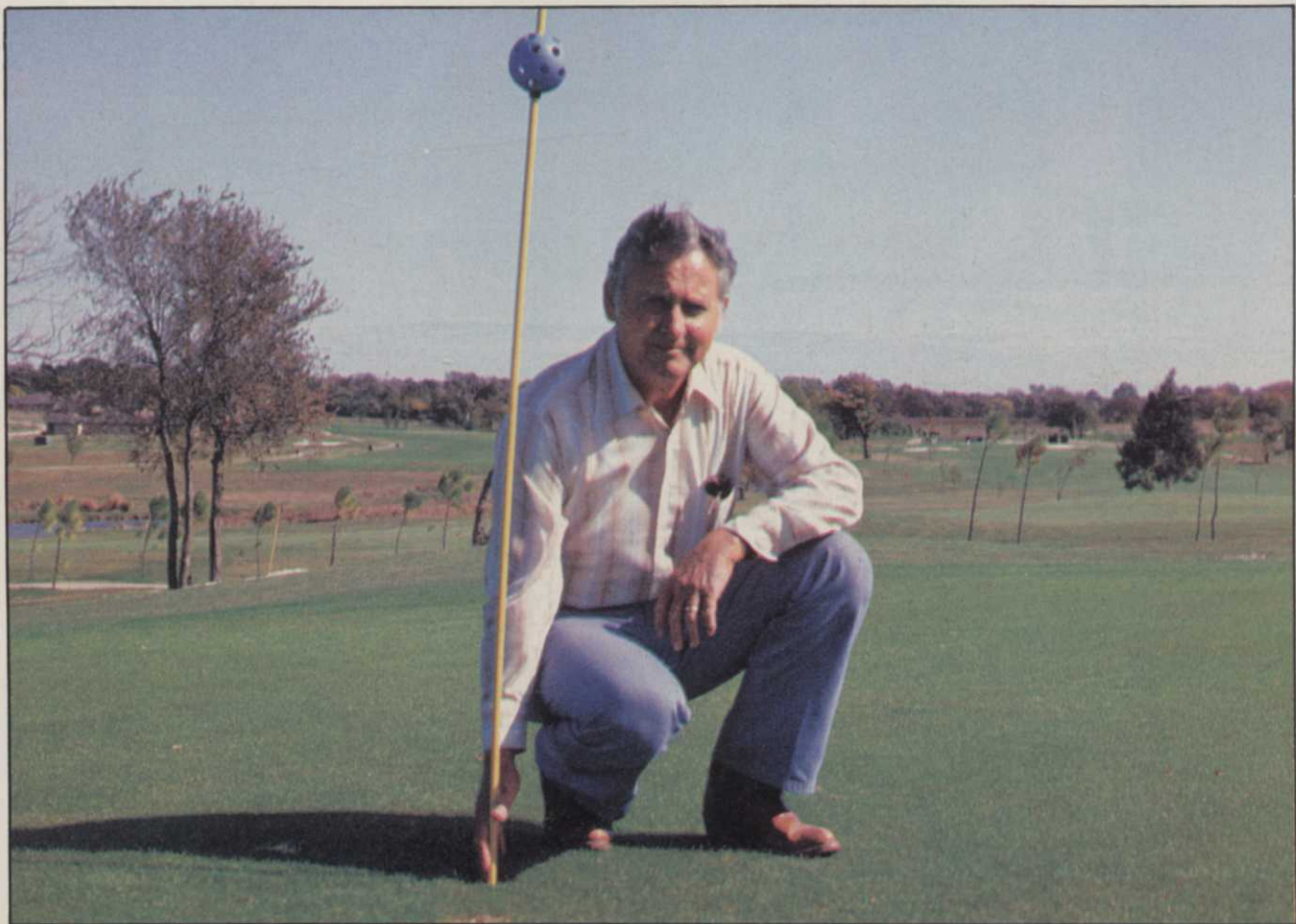
tions supplied by superintendents over the last 20 years," said Pakkala. "Golfers also travel a lot more so they get to see good conditions all year round." He added that with tougher economic times and tighter natural resources superintendents will be using different practices than they have in the past. They will be letting the rough grow more, not spraying as frequently and using different varieties of grasses to get better results with less maintenance. "It is the duty of the superintendent to convey his ideas to the members," he said. "If you don't create good public relations with the members you are in trouble. Most members are professionals. If you can explain what you are going to do in a diplomatic way, they will understand and you'll come out ahead."

"Some members complain because we're reverting to some of the old techniques, but I've never had a problem. I've got a good relationship with the membership here." Pakkala noted that some superintendents don't like to tell

Continued on page 80

Richard Hartline's Goal
**ANOTHER STAR
FOR TEXAS**

By Maureen Hrehocik



Hartline kneels proudly on one of the rebuilt greens.

