THE NEWSPAPER FOR THE GOLF COURSE INDUSTRY

Gene that limits plant growth discovered

By ANDREW OVERBECK

SAN DIEGO - A team of genetic scientists at the Salk Institute lead by Dr. Joanne Chory have discovered the gene that controls plant height by limiting the activity of a growth hormone. The scientists have been successful in transferring the gene to tobacco plants and experiments are underway with rice. If

Warren Bidwell and Sherwood

Moore were the most influential su-

perintendents of the 1900s, accord-

ing to a Golf Course News' survey of past Golf Course Superintendents

Association of America (GCSAA) presidents, former Canadian Golf

Superintendents Association presidents and current GCSAA chapter

Prospects are bright for no-mow turfgrass

that works, potential applications in turfgrass may not be far off.

"If it works in tobacco there is promise," said Dr. Mike Kenna, director of research for the United States Golf Association (USGA). "If they can get it to work in corn or rice, then the chances of it working in turf go from promising to highly possible.

SUPERINTENDENTS STEAM INTO NEW ORLEANS

Show, Feb. 14-20, see pages 17-28.

For a preview on the 71st International Golf Course Conference &

In the popular press, the discovery of the growth gene has garnered headlines touting the possibility of "no-mow" turf, prompting joy among homeowners who believe they will

Continued on page 10

Aventis Env'l Science Unveiled

Wetlands Regs Tighten Screws

New Nationwide Permits are delayed until April, but

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Best Builders of the Year





GCN'S GOLF COURSE BUILDERS OF THE YEAR

Golf Course News' annual Builder of the Year Award will be presented to Allan MacCurrach III, right, president of MacCurrach Golf Construction. The Best Small Builder of the Year Award will go to Golf Development Construction, represented by Managing Partner Louis Miller, left. The awards will be presented during the Golf Course Builders Association of America's annual banquet on Feb. 18 in New

COURSE MAINTENANCE

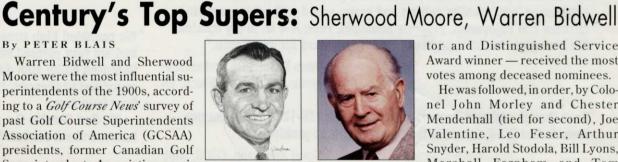
Dershimer's Tools of the Trade

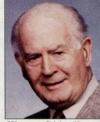
COURSE	DESIGN 8	& DEVELOPMENT	
Schulties gain	ing steam		45
R.I. unveils lat	est First Tee	project	46
co	URSE MAN	NAGEMENT	
		NAGEMENT y president	69

Bidwell — a 64-year GCSAA member, national direc-

JUPITER, Fla. - The golf boom of the 1990s has continued into 2000 - in a record-eclipsing way. Some 509 golf courses came on line in the United States in 1999, surpassing the record 468 set in 1995, according to the National Golf Foundation (NGF).

Continued on page 3





tor and Distinguished Service Award winner - received the most votes among deceased nominees.

He was followed, in order, by Colonel John Morley and Chester Mendenhall (tied for second), Joe Valentine, Leo Feser, Arthur Snyder, Harold Stodola, Bill Lyons, Marshall Farnham and Tom Johnson.

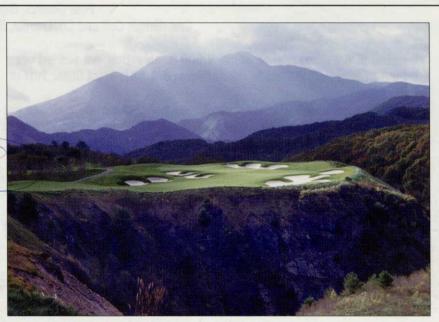
Moore - a longtime GCSAA member who served as Continued on page 27

New openings eclipse 500

presidents.

By MARK LESLIE

At the same time, the pipeline continues to be full. At the end of the year, 946 courses were under construction and 908 were in planning. This compared to the end of 1998 when 1.069 were under construction and 708 were



GOLF BOOMING INTERNATIONALLY

The Hole of the Gods — the 3rd hole at Golfplan-designed Bonari Kogen Golf Club in Numajiri, Japan — is one example of the mountains of work being done expanding golf throughout the world. See a report on international course construction, pages 61-68.

PERIODICAL

Meadowbrook becomes 3rd-largest manager

By PETER BLAIS

BEVERLY HILLS, Calif. - Meadowbrook Golf Group has acquired the balance of Fairways Acquisition Corp., the entity formed to facilitate last fall's 30-course acquisition of KSL Fairways from KSL Recreation Corp. Meadowbrook now owns 100 percent of Fairways Acquisition Corp.

KSL Fairways was the non-resort division of KSL Recreation, which continues to own such high-profile properties as Doral in Miami and LaQuinta and PGA West in Palm Springs, Calif.

Fairways Golf consisted of 24 golf properties primarily in Virginia, Maryland,

Continued on page 72

What they're saying about Penn Pals

"Penn A-4 enhances the game of golf. It is my personal feeling that Penn A-4 is one of a number of significant contributions to the game of golf by Dr. Joe Duich." "Awesome."

Cutler Robinson, CGCS, Supt. Bayville GC, Virginia Beach, VA

"Simply stated, everyone who has played Bayville comments the greens are 'the best they have ever putted.' This grass allows our members to experience 'tour' quality putting and green speed without jeopardizing fairness and enjoyment. Properly managed, Penn A-4 is, in my opinion, the best grass to date and has set a new standard for excellence."

Dean Hurst, PGA Professional Bayville GC, Virginia Beach, VA

"Even though summer temperatures can reach 115-120°, we've cut our Penn A-4 at 7/64" for more than a year with no problems."

> **Doug Anderson**, CGCS, Supt. The Vintage Club, Palm Desert, CA

"For me, the lower the cutting height, the better the management (Penn G-6)."

Pete Gerdon, Supt.

Grandfather Golf and CC, Linville, NC

"Because of the short season at our 7,500 ft. elevation, we sodded our rebuilt greens with 42" wide rolls of Penn A-4 from West Coast Turf in California.

There, we found a source for rootzone sand that closely matched our own, and the long, wide rolls minimized seams. We re-opened 5 weeks after sodding, and dense, fibrous roots reached 10-12" in a matter of months."

Kevin Ross, CGCS, Supt. CC of the Rockies, Edwards, CO

"Quality of the Penn A-4 putting surfaces at The Estancia Club is beyond comparison. Ball roll and the pace of the greens are excellent. I would not hesitate using Penn A-4 again."

Carl Rygg, CGCS, Supt. The Estancia Club, Scottsdale, AZ "Penn A-4 Greens do not cost more. While they do need more topdressing and aerification, they require significantly less water, fertilizer, and pesticides."

Ted Hunker, Supt. Tartan Fields GC, Dublin, OH

"We've overseeded Penn G-6 into our Poa/bentgrass greens after aerifying a total of five times. We fill the holes within 1/4 to 1/8" with sand, seed with one lb. per 1,000 sq. ft., then topdress. When the Poa stresses under heat pressure, Penn G-6 will re-populate that area."

John Lof, Supt. Michelbook CC, McMinnville, OR

"Penn A-4 greens do not mean more work, more trouble, and do not cost more money to maintain. In fact, just the opposite may be true. We have found that they require fewer cultural practices such as vertical mowing and brushing.

In two years of managing Penn A-4, we have not observed any brown patch or dollar spot, and greens require limited amounts of fertilizer."

Kurt Thuemmel, CGCS, Supt. Walnut Hills CC, East Lansing, MI

"I overseed our 18 old greens with 1/4 lb. per 1,000 sq. ft. of Penn A-4 each time we aerify. Now, with single cut and roll, our green speeds are consistently fast at 12 to 12-1/2'. Where ball marks tend to tear older bents, they just make dents in Penn A-4."

Pat Franklin, Supt. Plum Creek CC, Fishers, IN

"We resodded high stress areas in our PennLinks fairways with Seaside II, and are very pleased with its performance. I selected Seaside II with improved dollar spot disease resistance and salt tolerance to address two major turf challenges; the coastal influence and potential sodium buildup from irrigation.

We find Seaside II a strong ally to our PennLinks fairways, and in the future, will slit seed with Seaside II where needed to enhance turf quality."

David Major, CGCS, Supt. Del Mar CC, Rancho Santa Fe, CA

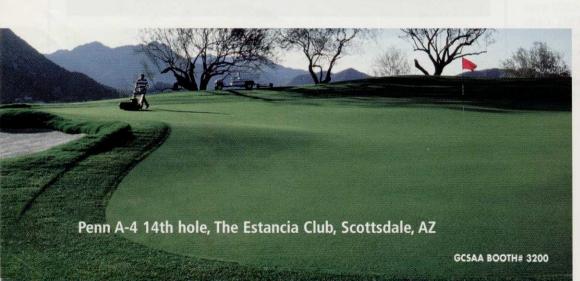
"We have 36 putting greens and 4 practice greens that have been converted from Toronto C-15 to Penn A-4 Creeping bentgrass.

When the greens were placed in play the spring after conversion, comments from our golfing membership were very positive even though turf maturity had not been reached. Putting trueness and turf appearance were among the positive remarks most often mentioned. Now that the putting surfaces have additional development, comments are the greens are superior to anything they've played."

Bill Byers, CGCS, Supt. Des Moines G & CC, West Des Moines, IA

"Comments from golfers have been extremely positive (Penn G-2)."

Jeff Hill, CGCS, Supt. Pinehurst Resort and CC, No. 8, Pinehurst, NC



Penn A-1
Penn A-2
Penn A-4
Penn G-1
Penn G-2
Penn G-6
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BRIEFS

BLOOMINGTON, Ind. —The Indiana University administration has been in talks since September with the private developer Indiana Club LLC to lease land for the construction of a championship course that would be home to the golf team, a private club of 2,400 members and limited public play. The course would be located near Griffy Lake. Men's Golf Coach Mike Mayer said the current course, on which an estimated 40,000 rounds are played a year, has reached its saturation point.

MIAMI — Greens To You, Inc. has acquired Costa Greens Golf Club located near Doral. Plans are in progress for adding \$1 million of improvements to this daily-fee facility, including new cart paths and sand bunkers, extensive tree pruning, new maintenance equipment and renovations to the irrigation system, clubhouse, pro shop and restaurant.

MYRTLE BEACH, S.C. — Tidewater Golf Club here has completed its three-month renovation and reopened for public play Jan. 15. The greens were planted with A-1, an improved variety of bentgrass that better tolerates the Southeastern climate.



New courses open at record pace Continued from page 1

in planning.

As the golf industry entered the 1990s the thought of 300 courses opening in one year was extraordinary. But when 351 opened in 1991 that started a momentum that accelerated through the decade. The biggest jump occured between 1994, when 381 new courses opened, and 1995 when the figure rocketed to 468.

Asked to explain the phenomenon, American Society of Golf Course Architects President John LaFoy said: "Regardless of what any of the golf pundits say, what it boils down to is that people feel they need more golf courses. They are building according to demand. That's the only thing that makes any sense to me.

"There is demand being met, especially for affordable and accessible courses. You've seen a shift in the type of course being built and who they're being built for."

Richard Singer, who as director of consulting at the NGF has spent the last few months studying the strategic perspectives of golf into 2010, predicted changes and warned: "We need to be ready as an industry to react to those changes. We have found that supply is not a constant thing."

Continued on next page



The Pete Dye course at the PGA at The Reserve in Port St. Lucie, Fla. is one of a record number of new course openings in 1999.

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Chlorpyrifos re-assessment continues to move forward

By ANDREW OVERBECK

With the initial public comment period completed, it is now up to the Environmental Protection Agency (EPA) to decide what use restrictions, if any, to place on the widely-used organophosphate chlorpyrifos. In the

coming months, the EPA will evaluate the comments it has received from end users and industry and environmental groups and then will release a revised risk



assessment that will likely include proposed mitigation measures.

As a group, golf course superintendents have been vigilant in their support of chlorpyrifos, known to them as Dursban and an effective method to combat cut worms and other pests.

Many do not want to see Dursban go the way of Diazinon, which was banned from use on golf courses in the late 1980s.

"Diazinon was the first choice and when it was banned, superintendents turned to Dursban," said Terry Buchen, president of Terry Buchen Golf Agronomy International in Williamsburg, Va. Another change will not come easy.

"It is one of our primary insecticides. I am familiar with it and I have never looked into using anything else because I have always had good results," said Carl Tegetmeyer, superintendent at Holiday Hills Resort and Country Club in Branson, Mo.

"We have had significantly more comments sent in with chlorpyrifos than on other compounds that have gone through the process," said Tim Maniscalo, manager of government and public affairs at Dow AgroSciences. "A good amount of these have been from superintendents ... the Golf Course Superintendents Association of America (GCSAA) has done a good job to get the word out about how the process worked and what was at stake. We have had great user-group response.'

Through its government relations department, the GCSAA has been instrumental on getting the word out. "We are waging an intensive war," said Carrie Riordan GCSAA government relations manager. "We sent out e-mails to our 600-person government relations network and all of our 101 chapters and their

Continued on page 11

New courses

Continued from previous page

Saying that "market forces, economic forces and the highest and best uses of property dictate what developers will do," Singer added: "There are a lot of 18-hole facilities now. You might see more alternative facilities of all different types and configurations.

"What should be done is highly localized. But, certainly, all types of facilities that cater to all different levels of skill, ability, time commitment, willingness to participate, etc. have to be considered as part of that equation."

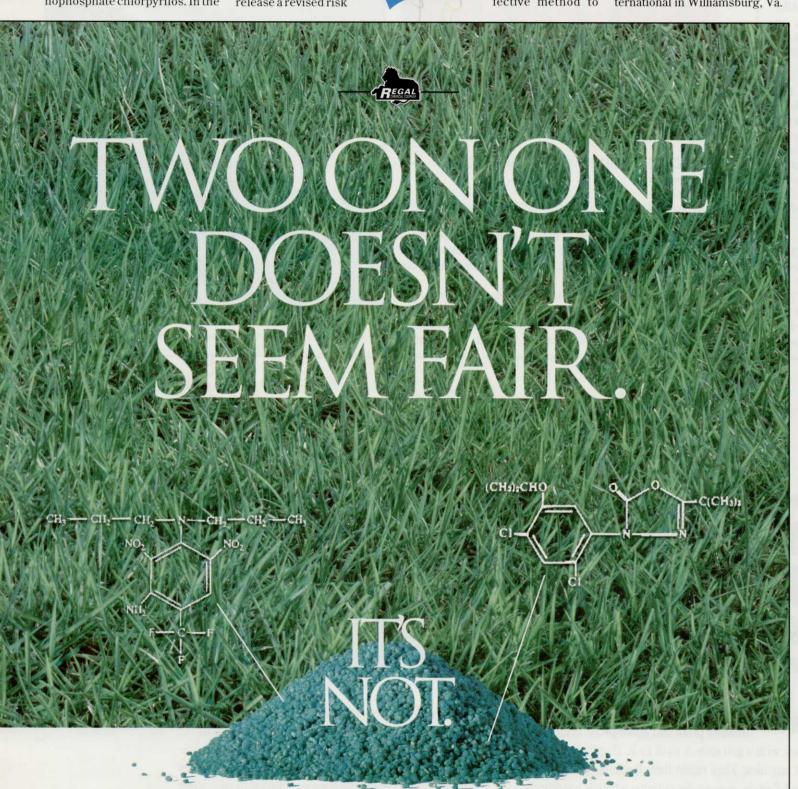
Because of the onslaught of new 18-hole facilities, Singer said a number of nine-hole courses have trouble competing.

That could explain the number of nine-holers that have been expanding to 18 the last few years.

Construction was "equally distributed regionally" around the country, Singer said, basically proportionate to population.

LaFoy thought golf course development has also received a boost because of positive feelings among the public concerning the industry's sensitivity to the environment.

"I give superintendents and architects a lot of credit," he said.
"One thing we've done that is telling, in the Northeast in particular, is showing we can build environmentally friendly and safe golf courses."



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Wetlands hold key to proposed Mich. track's future

RAY TOWNSHIP, Mich. -The Michigan Department of Environmental Quality is expected to rule soon whether an 18-hole course can be built along wetlands here.

Opponents are worried about the environmental impact a course would have on the area, according to The Detroit News.

Developer Thomas Penzien, co-owner of the Cracklewood Golf Club in Macomb Township and a 20-year veteran of golfcourse management, says his proposed Ray Township course would cause minimal impact.

The 4,000-population Ray Township, one of Macomb County's least-populated townships, has two golf courses: Northbrook Golf Club and Pine Valley Golf & Tennis Club.

Penzien wants to construct a new course on about 185 acres. About 63 acres of the site are classified as wetlands. That means Penzien needs a permit from the agency before he can start work.

Penzien's proposal calls for

golf-course construction on two of the 63 acres of wetlands. Under state law, that means he has to create two more acres of wetlands nearby.

The agency must rule on the wetlands permit within 90 days of the public hearing. If he gets the OK, Penzien said he hopes to start construction in the spring, with a planned opening date of spring 2001.



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Landing ready to take off

Wis.'s Hawks

MADISON, Wis. - More than 100 lots have been sold and the first nine holes of an 18-hole course are taking shape at the 530-acre Hawk's Landing development on Madison's far Southwest Side, according to the Wisconsin State Journal.

The developer is Jeff Haen. Oliphant Golf Construction is the course builder. The 18-hole course will be open to the public and should be completed by spring 2001. Grading on the first nine holes began this fall.

In addition to the course, Hawk's Landing has 377 single-family lots and 400 to 500 condominiums. It also will have office and retail space and a limited number of rental units.

The site includes four farms and was formerly in the township of Middleton, before it was annexed to the city of Madison last spring.

The development will include a 14,000-square-foot clubhouse. Other amenities will be a pool, tennis courts and a bath house.

Norman sets sights on \$240m Australian deal

MELBOURNE, Australia Springfield Land Corp., which is owned by Malaysian Maha Sinnathamby, has entered a joint venture with Medallist Golf Developments to develop a \$240million golf club and residential estate near Brisbane, according to the Asia Intelligence Wire.

Medallist Golf Developments, the partnership between Greg Norman's Great White Shark Enterprises and Macquarie Bank, is managed by insurance giant AMP Asset Management.

The Springfield Golf and Country Club will be located on a 230hectare development site, southwest of Brisbane. It is the first development funded by the AMP Medallist Capital Venture fund, which will manage the course and clubhouse.

The project would include 851 residential lots. Golf course construction is anticipated to begin in March with completion scheduled in 2002.

Medallist chief executive Tony Fehon said the project would be the first championship quality course in the Brisbane metropolitan area in 25 years.

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New 27-hole course planned for Central Maine area

By PETER BLAIS

AUBURN, Maine - Plans are in the works for a 27-hole, dailyfee links-style course and practice facility on a 215 acres of rolling farmland here.

Freeport developer Lenny Mishral, who operates the golf course construction firm Horizon Golf, hopes to begin construction of Fox Ridge Golf Course this spring and have 18 holes ready for play by summer 2001. He expects green fees to be roughly \$30.

Mishral designed the course and is one of the partners. Former Sugarloaf Golf Course superintendent Ed Michaud and Lewiston/Auburn banker Arnie

Roy are also involved.

"They're looking for an upscale, dailyfee course up that way," Mishral said.

Mishral's construction firm is also involved with the redesign and nine-hole

addition underway at Sebasco

Estates

Golf Course in Phippsburg near Bath. Developer Bob Smith hopes to complete seeding this fall on six new holes that will be incorporated with three of the existing holes to make a new, nine-hole layout. Plans are in the works to build another nine

holes. Michael Zikorus is the course architect.

Horizon also built 12 new holes at Boothbay Country Club, which will double from a nine-hole to an 18-hole layout this spring. Mishral and owner Jeff Harris co-designed the new holes.

Mishral also rebuilt the 18th hole at Northeast Harbor Golf Club last summer and began renovations to the par-4 16th hole in October.

Griffin donates \$250,000 to GCSAA Foundation

VALDOSTA, Ga. - Griffin L.L.C. has announced the contribution of \$250,000 to the GCSAA Foundation, in support of the Foundation's current campaign, Investing in the Beauty of Golf.

The GCSAA confirmed that Griffin is the first specialty chemical company to pledge an award at this dollar level, and become a member of the Old Tom Morris Society, representing the highest of all contribution levels.

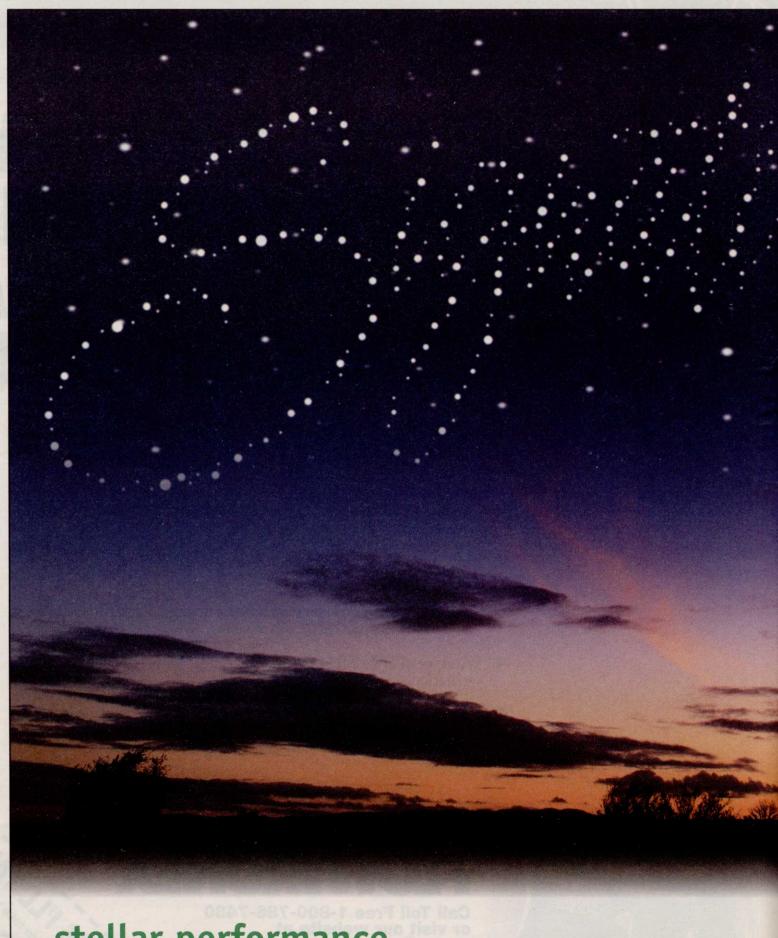
The GCSAA Foundation's board of trustees will oversee disbursement of the funds through its Professional Development Initiative (PDI) geared to increase superintendents' knowledge and skills for turfgrass management and maintaining optimum playing conditions.

The \$250,000 represents the minimum pledge made by Griffin based on product sales. The final contribution will be based on a percentage of sales from Junction and Pentathlon DF fungicides, and Pyroette insecticide over the next five years. The final amount could increase the pledge amount if total dollar volumes on these Griffin products exceed the threshold level established by Griffin and GCSAA.

Griffin, a customer-based supplier of agricultural and specialty chemicals, was founded in 1935. It is a joint venture company representing an equal partnership between Griffin Corp. and DuPont.

Griffin is planning for and experiencing rapid growth within all market segments and is particularly committed to market diversification, especially within its newest group, Specialty Prod-

Headed by Global Business Director Owen Towne, Griffin is dedicating dollars and staffing resources to become one of the leading chemical suppliers to Turf, Nursery, and Ornamental Professionals. "Griffin is pleased to be in a position to support the GCSAA Foundation's program and the wonderful contributions it has made to the game of golf," said Towne.



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Weed selected to design Jacksonville layout

PONTE VEDRA BEACH, Fla.— Weed Design has been selected to create an 18-hole course within a limited real-estate development on Fleming Island, south of Jacksonville, Fla., along the banks of Black Creek, a tributary of the St. Johns River. It is called The Golf Club at Fleming Island Plantation. The

owner-operator is Landscapes Unlimited of Lincoln, Neb., with the assistance of Centex Homes.

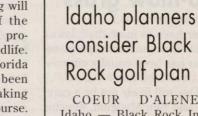
"We must really give the owners a great deal of credit in this development," said architect Bobby Weed about his latest design. "The golf came first. We routed the course before anything else was done on the prop-

erty. Most every fairway is single-wide. There will be limited real estate near the golf course."

The 18-hole, 6,800-yard, par-71 course will have three holes that play along the water. Vegetation includes mature hardwoods native to

North Florida. The routing will preserve much of the natural setting and provide habitat for wildlife. An abundance of Florida wildlife has already been spotted during staking and routing of the course.

The Golf Club of Fleming Island Plantation is slated for completion in the fall of 2000.



COEUR D'ALENE, Idaho — Black Rock Investments Inc. is seeking preliminary approval for the Club at Black Rock, a 650-acre development that would feature a world-class golf course near Rockford Bay on Lake Coeur d'Alene, according to *The Spokesman-Review*.

The Kootenai County Planning Commission is considering zoning changes and preliminary approval for the plan. The Kootenai County Commission makes the final decision.

Along with 381 homes and the golf course, the plan includes a clubhouse, equestrian center and convenience store.

The would-be developer is Marshall Chesrown, who summered in the area as a child and grew up in the Spokane Valley. Chesrown made his money acquiring and selling the Colorado National Speedway and six Denver auto dealerships.

Previous plans for a golf course and development were voted down by the planning commission.

Golf planned for Chicago parcel

CHICAGO — The heirs of the late Alexander MacArthur have accepted the bid of a developer who plans to build a golf course on the former farm property in Barrington Hills.

The winning bidder purchased 390 of the 430 acres of the Strathmore Organic Farm. The bidder was a major developer of golf course communities.

The property is zoned for single-family homes on five-acre sites. Development plans must still be submitted to the village for approval. The property can accommodate up 75 homes. The sale is scheduled to close Feb. 16.

SCOTTSDALE'S PALM VALLEY GOLF CAMPUS OPENS

GOODYEAR, Ariz. — Phoenix-based SunCor Resort and Golf Management's new Palm Valley Golf Campus recently opened to the public. The Palm Valley Golf Campus offers a ninehole lighted pitch-n-putt golf course, a lighted driving range and a short-game practice area. The entire golf campus was designed by Senior PGA Tour player Hale Irwin.





No-mow grass Continued from page 1

never have to mow their lawns again. Reaction from superintendents has been equally optimistic, albeit a bit more sober.

This will likely not be a cureall," said Ken Mangum, director of golf course and grounds at Atlanta Athletic Club in Duluth, Ga. "But it would be great to have on my gold tees, where nobody every plays but I still have to mow three or four times a week."

Much work must be done, however, before this genetically modified turfgrass comes onto the market.

THE SOUND OF SCIENCE

While doing fundamental research on how plants respond to their light environment scientists identified a gene that destroys a class of hormones called Brassinosteriods that stimulate cell division and expansion.

"We found that when the gene, BAS1, is overexpressed it destroys Brassinosteriods," said Dr. Michael Neff, lead researcher on the project and senior scientist for work being done at Washington University in St. Louis. "The end result is a dwarf plant that is dark green and slower growing.'

What makes this discovery unique is that they have amplified a gene in plants as opposed to mutating it, making it easier to apply to other plant species.

"Because it is over-expressed, you should be able to take it and put it into any plant that you can transform with foreign DNA," said Neff. "A lot of genetics involves discovering the function of genes by knocking them out and making a mutant or sick plant. But in this case we can take it right out of one plant and put it into another.'

In tobacco plants, the gene produced plants that matured at 6 inches as opposed to 6 feet. However, in those trials, the researchers discovered that as the DNA is inserted into the genome they got a range of expression levels.

"The gene behaves like a volume knob which means that you can have dwarfs that are as high as just under 6 feet or as low as 6 inches," said Neff. "So you can pick the line that you like best and it will be transformed and that effect will be propagated on from generation to generation."

ON THE COURSE

According to turfgrass scientists, conventional plant breeding has been heading in this direction for some time.

"When you get a dwarf plant, you are selecting for plants that are less efficient at cell elongation," said Kenna. "When you think of Kentucky 31 tall fescue, what was selected was finer texture and a slower growth habit."

Leah Brilman, director of re-

search for Seed Research of Orthis transgenic turf be usable? egon, hopes the discovery of the "I don't see any reason why this gene will give turf researchers a better idea of what has already

been accomplished. "We have

been selecting for dwarf varieties

for a number of years and we may

actually have plants that are using

this gene and we just don't know it,"

she said. "Knowing about this gene

But, the question remains, will

may make it easy to select for it."

wouldn't work," said Kenna. "But the \$64,000 question is, how much control do you want to have in the growth process? Do you want a plant that inherently wants to grow and you apply a plant growth regulator (PGR) to slow it down, or do you want a plant that inherently doesn't want to grow and you have to apply something to make it grow?"

James Nicol, superintendent at Hazeltine National Golf Club at Chaska, Minn., would rather err on the side of growth.

'I don't use PGRs. I like the grass being able to recover because up here we get a lot of play," he said. "This type of grass may be wonderful on pond and creek banks, bunker faces and out-of-play areas, but whether it would be good for tees and

greens remains to be seen."

While Mangum agrees that wear and tear would be the ultimate test for the transgenic turf, he is already dreaming of the possibilities.

"If I could apply something that would make the right half of the fairway grow more where cart traffic is coming on and off and keep the growth down on

Continued on next page

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No-mow grass

Continued from previous page

the other half, that would be great," said Mangum.

According to Neff, it may be possible to dial in exactly the amount of growth you want. "These grasses need to grow, or you will never be able to propagate them," said Neff. "There are promoters that determine where and when the gene is expressed,

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so you might be able to hook up this gene with a different promoter and regulate its expression with the application of chemicals.

Cutting down on growth, however, may not mean a drastic reduction in the frequency of mowing.

"To a large extent, mowing is done not only to combat top growth, but to make the turflook tidier. You may be able to get away with mowing only four times a year, but in between that, the turf is going to look pretty ratty," said Dr. Doug Brede, research director for Jacklin Seed.

THE FUTURE

Neff and his colleagues are working on transferring the gene to rice plants and expect that it will be five to 10 years before a modified turf variety is available on the market. Among his concerns are human and animal safety, disease resistance, regulatory issues and marketability. The risks of hybridization with native plant species will also be studied in the coming years.

"We will be looking at how the gene works in a number of different plant species, including trees and grasses," said Neff. "Once we have accomplished that, we hope

to attract a private biotech company that is interested in pursuing this further and actually moving it into the varieties of grass that people would be using. Then we can get into product-driven research.'

Turf scientists, meanwhile, remain cautiously optimistic. "Until they get some of these things out of the lab and see what they look like in practice, I am not going to invest my money in it just yet," Brede said.

Chlorpyritos

Continued from page 4

government relations liaisons."

The GCSAA also submitted a comment on chlorpyrifos stating that it was a valuable pest control tool and that user exposure risks are not high.

Going forward, chemical reassessments under the Food Quality and Protection Act of 1996 (FQPA) will continue to affect superintendents and the GCSAA will be on full alert.

"We will be conducting a survev that will gather information on chemicals that are coming up for review ... it should be helpful to the agency to show chemicals are being used effectively and safely," said Riordan.

In addition to chlorpyrifos, several chemicals are in EPA's reassessment pipeline: acephate (Orthene), ethoprop (Chipco Mocap), fenamiphos (Nemacur) and trichlorofon (Dylox and Proxol).

In the meantime, Dow is proceeding with various studies to avoid any use restrictions on chlorpyrifos. Dow has commissioned a Nebraska laboratory to conduct human tests to determine chlorpyrifos' possible side effects on people.

"One of the elements of FQPA is that the EPA wants to have more information about compounds. One of the things lacking is non-food exposure data," said Maniscalo. "We are trying to fill in these data areas and we are continuing to do studies and tests on these compounds."

While human testing has proved controversial with the EPA, Maniscalo insists that the tests are safe and have to be done.

'We go through medical board reviews and up until now these have been accepted by the EPA," said Maniscalo. "Ultimately this gives us a much wider margin of safety because we have greater confidence in relating the animal data to humans. It is one of the most-studied pesticides.'

If everything goes smoothly, the EPA should release its revised risk assessment by March or April. That will be followed by another 60-day public comment period and subsequent review period after which the EPA will issue its final assessment on chlorpyrifos.

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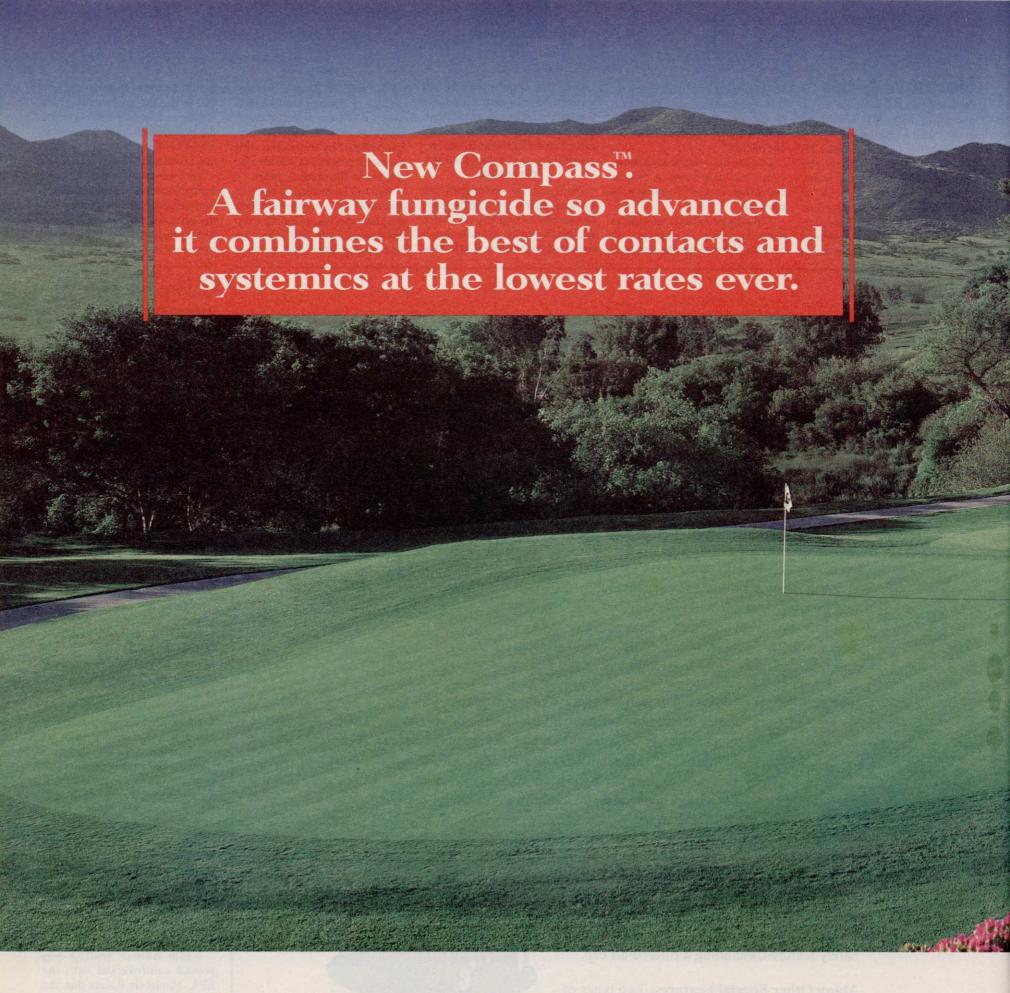
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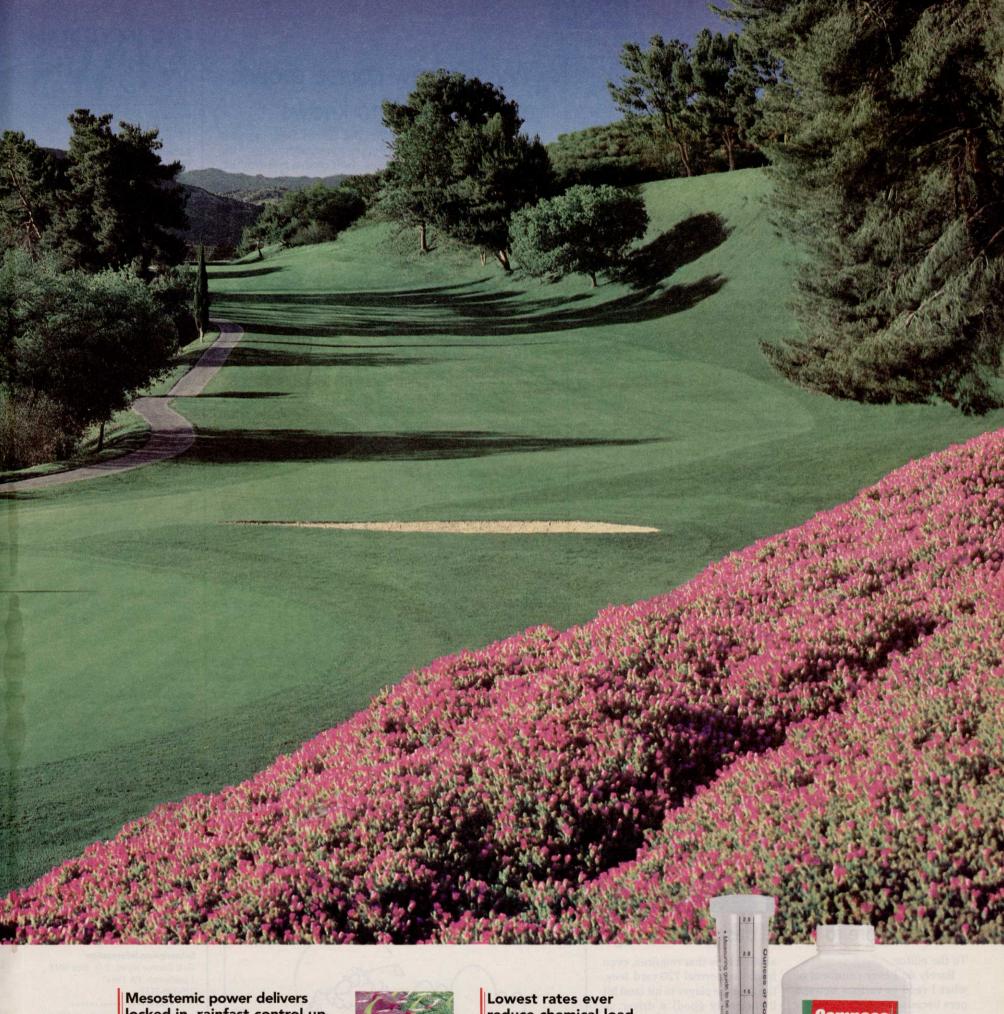
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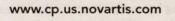
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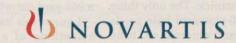


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USGA a true steward of earth

People will say, "Don't do that study. Let sleeping dogs lay." But I don't understand that thinking. I look at it as if you're off in the rough and move the ball. Do you call a penalty on yourself, or don't you? Working for the USGA, you call the penalty.

> - Dr. Mike Kenna, **USGA** Director of Research

"steward," according to Webster's Collegiate Dictionary, is a person who manages a household, who supervises provisions, who actively directs affairs.

The golf industry has, in recent years at least, prided itself on being an "environmental steward of the earth." This attention to wildlife ecology, habitat and water quality has spawned the Audubon Cooperative Sanctuary System for Golf Courses, the evolution of the biological control manufacturing industry, such technology as the BioJect — and extensive research into the impact of course maintenance.



Mark Leslie, editor

This aggressive awareness creates enormous weight for golf representatives when walking in that world occupied by members of such groups as the Sierra Club and Audubon Society and by such government agencies as the U.S. Army Corps of Engineers and state Departments of Natural Resources. Golf can now point to its posi-

Witness the Valderrama Declaration, which brought together (this winter in Spain) officials from such diverse groups as the United States and European golf associations, Audubon International, International Olympic Committee, World Wide Fund for Nature, United Nations and European Commission. The signatures on that document reminded me of the Declaration of Independence. They were bold. They were aggressive.

They were obviously not signed by timid "let-us-wait-and-see'ers." They were not signed by "don't-rock-the-boat'ers." Those signatures spoke volumes - about the officials on both sides of the environmental issue.

With its annual pronouncements of research funding, the U.S. Golf Association declares — in no uncertain terms — that golf will not only take environmental activists' best shot, it will fund the research to provide that fodder. The golf industry does want to know if any maintenance practices pose danger, if any chemical would be more safely applied by an alternative method, if a natural predator of mole crickets could better fight them than a pesticide could.

This is proof that the USGA and superintendents are truly stewards of the environment.

Speaking of the severe drought in Texas (see story page 29), Jack Swayze of Terra Turf Trees in Houston warned: "Trees that went to sleep won't wake up.

When combined with construction damage, significant renovation, root cutting, irrigation installation, cut-and-fill damage, etc., the severe drought could bring major problems, Swayze said.

Will this new course growth ever slow? Who knows

uring most of the 1980s, the United States opened between 150 and 200 courses a year, according to the National Golf Foundation. Golf course construction was a relatively quiet industry.

That all changed with the dawn of the 1990s. In 1991, the United States gave birth to 351 new courses. In 1992, the figure reached 354.

A year later it was 358.

New golf course construction companies opened up. Individual architects at large firms left their employers to hang up their own shingles.

Despite the boom times, headlines like "Golf bubble set to burst" were showing up in major publications.

Most of those gathered at the National Golf Foundation 1992 Golf Summit in

Orlando were a bit more optimistic. They generally saw 350 as a sustainable figure. It might move up or down a few courses each year as the 1990s continued, they predicted. But even the golf industry's most enthusiastic cheerleaders didn't foresee what has come to pass.

The numbers continued to grow, topping the 400 mark in 1995 with a then-record 468 new courses teeing off. Now 400 new course openings a year was the benchmark. And the industry maintained it. The number of new course openings never dipped below 400 through the second half of the 1990s. And in 1999, it exceeded 500 for the first time with 509 new course openings (see story page 1) around the country.

"I never expected it to keep growing like this," said Allan MacCurrach, whose firm, MacCurrach Golf Construction, won this year's Golf Course News Big Builder of the Year award.

Neither did anyone else. And with another 958 under construction and 823 in planning, who's to say how long the new record might last.

For years the golf course management industry had its Big Two — American Golf Corp. and ClubCorp. With more than 200 courses apiece, these two far outstripped the rest of the industry in terms of total courses.

Well, the Big Two has become the Big Three. With its recent acquisition of KSL Fairway's 30 courses [see page 1], Meadowbrook now operates roughly 100 golf facilities through Meadowbrook and its IGM subsidiary.

But the Beverly Hills-based firm doesn't plan to stop there. The conversion of its preferred stock into common stock "cleared the balance sheet for additional acquisitions in the future," explained Meadowbrook Chairman Arnold Rosenstein.

The consolidation of the golf course management industry continues. Don't be surprised to see a few other firms top the century mark in the coming years.

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LETTER TO THE EDITOR

There is more to course design than length

To the editor:

Rarely do I ever comment on what I read in various newspapers because almost everything is newsworthy - to someone. But once in a while you see something that is so ridiculous that it requires a little response. And here I am referring to the article in your January 2000 issue "Gibbs bringing longest hole to United States.

One hopes that the state of golf course design, construction and marketing has not gotten to the stage that everything has to have a gimmick. The only thing that a 950-plus-yard hole needs is a dinosaur, windmill, etc. to be

Think about this. What is fun

about a hole that requires, even from the normal 720-yard tees, the average player to hit (and hit them pretty good) a driver, 3wood, 3-wood, and then approach shot? There is no strategy to that. There is nothing interesting. It's just long.

This almost reminds me of the golf courses that advertise the replicas of famous holes. It seems that the designer suffered from a great lack of creativity and had to fall back on someone else's ideas. At least those copy holes are closer to real golf than a 965-yard par-whatever.

I guess this means that I am something of a traditionalist when it comes to golf. The fact that I think that Pinehurst #2



"This course must have been designed for a gorilla!"

and Prairie Dunes are great courses that have no gimmicks, no funky holes, no par-7s, but are just great fun to play over and over again. Hopefully our

industry and this great sport can survive such weak ideas as "the longest golf hole in the world."

Thanks for listening. David L. Whelchel



P.D.I. - By now superintendents should have heard the acronym, but if they have not, this writing will catch them up to date.

By RAY DAVIES

and MARK ESODA

he Professional Development Initiative has become a buzzword in our industry to the likes of how "paradigm shift" became a buzz phrase in industry years ago to describe a change in thinking patterns. Neither the "PDI" nor "paradigm shift" are new ideas. They are simply different names for old ideas.

The Professional Development Initiative is taking the ideas that continuing education, training, experience, formal education and minimum standards are important and good. Since they are good things, they should be part of our professional development and communicated to the people who employ us to make sure our contributions are appreciated.

As a side note, employers think these aspects of the professional development

Ray Davies and Mark Esoda are both certified golf course superintendents and members of the GCSAA Membership Standards Resource Group. Esoda is head superintendent at Atlanta (Ga.) Country Club, while Davies is head of agronomy for CourseCo.

P.D.I. — Futuristic thinking?

initiative are important as well. These issues are not new. They have existed since the beginning of professional organizations. Certainly, they have been around the profession since the begin-



ning of the Certification Program.

Why now?

There are three reasons. First, the idea of having a minimum standard for Class A and communicating it back to employers was endorsed by the voting delegates in 1996, and in 1997 the GCSAA board of directors formed the Membership Standards Resource Group to work toward that end

Next, the research conducted in the following 18 months showed that the golf industry was changing and that the superintendent was in a unique position to be able to effectively market his/her credentials - that is, if they had any to

Lastly, we must act now to be proactive and provide the means for change in the



level of competencies (skills and abilities needed to do our job). This fact is the basis for minimum standards.

Next, we had to look at ourselves. We studied the membership to see if educational needs are being met. No. The members needed better education systems that are both affordable and accessible. Members who attend the conference and show appreciate the seminars and other educational benefits. Those who cannot afford to attend have little access to continuing education tailored to our profession.

Our members also feel under-appreciated and underpaid. What do employers value in superintendents? How do they perceive the superintendent now and in the future?

We asked them the same questions in research conducted during the same 18month period. Some of the answers were surprising - some were not. They value formal education and continuing education.

The employer thinks we do not have adequate business skills. We have limited people skills and frankly do not value them. "Superintendents like to hide in their barns and leave at 2 p.m."

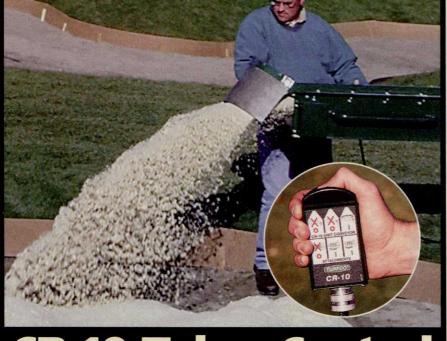
These are generalizations and perceptions, but ones we cannot ignore. We agree superintendents need these business and people skills as shown by the competency study. Do we have the means to acquire them?

The last study we did was of the GCSAA education system. We found that as good as it is, there were definite holes in the system. There is also a need to upgrade to the best practices in education, including new delivery systems and interactive learning opportunities. We need to make sure education is affordable and accessible. All members need access to effective continuing education. The key to this is using technology to bring the education to the members, instead of making the members go to the education.

A minimum Class A standard The combination of all the ideas and

Continued on page 23





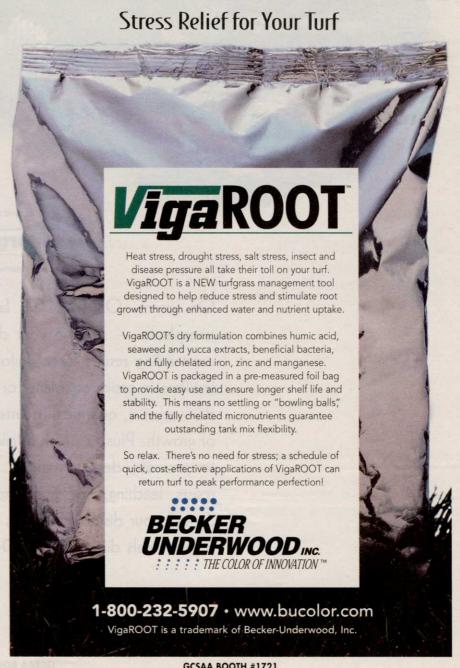


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Bringing limited-budget facilities into GCSAA fold is key to growth

By DAVID FEARIS

Most people run for the board with the idea of one day being president. From day one, you are being groomed for the position, so to speak. The president gives you committee responsibilities and you are in the loop on everything right from the start.

The Professional Development Initiative, for instance, began under Paul's [McGinnis] regime. That and other issues have taken up a lot of my time, as they will for [incoming President] Scott Woodhead. It's not like you come on as president and have your own agenda and that's it.

But if I had one thing I really wanted to see make some progress during my presidency, it was what's been called the Limited Budget Facility Program.

Right now 55 percent of superintendents nationwide are members of GCSAA. If you talk to other associations, they say that 55 percent of the market is pretty good.

Of the 45 percent of superintendents who aren't members, most work at limited-budget courses. Many are nine holes. Many are municipal.

My interest in those courses goes back to when I was a sales rep with The Scotts Co. Many of my accounts were limitedbudget courses. I got to know the people at those facilities and gained a deep appreciation for their ability to do more with less.

Superintendents at limited-budget courses may not have a lot of money for fairways, but their greens are usually unbelievably good. You can put them up against any course. The superintendents are often very innovative and have a lot to offer.