If Richard Hartline has his way The Shores Country Club in Rockwall, Texas, will soon be one of the leading championship courses in the state. In four years he has put the course well on its way with a series of refinements and improvements. The course has the potential, sitting on the shores of Lake Ray Hubbard in the center of a \$200,000 and up housing development. As he states, "There is plenty of room near the clubhouse to accommodate a gallery for championship matches."

When Hartline became superintendent of the course, located 30 miles east of Dallas, he immediately

reworked and reshaped the greens. He solved, for the most part, a severe drainage problem. He planted over 5,000 trees and installed a \$100,000 cement cart path. It was all accomplished in about a year, and, Hartline says, he hasn't finished yet.

The 18-hole semi-private course was designed by Ralph Plummer. Hartline says one of the major selling points of the housing complex is the golf course.

Future improvements include diverting some of the water from the lake to make water traps. Hartline still has a drainage problem to contend with on some of the

fairways. Nine more tees will be leveled and senior citizen tees will be added. Plans are in the works to build 23 more traps and plant 10,000 more trees—all within the next two years.

"I'm particularly proud of the back nine holes," Hartline says. "They have the best view of the lake."

With more than 267 acres of turfgrass in recreation alone (including the tennis court area) and 14,255 rounds played on the course up to October of last year, Hartline's maintenance schedule is fine-tuned. He and his crew of

Continued on page 42



The complex of \$200,000 homes abuts one edge of the course. A few of 5,000 trees planted by Hartline's crew are in the background.

eight (12 from March to November) fertilize greens and tees four to five times a year. Constant repair is needed on the turf near the cart path because of careless drivers. Weeds in the Bermudagrass greens are kept under control with Koban, usually applied five times a year.

Fairways are overseeded with common rye, tees with "Futura"

The golf course is a major selling point of the housing complex adjacent to the The Shores.

and greens with "Futura" Plus. Hartline's winter overseeding includes cutting and thinning out the greens using "Futura" and a mixture of sand and compost. Turf on the greens is 328 Tifgreen with common Bermudagrass used on the fairways, roughs and tees.

Fairways and greens are usually aerified twice a year, greens three times a year. Compost is used as the topdressing for tees and greens. Fairways, greens and tees are irrigated automatically with a Buckner system. Turbin pumps have a 1,200 gallon-a-minute capacity.

Reclaimed water from the city of Rockwall is collected in a man-made lake to provide the water source. Five roughs have quick-coupler sprinkling systems.

Hartline's affinity for his work started as a boy growing up on a Texas farm. "I've always loved farmwork," he says. He got started in his profession when his family leased a farm next to the McKinney Country Club in Texas. Gradually, he started helping out, caddying and mowing the greens, even though at the time, it was hard for him to see over the top of the mower. Eventually, he began working full-time at McKinney.

Hartline became a Class A member of the Golf Course Superintendents Association of America in 1960. He had been a superintendent five years prior to that. Since then, he's worked at a number of courses in Dallas, Brookhaven Country Club in Carrollton, TX, Eastern Hills Country Club in Garland, TX, Calabasas Country Club in Calabasas, CA, and began at The Shores in 1978. Besides the GCSAA, he is a member of the Texas Turfgrass Association.

"There's no limit to what you can do to beautify a golf course," Hartline says. "I'd like to make ev-

ery hole a conversation piece as well as a challenge to play."

Hartline knows what he has to do to make The Shores the kind of course he'd like it to be. But the biggest challenge that faces him is the one that faces every other golf course superintendent—the weather.

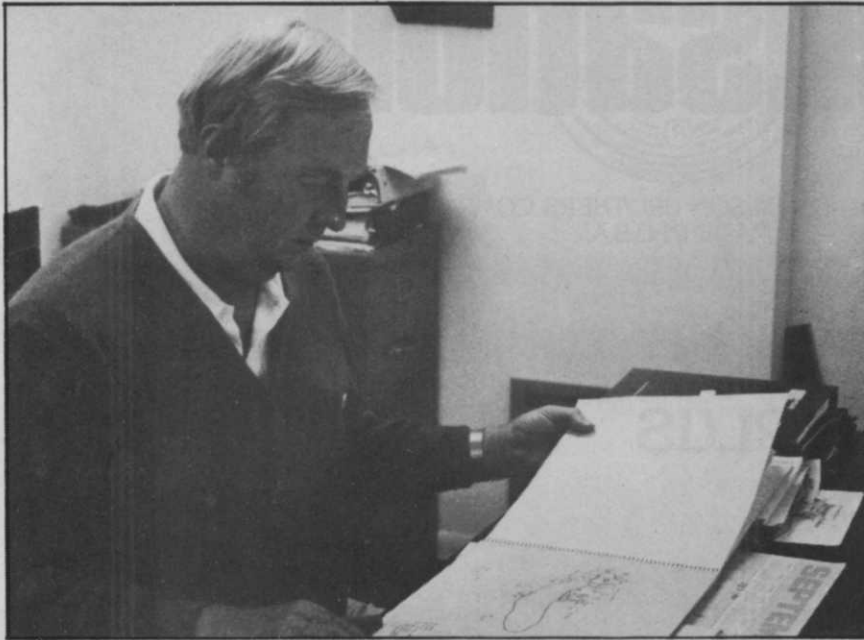
"My maintenance program is always geared around fighting Mother Nature."