So we formed a resource committee that first met in May 1999 with the idea of finding ways to get the superintendents at these courses more involved with both their local chapters and the national association. There were some non-members on the committee, which was a break with tradition. And there

David Fearis is head superintendent of Blue Hills Country Club in Kansas City, Mo., and outgoing president of the Golf Course Superintendents Association of America. He will continue on the GCSAA board of directors for the next year as immediate past president



GCSAA outgoing President David Fearis (left)

were owners, some whose superintendents were GCSAA members and some whose superintendents weren't. We brought them together in Lawrence [Kan.] and asked "What can we do to bring these people into the fold?'

There are three things that come up when you ask people why they aren't members of an association: time, money and clique-ness.

Time should never be an excuse. What's the old adage? "If you want something done, ask a busy person." When I was at Scotts I'd get that excuse from limited-budget course superintendents. I couldn't believe they didn't have the time to learn more about the business where they made their living.

As for the money, they'd say something like, "The club won't pay for me to belong."

"Well, did you ask?" I responded.

"They'd just say 'no' if I did," they'd reply.

Well, I'd go to meet with their employer, explain the benefits of belonging to GCSAA or the local chapter, and the owner would usually sign them up. One club even wrote it into the superintendent's contract that he had to go to the local meetings. He loved it once he got there.

But the thing that is the toughest to deal with is the perception, sometimes accurate unfortunately, that there is a clique. "That's for the metropolitan, high-budget country clubs and I just don't

Continued on page 28

New president says technology to change GCSAA

By PETER BLAIS

The "techno-president" is how incoming Golf Course Superintendents Association of America President Scott Woodhead believes he'll be remembered. "We'll try to make as much use of technology as we can to better serve our members,' promised the 44-year-old head superintendent of Valley View Golf Club in Bozeman, Mont.

There are some real possibilities with today's technology of doing some alternative distant learning that may allow us to reach the superintendent at the limited-budget course who doesn't have a lot of travel money but may have the time to put a CD-ROM into the computer and do a selfstudy course or tune into a video conference in the shop. We have an online class now and we'd like to continue to develop those.

Other changes will likely result from GCSAA's Professional Development Initiative (PDI), such as the revamping the association's educational program, Woodhead said.

"Right now our education is based on seminar, person-to-person group instruction," he said. "We're looking at alternatives, whether it be CD-ROM, videoconferencing, Internet, or correspondence courses.

'We're going from having instructors teach what they think students need to know to having the

Continued on page 22



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Election 2000 candidates at a glance

PRESIDENT

Name: R. Scott Woodhead

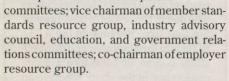
Age: 44

Course: Valley View GC, Bozeman,

Mont.

Former head superintendent at: Town & CC, Miles City, Mont.; Univ. of Montana GC, Missoula.

Years GCSAA member: 17 GCSAA posts held: Vice president 1999; secretary/treasurer 1998; board member since 1993; chairman of the certification, chapter relations, research, information services, Par for the Course Resource Group, public relations, publications, scholarship, conference and show, membership and career development



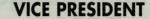
Other associations: Director and past president of Peaks and Prairie GCSA and a member of the Association of Montana Turf and Ornamental Professionals.

Education: Bachelor's degree in landscape management from Montana State University

Family: Wife, Valerie; children Andrew, 8, Jeremy, 6.

Goal: "My primary goal is to deliver education to as many members as possible at as reasonable of a cost as possible using technology in any way we can. Otherwise I want to hold the course and continue with the strategies and goals of those who have preceded me. I have

no monuments to build [to myself]. If everything runs smoothly this year I'll be very happy to step aside a year from now and feel very gratified with what I was able to do."



Name: Tommy D. Witt

Age: 46

Course: Director of golf management, StillWaters Resort, Dadeville, Ala.

Former head superintendent at: Wynstone GC, North Barrington, Ill.; Bent Tree Country Club, Dallas; Austin (Texas) Country Club; Riverhill Club,

Kerrville, Texas.

Years GCSAA member: 21 GCSAA posts held: Board member since 1994; chairman of, employers resource group, public golf resource group, and student resource groups; chairman of publications, research, career development, education, membership and tournament

committees; vice chairman of chapter relations and public relations committees; member of certification, bylaws resource, conference, fundraising, resource and scholarship and research committees.

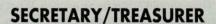
Other associations: Past president of Central Texas GCSA; past president of Lone Star GCSA; past vice president of North Texas GCSA; chapter liaison and voting delegate for North Texas and Lone Star chapters; former board member of Bentgrass Research Inc., North Texas

and Lone Star GCSAs, Midwest and Chicagoland Associations

Education: B.S. in agronomy with turfgrass management option from Texas A&M University.

Family: Wife, Lorrie; children, Seth, 11, Lauren, 11, Tanner 9

Goal: "I enjoy working with my fellow board members and am encouraged by the progress we've made over the past six years. It's gratifying to represent my fellow golf course superintendents in this arena.



Name: Samuel Snyder

Age: 45

Course: Hercules CC, Nottingham, Pa. Former head superintendent at:

Colonial CC, Harrisburg, Pa.; Sheraton Golf Links, Greensburg, Pa.; Grandview GC, Curwensville, Pa.; Punxsutawney (Pa.) CC.

Years GCSAA member: 23 GCSAA posts held: Board member since 1997; chairman of the education, scholarship, career development, membership, conference and show com-

mittees; vice chairman of the student resource group; member of scholarship & research and nominating committees and the fundraising resource group.

Other associations: Past president of

Central Pennsylvania GCSA; vice president of Pittsburgh GCSA; past president of Pennsylvania Turfgrass Council; past president of Allied GCS of Pennsylvania; past board

member of Allegheny Mountain GCSA.

Education: Certificate in turfgrass management from Pennsylvania State University.

Family: Wife, Susan; Emily, 18, Sam, 12.

Goal: "I want to play a role in the professional development of the superintendent, so that we can put our best foot forward and

be recognized as professionals. I'm very excited about education, particularly the new ways it is being delivered, such as the Internet, which makes educational opportunities accessible to more members." Name: Michael Wallace

Age: 49

Course: Hop Meadow CC, Simsbury,

Former head superintendent at: Rockledge CC and Buena Vista GC, West Hartford,

Years GCSAA member: 22 GCSAA posts held: Board member since 1995; chairman of information services, student resource group, conference and show, membership, scholarship, publication, certification

and communications committees; vice chairman of technical information services, scholarship and career development services committees; member of planning, public relations and membership services committees; delegate at chapter relations annual meeting; member of career development group; voting and alternate delegate.

Other associations: Past president of Connecticut GCSA; member of Environmental Industry Council of Connecticut.

Education: Associate's degree in turfgrass management, University of Massachusetts.

Family: Children, Tye, 31; Grier, 29; Ian, 28; Sian, 25.

Grier, 29; Ian, 28; Sian, 25. Goal: "To keep the GCSAA

moving forward. We've made tremendous progress in recent years and I've been involved in many projects that are starting to come to fruition. I want to stay involved and have an impact on the future direction of the organization."



Michael Wallace

BOARD MEMBERS

Name: Timothy O'Neill

Age: 42

Course: CC of Darien, Darien, Conn. Former head superintendent at: N/A

Years GCSAA member: 19

GCSAA posts held: Member of the public relations and chapter relations committees; former chapter delegate and chapter president of the Metopolitan GCSA.

Other associations: Member of the Connecticut and Rhode Island GCSAs; president of the Tri-State Turf Research Foundation

Education: Bachelor's degree in turfgrass management from the University of

Samuel Snyder

Family: Wife, Jennifer; children, Justin, 10, Kristen, 8.

Goal: "I am excited about the opportunity to work on our board of directors. I want to continue the many worthwhile initiatives that have advanced GCSAA and the profession of the golf course superintendent. GCSAA should continue its main mission to provide support to superintendents through quality education. My enthusiasm to be involved at this level is fueled by the pride I have in this organization and my love for the profession. If elected, I plan to use my experience and enthusiasm to continue the work of the association.



Timothy O'Neill James N

Name: James Nicol

Age: 4

Course: Hazeltine National GC, Chaska, Minn.

Former head superintendent at: Bunker Hills GC, Coon Rapids, Minn.

Years GCSAA member: 21

GCSAA posts held: Member of public relations, election and chapter relations committees and the Par for the Course Resource Group.

Other associations: President of Minnesota GCSA; director of Minn. Golf Association; member of U.S. Golf Association, Penn State Turfgrass

Alumni Association, Pennsylvania Turfgrass Council and OJ Noer Foundation. **Education**: Two-year certificate in turfgrass management from Penn State University. **Family**: Wife, Barbara.

Goal: "One of my primary goals is to make sure GCSAA's programs are affordable for all our members and never get to the point of being exclusionary. Two, we need to promote the superintendent's image with the general public and do even more in the public relations arena. Three, we need to ratchet up the recertification requirements for our members. Four, GCSAA needs to do more tangible things that benefit members, for instance safety training for using respirators that could be put on a CD or disk and made available to GCSAA members and their staffs."

BOARD MEMBERS

GCSAA posts held: Board

member since 1996. Chairman

of the scholarship, government

relations, membership, certifica-

tion, publications, tournament

and communications commit-

tees; vice chairman of the stu-

dent resource group; member of

certification, election, career de-

velopment, nominating, public

Name: Ken Mangum Age: 46

Course: Director of golf courses and grounds at Atlanta Athletic Club, Duluth, Ga.

Former head superintendent at: Idle Hour CC in Macon. Ga.; Lagoon Park in Montgom-

Years GCSAA member: 25

Name: Jon Maddern

Age: 41

Course: Elk Ridge GC, Atlanta, Mich.

Former head superintendent at: Golf grounds and park superintendent at City of Farmington Hills, Mich.; Hillcrest CC in Mt. Clemens,

Years GCSAA member: 23 GCSAA posts held: Board member since 1998; chairman of the membership, government re-



lations and information services committees: vice chairman of employer resource and education com-

mittees: member of the elections committee; chapter delegate.

Other associations: Past President of Michigan Turfgrass Foundation; member of Northern Michigan Turf Managers Association; past secretary/treasurer of Greater Detroit GCSA; member of Western Michigan GCSA and Golf Association of Michigan; board of director member of the Michigan Golf Foundation.

Education: Certificate in Turfgrass Management, Michigan State University.

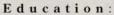
Family: Wife, Bev; children, Brad, 17, Heather, 14.

Goal: "To fulfill and expand services that GCSAA can offer to its members and improve the image of the golf course superintendent in the game of golf."

> GCSAA members will elect three officers and two directors during the Feb. 19 Annual Meeting. Both secretary/treasurer candidates have one year remaining on their twoyear director terms. This will require the incoming president to make a oneyear appointment to fill the director's position vacated by the new secretary/treasurer. Mark Woodward has one year remaining on his two-year director term. David Fearis, 1999 president, will serve as past president.

re-lations, government relations. education, membership and certification committees.

Other associations: Past president, board member and voting delegate of the Georgia GCSA; member of the USGA Green Section committee, Georgia State Golf Association, Atlanta Junior Golf Association, Abraham Baldwin Agricultural College Advisory Board, Georgia Turfgrass Association (selected as the Georgia turf professional of the year in 1996) and Carolina Golf Course Superintendents Association.



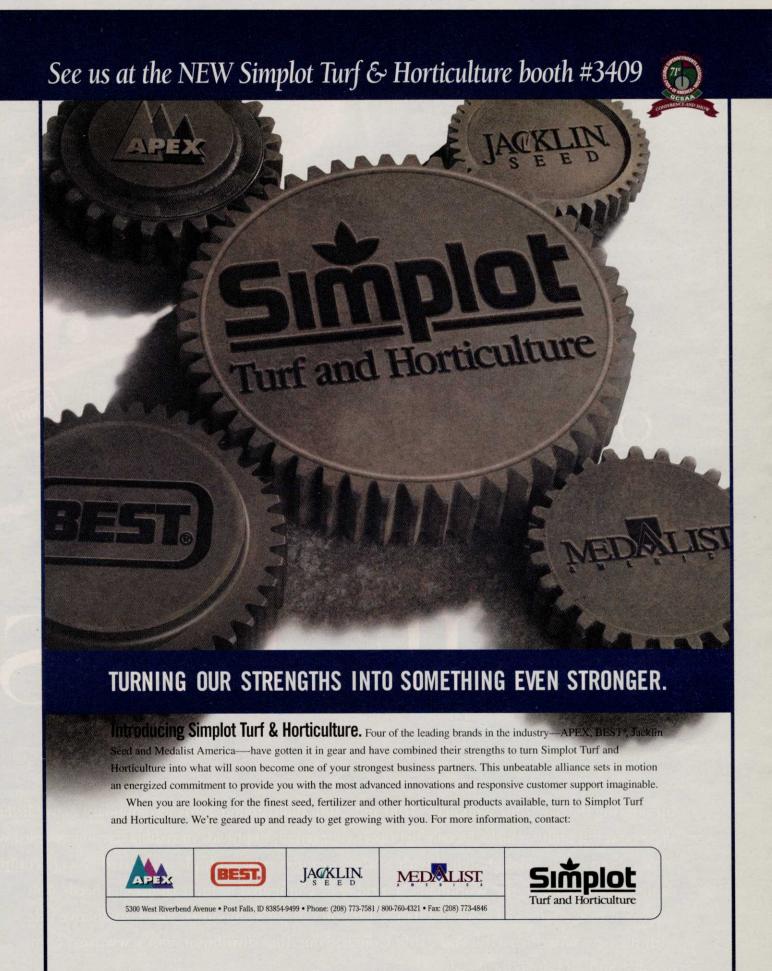
Associate's degree in golf course operations from Lake City (Fla.) Community College.



Family: Wife, Pam; children, Miranda, 22, Trey, 19, Hayley 18.

Goal: "To serve the members and the profession. The Professional Development Initiative is going to play a major role in the future of our profes-

sion and I'm excited to be a part of that, particularly in terms of employer recognition.





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GCSAA International Conference & Show schedule

MONDAY, FEB. 14

6:30 a.m.-6 p.m.

Conference Seminar Registration

8 a.m.-5 p.m.

One-Day Seminars

- · Applied Turfgrass Physiology
- · Budgeting and Forecasting
- · Calculations and Practical Mathematics for Use in Golf Course Management
- · The Challenge of Owning a Golf
- · Golf Course Safety, Security and Risk Management
- · Insect and Disease Management for Warm Season Turfgrass
- Irrigation Scheduling Techniques
- · Lake and Aquatic Plant Management
- · Maximizing Turfgrass Disease Control
- · The Microbiology of Turfgrass Soils
- · Personal Stress Management
- · Protecting Natural Resources on the Golf Course
 - · Turfgrass Ecology
 - USGA Golf Course Rating System

8 a.m.-Noon

Half-Day Seminars

- · Management of Localized Dry Spots and Water Repellent Soils
- · Weed Control in Ornamentals

1-5 p.m.

Half-Day Seminars

- · Complying with New Health and Safety Regulations
- · Managing Turfgrass Root Systems

TUESDAY, FEB. 15

6:30 a.m.-6 p.m.

Conference Seminar Registration

8 a.m.-5 p.m.

One-Day Seminars

- · Bentgrass Management and Rootzone Maintenance
 - · Budgeting and Forecasting
- · Cool-season Turfgrass Vertebrate and Invertebrate Pest Management
 - Drainage Systems
- · Enhancing the Image of Golf Course Superintendents and Golf Industry Professionals
- · Fundamentals of Turfgrass Management I
- Human Resource Management
- · Irrigation Water Quality
- The Magic of Greenkeeping
- Management Strategies for the Turfgrass System
 - · Managing On The Job Behavior
 - The Superintendent as Grow-In Man-
- · Sustainable Golf Course Landscape Design: Enhancing Aesthetics, Function and Maintenance
- · Turfgrass Stress Management
- · Turfgrass Traffic Stress: Physiology and Management
 - · Weed Control
 - 8 a.m.-Noon
 - Half-Day Seminars
- · Computer Mapping and Golf Course Management
- · Effective Soil Water Management for Quality Golf Course Turf
 - 1-5 pm

Half-Day Seminars

· Classic Golf Courses and the Master Architects • Managing Golf Course Trees MONDAY, FEB. 14 - TUESDAY, FEB. 15

8 a.m.-5 p.m.

Two-Day Seminars

- · Golf Course Construction Techniques and Management
- · Golf Greens: History, Theory, Construction and Maintenance
- · Managing People for Peak Performance and Job Satisfaction
 - Plant Nutrition and Fertilizers
- · Salt-Affected Turfgrass Sites: Assessment and Management
 - · Spanish for Golf Course Management

WEDNESDAY, FEB. 16

6:30 a.m.-6 p.m.

Conference Seminar Registration

8 a.m.-5 p.m.

One-Day Seminars

- Applied Turfgrass Physiology
- · Bentgrass Summer Stress Management for Cool/Humid Regions
- · Certification Exam Study Guidelines
- · Cool-season Turfgrass Vertebrate and Invertebrate Pest Management
 - Drainage Systems
 - · Employee Safety Training
- · Enhancing Your Value as a Professional Golf Course Superintendent
- · Financial Essentials for the Superintendent
- · Golf Course Construction Management and Grow-In
 - · Influencing On The Job Behavior
 - · Integrated Environmental Management
 - Irrigation Scheduling Techniques
- Irrigation Troubleshooting-Hardware
- · The Magic of Greenkeeping
- · Maximizing Teamwork
- · The Microbiology of Turfgrass Soils
- · Problems and Solutions: Using Annuals and Perennials in the Golfscape
- · Strategic Planning for Golf Course
- Sustainable Golf Course Landscape Design: Enhancing Aesthetics, Function and Maintenance
 - Turfgrass Ecology
 - Turfgrass Field Seminar
 - Turfgrass Stress Management
- · Turfgrass Traffic Stress: Physiology and Management
 - · USGA Intermediate Rules of Golf

8 a.m.-Noon

Half-Day Seminars

- · Annual Bluegrass Biology and Ecology
- Computer Mapping and Golf Course
- · Developing a Successful Superintendent/Employer Relationship
- · Golf Course Photography: Promoting and Protecting Yourself Through Pictures
- · Management of Zoysiagrass on the Golf Course
- · Managing Up: Strategies for Influencing Boards, Committees & Managers

1-5 pm

Half-Day Seminars

- · Annual Bluegrass Maintenance
- · Guest Architect Seminar with Brian
 - · Media/Public Relations and the Golf

WEDNESDAY, 6-8:30 PM OPENING SESSION AND RECEPTION PRESENTED IN PARTNERSHIP WITH UNITED HORTICULTURAL SUPPLY

Course Superintendent

· Time Management for the Golf Course Superintendent

THURSDAY, FEB. 17

6:30-7:30 a.m.

Chapter Delegates Breakfast

6:30 a.m.-6 p.m.

Conference Seminar Registration

7 a.m.-Noon

President's Dinner Show Voucher Exchange Booth Open for Early Voucher Holders

8 -9 a.m.

Research Breakfast

Presented in partnership with Tee-2-Green Corp., Turf-Seed Inc. Pure Seed Testing Inc.

8 a.m.-5 p.m.

One-Day Seminars

- · Advanced Weed Management
- · Chemical Storage Facilities: Protecting Your Investment
- · Developing Your Hazard Communication Program
 - Financial Management
- · Fundamentals of Turfgrass Manage-
- · Integrated Disease Management for Bermudagrass Golf Courses
- Lake and Aquatic Plant Management · Management Strategies for the
- Turfgrass System · Maximizing Job Satisfaction
- Maximizing Turfgrass Disease Con-
- · Problems and Solutions: Using Annuals and Perennials in the Golfscape
 - Reclaimed Water Irrigation
 - USGA Intermediate Rules of Golf
- · Wildlife Management and Habitat Conservation

8 a.m-Noon

Half-D.av Seminars

- · Annual Bluegrass Biology and Ecol-
- · Application of Inorganic Mineral Soil Amendments to Golf Courses
 - · Are You Prepared to Say Yes?
- Communication Skills to Get You to the Top and Keep You There
- · Management of Localized Dry Spots and Water Repellent Soils
- · Time Management for the Golf Course Superintendent

8 a.m.-2:30 p.m.

Certification Examination

8 a.m.-5 p.m. Media Room Open

9-10:15 a.m.

Career Development General Session 9 a.m.-Noon Research Session-Science for the Golf

Course: Making Your Job Easier 10:30 a.m.-Noon

Career Development Breakout Sessions · Labor Trends and Employment

- · Management Company Practices: Fact vs. Fiction
- · Promotion Strategies for the Golf Course Industry

11:30 a.m.-1 p.m.

Past President's, Board of Director's and Spouse's Luncheon (by invitation)

11:45 a.m.-1 p.m.

New Exhibitor Luncheon

Noon-6 p.m.

President's Dinner Show Voucher Exchange Booth Open. 1-3 p.m.

Chapter Manger's Workshop

Your Greens Singing the Blues? Education Concurrent Session-All That Jazz Between the Roughs

Education Concurrent Session-Are

1-5 p.m.

Half-Day Seminars · Annual Bluegrass Control

- · The Art of Negotiation with Your Employer
- · Communication Skills to Get You to the Top and Keep You There · Management of Zoysiagrass on the
 - Managing Turfgrass Root Systems
 - · Turfgrass Growth and Development

3-4:30 p.m. Education Session-What To Do When Your Budget's Not the Big Easy

3-5 p.m. Education Session-Golf Course Gumbo Chapter Research Program

WEDNESDAY, FEB. 16 - THURSDAY, FEB. 17

8 a.m.-5 p.m.

- Two-Day Seminars • The Assistant Superintendent: Man-
- aging People and Jobs · Disease Identification and Control
- · Golf Course Restoration, Renovation and Construction Projects
- · Golf Greens: History, Theory, Construction and Maintenance · Managing People for Peak Perfor-
- mance and Job Satisfaction · Physical Problems of Turfgrass Soils: Identification andCorrection
- · Pre-construction and Construction Management FRIDAY, FEB. 18

6-7 a.m. Innovative Superintendent Breakfast Presented in partnership with American Cyanamid Company and Club Car.

6:30 a.m.-6 p.m. Conference Seminar Registration 7-8:30 a.m.

Innovative Superintendent Session I President's Dinner Show Voucher Exchange Booth Open to All V o u c h e r

Holders 7:15-8:30 a.m.

Environmental Steward Award Recognition Breakfast

Distributor Preview

8-11 a.m.

8 a.m.-6 p.m.

Media Room Open

Continued on next page

GOLF COURSE NEWS

February 2000 21

New GCSAA president speaks out

Continued from page

students dictate what they want to learn, and then having the instructors teach it that way. We've gone out with focus groups and asked superintendents where they think their strengths and weaknesses are in terms of doing their jobs. We're taking these competencies and comparing them to our existing educational opportunities to see where we need to put more emphasis. Then we'll ask the instructors to develop their curriculum based on what the students say is needed.'

The most controversial part of the PDI has involved possible changes in the requirements to be a Class A member. Any change would take a bylaw amendment, which requires a two-thirds vote of the membership. That vote could occur as early as the International Conference and Show in Dallas in 2001.

"It [PDI] really is a work in progress," Woodhead said, "and will continue to be so until at least September, when some sort of recommendation from the Member Standards Resource Group will be presented to the delegates at the annual chapter delegates meeting. If the delegates are comfortable with it, then it will be placed before the board. Until then, it is purely a committee project and the board is doing nothing more than listening and keeping track of the feelings of the membership."

The environment will continue to be a major GCSAA focus, Woodhead predicted. "It's really become a way of life for superintendents," Woodhead said. "It's not such a heated topic among the environmental community these days. But we can't sit back and rest on our laurels. It won't take much to re-ignite a controversy. GCSAA is developing an eco-golf philosophy. You'll see that blossom a little more this year."

Woodhead believes the major strength he brings to the presidency is his seven years experience on the board of directors. "I've had the opportunity to serve on or chair almost every standing committee GCSAA has," he said. "It's given me a very well-rounded background.'

Another strength is coming from a limited-budget course himself. "I know what it takes to run a golf course on a shoestring," he said. "I'm aware of the challenges faced by superintendents who have money issues.

Woodhead's employer, Valley View, is a private, equity club located at 4,900 feet in Montana's Rocky Mountain range. The annual operating budget would place it in the lower 25 percent nationally, Woodhead estimated.

"If you look at the new construction, private, equity clubs aren't being established. Most of the lower-end ones are struggling," he said.

Very few GCSAA presidents have come from the Northwest. Dick Malpass (1976) was from Oregon. Woodhead is the first from Montana.

"We're the only two from the Northwest that I know of," he said. "There are obviously a lot more golf courses in other parts of the country. But there are still a lot of courses up here. It's nice that I can carry their voice, as well as that of the rest of the members, when I travel around the country.'

Woodhead's assistant is David Evans, who joined Valley View a few months after Woodhead was first appointed to the board in 1993. "David is very competent and makes my ability to travel a lot easier. The members have always been willing to support me in my [GCSAA] duties."

TRADE SHOW OPEN FROM 11 A.M.-6 P.M. FRIDAY, 9 A.M.-5 P.M. SATURDAY, AND 9 A.M.-1 P.M. SUNDAY

FRIDAY, FEB. 18 (CONT.)

8:45-10:30 a.m.

Golf General Session

The Breakthrough Factor: Creating a Life of Value for Superintendents to Achieve Success and Happiness. Presented in partnership with Novartis Turf & Ornamental Products, Pursell Technologies, Inc., Rain Bird and Textron Turf Care And Specialty Products: Cushman, Jacobsen, Ransomes and Ryan brands

11 a.m.-6 p.m.

Trade Show

Noon-12:30 p.m.

Certification Luncheon (by invitation). Presented in partnership with Zeneca **Professional Products**

12:30-1:30 p.m.

Certification Business Meeting

1-3 p.m.

Super Users Forum

1:30-4 p.m.

Greens & Grassroots Government Relations Program

2-4 p.m.

Selection, Installation and Management of Zoysiagrass. Presented by the American Zoysiagrass Association.

Tools for Tree Management. Presented by the International Society of Arboriculture.

NGCOA-Cutting Edge Programs. Presented by the National Golf Course Owners Association.

Taking Another Look at Strategic Perspective on Golf. Presented by the National Golf Foundation

2-5 p.m.

International Summit

Honesty • Integrity • Innovation

Chapter Media/Public Relations Ses-

SATURDAY, FEB. 19

6-7 a.m.

Innovative Superintendent Breakfast and Roundtable Discussions. Presented in partnership with American Cyanamid Company and Club Car, Inc.

6:30 a.m.-5 p.m.

Conference Seminar Registration

7-8:30 a.m.

Innovative Superintendent Session II

7:30-10 a.m.

Collegiate Turf Bowl Competition

Golf Course Architecture in the New Millennium. Presented by the American Society of Golf Course Architects

8-10:30 a.m.

Annual Meeting and Election of Offic-

8 a.m.-Noon

Half-Day Seminar

Precise Boom Sprayer Calibration, Tank Mixing and Record Keeping

8 a.m.-2:30 p.m.

Certification Re-Examination

8 a.m.-5 p.m.

Media Room Open

9 a.m.-5 p.m.

Trade Show

10 a.m.-Noon

Student Forum: Building Your Student

10:30 a.m.-Noon

Town Hall Meeting

11:30 a.m.-1 p.m.

Friends of the Foundation Reception

Noon-1:30 p.m.

Student Chapter Lunch

1-4 p.m.

Chapter Newsletter Editors Session. The New Millennium-Making Wise Decisions. Presented by the United States Golf Association

2-4 p.m.

Student Seminar: From Student to Superintendent. From the Golf Course to the Boardroom: Essential Tactics for Becoming Your Facility's Chief Operating Officer. Presented by the Club Managers Association of America

Coordinating an Irrigation Design and Installation. Presented by the Irrigation

Shortages of Turf Equipment Technicians in the Green Industry. Presented by the Turf Equipment Technicians Association

4-5 p.m.

Student Mixer

6-7 p.m.

President's Dinner Show Reception. Presented in partnership with The Textron Group of Companies.

7-10:30 p.m.

President's Dinner Show

SUNDAY, FEB. 20

7:30-9 a.m.

Prayer Breakfast

8 a.m.-1 p.m.

Conference Registration

Media Room Open

9 a.m.-1 p.m.

12:30 p.m.

27-Hole Challenge Prize Drawing

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GOLF COURSE NEWS

Davies on PDI

Continued from page 15

research make up the Professional Development Initiative. We need a minimum standard for Class A superintendents that employers understand and value which will return a greater appreciation of our skills and abilities as they relate to the business of golf.

We need to support the skills and abilities with affordable, accessible education. There needs to be a marketing program for these credentials to the employers so they understand the value of what we do. This process needs to be supported by the members.

Part of obtaining member support is getting the message to members and getting feedback. That is what we are doing now. Some of the program involves change and emotion. We understand this very well, as many hours were spent debating the issues and finding consensus during our meetings.

Members of the Membership Standard Resource Group have been traveling around the country giving presentations to chapters and collecting feedback. The PDI presentation is on the GCSAA web site for view and comment. The voting delegates and other committees have seen presentations and been giving feedback and making recommendations. The process is still in the development stage and evolving.

THE KEY ISSUES

Following are some of the key issues that have been raised to date. They include the educational requirement, use of the planning tool, grandfathering and costs. During presentations these issues are raised most often.

√ Formal Education

The most discussed subject is the requirement of a two-year degree in turf or a four-year degree in another subject. Often the concern is that we are closing the door on anyone who is not fortunate enough to get a two-year degree, much less four.

Many current superintestour.

Many current superintendents without a degree perform at an excellent level, so the idea that they must have a degree is untrue. The degree closes the door forever on those who cannot go to school for whatever reason. This is not consistent with the way we have managed the certification program, where an alternate path is offered. For most of those who express this position, an alternate path is the solution; set a requirement for CEUs that will be considered an equivalent.

A few others feel the educational requirement should be eliminated completely.

But the degree was included for many reasons. Employers value the degree and superintendents are the most educated group as part of the management team in golf. So it has great value in our effort to communicate what we bring to the game.

Employers also desire more from superintendents in nontechnical skills. Superintendents will receive training in non-technical skills in college, especially with a four-year degree. This is why the four-year degree in another subject was included. We have an abundance of collegetrained assistant superintendents and even spray techs, working for their first opportunity as a superintendent. The degree is becoming the standard whether we make it one or not.

No one has disagreed that the best way to prepare for the profession is with a college education. No member has said the best way to prepare is to go to work on a crew and forget a degree. The most fundamental question is not the value of a degree, but the appropriateness of including it in our standards. All the issues raised by members will be reviewed by the MSRG. This issue was the most difficult to gain consensus during our preparation of the first draft—and for good reason. There is significant support for an alternative path.

HR WEB

The HR WEB is a planning tool that uses the Internet to allow members to compare their current competencies against the minimum standards, the demands of their current position, or the demands of a future position they desire. The tool is outstanding in its ability to identify the areas of continuing educa-

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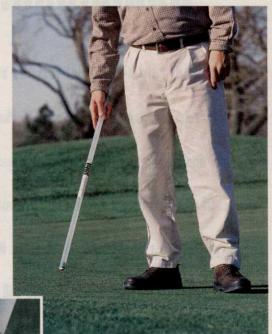
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GCSAA BOOTH #1908



GCN Big Builder of the year Allan MacCurrach (left) and his sister.

MacCurrach grabs Big Builder award

RV PETER RIAIS

ARMOUTH, Maine — MacCurrach Golf Construction Inc. of Jacksonville, Fla., is a name *Golf Course News*' readers are getting used to seeing at or near the top of the Builder of the Year leader board.

The winner of *GCN*'s 1999 Big Builder of the Year Award (four or more courses) took the Small Builder of the Year honor in 1996 and finished second in the Big Builder balloting a year ago. MacCurrach received a score of 78.88 on an 80-point scale in evaluations of the firm's construction projects by architects, developers and superintendents.

Others finishing high in the Big Builder balloting included Barbaron, Golf Works, Golf Visions, Ryan Golf, Landscapes Unlimited, Ranger Golf, SAJO Construction, Shapemasters, RBI Golf, Quality Grassing & Services and Niebur Golf.

MacCurrach completed seven projects in 1999. They included three new courses: the Pete Dye-designed course at PGA at the Reserve in Port St. Lucie, Fla.; Mel Graham-designed World Tour Golf Links in Myrtle Beach, S.C.; and Tom Faziodesigned Barefoot Landing in Longs, S.C. MacCurrach also completed four major renovations: a \$2-million project at The Club at Seabrook Island's (S.C.) Crooked Oaks layout: a \$1.3-million redo at Amelia Island Plantation's (Fla.) Oyster Bay track; an \$800,000 upgrade at Delaware Country Club in Muncie, Ind.; and a \$300,000 project at the TPC at Sawgrass in Ponte Vedra Beach, Fla.

Among the rave reviews of those affiliated with these projects were the following comments:

- "Allan [MacCurrach] and his crew are the epitome of what a professional contractor should be." Joel Ratciff, superintendent at Word Tour Golf Links.
- "They've done an excellent job for us every time." Scot Sherman, a senior associate designer with Bobby Weed, architect at Amelia Island's Oyster Bay.
- "The best I have ever worked with."
 —Tim Liddy, architect at Delaware Country Club.
- "Completed the course in eight months on budget. Great company and individuals." Bob Fromm, superintendent at PGA at the Reserve. "

"I would not have anyone else doing

our construction." — Ron Hill, superintendent at Amelia Island Plantation.

MacCurrach is particularly excited about the Dye course at the PGA at the Reserve. "It is the newest cut of the abstract Pete Dye," MacCurrach said of the layout, which he predicts will receive numerous accolades in the various "best new course" lists. "That's going to be big."

Founder Allan MacCurrach III is the son of Allan MacCurrach Jr., a former head agronomist with the PGA Tour. The younger MacCurrach grew up working on the grounds crew of the TPC at Sawgrass. A graduate of the University of Massachusetts' two-year turfgrass program, he helped build courses with Dye and architect Bob Cupp, as well as builder Jim Holmes of Greensboro, Ga., before striking out on his own in 1987.

MacCurrach will receive his award at the Golf Course Builders Association of America annual banquet during February's Golf Course Superintendents Association of America International Conference and Show in New Orleans.

"People get up at that banquet and always thank their employees," MacCurrach said. "And that's fine. But if we were playing in the Super Bowl, we'd have the best lineman, best receiver, best quarterback... I could end up in a rectangular box with six feet of top dressing on top of me and this company would not miss a beat.

"I've got a core group of guys who have brought a lot of success for me: General Manager Brian Almony and project superintendents Chris Papanto, Doug Seldon, Jeff Tourangeau, Tom Weber and Chris Kleinsmith. Many of them are the same guys who were with me when we won the Small Builder award. Every superintendent who works for this company has come from the ditch. Most of them came to us as college interns or laborers and now they are running \$5-million jobs."

The transition from "small" to "big" builder can be a rocky one, but has been relatively smooth for MacCurrach. MacCurrach peaked at 145 employees in 1999. A dozen years ago it was just MacCurrach.

"We absolutely pride ourselves in not

Continued on page 28



The Bull at Boone's Trace, a GDC course.

GDC takes the small builder title

By PETER BLAIS

ARMOUTH, Maine — What do gymnast Olga Korbut, pitcher David Wells, bowler Dick Webber and Golf Development Construction Inc. (GDC) have in common? They've all posted perfect scores/games.

Louisville-based GDC is the latest to turn the trick, capturing all 80 of a possible 80 points to take the 1999 *Golf Course News'* Small Builder of the Year award. It is the first time GDC has taken the honor and the first time any firm has received a flawless rating from the developers, architects and superintendents who rate their work.

Others finishing high in the Small Builder balloting included Oliphant Golf Construction, Turf Drain, Furness Golf Construction, Frontier Construction, Formost Construction, Course Doctors, Pennink Arrimour Golf, Terry Johnson & Associates, Intergolf Design and Daylen.

GDC will receive the award at the Golf Course Builders Association of America annual banquet during February's Golf Course Superintendents Association of America International Conference and Show in New Orleans.

Among GDC's 1999 projects were a nine-hole addition to Panther Creek Golf Club in Utica, Ky.; a nine-hole renovation to Shawnee Hills Country Club in Harrisburg, Ill.; and a new, David Pfaff-designed 18-hole course called The Bull at Boone's Trace in Richmond, Ky.

Panther Creek was a nine-hole addition built over a former strip mine. The site included three deep ponds. The project required some major earthmoving to rid the property of the spoilage that dominated the landscape. Managing partner Louis Miller designed the new holes himself.

Shawnee Hills is a nine-hole country club that lost all its greens in 1998. GDC completely renovated the facility, which reopened by mid-summer 1999.

The Bull at Boone's Trace is an 18-hole course located within a 2,300-acre tract that Miller said has been receiving strong reviews.

"We are very pleased with the results of GDC's work," said Shawnee Hills superintendent Herman Hutchison. "The completed work met with all of our expectations. GDC helped us throughout the grow-in period, with excellent results."

GDC offers construction services com-

plete through grow in, taking the grass through three mowings, multiple fertilization applications and, if needed, applications of fungicides and insecticides.

"We charge a lot for that," Miller said. "We provide the men and equipment. But then the owner has a finished product. You don't have a superintendent with no grow-in experience who is trying to follow you. That superintendent may or may not be qualified to grow in a course. For us, it was born out of necessity to get our money and get our retainage [the 10 percent developers typically hold back until construction is completed]. Once you're through grow-in, the architect signs off, the owner signs off, everybody is happy.

"Grow -in is not cheap. It's \$100,000. It's a break-even for us. But it guarantees I'm going to get my money. And the client gets a finished product. We don't require it [that the developer signs on for growin]. But when you offer it, most will turn it down initially, then come back knowing it's too good to pass up. The developer or architect will usually go to the owner and say, 'You're crazy if you don't take this."

GDC is a certified course builder with more than 100 years of golf industry experience between partners Miller (secretary/treasurer), Clark Fenimore (vice president) and Jim Kirchdorfer (president). Miller, Kirchdorfer and Fenimore joined forces to build their first project, 27-hole Quail Chase Golf Club in Louisville, in 1987. Since that first year, the firm has been involved with more than 95 golf course projects.

Miller, who is GDC's managing partner, has been in the golf business for 37 years. He has a degree in agronomy from Pennsylvania State University and a bachelor's degree in English. He has been involved with Louisville Country Club for 30 years, first as a superintendent and now as an agronomist.

GDC did all the renovation work in preparation for the 1996 and 2000 PGA Championships at Valhalla Golf Club in Louisville. It will prepare the course for the 2004 PGA Championship and the 2007 Ryder Cup. GDC also built the nation's initial First Tee facility, a three-hole, kids-only layout named Shawnee Golf Course in Louisville.

GDC is a regional builder, working primarily in the Upper South and Midwest.

Continued on page 28



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Davies on PDI

Continued from page 23

tion that will be of most value to a superintendent for his current position and in preparation for career advancement.

It will link to education providers and allow the superintendent to access education of their own choosing. It is based on task analysis and includes all the competencies discovered in the research.

Some of our members are concerned that this tool, though effect for planning, could be misused and abused. There is concern that the personal information would not be adequately protected, that the competency could be used by employers in selecting superintendents, or that GCSAA would use them to recommend individuals in response to jobopening announcements.

Others are concerned the use of the planning tool and continuing education would be mandated for those who desire Class A status.

The basis for minimum standards is that all superintendents do the same tasks. This allows us to set minimum standards. The planning tool is critical if we choose to have minimum standards. The only access allowed to the system will be individual mem-

bers using their password. Therefore, no one not authorized by the superintendent shall have access to the information. GCSAA will contract for the use of the tool and its management, so even staff access will not be a concern.

The more difficult question to address is, what will employers do with the knowledge that our membership has a profile? Will they require us to bring them to interviews and use them inappropriately in the selection of superintendents? This will require a better understanding of what employers will do when we communicate competencies to them.

GRANDFATHERING

The grandfathering recommendations are liberal and were the outcome of our recommendation that no current superintendent be required to go back to school to keep their Class A. Some feel that to have any integrity, the new standards should not allow anyone to grandfather. If the new standards are so important, then they should be applied to all, not just new superintendents after July 2002.

Others believe that without the grandfathering, the new standards would be unfair. It has been correctly pointed out that the grandfathered superintendent who does not continue his education or participate in any local chapter meetings, would lose the Class A after a three-year period.

Grandfathering is what it was intended to be: a period of adjustment to the new standards which protects current superintendents who do not meet the new requirements. The MSRG feels this is a tried-and-true tool that was effective in establishing the certification program and has an effective historical record.

Could the timing be adjusted to be more fair? Could the certification window be larger or smaller? What happens if a superintendent loses his job? These issues will be reviewed by the MSRG, but we are confident that the grandfathering tool is important and will be effective.

COSTS

How much will it cost for education to meet the continuing education requirements after superintendents are grandfathered? How much will these other education providers charge for their training? How much has the GCSAA spent to date on the PDI and how much more will it cost before we are done? How much will the HR WEB cost for ongoing operations?

These are very important questions. Those who are opposed to the present proposal have questioned the costs and expressed concern that money not be spent on an effort to make changes with which they disagree. This is an understandable position.

We feel that with the modifications that will come from the continued work of the MSRG, a proposal that gains the needed support of the membership will be developed. The studies were expensive, as is the cost of bringing the MSRG and other committees together for meetings. GCSAA has a budget of more than \$15 million per year and well over \$45 million the past three years. The costs associated with the PDI are reported to be \$900,000 to date

Continued on next page



Influential supers

Continued from page 1

president in 1962 and is a consultant living in Brewster, Mass. — received the most votes among active/retired nominees. Following Moore were Eb Steiniger, Robert Williams, Gordon Witteveen, Walter Woods, Paul Latshaw, Palmer Maples, Robert Mitchell, Randy Nichols and Edward "Ted" Horton.

Bidwell was an Owensboro, Ky., native who began his turfgrass career in the ninth grade on the maintenance staff of Homestead Golf Club in Cincinnati. He joined the GCSAA in 1934, remodeled Olympia Fields Country Club in Chicago in preparation for the 1961 PGA Championship and later worked at Philadelphia Country Club and Congressional Country Club in Bethesda, Md. He served on the national GCSAA board from 1969 through 1971 and, after retiring from course management. traveled worldwide as a turfgrass management consultant for Tee-2-Green and Turf-Seed Corp..

"He was a true visionary who led by example," wrote Ken Krausz of the GCSA of New Jersey. "He trained many future superintendents and was the consummate professional."

Morley and Chet Mendenhall were two of the original founding members of GCSAA.



John Morle

Born in England, Morley emigrated to the United States before the turn of the century, became head greenkeeper at Youngstown Country Club and served as the GCSAA's first

president from 1926-31. "He was the first to exercise a future vision," wrote Robert Williams.

Mendenhall, who served as GCSAA president in 1948, was the association's last surviving charter member when he died a few years ago. Born in 1895 on an Oklahoma farm, his



Chester Mendenhall

golf career started on a city-owned course he designed and built in Wichita, Kan. He later worked at Wichita Country Club and Mission Hills Country Club on the Kansas/Missouri border and also designed a number of courses in the two states. "He was the original superintendent," wrote MAGCS President Don Ferreri.

No one is held in higher esteem among the active/retired superintendent ranks than Moore. Moore attended the Stockbridge School of Agriculture at the University of Massachusetts concentrating on turfgrass maangement and horticulture. He worked at several New Jersey courses before accepting the head superintedent post at Winged Foot Golf Club in New York. He had two tours of duty at Winged Foot, hosting the U.S. Open and Senior Open. Moore was the first superintendent to receive the Old Tom Morris Award, GCSAA's highest honor, and was a frequent contributor to Golf Course Management magazine.

"He had that All-American boy image," wrote Robert Williams of the man who would follow him as GCSAA president four years later. "He had a great track record."

Another voter cast his lot with Moore "for the work he did overseas and his

infectious enthusiasm."



Eb Steini

Born in Germany, Steiniger spent 53 years at Pine Valley Golf Club, the suburban Philadelphia layout annually voted the top course in the world by most major

golf publications. He nurtured the course along to its eventual No. 1 ranking and earned the GCSAA's Distinguished Service Award in 1988. The turfgrass maintenance museum at Penn State is named after Steineger and fellow course manager Tom Moscaro. "He was the nicest, greatest and most talented man ever to serve in a golf course maintenance capacity," wrote Joe Owsik of the Philadelphia Association of Golf Course Superintendents.

Robert Williams, who served as GCSAA president in 1958, spent most of his career as head superintendent of Bob O'Links Golf Club in suburban Chicago. An eloquent speaker,



Robert Williams

talented writer and capable businessman, he is credited with helping elevate the position of golf course superintendent from a menial job to a profession. "He was the leader of GCSAA during the transition from greenkeeper to superintendent," wrote one voter.

The survey was conducted in November and December. Voters were asked to rank the top 10 superintendents in each category (Deceased and Active/Retired).

'He was a true visionary who led by example. He trained many future superintendents and was the consummate professional.'

— Ken Krausz of the GCSA of New Jersey on Warren Bidwell

Nominees received 10 points for a firstplace vote, nine points for a second-place vote, eight points for a third-place vote, and so on.

Also receiving votes in the "Deceased" category (in no particular order of finish) were Arthur Anderson, Bill Beresford, Andrew Bertoni, Fred Burkhardt, Phil Cassidy, Angelo Cammarota, O.B. Fitts, Joe Flaherty, Raymond Gerber, John Gray, James Haines, Lester Hall, Norm Kramer, Frank Maples, Casper McCullough, John McGregor, Mal McLaren, Roy Nelson, Jack Ormond, Emil Picha, William Sansom, Hans Schmeisser, Robert Scott, Robert Shields, Bill Smart, Colin Smith, John Steel, Clarence Wolfrom, Paul Boizelle, Fred Roth, Joe Hadwick, Adolph Bertucci, Art Benson Sr., Leon Lambert, Paul Weiss Sr. and Frank Ermer.

Other "Active/Retired" nominees receiving votes (also in no particular order) were Walter Boysen, Tom Burrows, Paul Frank, Gary Grigg, Dan Hall, Keith Ihms, Dan Maples, David Moote, Keith Nisbet, Sid Puddicombe, John Spodnik, Paul Voykin, Cliff Wagoner, Bruce Williams, Theodore Woehrle, Steve Cadenelli, Bob Alonzi, Doug Peterson, Mike Bavier, Oscar Miles, Richie Valentine, Sonny Debose, Tom Leonard, Donald Hearn, Kevin Downing, Fred Klauk, Tim Hiers, Mark Jarrell, Paul Crawford, Charlie Tadge, George Morgan, Jim Wyllie, Louis Miller, Peter Smith, Carl Beer, David Gourchy and Mel Lucas.

Davies on PDI

Continued from previous page

and a detailed report on a breakdown of costs has been requested.

The costs are appropriate for the work that has been accomplished. Even those who are most aggressive in their views that portions of the proposal must be changed, feel that there is much good in the proposal, if we can simply address their concerns. We agree with this view and expect to address concerns sufficiently to gain the support required.

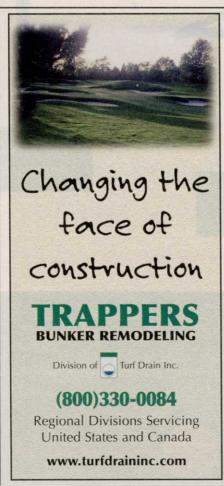
Our membership is detail-oriented. Before taking our proposal to them, concern was expressed that all details had to be worked out prior to exposing the members to the proposal. The thinking was that if we had any unaddressed issues, the members would reject the proposal. The majority felt it important to show that we had a work in progress and that we desired membership input.

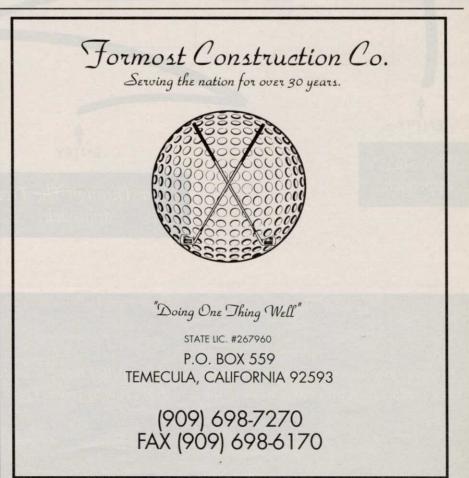
We made many tough decisions, so no one would feel we were unwilling to address core issues. But to give the impression that there was no room for movement, and all decisions were final, was inconsistent with our intentions.

We do walk a fine line. We are exposed to criticism that we should have the answer to every question on one side and on the other that we have already made up our minds, so why are we even asking for input from the membership. Exposure to criticism is a price that leadership must always pay. It cannot be any other way and we do not shun it. We do not glory in it, either.

Our members want to know how the decisions will affect them.

Change is hard for any organization. The issues we are dealing with are important enough to pay the price change requires. We are proud of our membership, especially those who have raised their voices to express concerns. It is a great profession!







Fearis

Continued from page 17

fit in," the low-budget superintendent would say

The limited-budget initiative is a way to overcome that perception of cliquesh-ness. It is sort of a chapter outreach program.

As chapter members and local distributors you know the limitedbudget facilities in your areas.

those courses. Then make a telephone call, or better yet, a personal visit. You do that and you break the barrier of the clique. You invite them to the meetings and maybe waive the chapter dues for a year, if that's what it takes to get them to come to the meetings. GCSAA is giving its chapters a free membership to award to a course that is identified through waive the dues and hopefully the chapter does the same.

You make the new superintendent feel at home. You remember how you felt when you went to that first meeting? You didn't know anybody. You had no idea who you were going to play golf with. So, instead of playing in your regular foursomes, you put this new person in your group. You follow

mention a problem they are having at their course. Maybe you stop by their club for a visit. And let them know GCSAA will follow up with any information it has that may help them.