Another challenge Hartline finds is the fact that golfers as a whole are getting better and expect better-maintained courses. "We're seeing more and more golfers who

"I'd like to make every hole a conversation piece as well as a challenge to play."

expect courses to be in tip-top shape every time they play. Not getting the grass mowed because of the weather is no excuse."

With the ideas and improvements for the course Hartline has in mind, as well as the maintenance schedule he already implements, The Shores will have no trouble meeting the demands of golfers across the country. **WTT**



Woehrle carefully manages the \$400,000 in his budget.

chine whenever possible. Down time on mowers can be a big problem, particularly during a season when grass grows rapidly."

The rough height of cut will range between two and three inches. Under normal conditions, nine holes are mowed per day and with abnormal growth, 18 holes daily.

The intermediate courtesy rough (six feet wide) is mowed at a height from one-and-a-half-inches to

two-inches with regular growth and is done three times per week. Mowings are made daily if growth is rapid.

Fairways are mowed daily at a height of from one-half-inch to five-eighths of an inch. Cross cutting is done weekly and verticutting monthly. Aerification is done annually on fairways.

Weather often dictates the greens cutting but the mowing height ranges between $\frac{3}{32}$ of an

inch to $\frac{3}{16}$. Regular mowing is done daily, verticutting two times a month, double cutting as required, sanding (light dusting) every three weeks and aerification annually.

Tees are mowed to a height of one-half inch three times per week.

Traps are edged and contoured semi-annually and are dug up and respread annually.

All machinery is inspected and repairs made as needed during winter months. This includes inspection and repair work on the 20 gas-powered golf carts and the 80 electric carts.

Woehrle also initiated a tree inventory program several years ago which is done annually during the winter months. In addition certain grounds work is done during the winter months as weather permits.

Ted Woehrle has praise for several universities that have done

"It is important to have the same operator run the same machine whenever possible."

considerable work on turfgrass development.

"Three schools have been particularly active in turf grass research and management," he said. "They are Michigan State, Purdue and Ohio State."

And though education at universities and technical schools is valuable, Woehrle gives one the impression that that working under the direction of a competent golf course manager is one of the most valuable experiences any aspiring "Super" can get.

"One of my most gratifying accomplishments during 26 years as a golf club superintendent," he said, "has been training 37 men who currently are golf course superintendents around the country."

While Woehrle didn't say so in as many words, it is evident that job satisfaction has made his working career a real personal success.

WTT



Just 4 of 118 bunkers on the two courses. Traps are edged and contoured semi-annually.



Pakkala locks in head to manual irrigation system. An automatic system is part of the reconstruction plan.

their members what they're doing. They don't feel the members need to know. Pakkala believes in the exact opposite. He prefers to have his duties and projects in writing and keeping the membership well-informed. It is standard policy for Golf Force to submit a monthly report to the club on the superintendent's progress. (This is done less frequently during the dormant season.)

Pakkala believes the superintendents of today owe a debt of gratitude to the past generations of

superintendents. "We're in a better position to deal with management and members because of the older superintendents," said Pakkala. "Today budgets, salaries and research are better because of the groundwork they laid. The new guys coming out of the universities have really turned things in golf around with the way they maintain courses."

Larry Pakkala is one of those new guys. He likes challenges and that is one of the main reasons he joined on at St. Andrews.

While the club has the Nicklaus organization solidly behind it there is still much work to be done. "Nicklaus has developed a corporation that is designed to better golf," said Pakkala. "That is why he is involved with St. Andrews. The club has some ideal benefits. It is 20 minutes from Manhattan and two minutes from public transportation. We expect to appeal to the international business clientele of New York." He added that the club will probably sponsor a major tournament in 1988 to celebrate the centennial of golf.

St. Andrews is getting back on its feet and regaining the glory of being the oldest golf club in the United States. Larry Pakkala is a major force behind that effort and when it is completed, maybe he'll stay or maybe he'll go on to the next challenge. There might be a clue in this statement to WTT, "One of these days maybe I'll have a big, chunky budget, but I don't know if I could work with it." **WTT**

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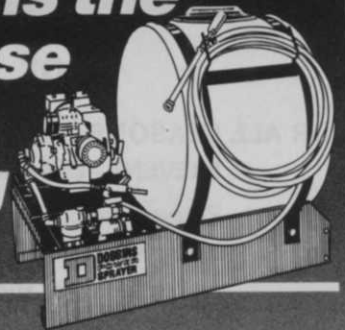
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