Hopefully they'll see that the local chapter is helping them and consider attending the national conference and show

It goes back to this affordable,

try is stressing. The growth of the game won't occur solely at the \$175 green-fee facilities. Somewhere there has to be a place where women, kids, minorities and Generation X-ers can go, learn the game and not pay an arm and a leg for it. Limited-budget facilities are where this can happen. I'll bet 90 percent of superintendents can trace their roots back to facilities like these, either playing or working. If the game and out industry is going to grow, it's going to happen largely at these limited-budget courses.

MacCurrach

Continued from page 24

overloading the capacity of the company," MacCur-rach said. "I tell our clients and architects we are a good five-job company. If we have guys on five different sites, we're good. If we have guys on six different sites, we're not so good, we're okay. If we get stretched to where we are finishing one and starting one, and we get some overlap where we have guys at seven different locations. we're not a good company.

'Growth-wise, we've been extremely controlled. My nightmare would be to get a telephone call from an owner someday saying, 'We're not getting enough production from this.' I just never get those calls.

'We don't bid a lot of work. If we show up at a bid meeting, it's because we want the job. I don't throw in a bunch of complimentary bids. Our batting average on bids is pretty good because we don't bid a lot of jobs. We have a lot of negotiated work coming our way. Some of these architects are starting to lean toward us on some of their nicer jobs. That's a blessing."

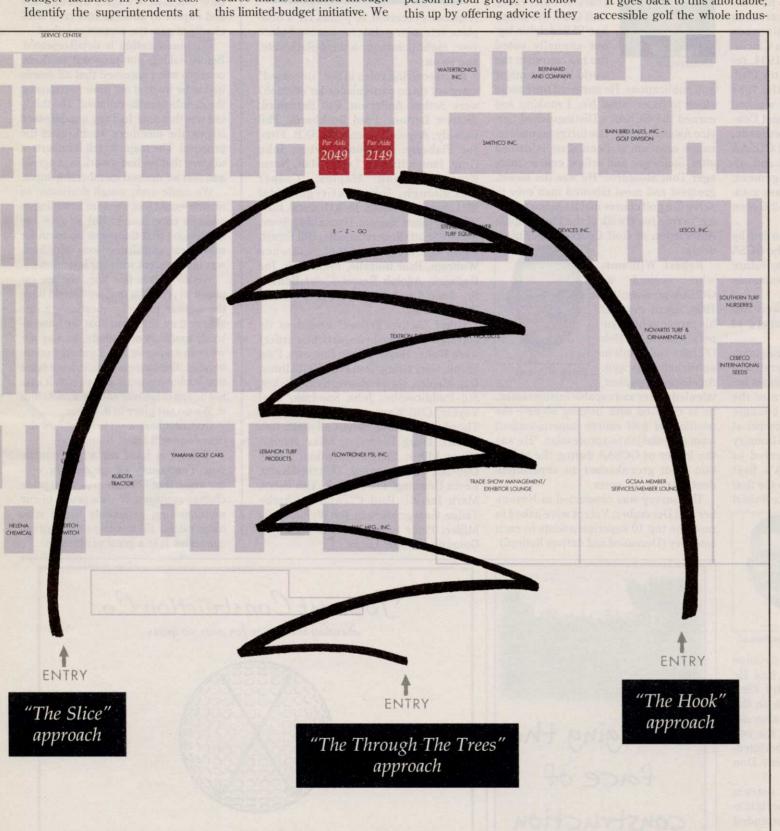
MacCurrach has never set goals in terms of total revenues or employees. At the end of each year, he said, he meets with his accountant and is always amazed at how much money the firm has

"We've always focused on the journey and not the destination," he said. "We don't have a five-year or 10-year plan around here... If I lose a bunch of people, I'll take on less work. Our capacity of personnel drives the volume of work we do. We'll never overextend the capacity of this company."

GDC

Continued from page 25

"We're at a comfortable size for us right now," Miller said. "We can run up to 90 employees and as many as four full-time jobs. We don't want to get much bigger. That way we can retain hands-on control. When the architect's on site, I want to be there, too." there, too."



However you find your way to our booth, you'll be thrilled that you made the visit. For yet another remarkable new product from the leading name in the industry, swing by booths #2049 and #2149 at GCSAA. 1-888-893-2433.





BRIEFS



IN HIS GRIP CO-AUTHOR SPEAKING AT PRAYER BREAKFAST

NEW ORLEANS - Dr. Jim Sheard, co-author of In His Grip and Playing the Game, will speak at the annual Prayer Breakfast at the International Golf Course Conference and Show here at 7 a.m. Sunday, Feb. 20. Sheard, who wrote the books with former PGA Tour player Wally Armstrong, has written a third book, A Champion's Heart, which identifies the essential character qualities for success in life and sport. A former senior vice president for human resources and president with Federated Insurance Cos., and a former executive vice president with Personnel Decisions International, Sheard is co-founder of In His Grip Resources, headquartered in Owatonna, Minn.

LAKE CITY STUDENTS FIRST IN IA

ORLANDO, Fla. — Steven King, irrigation instructor at Lake City Community College, and students recently attended the 20th Annual Irrigation



Association Conference & Show here. The LCCC students and King were recognized as the first student chapter in the United States of the

Irrigation Association. The newly formed Irrigation Association student chapter at LCCC recently elected officers for the 1999-2000 school year, including President Todd McMahon. He is joined by Vice President Rick Helbling, Treasurer Mike Mcvickers, and Secretary Richard Adams.

TURF SCHOLARSHIP AWARDED

Brian Lentz of the Central Florida Golf Course Superintendents Association has presented Ricky Craig of Center Hill, Fla., with a \$1,500 Danny Burgess Memorial Scholarship at a ceremony at Windermere CC. Craig will attend the Golf Course Operations program at Lake City Community Col-



lege to pursue a career in golf turf management. Craig work-ed last year at Disney's Magnolia and Palm courses and was nominated for

the scholarship by Disney superintendent Scott Welder. Each year the Central Florida Superintendents Chapter holds the Danny Burgess Memorial Tournament at Windermere CC in memory of that club's former superintendent who died in 1994.

Scientists: Threats of drought loom in future

By GARY BURCHFIELD

OLUMBIA, Mo. — Golf course superintendents not prepared for drought may want to institute a long-range management plan that includes the possibility of extended dry weather.

Climate models developed by researchers at the University of Missouri, Columbia, indicate a good probability of extremely dry conditions in the next four or five years, especially in the country's mid-section.

The past four years already have seen major droughts across Texas, Oklahoma and the Southern plains, much of the eastern Corn Belt and along the Eastern seaboard. Southwestern states suffered drought effects in 1996, 1998 and into 1999. Forest fires ravaged parts of Florida in 1997.

Across South Carolina, 1999 rainfall

U.S. Drought Monitor



was 16 to 20 inches below normal. Farmers in several areas have suffered major crop losses. Lawns and golf courses have seen their share of stress in several regions. Now, forecasters are predicting a high probability of more dry weather ahead.

The Missouri scientists studied precipi-

Continued on page 30

Drought-proofing a golf course

As the old saying goes, "You can't control the weather. But you can be prepared for the possibilities."

Here are some tips to counteract drought effects, or at least lessen their impact on a golf course.

√ Long-range, consider finding an effluent water source for irrigation. According to Roch Gaussoin, Extension turfgrass specialist at the University of Nebraska, using wastewater to irrigate a golf course usually means the course will not have

Continued on page 32

\$2 MILLION IN PROJECTS FUNDED

USGA's new financing eyes owls to turfgrasses

By MARK LESLIE

FAR HILLS, N.J. — The United States Golf Association (USGA) has continued its 17-year-old financial commitment to scientific research, to the point where it has "maxed out" its manpower resources.

The USGA Green Section Research Committee has doled out another \$848,763 for 17 new turfgrass and environmental research projects. Combined with some 72 other continuing projects, the donations total \$1,998,241 in 2000.

In the meantime, Director of Research Dr. Michael Kenna said: "Our commitment to research is not a problem. If this [research] committee wanted to go after more funding, we could probably get it. But I personally have reached a point where we can't add any projects."

The problem is finding the manpower and time to oversee the research and process the findings:

"We get 900 pages of research reports," Kenna said from his office in Stillwater, Okla. "When I came aboard in 1990 we had 23 projects, compared to 89 now."

That number took a leap when the USGA Green Section added an environmental focus. Several years ago, it began its support of the Audubon Cooperative Sanctuary Sys-

tem and created Wildlife Links, which deals with wildlife habitat issues regarding species that live on and are affected by golf courses.

The mostly highly funded new projects each obtained approxi-

mately \$75,000. They are:

• Development of gray leaf spotresistant perennial ryegrass through breeding and biotechnological approaches, by Mark Faman at the University of Kentucky.

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Pellrene: Canada's best likes the old, loves the new

By PETER BLAIS

VANCOUVER, British Columbia, Canada — He's built new courses that went on to host Canadian championships. He's refurbished classics that legends A.W. Tillinghast and Stanley Thompson would still be proud to call their own.

Whether it be ringing in the new or restoring the old, Canadian Superintendent of the Year Dennis Pellrene (as recognized by the Canadian Golf Superintendents Association) is the man for the job.

"New construction is always exciting because there are so many things that come up that you have to solve," Pellrene said. "But being involved with an old course is exciting, too."

Pellrene started his career in 1960 on a nine-hole, oiledsand greens course in Camrose, Alberta. He converted the greens to turfgrass and was named greenkeeper during his four-year tenure.

He moved east with stops at St. Catharines Golf & Country Club and Erie Downs Golf Club in Fort Erie, Ontario, before Reg Acomb, general manager at Toronto's Glen Abbey Golf Club, approached him about building the Jack Nicklaus-designed course that eventually became the home of the Canadian Open. Glen Abbey opened in 1976 and held the first of four Opens under Pellrene's watch in 1977.

The two people Pellrene said had the greatest effect on his professional development entered his life during his Glen Abbey years — Ed Etchells and Jack Eggens.

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Dennis Pellrene at Capilano Golf & Country Club near Vancouver.

GOLF COURSE NEWS



Scientists warn of drought possibilities

Continued from page 29

tation patterns for the period 1885-1996 and determined that precipitation has followed an approximate 20-year cycle of wet and dry periods. The driest periods occurred in 1895-1900, 1915-20, 1935-40, 1955-60 and, most recently, in the late 1970s.

The most severe droughts were those of the 1930s and 1950s, and they extended over most of the contiguous United States. About 65 percent of the country was in "severe to extreme drought" during the 1930s. The Central Plains hasnnot had a widespread severe drought for several years, but it may be due.

In fact, data compiled by the National Drought Mitigation Center, which is housed at the University of Nebraska, shows that severe drought conditions at the end of 1999 were present across a wide area of northeast Nebraska and northwest Iowa; across central Texas into Louisiana; and from eastern Missouri through Illinois, Indiana and much of Ohio and Kentucky. Year-to-date rainfall totals were 74 percent of normal at Little Rock, Ark., 67 percent at Lake Charles, La., and 63 percent in Houston.

Lincoln, Neb., recently experienced 49 days without precipitation — the fourthlongest dry spell in the city's history — and the warmest November in 113 years of record-keeping.

Dr. Qi "Steve" Hu, assistant professor and agricultural climatologist at the University of Nebraska, analyzed historical climate data from weather stations across the Central Plains for the period 1895-1995. The data shows a significant 20-year precipitation cycle. Formerly at Missouri, Hu and his collaborators there found this 20-year precipitation cycle is related to similar 20-year cycles in the North Atlantic region.

"It seems that global circulation patterns are influenced by variations in seasurface temperatures and sealevel pressure in the North Atlantic Ocean," Hu said. "These variations directly affect the intensity and circulation of the anticyclone (jet stream) across the midsection of the country."

DROUGHT CENTER PROVIDES ADVANCE WARNING

Climatologists for several years have been pushing for more advance planning on steps to deal with drought conditions. States and localities typically have disaster plans

for hurricanes, blizzards, floods, tornadoes, power outages, nuclear accidents — almost every type of disaster except drought.

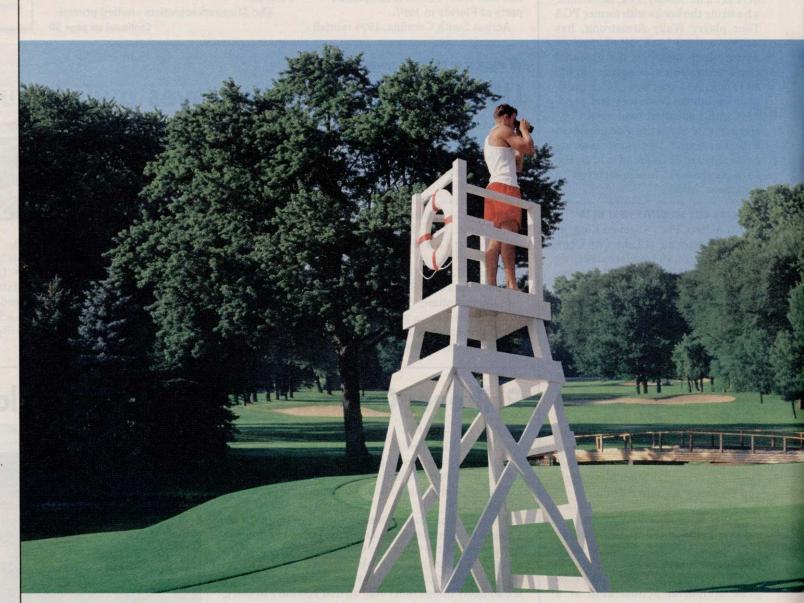
While 29 states do have drought plans, most of these are response-oriented rather than mitigation-type plans that are aimed at reducing risk before drought occurs. That is beginning to change, though, and it may be just in time.

Texas is developing a more comprehensive droughtmitigation plan. Nebraska is revising its drought plan (originally developed in 1986) to place more emphasis on mitigation. New Mexico recently developed a mitigation plan.

As a result of the widespread 1996 drought, the U.S. Congress passed the National Drought Policy Act in 1998 and set up a commission, which is to provide Congress and the President with recommendations on an integrated national drought policy by April.

"It's a question of risk management vs. crisis management," said Dr. Don Wilhite, director of the National Drought Mitigation Center (NDMC). "Because drought is often a local phenomenon or within a limited area, it's not always major 'news.' But for the past 100 years, an average of 15 percent of the U.S. every year has suffered some type of drought condition. California and Nevada suffered seven

Continued on next page



When it comes to weed co

If you're making multiple applications of a DNA herbicide every year, you're running two major risks. First, you're running the risk of developing DNA-resistant weeds. Second, you're risking damage to new root growth that is essential for turf to recover from winter stress, pest damage and other injury. This year, cut your risks by making the turf-friendly oxadiazon chemistry of CHIPCO* RONSTAR* herbicide the foundation for your weed control program. CHIPCO* RONSTAR* gives you season-long control of 25 broadleaf and grassy weeds—including goosegrass, crabgrass, and Poa Annua—with just one



Droughts worse centuries ago

Drought conditions actually have moderated compared to past times. Scientists at the University of Minnesota have studied long-term climate changes over the past 2,300 years by studying layered sediments. Droughts worse than the 1930s Dust Bowl were common before AD 1200.

The most pronounced drought periods were AD 200-370, AD 700-850 and AD 1000-1200. Drought conditions in past centuries have per-

sisted longer in the Great Plains region than in other areas of the country.

It is due to the region's continental location, where differing air masses tend to collide, such as warm dry air from the Pacific, cold dry air from the Arctic and moist tropical air from the Gulf of Mexico.

Will long-term droughts reoccur? Perhaps. But governments and organizations will have advance notice and better information available to help counter drought effects, thanks to the National Drought Mitigation Center.

Scientists warn of droughts

Continued from previous page consecutive drought years from the late 1980s through the early 1990s, but it seldom made the national headlines because droughts are 'nonstructural,' compared to earthquakes, floods, tornadoes,

The NDMC was established

in 1995, with support from the U.S. Department of Agriculture. Now, the center is partnering with USDA and **NOAA's Climate Prediction** Center to track developing drought conditions anywhere in the country. The most visible result is the weekly Drought Monitor, which was unveiled at the White House in Washington last July and is available to anyone via the

The map provides an up-todate summary of current drought areas across the 50 states, Puerto Rico and the Pacific possessions. It incorporates information from many sources at state, regional and national levels. Besides current conditions, it provides an outlook on where drought is likely to develop or worsen in the months ahead. The Drought Monitor classifies drought by severity levels.

"It's designed to provide a 'big picture,' so the general public, media, government officials and others can see what is happening around the country," Wilhite said. The map, updated weekly, is not designed to depict local conditions or replace drought warnings and watches issued by local or regional government entities, he said. "Local situations can be better interpreted by officials in the

"What it is designed to do is highlight emerging trouble spots to help state and federal agencies address potential problems earlier," he added. The idea is to enable agencies to coordinate planning and response efforts so they can implement mitigation programs to lessen drought impacts."

Wilhite said there is no universal drought definition, so the NDMC uses several indices to compile the Drought Monitor map, which shows where drought is emerging and where it is lingering across the United States. The monitor also shows how drought is affecting agriculture, wildfire danger and water supplies.

"It's designed for drought and water planners and policymakers," said Wilhite. "But many people find the information interesting. And, it's as easy to understand as the Weather Channel's travel advisory service."

The Drought Monitor and drought index maps can be accessed on the World Wide Web at http://enso.unl.edu/ http://enso.unl.edu/monitor>





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ORVALLIS, Ore. — An Associated Press report states the Environmental Protection Agency (EPA) says fertilizer levels that are safe for human drinking water can kill some species of frogs and toads.

In a new study, researchers at the Oregon State University found some tadpoles and young frogs raised in water with low levels of nitrates typical of fertilizer runoff ate less, developed physical abnormalities, suffered paralysis and eventually died. None died in

Fertilizer safety levels in doubt

control tanks with normal water.

"We're looking at levels of nitrates so low we didn't think we'd get any effect," zoology Professor Andrew Blaustein told the AP.

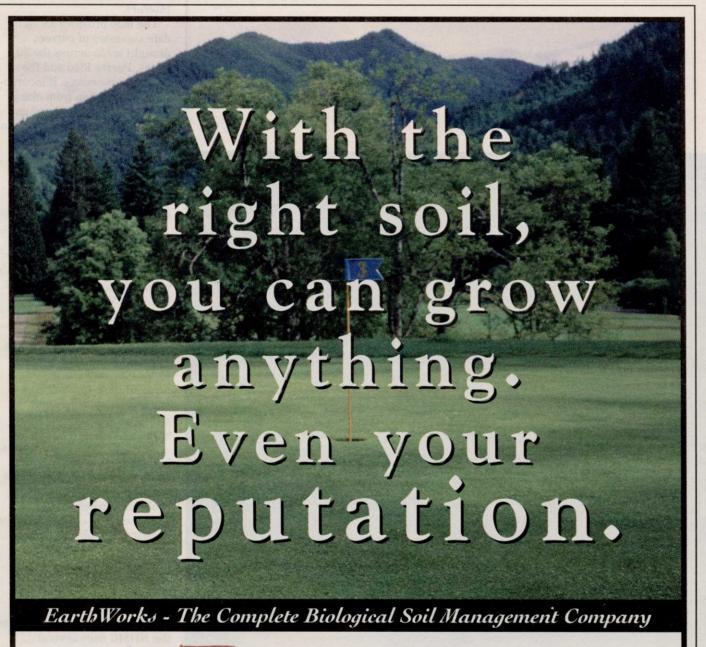
In addition, the fertilizer runoff may be encouraging the growth of algae that feeds tiny parasitic flatworms called trematodes, blamed for causing deformities in frogs around the United States. The study indicates EPA water-quality criteria does not guarantee the survival of some protected and endangered amphibians, Blaustein told the AP.

"I think this is clearly a significant problem," he said. "The question I have to ask is, are you comfortable drinking water with levels of fertilizer that kills off frogs?"

Officials at the EPA regional office in

Seattle would not comment until they have reviewed the study, published in November in the journal Environmental Toxicology and Chemistry.

Scientists internationally have reported a sharp decline in the numbers of frogs, toads and salamanders in many locations. Numerous explanations have been proposed, including water pollution and increased ultraviolet radiation from the sun because of a thinning ozone layer around the Earth.



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Drought-proofing

Continued from page 29

to contend with water-use restrictions in the event of an extended drought.

"Although still rare in the Midwest, tapping an effluent water source for turf irrigation is becoming more common on the East Coast," said Gaussoin.

 $\sqrt{\text{Another consideration is to minimize}}$ irrigated areas.

"One way is to decrease the amount of fairways and increase rough areas," Gaussoin added.

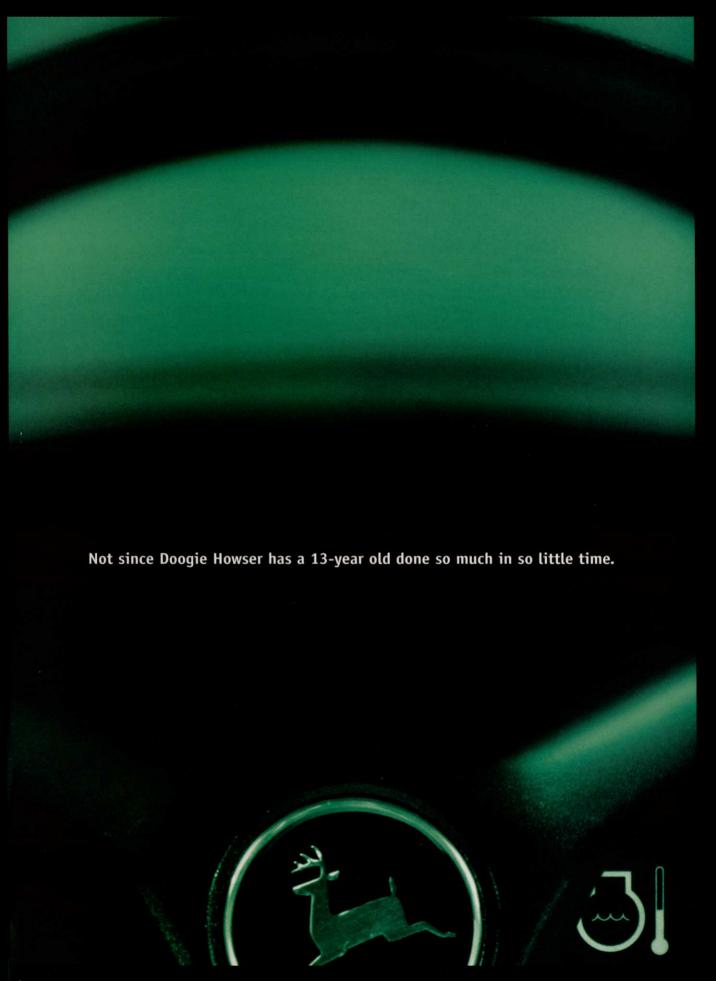
 $\sqrt{}$ Plant more native, drought-tolerant species in the roughs, and even in irrigated areas, if necessary.

"Kentucky bluegrass, for example, can go dormant under drought stress. It will turn brown, but it will be there and green up again when you get rainfall or irrigation water," he said.

Under water rationing or restrictiveuse conditions, Gaussoin recommended these additional steps:

- Prioritize water use, starting with the prime pieces of real estate. That is, water greens first, then tees, then fairways and roughs if possible. Don't worry about grass around the clubhouse. It won't look pretty, but that isn't what the customers come for, he said.
- Consider retrofitting the irrigation system to make it more efficient. Valve-in-head systems, for example, provide better irrigation management and more efficient use of water. Water can be easily applied to those areas most critical to the course.
- Make subtle management changes. Raise mowing height slightly to give grass a little extra "insulation" from heat stress. Consider using a growth retardant to slow grass growth (and water use). The offset to this, however, is that grass will be slower to pull out of stress after its growth has been slowed.
- Limit traffic where possible. Heavily trafficked turf requires more water to recover and, when it is drought-stressed, won't recover as quickly. Keep carts on cart paths or limit them to roughs. Use the 90-degree rule to reduce wear on fairways.
- Move the cups more often to reduce greens stress. Move tees more frequently.
- Route traffic with physical barriers—artificial or plant material—to reduce wear and compaction on turf. For example, if golfers always exit the tees or greens in the same place, it increases turf wear. Use barriers to change traffic patterns occasionally.

"These are all pretty common management steps superintendents can take, but too often we don't think about them until we're into a drought-stress situation," Gaussoin added.





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FeedBack

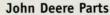
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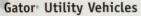
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USGA RESEARCH, ENVIRONMENT & EDUCATION GRANT SUMMARY FOR 2000						
		Funding				
Project Area	Number	Grant	% Total			
Integrated Turf Man	17	406,411	20.3%			
Germplasm Enhancement						
Course Construction						
Environmental Impact	14	305,966	15.3%			
Sustainable Landuse	1	10,000	0.5%			
Wildlife Links	8	182,800	9.1%			
Audubon Coop. Sanctuary	1	100,000	5.0%			
Education						
Turfgrass Information Center	1	200,000	10.0%			
Green Section Regional Projects						
Total						

NEW USGA TURFGRASS AND ENVIRONMENTAL RESEARCH PROJECTS FOR 2000						
Title	Research Institution	Principal Investor Year	rs	Total		
Integrated Turfgrass Management						
Biological Control of White Grubs on Golf Courses by Native Parasitic Wasps Identification and Metabolic Diversity of Rhizobacteria from Bent & Bermuda Greens Establishment & Management of Seeded Bermudagrass in the Transition Zone Relationship of Environment, Management, and Physiology to Bermudagrass Decline	UKentucky	Daniel Potter	2	42,950		
	Clemson U.	Horace Skipper	2	34,800		
	UArkansas	Michael Richardson	3	43,007		
	Texas A&M	Richard White	3	74,984		
Integrating Biologically Based Strategies for Turfgrass Pest Management (Phase II)	UGeorgia	S. Kristine Braman	3	37,671 233,412		
Turfgrass Germplasm Enhancement Development of Gray Leaf Spot Resistant						
Perennial Ryegrass through Breeding and Biotechnological Approaches Identification of Creeping Bentgrass	UKentucky	Mark Farman	3	75,000		
(Agrostis palustris Huds.) Cultivars Using Simple Sequence Repeats (SSRs)	Rutgers/Cook	William Meyer	2	49,880 124,880		
Course Construction Practices Effect of Root-zone Material and Depth on Moisture Retention Problems in USGA Greens Using Cubical Triaxial Testing for Deter- mining the Bulk Mechanical Behavior of Sand for Rootzone Mixtures	Michigan St. Penn State	Bernd Leinauer Charles Mancino	3 2	75,000 15,382		
Pesticide and Nutrient Fate Modeling	a			90,382		
Best Management of Post-application Irri- gation To Reduce Exposure to Volatile & Fo- iar Pesticide Residues & To Minimize their Conversion to More Env'lly Mobile Products From Small Plots to Course Watersheds: Calibration of Computer Model Scenarios	UMass	Marshall Clark	3	74,867		
for Pesticide & Nutrient Runoff & Leaching in Turfgrass Environments	UGeorgia	Kevin LArmbrust	3	75,000		
Controlling Nutrient Runoff from Fairways Using Vegetative Filter Strips Surface & Subsurface Water Quality Data	Okla. State	Gregory Bell	3	75,000		
Collection and Model Development for a Watershed Scale Turfgrass System Further Evaluation and Modeling of Pesticida Partitioning Data From the LICP	USGA-ARS	Kevin King	3	74,800		
cide Partitioning Data From the UCR Putting Green Lysimeters	UCal-Riverside	Laosheng Wu	2	24,934		
Phosphorus Fertilization of USGA-type		0.10	•	75.100		
Greens: Placement, Rates and Leaching	Auburn Univ.	Beth Guertal	3	75,488 400,089		
Green Section Staff Projects Total			3	90,000 848,763		

Premixer saves repair parts, labor

By TERRY BUCHEN

V IENNA, Va. — Walter Montross, superintendent at Westwood Country Club, here has almost totally eliminated the need to replace any seals in his sprayers since beginning to use a premixer unit.

"A couple of years ago we were experiencing premature wear on the pump seals of our two Chempro Sprayers," said Montross, a certified golf course superintendent. "Although there was some initial suspicion that the seals were of poor quality, I believed it was directly attributable to the abrasive materials we were putting into the sprayers. I also felt the water-soluble bags of various chemical materials had a negative effect on the seals."

To the rescue came Howard Meredith, who had formally worked with Chempro Sprayers. Meredith informed Montross that he was building a "premixer" unit that would allow for the chemical materials to be "pulverized and fully dissolved" before circulating through the sprayer filters and,

We have almost totally eliminated the need to replace any seals.'

- Walter Montross

ultimately, the seals. Meredith sold a prototype unit to Montross in 1998 for about \$2,000.

"The premixer unit is pretty simple in nature as it breaks down the chemical material through the upper screen that has high pressure nozzles directed at it," Montross said.

"Once the chemical materials move into the tank, a secondary set of highpressure nozzles keep them in suspension. The chemicals then travel through a series of filters before they are ready to be transferred into the spray rig."

There are other benefits. Through a series of quick-connect hoses, Montross' crew members are able to fill the premixer with water and then move the chemical materials to the sprayer unit by simply turning two valves. Once the

chemical materials are loaded into the basket, that is the last time they are handled.

pre-mixing implement helps the

spray technician save valu-

able time as well as wear and tear on the sprayer unit.

The premixer tank holds 80 gallons, so when the initial batch is transferred to the sprayer through a 2-inch-diameter flexible hose with a quick disconnect end piece, they simply refill the premixer with water and transfer the rinseate.

"Lastly," said Montross, "I have found that if I have one of my assistant superintendents loading the premixer while my spray technician is on the course making an application, I can reduce my overall spray time by as much as two hours.

"We have almost totally eliminated the need to replace any seals since we began using the premixer unit," Montross said.

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USGA funds new round of research projects

Continued from page 29

GOLF COURSE NEWS

• The effect of root-zone material and depth on moisture-retention problems in USGA putting greens by Bernd R. Leinaur at Michigan State University.

• Best management of post-application irrigation to reduce exposure to volatile and foliar pesticide residues and to minimize their conversion to more environmentally mobile products, by J. Marshall Clark at the University of Massachusetts.

• Calibration of computer model scenarios for pesticide and nutrient runoff and leaching in turfgrass environments, from small plots to golf course watersheds, by Kevin L. Armbrust at the University of Georgia.

• Phosphorus fertilization of USGA-type putting greens: placement, rates and leaching, by Beth Guertal at Auburn University. But perhaps the most fascinating research is being done by Courtney Conway at Washington State University. She is studying burrowing owl conservation on golf courses.

The burrowing owl, Kenna explained, lives in the ground, in the burrows of rodents. WSU scientists have learned to create artificial burrows for these owls on golf courses, where there should be a bountiful food supply.

Kenna pointed to Armbrust's research into pesticide and nutrient runoff and leaching as a crucial study. It is also being supported by a grant from the federal Environmental Protection Agency as are other studies of major watersheds of the U.S. Geological Survey.

"Essentially, the goal is to document the water quality and the effects of land uses on water quality," Kenna said. "We know from all the research that chemicals can reach ground and surface water. If everything is managed correctly and timing is right and labels are followed, we don't see a problem. But a lot of the pesticides showing up (although in small amounts) are used in the professional lawn care and golf industries. And the peaks come when people are putting out pre-emergents or post-emergents... We want to get a better handle on when the contaminations are occurring. My guess is that it will come from homeowners."

That study, like many of the other new ones, will not be complete for three years, although others have two-year time limits.

With this latest round, the USGA has climbed to \$18 million in funding since 1983.



Pellrene felt influence of Etchells and Eggens

Continued from page 29

Etchells, an agronomist with Golden Bear International, was Jack Nicklaus' superintendent at Muirfield Village (Ohio) while Pellrene was growing in Glen Abbey.

"It was a superintendent talking to a superintendent and I was able to draw on his expertise in how to run a major tournament," Pellrene said. "There was a tremendous amount to learn.

While at Glen Abbey, Pellrene took course work at the University of Guelph, where Eggens was a professor. "I admired the way he taught and what I learned in his courses," Pellrene said.

From Glen Abbey, Pellrene moved to Scarborough Golf & Country Club, where he whipped the A.W. Tillinghast track back into shape while undertaking a \$3.5 million erosion-control project.

Seven years ago, Pellrene returned to his Western Canadian roots, taking over Capilano Golf & Country Club near Vancouver. When he first arrived, members played just 16 holes because two greens had been seeded to bentgrass and failed. Pellrene converted them from bentgrass, which had trouble surviving the 120 inches of annual rainfall, to ryegrass that first summer and eventually to poa annua to match the other 16 greens. He came aboard in February and by July the two greens were back in play.

"They were slow, at first, but the members were happy to just have them back in play again," he remembered. "You can't grow bentgrass in this rainy, mountain climate."

Pellrene maintains a 10,000square-foot nursery of poa annua plugs. He aerifies the nursery a half-dozen times a year and uses the nursery to repair problem areas. The poa annua greens are cut to an 1/8-inch and yield green speeds of nine to 10. Fairways and tees are a combination of poa annua and ryegrass.

Once the greens had been reclaimed, Pellrene began a fiveyear restoration project of the Stanley Thompson-designed bunkers in cooperation with architect Doug Carrick.

"This (Capilano) is an antique." Pellrene said, "with a prestigious designer in Stanley Thompson. We have 120 inches of rain a year. The bunkers were deteriorating and contaminated. We've solved some of those problems with ultra-drainage."

"I classify this as a sympathetic restoration project, sympathetic to the original architect because he was such a great designer.

We'll do a little bit every year until we bring it back."

Pellrene has concentrated on the bunkers and stayed away from greens. "We just want to make the old green sites work, make them compatible with today's standards," he said. "Primarily we're working on drainage and trying to get them back

to the way they were."

The biggest change over the past 40 years, he said, has been the public's growing interest in the environmental impact of golf courses and their operations. "They want to know what they are doing on the golf course. We have a long way to go in communicating what we

do to the public. We have a good understanding of what it is we're doing out there. It's up to us to communicate that understanding to the public. We are good stewards of nature.

"Computers and the

materials we use have come a long way. We don't waste materials like we used to. The equip- once we retire," he said.



ment is second to none. At this site, the Verti-Drain has made my job much easier. It's really improved this golf course."

Pellrene, 58, plans to continue working to

"I'd like to eventually

buy a diesel trawler my wife and I can drive up and down the coast

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Labor woes are the top concern of supers in 1999

By TERRY BUCHEN

ILLIAMSBURG, Va. — The Year 1999 is over and what a year it was! Heat, humidity, disease, crabgrass, clover, insects - the Midwestern and Northeastern golf courses had it all, just like the recent bad weather years of 1995 and 1988 in those regions, quite

possibly even worse. What overshadowed the bad weather more than anything else on most of the courses nationwide? Finding and keeping suitable hourly employees, both full-time year round and seasonal.

Fast-food restaurants are advertising heavily in most areas of the country for the labor shortage they are often facing, many offering jobs that pay substantially more than golf course hourly labor rates, and they even include free meals, which is difficult for golf course managers

to compete with. The excellent employment or in other outdoor

U.S. economy has meant fewer and fewer hourly employees looking for work in the great outdoors since they can make substantially more money working indoors on year-round full-time

jobs such as construction, which is facing a serious labor shortage as well but is willing to pay more than golf courses usually can.

What is the golf course manager to do? Creative hiring is being practiced more and more, with encouraging results.

Examples include offering high school and college students "flex-time" to work up to seven days per week on very flexible hours. Many times this is one of the best ways to cope with seasonal labor shortages, especially during the spring and fall.

Signing bonuses are in vogue at some courses, where an employee after a short probationary period will receive a significant check. If they do a good job and stay for the entire season they frequently will receive a season-ending bonus as well.

Being a quality-oriented "people person" who can motivate employees works well because those employees will suggest to their friends to work there.

Hiring temporary workers and then offering any of the good ones a position on the maintenance staff is paying dividends and only a few bad experiences have occurred along the way.

Free golf will always be one of the best fringe benefits a golf course can offer employees, even to the point of allowing them to play not just one but many days per week after their normal working hours or on their days off.

Another way to fill the seasonal employee void is to hire and keep more year-round, full-time employees and to pay those employees more than in previous years to attract and keep them happy.

Charles E. Poole, superintendent at the Rum Pointe Seaside Golf Links in Berlin, Md., is keeping more year-round full-time employees and paying them more to start and gives them rapid merit increases to bring their level up to \$1.50 more than previous full-timers were starting at.

Poole has even seriously investigated acquiring a large van and picking up immigrant laborers up to an hour away and having them at work by 5:30 each morning, while finding a suitable driver, an obviously difficult task at best.

Immigrant workers are being used more and more as seasonal golf course workers as the demographics shift more in that direction. If an immigrant likes where they are working, they many times will tell their friends who, in turn, may pursue employment on the staff.

The bottom line is that paying an employee \$6 to \$6.50 per hour is in the past. The only really good way to win the war is to pay a competitive wage that will attract and keep hourly employees. There are plenty of available workers if a golf course is willing to pay a good, competitive hourly rate.



GOLF AND THE ENVIRONMENT

Dodson weighs in with Managing Wildlife Habitat

resources and experiences to write a book that will provide golf course superintendents and others a framework for successful, environmentally sensitive land management practices.

Managing Wildlife Habitat on Golf Courses, which became available in January, is a working foundation, providing a holistic approach to understanding and managing golf courses and a basic understand-

ANN ARBOR, Mich. — Audubon International ing of wildlife and habitat needs. It is a celebration of President Ron Dodson has pulled together his the management strategies, environmental protecthe management strategies, environmental protection and habitat enhancement techniques that have become vital to the game of golf. Dodson is one of the international leaders of the modern-day environmental movement in golf, having organized the Audubon Cooperative Sanctuary Program and Audubon Signature Program, among others.

Managing Wildlife Habitat on Golf Courses, by Ronald Dodson, Ann Arbor Press, hardcover, \$45.

Audubon certifies Ironwood

MAINTENANCE

GAINESVILLE, Fla. - Ironwood Municipal Golf Course has achieved designation as a Certified Audubon Cooperative Sanctuary by the Audubon Cooperative Sanctuary System (ACSS). Ironwood is the 27th course in Florida to receive the honor.

A division of the Recreation and Parks Department of the city of Gainesville, Ironwood joined

the Audubon program in 1994.

"Ironwood Municipal Golf Course has shown a strong commitment to its environmental program. They are to be commended for their efforts to provide a sanctuary for wildlife on the golf course property," said Joellen Zeh, staff ecologist for the Cooperative Sanctuary System.

"Ironwood's Resource Committee, as well as staff and community volunteers, have worked very hard to attain designation as a Certified Audubon Cooperative Sanctuary," said Jan Weinbrecht, Resource Committee chair, "but we're even more excited with the anticipation of what certification will mean in accomplishing other immediate and long-term environmental goals for Ironwood."

This was a collaborative effort," said Golf Course Manager Bill Iwinski, who was responsible for outreach and education. "However, Jan Weinbrecht deserves most of the credit for the accomplishment. Jan developed the Environmental Plan and oversaw the entire project. In addition, he was directly responsible for Wildlife and Habitat Management and Water Quality Management."

Barry Greenwalt, superintendent at Ironwood, along with his employer, One Source, Inc., were key players in this achievement as well, Iwinski said. Greenwalt was responsible for Integrated Pest Management and water conservation. One Source, provided much assistance and was "100percent committed to the success of the project," he said.

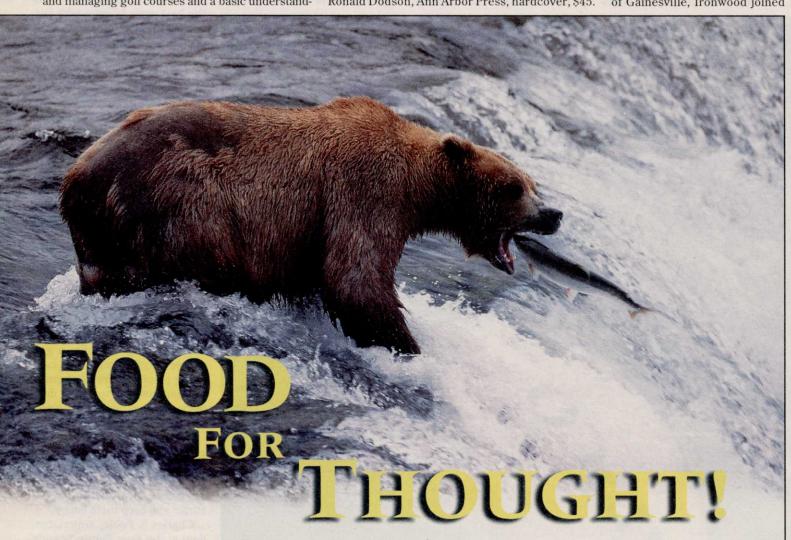
Everglades donates to area schools

Everglades Golf Course Superintendents Association, a supporter of environmental education in local schools since 1995, has made a contribution that will benefit all within the Audubon Cooperative Sanctuary Program for Schools. The organization supports 11 local schools and has funded two project grants.

This latest contribution will be used to fund the Teacher Training Video. The 40-minute video provides guidance and illustrates case studies of two schools that have integrated projects into their curriculum in different ways.

The Audubon Cooperative Sanctuary Program for Schools, administered by Audubon International, is designed to help schools and other educational facilities enhance their environmental quality while completing Cooperative Sanctuary projects.

In addition to schools, Audubon International has special programs for homeowners and businesses.



Total Bacteria (cfu/g soil) 106 Weeks

Nature Safe | Synthetic (UHF) 10-2-8 (1lb. N)

The bacterial population continued to increase with Nature Safe while the bacterial population decreased with the synthetic.

Agriculture and Agri-Food Canada, Southern Crop Protection & Food Research Centre, Dr. George Lazarovits, 1998

- Soil Organisms And Their Role In Healthy Turf, Turfgrass Trends August 1998, Elaine R. Ingham, Ph.D.
- If You Care For Your Microbes Your Microbes Will Care For Your Turf, Golf Course Management, September 1998, Bud White, Agronomis

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Hydroject aerifier trailer means one-man operation in the field

By TERRY BUCHEN

APLES, Fla. — The idea of building a Toro Hydroject trailer came to superintendent Darren Davis on a visit to Merion Golf Club when he visited Paul B. Latshaw, who was superintendent at the time.

Upon returning to Olde Florida Golf Club here, Davis had Equipment and



Davis said

Shop Manager Kim Ellis helped design and construct the trailer they now use, which was built entirely in house

ON THE GREEN "In the past, our Hydroject activities always took two people — one to hold the hose and guide and one to operate the machine,"

No more, not with this latest innovation.

On the rear of the Hydroject, Ellis constructed a custom-built trailer hitch that is attached to the machine with bolts. The 2- by 5-inch, 1-inch-thick hitch that extends from the Hydroject has a 1/2- inch diameter hole drilled through it so the trailer tongue can be attached to the machine with a hitch pin to transport it around the golf course.

"The trailer was constructed," Davis said, "so that the hose reel sits on top of the trailer, centered in the rear, which allows the floor of the trailer to stay clear for storage of items such as the quick couplers, extra filters, the tool to change the filter on the Hydroject and extra hose."

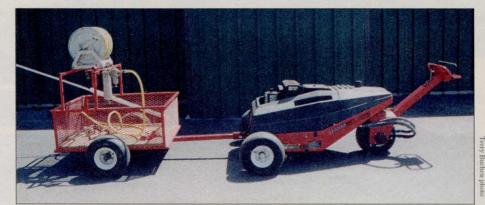
By having the hose reel mounted high above the sides of the trailer, it also allows the operator to have the hose flow freely off the reel when using the Hydroject. The operator transports the Hydroject with trailer to the green or tee. A quick coupler is mounted to the "in" side of the hose reel and the quick coupler key on the other end of the hose is inserted in the valve by the green or tee.

The trailer is unhooked from the machine and positioned so the rear (the side that will allow the hose to flow freely off the reel) is facing the green or tee. The Hydroject is then operated making straight lines across the green or tee, working perpendicular to the trailer. The machine then operates away from the trailer across the area until the other side is reached. This allows the operator to Hydroject without crossing the hose or needing someone to move the hose out of the way.

Between the quick coupler and the hose reel is a pressure-regulating valve (Watts Model # M3, # 223 HP with a 3/4-inch inlet and outlet NPT, available from Toro). After the pressure-regulating valve is the Campbell Water Filter Model # 1 MS. Then there is a standard water-pressure gauge that measures between 0-200 PSI, in 2-pound increments. This hardware is all attached to a 1/4- by 4- by

10-inch metal plate in which holes were drilled where needed to attach the hardware. Included is a hole drilled in the metal plate to slide in the Campbell Water Filter Tool. This is used to change the filter, which Ellis made using the socket and welding a piece of 8-inch-long 5/8-inch cold role steel.

Continued on page 40



The Toro HydroJect trailer, made totally in-house, performs many worthwhile functions.

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GOLF COURSE NEWS February 2000 37



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GCSAA BOOTH# 2721



Florida Turf Assn. eclipses \$1M in research support

ORLANDO, Fla. — The Florida Turfgrass Association (FTGA) has surpassed the \$1-million mark in donated research funds to the University of Florida's (UF) Institute of Food and Agricultural Services.

UF Assistant Dean Everett Emino wrote: "The FTGA has now provided over \$1 million in

grant donations to the University of Florida. That is truly a milestone in support."

The total research support given by the FTGA through 1999 is \$1,087,921.

The FTGA has been raising and donating money to UF's Florida Turfgrass Research Foundation since June 1982. FTGA donations have been used to better understand pest controls and their uses, warm-season turfgrass improvement, turfgrass growth, turfgrass breeding, water quality and quantity issues, pest resistance in grasses, and chemical application methods.

Plus, the FTGA, in coopera-

tion with the University of Florida, provided \$139,000 to fund the first Economic Impact Study of Florida's Turfgrass Industry. The FTGA also donated \$350,000, along with matching funds from the state, for the creation of the Environtron, a unique environment for researching turfgrass. These make

actual donations to the university since 1982 closer to \$1.5 million for turf-related research and studies.

"When I first joined the Florida Turfgrass Association [1972] it bothered me that other industry representatives looked upon this association as just another golf course superintendents' group," explained FTGA President Mark Jarrell. "We're more than that, and always have been."

Roy Bates, past president of the FTGA, added, "Apercentage of our donated research grants go to golf course specific research, but an awful lot is dedicated to turf research benefiting sports associations and their stadium turf, parks and recreation departments, the Irrigation Society, lawn maintenance companies and Florida pest control operators."

The FTGA raises funds through golf tournaments, the FTGA's annual and regional conferences, and donations from the local chapters of the Golf Course Superintendents Association of America.

Hydroject trailer

Continued from page 37

"The tool was made so that the socket would always be handy and not get lost," Davis said.

After this setup, a high-pressure hose is used to tie into the Hannay Hose Reel Model #1520-17-18 with a manual hand-crank reel equipped with 150 feet of 1/2-nch hose, with a Toro adapter "pig tail" Part #80-6740 at the end of the hose.

"The trailer itself measures 44 inches wide by 48 inches long and the sides are 18-inches high. The floor is made up of 2- by 6-inch PT planks bolted to the frame of the trailer. And the trailer frame consists of 1- by 1-by 1/8-inch square tubing.

The sides, front and rear of the trailer are covered with 3/4-inch expanded steel. The axle is built with a 2- by 2- by 3/16-inch square tubing that measures 50 inches. At the end of the square tubing is a standard axle spindle where the hubs are attached. The tires are 18-inches by 9.50 by 8 Goodyear Terra Tire Smooth with four lug standard rims and hubs. The 52-inch hitch is welded to the axle and is also made from the 2- by 2- by 3/16-inch square tubing as the axles are.

Attached to the end of this 52-inch square tubing are two pieces of 1/2-inch-thick plate, with one on top of the square tubing and one on the bottom, which makes up the hitch that attaches to the Hydroject. On the side of the trailer is a 1-1/2-inch diameter piece of PVC pipe that is used to hold a dew whipping pole to clean up the greens and tees after Hydrojecting.

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Tools of the Trade... at StillWater's Legend Golf Course

ohn Dershimer is the superintendent of the George Cobb-designed Legend Golf Course at StillWaters Resort, a community with two courses on

45,000-acre Lake Martin in Dadeville, Ala., near Auburn. Dershimer joined the staff of Director of Golf Course Management Tommy Witt in 1998 and supervised renovation of greens, tees,

bunkers and irrigation system.

Dershimer, 30, earned an associate degree in turfgrass management from Lake City (Fla.) Community College in 1996 and worked in assistant positions at TPC at Sugarloaf in Duluth, Ga., and Country Club of the South in Alpharetta, Ga., before coming to StillWaters.

He is married and a member of the Georgia, Alabama and national golf course superintendents associations.



ers head out on the Legend Golf Course at StillWaters for a day's work

Dershimer said the following equipment is used for both the Legend and Tradition courses.

Greens Mowers: 2 Jacobsen Greens King II (diesel)

Tee Mowers: 2 Jacobsen Greens King

Fairway Mowers: 2 Jacobsen LF 3800 4WD (diesel)

Rough Mowers: 1 Jacobsen LF 3800 4WD (diesel)

CAN'T LIVE WITHOUT: MY STAFF

Riding Bunker Rake: 2 Ransomes/ Cushman Groom Master (gas) Turf Utility Vehicles: 6 John Deere Gators, 2 Cushman Trucksters (gas) Verti-Cut Reels: 1 set Jacobsen Aerifiers: 1 Ransomes/Ryan GA 30 for

OLDEST PIECE OF EQUIPMENT: 97 NEW HOLLAND SKID STEER

tees; 1 GA 24 for greens (gas) Topdressers: 1 Cushman TD-1500 Grooming Reels: 1 set Jacobsen Tournament Speed Roller: Smithco

Reel Grinder: Neary Reed Grinder 500SR

Bedknife Grinder: Land Pride Irrigation Pump Station: Flowtronex 1900 GPM

Irrigation System Manufacturer: Toro OSMAC with Site Pro software

Golf Car Fleet: 90 Club Car (electric) for two courses

Flagsticks: Lesco Survey (6-ft. tapered) Computer & Accessories: Dell with Xerox copier and Hewlett-Packard printer Primary herbicide: Ronstar (granular) Primary pesticide: Dursban Pro

Primary fungicide: CHIPCO 26GT, Daconil ZN

Primary slow-release fertilizer: Par-Ex IBDU

Total square footage of the maintenance building(s): 10,000 square feet Annual rounds of golf? 15,000 to 20,000 Normal green speed: Mid-8 because it's on new Tifdwarf Bermudagrass

perception

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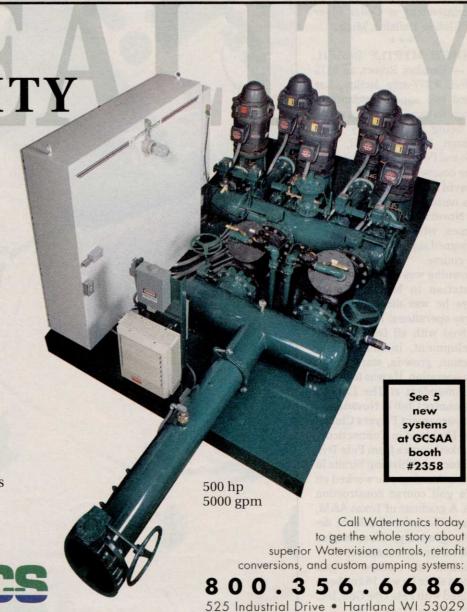
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Wesseldine joins Evergreen Alliance

Dennis Wesseldine, a certified golf course superintendent, has joined Evergreen Alliance Golf Limited as construction manager. Wesseldine's focus and re-



Dennis Wesseldine

sponsibility will be for planning, budgeting and contract negotiation for construction, reno-

projects of golf courses nationwide. Wesseldine was most recently director of maintenance for American Golf Corp.

Scarsdale, N.Y. — Stephen Renzetti became head superintendent at Quaker Ridge Country Club here in early January. Rinzetti had been at The Wykagyl Club in New Rochelle the previous seven years.

Mainville, Ohio — Dave Faucher has been hired as the new head superintendent at the TPC at River's Bend, an Arnold Palmer design scheduled to open in 2001 in Mainville, Ohio. Faucher was previously head superintendent at Cedar River Golf Club in Bellaire, Mich.

NORTH MYRTLE BEACH, S.C. — Barefoot Resort, an \$812 million, 2,377-acre facility, has named two superintendents to manage its four golf courses which are being designed by Greg Norman, Davis Love III, Tom Fazio and Pete Dye. Development of the courses is well underway.

David S. Downing II has been named superintendent for the Norman, Love and Fazio courses, while Todd Puckett was named superintendent of the Dye course.

Downing was with Wild Wing Plantation in Myrtle Beach, where he was director of golf course operations. There he was involved with all facets of the development, including construction, grow-in, start-up and daily operation. He was formerly superintendent at The Las Vegas Country Club in Nevada and the Tournament Players Club at River Highland in Connecticut.

Puckett comes from Pete Dye Golf, Inc., at Whistling Straits in Wisconsin, where he worked on Dye's golf course construction team. A graduate of Texas A&M, he has a bachelor of science degree in agronomy, with an emphasis on turfgrass management.

Puckett has worked on golf courses since he was 16 and been affiliated with Pete Dye Golf, Inc. since college graduation.

DFW INTERNATIONAL AIR-PORT, Texas — **Mike Bartlett** has been named head superintendent of the 36-hole daily-fee Hyatt Bear Creek Golf managed by Hyatt Regency DFW. Bartlett left Riverside Golf Club, a daily-fee facility in Grand Prairie.

Prior to his position at Riverside, Bartlett held superintendent positions at Creekview Golf Club in Crandall, La Cantera Golf

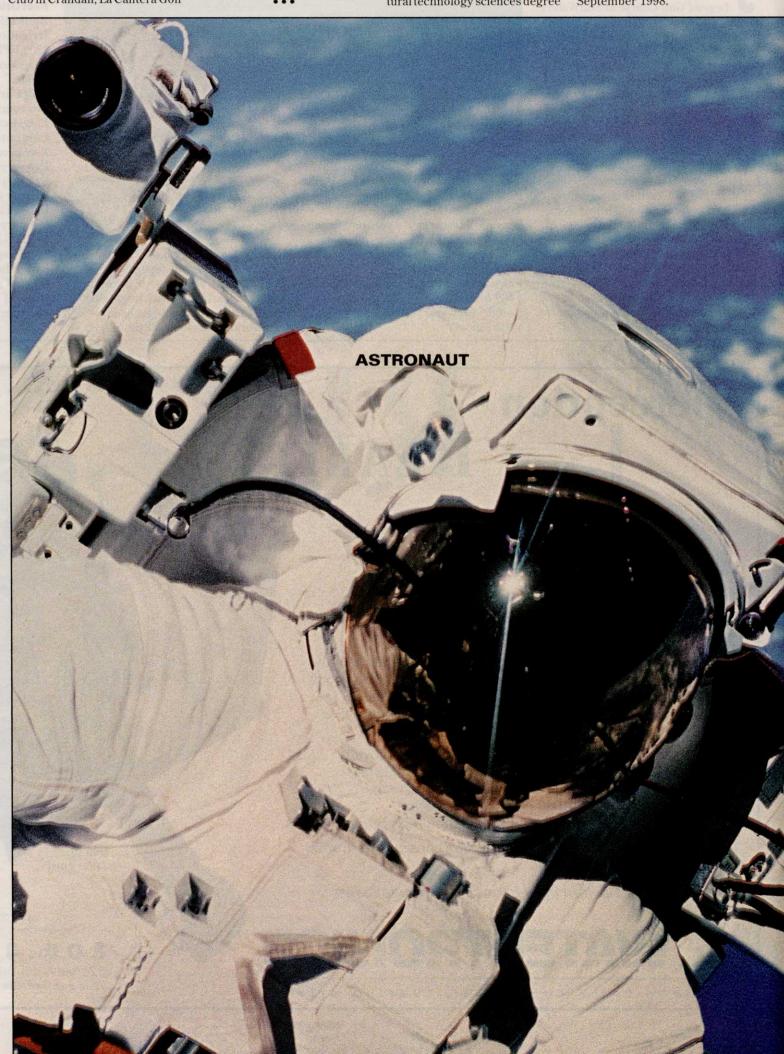
Club in San Antonio, and Angel Park Golf Club in Las Vegas, Nev

A Texas A&M graduate with a degree in turfgrass management, Bartlett belongs to the national, Central Texas and North Texas golf course superintendents associations.

LONGWOOD, Fla. — John Scott Kopack of Longwood, president of the Central Florida Superintendents Association, has been named golf course superintendent at The Legacy Club at Alaqua Lakes, a Tom Faziodesigned 18-hole course.

Kopack has more than 16 years of golf course operations and turf management experience. In 1991, Kopack earned a horticultural technology sciences degree from Valencia Community College and in 1981 received an associate arts degree from Seminole Community College.

The Legacy Club at Alaqua Lakes is a semi-private course development here, just northeast of Orlando, featuring a 7,100-yard, par-72 course, and is part of the International Audubon Signature Cooperative Sanctuary Program. The course opened in September 1998.





By DR. JOHN PERRY

ore than 7,000 yards of greens, tees, fair ways and slopes coupled with mowing, fertilizing, bending, walking and lifting. These are the things superintendents and their crews have to deal with every day.

What they often don't pay attention to, however, is their bodies, joints, muscles and liga-Just the ments. as

Foot Dr.: Healthy feet make healthy greens

agri-management of soils, chemicals and water must be planned, measured and monitored, so too should the superintendent's biomechanics, shoe gear and work habits.

Overuse, repetitive motion and improper shoe gear are the primary causes of lower-extremity injuries.

Injuries fall into two categories. The first, acute trauma or accidents, makes up 20 percent. The second, repetitive trauma or 'overuse', is much more common at 80 percent. Prevention of these injuries can result in huge savings in terms of time and rehabilitation expenses.

One pair of boots or sneakers,

replaced regularly, can help avoid arch pain. Proper forefoot fit can prevent mortons neuroma. a pinched nerve in the toe area.

Regular behavior changes, like changing socks and shoes at lunch time, can reduce the chances of getting athletes feet. This tip can be especially helpful with the double whammy of

morning dew and automatic sprinklers.

Superintendents frequently ask "Hey, doc, what shoe should I wear?" The answer is "It depends."

A 200-pound person with high arches needs more cushioning and less support. A 150pounder with flat feet needs more support with a rigid heel counter and less flexibility in

Regardless of the individual's dimensions, all golf course footwear should have the follow-

- · rigid heel counter;
- · roomy toebox;
- firm outer sole, at least an inch thick that flexes only at the ball;
 - breathable upper material. I don't recommend particu-

lar brands because shoe styles change too frequently. Shoes should be changed

every day to dry out and replaced every three months. It may seem expensive, but will result in cost savings by reducing lost time and injuries.

'But I'm doing those things, doc, and still have pain," patients sometimes persist.

Don't despair.

If it's ankle, knee, hip or back pain. there could be a simple solution. It begins with a thorough physical exam and medical history. Then, using computer gait analysis, a diagnosis is made.

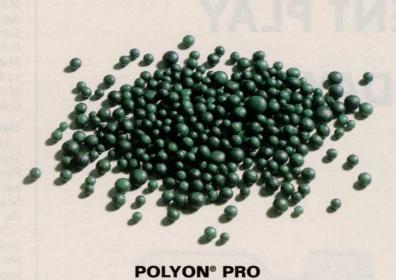
On the golf course, if the soil is too acidic, then growing problems occur. In lower-extremity biomechanics, when the leg and foot roll in excessively (over pronates) the ligaments are stressed excessively, causing shin splints, knee bursitis and/or low back pain.

The solution? Foot supports. commonly known as orthotics or arch cushions. The over-thecounter variety are an inexpensive first step, but often aren't overly effective.

If fatigue and pain persist, custom-made orthotics may be the answer. They can be soft, semi-rigid or rigid, depending on the individual's needs. They fit directly into the shoe, where they better control abnormal pronation motion and any resulting pain.

Just as good soil conditions cause grass to flourish, good mechanics result in reduced stress and fatigue. That makes for fewer injuries and a happier grounds crew.

Dr. John Perry, a sports podiatrist, practices in South Portland, Maine. He graduated from Scholl College of Podiatric Medicine and trained at Cambridge Hospital/ Harvard Medical School. He specializes in foot, ankle and leg problems for athletes.



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MAINTENANC

FERRERI NEW MIDWEST PRESIDENT

The Midwest Association of Golf Course Superintendents (MAGCS) has elected Don Ferreri president.

Ferreri is the superintendent at Seven Bridges Golf Club (GC) in Woodridge, Ill. The election took place at the MAGCS annual meeting, held at Medinah Country Club (CC) outside Chicago. Ferreri succeeds Robert Malbusch of Hinsdale Golf Club

in Claredon Hills.

Vice president for the year 2000 is Brian Bossert of Bryn Mawr Country Club, while Luke Strojny of Poplar Creek Golf Course was elected

secretary-treasurer.

Elected to two-year terms as directors were Fred Behnke of Mount Prospect GC, John Gurke of Aurora CC, Thomas Fahey of Marquette Park and Columbus Park CG. Michael Mumper of Ravisloe CC was elected to a one-year term.

Directors with one year remaining are Kevin DeRoo of Bartlett Hills GC and Gregory R Thalmann of Fox Run Golf Links.

NEW YORK SCHOLARS CITED

SYRACUSE, N.Y. — Scholarships were presented at the New York State Turfgrass Associations (NYSTA) Turf and Grounds Exposition here. Students who are enrolled in accredited turf management programs were eligible for these scholarships.

Robert Mediak of SUNY Delhi, received the NYSTA-John Corman Scholarship while NYSTA Scholarships were presented to Jason Anderson and Douglas Vanderlee of SUNY Delhi; and Joel Bardwell, David Perconti, Steven Solsky and Kevin Walker of SUNY Cobleskill. The NYSTA Equipment

Managers Scholarship went to Christopher Howell of SUNY Delhi; the Fitzharris Agency Scholarship to Andrew Stevens of SUNY Delhi; Bayer Corp. Scholarships to Chad Anderson of SUNY Cobleskill and Toni Hershey of SUNY Delhi; Stephen V. Moffett III Scholarships were awarded to Ryan Daly of SUNY Delhi, Teresa Damaski of Cornell University and Robert Milar of SUNY Cobleskill; the AgrEvo Scholarship to James Loivo of Cornell; and Peter P. Hahn Scholarships were given Matthew Delly of SUNY Delhi, and Andrew Hahn and Jon McConnville SUNY of Cobleskill.

JARRELL VOWS MORE MEMBERSHIP

ORLANDO, Fla. — Florida Turfgrass Association (FTGA) President, Mark Jarrell has announced personal initiatives that he is going to focus on as head of the Florida association.

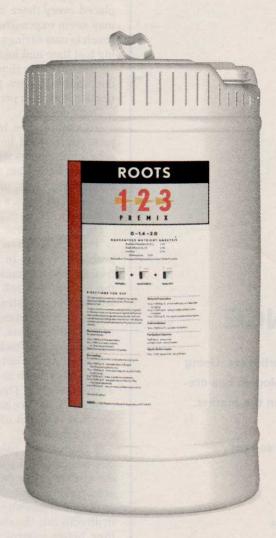
"My agenda is to grow our membership through an outreach program to other turf-related associations, increase attendance at our Conference and Show, increase our levels of fundraising for turfgrass research, and build stronger bonds with our university turfgrass programs." stated Jarrell.

Jarrell views the objectives of the FTGA to be founded in education and research: research on alternative Florida grasses requiring less water and less fertilizer and higher, more broad, education opportunities for all related industry professionals to impede unnecessary environmental and legislative regulations that simply add costs to operations with no defined benefit.

"To be better professionals we have to take the initiative to learn more about what makes up our industry," Jarrell said. "We have to learn and understand what's good and what's detrimental to the environment, for example. To acquire this knowledge first-hand means our industry must create ways to generate funds for the necessary research; appropriate university research."

As president, Jarrell created the Allied Association Committee chaired by Vernie Pickhardt to organize an effort of developing a sense of cooperation between associations allied to the Florida Turf Industry: i.e. sports associations, parks & recreation associations, Irrigation Society, Lawn Maintenance Association, Florida Pest Control Operators, and others.

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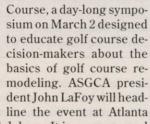


MANDELL CHOSEN FOR EXPANSION

STEVENSVILLE, Md. - Queen Anne's County Parks and Recreation Department has hired Richard Mandell of Whole In One Design Group of Durham, N.C., to add nine holes to Blue Heron Golf Course here. Blue Heron is on Kent Island of the Eastern Shore. The existing nine-hole layout will be re-worked to solve safety issues and incorporate strategic design into the layout, Mandell said. Queen Anne's County is upgrading and expanding the course to attract a larger market share of Eastern Shore golfers as well as golfers from the Annapolis area. "The site has great natural beauty I plan to enhance," Mandell said.

ASGCA HOSTS REMODELING UNIVERSITY

DULUTH, Ga. — The American Society of Golf Course Architects (ASGCA) will host Remodeling University: A short Course to a Better



Athletic Club here. It is co-sponsored by Georgia State Golf Association and will feature a panel of ASGCA members. including Arthur Hills, Clyde Johnston and Bob Cupp. To register, people should contact the ASGCA, 221 North LaSalle St., Suite 3500, Chicago Ill. 60601; telephone 312-372-7090.

INT'L EVENT'S FOCUS: CONSTRUCTION

FRANKFURT, Germany — The International Trade Exhibition & Conference on Golf Course Planning, Construction and Maintenance is scheduled to be held here, Dec. 5-7, 2000. Organized by Golf Course International, the event will inform attendees about issues of construction, care, maintenance and modernization — a key area being wastewater treatment and its re-use for irrigating golf courses. Interested people in the United States should call 412-480-7990 or e-mail: TantoGolf@aol.com

WEED TO DESIGN AUSTIN TRACK

AUSTIN, Texas — Weed Design has been selected to design Bee Cave Golf Club, an 18-hole course on the outskirts of the city. The 6,900-yard par-71 layout will be part of an effort to restore Austin's native grassland to a previously overgrazed property. Clearing work is taking place and construction is expected to start in the spring.

New wetlands regulations tighten the screws

By MARK LESLIE

ASHINGTON, D.C. — Nine out of 10 golf course projects could be affected by new national wetlands regulations that are expected to be instituted on April 14 by the U.S. Army Corps of Engineers (USACE).

The regulations, which control jurisdictional waters of the United States such as wetlands, streams and lakes, were scheduled to go into effect on Dec. 31, 1999, but they were delayed for some tweaking. Reportedly included are two new rules that could have wideranging impacts on developments:

• Preconstruction notifications (PCNs) will likely be required on all projects impacting more than 1/10-acre. Nationwide Permit (NWP) 26, which will be replaced by five new NWPs in April, now allows for 1/3-acre impact without PCNs; and it was anticipated to be reduced to 1/4-acre — until now.

• On the other hand, a lessrestrictive ruling regarding golf course construction in flood plains appears to be in the works.

"Greater than one-third of our projects in coastal areas over the past 10 years have had wetlands impacts of several thousand square feet," said Dr. Stuart Cohen, president of Environmental & Turf Services, Inc. in Wheaton, Md. "In

Continued on page 50

Dye's PGA track enviro-friendly

By KIT BRADSHAW

PORT ST. LUCIE, Fla. — They say that "under all is the sand" in South Florida. When golf course architect Pete Dye first surveyed the course that was to bear his name at PGA Village here, this saying was only partially true. In addition to the flat sandy topography, there was something else he had to accommodate when designing The Big Mamu. The Big Mamu is a 100-acre marsh that not only needed to be preserved, but protected via the design.

When he first walked this 300-acre combination of sand and wetlands, Dye knew his job would be demanding. He was creating a course that had to follow strict environmental guidelines, combine playability with challenge, but also be a showcase to the golf world, since The Dye Course would be part of the PGA of



Pete Dye's new course at PGA Village mixes water, sand — and trouble.

America's PGA Village.

On Jan. 1, at the height of the tourist season along Florida's Treasure Coast, The Dye Course officially opened to the public. Built as part of the triumverate of public courses for PGA Village, it is an extraordinary combination of tradition, preservation and innovation in design.

Not only did Dye design the course in the traditional fashion, with the holes going out and back, but he used every

Continued on page 51



Kipp Schulties, left, with PGA Tour great Fred Couples.

Schulties gains steam

Kipp Schulties, 30, worked for the Gene Bates/Fred Couples design team for seven years before opening his own firm two years ago with offices in Palm Beach, Fla., and New York City. Among the Indiana native's best-known designs are the Boca Raton (Fla.) Resort & Club (Kipp Schulties Golf Design Inc. for Gene Bates) and Quail Lodge Resort Golf Club in Carmel, Calif. Other Schulties' efforts include Carolina Golf Club in Southport, N.C., and Heron Ridge Golf Club, both with Fred Couples. Schulties has a bachelor's degree in civil

engineering from Purdue University and a master's in business administration from the University of Mi-

ami. A single-digit-handicap golfer while in college, Schulties didn't consider becoming a golf course architect until his mother suggested he find out if there was such a profession during his sophomore year at Purdue.

Golf Course News: How did you get into course design?

KS: On spring break my sophomore year I decided to go to Florida and see if there

Continued on page 56

Hyatt to build \$152M resort

CAMBRIDGE, Md. — A venture including Chicago-based Hyatt Corp. has secured funding to build a \$152-million privately financed waterfront Hyatt resort, golf course and marina on Maryland's scenic Eastern Shore here.

The resort hotel and conference center will be owned by Maryland Economic Development Corp. (MEDCO) and managed by Hyatt. The developer is Quadrangle Development Corp. and construction management will be provided by Clark Enterprises, Inc. Construction was financed by the sale of tax-exempt revenue bonds to private institutions.

Phase I of the project will be construction of the 400-room Hyatt Regency Chesapeake Bay Resort, which will include an 18-hole golf course, 24,000-square-foot conference center, 15,000-square-foot health and fitness spa and a 150-slip marina. Hyatt-signature pools and restaurants will enhance the resort experience for guests. The resort is scheduled for completion in December 2001.

GOLF COURSE NEWS

From toxic to First Tee at Providence's new Button Hole project

By KIT BRADSHAW

ROVIDENCE, R.I. — Just five years ago it was an ugly rut of earth that looked as though God had kicked his heel into it and walked on. The state of Rhode Island owned this gouged 26 acres and had despaired of using it for anything beautiful or beneficial to the Providence area. Prostitutes stationed themselves in the area at night. and during the day dirt bikes droned up and down the hill that hid years of toxins. A flower cross memorial marked the spot where a girl was raped and murdered.

Today, it's not rutting, it's routing that defines the space. There's order and symmetry and patches of new grass knitting together. Providence residents come to the top of the former pit, look out over the ordered and greening earth and pronounce it "a miracle "

Today, the short golf course and teaching center called Button Hole is rising from this earthen scar, and the man behind it, Ed Mauro, the former president of the Rhode Island Golf Association, says he feels God's hand on the project.

A few years ago, Mauro was at a meeting at the U.S. Golf Association (USGA) and Executive Director David Fay talked to him about creating a short course in Rhode Island. The next day, Mauro and Fay were in Summit, N.J., at Municipal Golf Course, a par-3 of less than a 1,000 vards that is used by young and senior golfers, women, golfers working on their short game. The idea for a short course took hold, and Mauro, the semi-retired CEO of his own company had a new passion. It is a passion shared by many in the country as part of the First Tee concept spearheaded by the World Golf Foundation, with support from golf's high-profile organizations.

"When we came back from New Jersey, I sought out various parcels in the

We have 25,000 kids within three miles of this place, and I think that the program will be astounding.

- Ed Mauro

state," Mauro said, "and came across three or four, but they were too far from the city. Then I started calling different Rhode Island departments for surplus land, and found this parcel within three miles of the financial district of Providence, under the state's ownership. As soon as I saw this property, I knew this was where our home was going to be."

The abandoned gravel pit plunges 35 feet below adjacent property. It is perfect for Mauro's vision of a golf course that would be accessible to urban youngsters, seniors, women and others who might not otherwise have a chance to play a friendly course near their homes. In Mauro's vision, this is more than a short golf course and learning center.

"This is not a golf project," he said. "It is a social project. The mission is to mentor the kids who come here, to play golf with a kid, to buy him a hot dog at the end of the round, to listen to him. Seniors. beginners and women golfers are also welcome, but their tee times will not be in conflict with the kids' times.

"We have 25,000 kids within three miles of this place, and I think that the program will be astounding."

The property had several advantages, according to Mauro. It is close to the urban areas of Providence, and it is on the edge of an undisturbed section of Rhode Island on a beautiful river. The bike path of the city's Woonasquatucket River Greenway Project will come next to the property. "You have a \$13-million govern-



The Button Hole course is beautifying an eyesore in Providence, R.I.

ment project, a beautiful bike path, that will come all the way from Providence right by our site, and go around Button Hole. It is the most unusual site for an inner-city golf course in America," Mauro

Several details needed to be ironed out, but Mauro was astonished at the cooperation between the public and private sectors to begin the project. The state leased the Button Hole property at \$1 a year. The owners of the adjacent property are leasing a corner of their land to Button Hole for \$1 a year, provided the property remains as a golf course. Others have come forward with expertise, equipment and, most importantly, time.

As the project started to take shape, Mauro organized The Golf Foundation of Rhode Island, a 501c (3) tax-exempt organization entitled to operate the facility under the long-term lease with the state. The members of the foundation are chosen from the Rhode Island Golf Associa-

Reaching out



This package of stories is one of an ongoing series covering initiatives and projects developed to bring new golfers into the game, particularly youths and minorities. People wishing to submit projects for articles should contact the editorial department of Golf Course News at P.O. Box 997, Yarmouth, Maine 04096; e-mail:

mleslie@golfcoursenews.com

tion, which is spearheading the project, the Rhode Island Women's Golf Association, Ocean State Women's Golf Association, Golf Course Superintendents of Rhode Island and the Rhode Island Professional Golfers Association.

Continued on next page

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Friends, businesses catch Mauro's vision

PROVIDENCE, R.I. - If Ed Mauro has one outstanding quality, it is not only the ability to see the vision of a short course and learning center at Button Hole, but to share this vision with others. Mauro doesn't see it as an individual effort, but rather a miraculous coming together of opportunity and people that will eventually create Button Hole on a scarred, abandoned gravel pit here.

Even though the cost of the enterprise is daunting - \$3.3 million for everything involved — this hasn't stopped Mauro. "We have \$1.6 million in cash and pledges," he said, "and \$700,000 in in-kind contributions. We need another \$900,000 to complete.

Help has come from both in and out of the golf industry. The U.S. Golf Association kicked everything off with a \$50,000 pledge, and then added another \$50,000 from its Foundation Grants pro-

"Textron has given the project cash and equipment for maintenance of the course, " Mauro said, "and I estimate their contribution alone is worth between \$250,000 and \$300,000."

Add in the services of Ron Pritchard and P.B. Dve who created the design of the facility - all at no

Then there is the ongoing support of PGA Tour



Button Hole President and founder Ed Mauro on the construc

professionals Billy Andrade and Brad Faxon, who are honorary co-chairmen of the Button Hole Fundraising Committee. Andrade has helped as he can from his base in Atlanta, said Mauro, and Faxon is helping on a variety of projects for the course,

Continued on page 49

Button Hole 'Providential'

Continued from previous page

To kick things off, the USGA Foundation Grants program donated \$50,000, and has since doubled that amount.

The design was created with the cooperation of two golf course architects, Ron Pritchard and P.B. Dye. "I knew Ron Pritchard from the restoration work he did on the club I belong to," Mauro said. "He did the initial layout of the course, and I took this layout to the Dominican Republic, where I visit in the winter. Pete Dye is a friend of mine. I was staying at a home that was next door to the Dye's home there, and I was hoping that Pete or Alice would be there. As it turned out, P.B. Dye [a son] was home, and I asked him to look over the plan. P.B. said that plan was good, but he had some ideas, and he reworked it, getting up at 5 in the morning so he could do the sketches and still catch a plane out. When I showed Ron the routing P.B. had done, he said it looked great and we went with the plan." Mauro added that both golf course architects donated their time.

When Button Hole is completed, it will contain a nine-hole short course, with holes ranging from 73 to 187 yards in length. There will be a full-size driving range, an oversized putting green, clubhouse and a couple of ponds where there will be ice skating in the winter.

The site has been a challenge from the beginning, Mauro said. "There's a big hill on one side of the pit, and underneath the hill was toxic waste, so we couldn't grade down the hill as much as we wanted to do. We graded it as much as we could, and the contractor, Izzo Construction, brought in fill, since we had the hill on one side and the rest was flat as a pancake and we needed a lot of fill to go from zero feet to 20 feet over a stretch of 270 yards."

In addition, Mauro said, some of the greens are in the buffer zone between the property and the Woonasquatucket River, and after a dry spell, the area had a monsoon, which dumped several inches of rainwater into the site.

The result? Dirt from the construction area ran into the nearby wetlands, and the Rhode Island Department of Environmental Management halted work in the buffer zone until the situation could be corrected.

But as 1999 drew to a close, there had been progress.

"We've sodded the nine holes," Mauro said, "with the exception of the 1st tee area, which we aren't sodding until we complete the adjacent clubhouse. We decided to sod, rather that seed

ial/

the course because we had

elected to sod the steep slope of

the hill, and it looked so nice

that we decided to sod the rest of

the course. We had a tremen-

dous cooperation from LIUNA

[Labors International Union of

America], which not only

pledged \$25,000 toward the

project, but also offered to pro-

vide any labor we needed to sod

DESIGN & DEVELOPMENT

the course. As part of this pledge, members of LIUNA have begun to lay the sod.

"We have only seeded three greens, and the big putting green," Mauro continued. "Some of these greens are in the buffer zone so it deterred us from completing the contouring of these greens, and in other cases, we ran out of time to seed the greens before winter came. However, some work will be done over the winter. We'll be

'This is not a golf project,.

It is a social project. The mission is to mentor the kids who come here...'

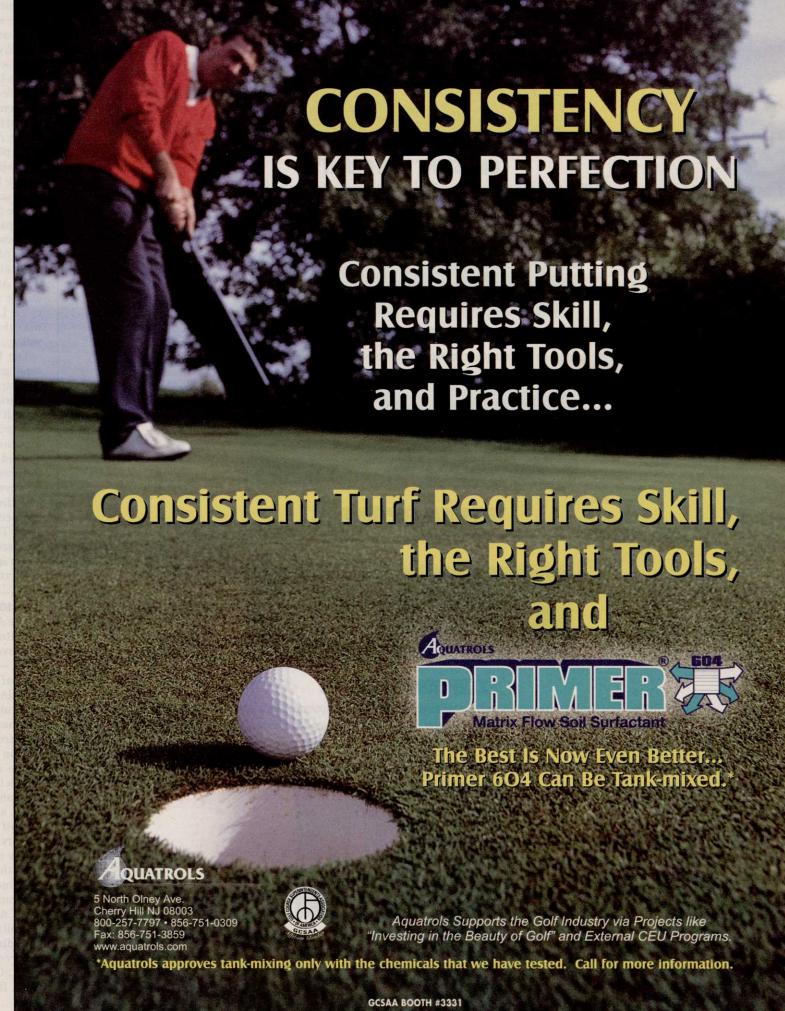
- Ed Mauro

completing the driving range, shaping the practice area and building the target greens."

Mauro projected that the driv-

ing range will open in June, and with any luck, the course will be playable by August.

"Since we are continuing to sod the first of April, everything would have to happen right to make this date," he said. "We aren't going to push to get on the golf course if it means we jeopardize the condition of the course. We do anticipate that by the fall you'll be able to play the course, but it will probably be too cold."







A telling name for Ault/Clark's **River Course of Pulaski County**

PULASKI COUNTY, Va. - Boasting 2-1/2 miles of river frontage, natural rock outcroppings and cliffs, and a secluded setting, the 18-hole River Course of Pulaski County here is being readied for a spring opening.

Construction started on the course in

Ault/Clark designed River Course is expected to open this year

the spring of 1998, and the final nine holes are being grown in and groomed for play. Designed by Ault, Clark & Associates for Blue Ridge Golf Development, the new course has generated more than 100 membership sales prior to the first ball being struck. When completed, the facility will contain a full-size practice area, pitching and chipping green, practice putting green, and full-service clubhouse with pool.

Situated on 180 acres adjacent to the New River, the course is bisected by a 70foot rock cliff. This created the opportunity to build two distinct but complimentary nine-hole loops, which start and finish adjacent to the club area. The linear nature of these two nines has allowed views of the river on 14 of 18 holes. Eight of these play directly along the river's edge.

Playing to more than 7,100 yards, the course has been designed "to challenge and excite all calibers of golfers.

The front nine, nearly void of trees, well-guarded green.

sand, and playing to a maximum length of 305 yards, will also provide excitement

With trees coming into play, the back nine will provide a varied but balanced experience to the front. Golfers will be enticed to carry water and sand to reach the green in two, on the short par-5 11th. However, the 150-yard par-3 14th is perhaps the essence of the course. The green has been pushed out into a bend in the river. The course's home hole is a stout 465-yard par-4 which finishes at a set of river rapids, and is also backdropped by a steep rock cliff.

has spacious rolling fairways, allowing wind conditions to add a necessary element of strategy to the course. A highlight of this nine will be the par-5 3rd hole. At 565 yards, this is the first hole of the round to be played along the river. Large bunkers define the route, with the approach being played into a

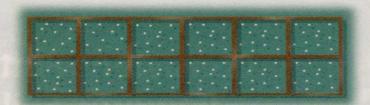
The 5th hole, guarded by water and for daring long hitters.

ASGCA RELEASES DIRECTORY ON CD The American Society of Golf Course Architects (ASGCA) has introduced its first-ever Suppliers Directory on CD-ROM — an interactive, electronic version of the group's printed directory. By using the CD-ROM directory, people can quickly search and select information on more than 90 product and service providers, including contact information on the 139 member architects of the ASGCA. "With supplier participation increasing each year, along with new and improved products and services, as well as the increasing number of golf course architects joining the society, it became imperative to create a new directory that was beneficial to both the golf course architect and the golf industry," said Clyde Johnston, chairman of the CD-ROM project. The ASGCA Electronic Information Source is available for \$25 for the fully interactive directory. The CD-ROM can be ordered by sending a check for \$25 to the ASGCA, 221 North LaSalle St., Chicago, Ill. 60601.



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Button Hole vision

Continued from page 46

including advising on the driving range, providing publicity to generate funds, and contacting others in the industry to help as Button Hole moves ahead.

"He never lets me down," Mauro said.

There's help on the job as well, according to Mauro. Volunteer Vinnie DeQuattro is a retired administrative worker for one of the largest road-building contractors in the state, and he's out at the site each day directing traffic as the earth is moved.

Izzo Construction, who was hired to build the course, found clean fill for the project, and has been bringing it in to help with the contours of the ground.

Dave Wallace of Tee and Seed "helped tremendously," by providing the sod at a very attractive price, Mauro said.

There are others, not even remotely related to the golf industry, who have helped as well.

"Dave Gavitt was the basketball coach at Providence College and the former executive general manager of the Boston Celtics," Mauro said, "and when he saw the property, he announced that his job would be to get golf clubs for the players. So we now have display stands and bins for these clubs and for golf balls at almost every public and private course in Rhode Island. The clubs are coming in like wildfire.

"Originally, we were going to cut down the clubs," he added, "but now we are planning to sell the donated clubs and get kids' clubs from the manufacturers. The manufacturers point out that if we want to help the kids play golf, they have to have the right clubs in their hands."

Hundreds of others have seen the vision for Button Hole, and have volunteered funds, time, and expertise in a variety of ways to help the project get off the ground and become a benchmark for First Tee. The community has rallied, too, from the state's participation to the support of Providence to the agencies within the various governments. There is grassroot support as well. Throughout the construction process, Mauro said, there has only been one small incident of vandalism, and signs, which are usually filled with graffiti on a project like this don't have a mark on them.

And through it all, Mauro takes little credit for the outpouring of support for a small idea that has grown into a big plan.

"I can't conceive of anything happening as it did for this project," he said. "There are so many things that have happened that we didn't make happen; they just came about. I truly believe that God's hands are on this project."

Tater Hill GC undergoing facelift and name change

N. WINDHAM, Vt. — All 18 greens and tees will be relocated and fairways shifted in a complete redesign of Tater Hill Golf Course here. The \$1.1-million project at the semi-private club will be done in four phases over the coming years.

The course also will be renamed to call attention to the sweeping changes and its new persona. The existing name, Tater Hill, refers to the fertile old potato fields

over which the course is built. New names have been solicited from the membership and one will be selected soon.

Larger greens and finger-laying the design of the fairways are two of the notable changes in the redesign, drafted by architect Barry Jordan of Fayetteville, N.Y. The modifications will result in a course that continues to challenge all golfers.

Play will continue uninterrupted as the

work progresses, using temporary greens and tees as each hole is reworked.

"Eleven new holes and reconstruction of all remaining greens are highlights of a plan which will vastly improve routing, playability and strategy of the course," Jordan said. He added that the new design will test a player's ability to position shots upon a rolling terrain while moving them through a unique combination of golf landscapes.

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DESIGN & DEVELOPMENT

Wetlands regs

Continued from page 45

past when, talking about impacting 10,000 square feet, it has been easy to mitigate — a wave of the hand. But, if you have 1/10-acre limit, it will greatly lengthen an already long permitting process."

More than one-third of our coastal projs over the last 10 years have impacted more than 1/10 but less than an acre. The PCN change would affect nearly all golf course projects, while the flood-plain ruling would impact about half, according to Dr. Richard Whiteside of Wetland and Ecological Consultants in Woodstock, Ga.

"One of the things I was very concerned about is the NWP program (usually the easiest and best to work with if you have to do it, because of its time limits, etc.) was going to be prohibitive for projects in the 100-year flood plain under these proposed changes," said Whiteside. A restrictive flood-plain component could force developers into dealing with the individual permitting process, which is more time-consuming that NWPs, he added.

Since homes can't be insured if built in the 100-year flood plain, non-structured developments like golf courses are often built in those low areas.

The USACE plans to replace NWP 26 with five new NWPs, but a USACE statement reported: "Permittees will have up to 12 months to complete activities authorized under NWP 26, provided construction activities commence, or are under contract to commence, before the existing NWP 26 expires."

Saying that NWP 26 is too broad, the USACE decided five separate NWPs could more accurately address specific activities that are similar and have similar effects, such as recreational activities.

When it was last rewritten, in January 1997, NWP 26 reduced the number of acres a project could affect. Before then, a developer could impact one to 10 acres of isolated wetlands or stream headwaters. One acre could be affected without seeking permits. Under the 1997 revision, permits were required for any impact of more than 1/3 acre. The 10-acre maximum of wetlands that could be affected was reduced to 3 acres.

NWP 39, as it is written today, would reduce that 1/3-acre to 1/4. However, USACE sources have suggested the lower limit will be 1/10 acre. The 3-acre maximum would remain in place, but may often not be met because the limit on any project would be the baseline (1/4 or 1/10, for instance) acre plus 2 per-

cent of the total project acreage.

Under the anticipated new regulations, mitigation is going to be baseline, Whiteside said.

According to USACE, NWPs 41, 42, 43 and 44 will also be instituted in April.

NWP 39 is intended for residential, commercial, and institutional development activities, including construction or expansion of building foundations or pads, as well as roads, utilities,

sidewalks, and other similar infrastructure. This includes golf courses, playgrounds, ball fields and nature trails.

NWP 42 authorizes construction or expansion of recreational facilities, which could include golf courses and ski areas, "provided substantial grading and filling is not required."

Also possibly affecting golf development will be NWP 43, which authorizes construction of new

stormwater management facilities and maintenance of existing stormwater ponds and basins. A two-acre maximum impact for new construction is expected under this NWP, but excludes impacts to perennial streams.

USACE is accepting PCNs for current permits until Feb. 14.

One USACE official said the 45-day response period has been suspended, and the Corps "can take as long as we need, up to a

year, to process the NWP 26 PCNs received prior to Feb. 14."

"I believe that our goal will be to maintain the 45-day time period," he wrote in a letter to wetland consultants, "but if we take longer than 45 days there will be no automatic authorizations."

According to the Federal Register, the new and modified NWPs will be issued on or before Feb. 14 and become effective 60 days later.



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Dye's PGA course addresses environmental issues

Continued from page 45

recourse he has discovered in his more than 40 years experience to create a environmental benchmark. Because of this dedication to environmental stewardship, The Dye Course and the new PGA Learning Center, which Dye also designed, follow Audubon International's strict The two new facilities join the Tom Fazio-designed PGA Village North and South courses, in receiving this Audubon International designation.

Dye kept environmental sensitivity and ease of maintenance in the forefront of the design.

First, he used the Big Mamu

Signature Program guidelines. as a focal point, winding the course around this large wetlands area. "I imagine the golf course itself is on about 175 acres," Dye said, "but the total marshes, including the Big Mamu, are over 125 acres. The marsh area is so big that although there is some development, it is sparse, and you really

feel like you are out here by yourself when you play golf."

Secondly, Dye augmented the large marshland areas by using native grasses, and pine needles under the pine trees, to reduce maintenance on the course, and to contribute to the natural feel of a links style.

Dye admitted that to create the

Big Mamu marsh 'is so big that although there is some development, it is sparse, and you really feel like you are out here by yourself when you play golf."

- Pete Dye

dunes, he had to move a lot of dirt, since much of the original land was flat and sandy. However, the course, which measures 7,150 yards from the tips, has only three water hazards. More than 100 bunkers, along with wetlands, provide the natural hazards.

One of his key decisions was to eliminate much of the Bermudagrass normally found on a South Florida course, and as a result there are only about 60 acres of Bermudagrass.

We tried to reduce the amount of Bermudagrass," Dye said, "which is cut short all the time, as well as the golf course grass, yet make the golf course playable for John Q. Public. The course will take longer to mature than if you put in all Bermudagrass, since Bermudagrass grows so rapidly in South Florida. But then, because it grows so rapidly, you spend the rest of your life cutting it. So we've tried to isolate what we hope will be out-of-play areas and used a lot of native grasses for these areas.'

Perhaps one of the biggest innovations is the extensive use of coquina, a natural limestone of coral rock and seashells native to South Florida. It looks and feels like fine sand and, over time, it becomes compacted. Dye said he used about 30 acres of coquina in cart paths and waste areas. Not only does coquina compact well, but golfers can find their balls in it, speeding up play.

'The coquina we've used also aids the drainage," Dye said. "I hope in the long run, it will be an economical thing. You're not putting fungicide on it. You're not putting fertilizers on it. And you're not running the mowers on it. Although it will take a while to get established and built up, with coquina you can find your golf ball and you don't have to mow the grass.

"A lot of courses have used it on cart paths alone," Dye added. "I went out to look at the course and when I saw the coquina, I said, 'Let's keep on going.' This was a change of pace no one had done. This is the first course I've designed with so much coquina."

The result of this design is a course that showcases nature while giving the golfer an interesting and dynamic test of golf. Because of Dye's environmentally sensitive design, it makes golfers feel as though they are part of the natural vegetation, the sky and the undulations of the earth.

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Morrish, Druzisky team in the desert

HENDERSON, Nev. - MacDonald Ranch Country Club, a planned community nestled along the McCollough Mountain Range here, will offer an 18-hole private golf course designed by Jay Morrish and David Druzisky. The designers said no other course like this will exist in Las Vegas due to the course's soil, terrain, colors of rock and its loca-

Natural beauty will encompass the golfers, allowing them to enjoy the sport while being surrounded by desert and water features, according to Emily Sherwood, vice president of sales and marketing for MacDonald Ranch Country Club.

An elaborate water feature on the course comprises several streams meandering downward along the fairways, forming several waterfalls that flow into a two-acre lake. The water feature interacts with the 5th, 6th, 7th and 8th fairways and, in keeping with the developers' desire for water conservation, will continually re-circulate.



The MacDonald Ranch Country Club entry and golf course are shown in this aerial shot. The course is expected to be completed this spring.

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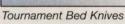






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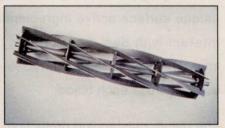




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Jacobson proves that you can go back home

GLENVIEW, Ill. - Native son Rick Jacobson has built his reputation as a golf course architect by designing layouts in New York, Virginia, Delaware, Wisconsin, Iowa and Japan. Now, Jacobson is getting the opportunity to show his creativity in this north Chicago suburb where he grew up.

The Glenview Park District has awarded Jacobson the job of designing the new "family-oriented" nine-hole course planned for the Glenview Naval Air Station Redevelopment Project.

The course will be built on 39 acres as part of a mixed-use redevelopment of the 1,121-acre parcel that formerly served as a U.S. Naval Air base. It will be located adjacent to a new 18-hole championship course being designed by Tom Fazio.

"I am honored to have been chosen to contribute to Glenview's 'once-in-a-lifetime' opportunity to redevelop the Glenview Naval Air Station property," said Jacobson, a 1976 graduate of Maine North High School. "As someone who spent his formative years in Glenview. I know what a tremendous community it is. I am thankful for this opportunity to give something back to the village and I am committed to creating the best possible nine-hole golf course for the residents."

The course will be aimed at the segment of the golfing population that may not have the time, expertise or inclination to play the championship course. Beginning golfers, juniors and seniors are expected to comprise the bulk of its customers.

"The synergy of the nine-hole and 18-hole courses - along with the Park District's existing par-70 18-hole course - will offer golfers of all levels the opportunity to play golf right in the village," Jacobson noted. A tunnel under West Lake Avenue will connect the Jacobson course with the Fazio course.



Silva's Black Creek Club to debut in July

CHATTANOOGA, Tenn. — When Black Creek Club opens in July, architect Brian Silva will unveil what he calls "[Seth] Raynor on steroids — a course that will raise the bar on layouts that presume to integrate vintage design characteristics into the modern game."

Located 10 minutes from downtown Chattanooga, the semi-private Black Creek Club (BCC) was laid out, developed and constructed by an ardent chapter of the decidedly unofficial Seth Raynor Fan Club:

- Silva is refurbishing a pair of vintage Raynor designs: Mountain Lake Club in Lake Wales, Fla., and Pittsburgh's Fox Chapel GC which is scheduled to host the USGA's Curtis Cup Matches in 2002.
- The four major investors in BCC Doug Stein, Gary Chazen, King Oehmig and Clay Crumbliss are all members at nearby Lookout Mountain (Ga.) Golf Club, a 1925 Raynor layout that Silva finished restoring in 1999. [In the name of "research", this development foursome has spent the last decade criss-crossing the country, doggedly playing and "studying" the Raynor design legacy.]
- The Black Creek course itself was built by Stein's contracting firm, Stein Construction Co., the same outfit which built The Honors Course in Ooltewah, Tenn., one of Pete Dye's best designs and site of the 1991 U.S. Amateur.

"Black Creek Club is a unique project because the architect, developers and contractors are all of a very, very like mind: We all have the utmost respect and admiration for Raynor's work," said Silva, a partner with Uxbridge, Mass.-based Cornish. Silva and Mungeam, Inc. "These clients wanted a traditional golf course in the Raynor style, and that's just the direction my own designs have taken. And let's be honest: It's impossible to do restoration work at places like Fox Chapel without absorbing the artistry and strategic sensibilities of the original architect. It's been an entirely positive influence, and I think it really shows at Black Creek."

Though Raynor and his early design partner, C.B. Macdonald, worked during the early years of this century, they were unabashed devotees of 19th-century British course design. So strong was this Old World influence, so dutiful was **their** homage, that all the Raynor/Macdonald products (National Golf Links and Fisher's Island GC on Long Island, Shoreacres and Chicago Golf Club in Illinois, Yale GC in New Haven,

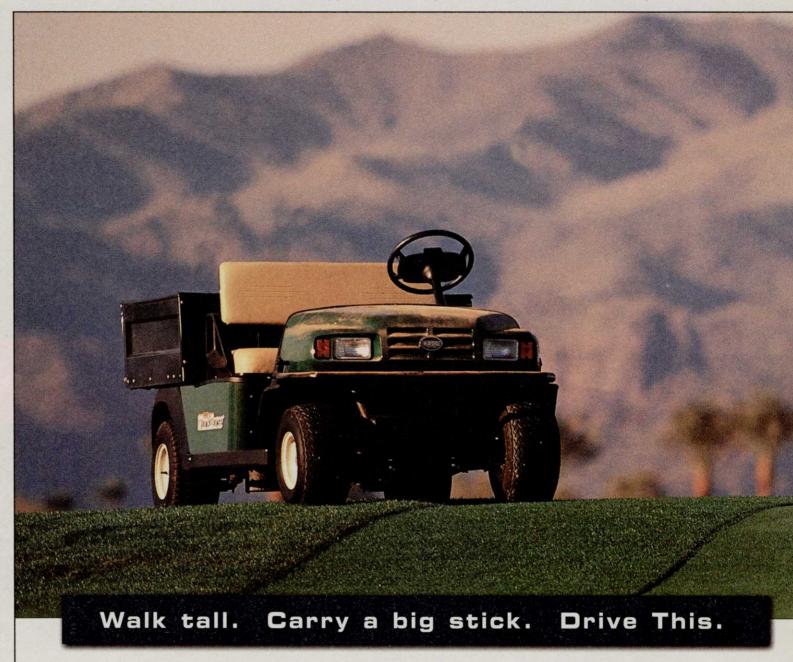
Conn., Yeamans Hall in Charleston, S.C.) include loving replicas of famous Scottish holes such as the Redan at North Berwick and the Alps at Prestwick, among others.

Silva has carried on this practice by reprising Raynor's Redan and Punch Bowl greens at places like Waverly Oaks and Cape Cod National GC. At Black Creek Club, the architect has included all the Raynor standards: the Biarritz Green (no. 17), the Redan (11), the Reverse Redan (7), the Cape Hole (15), the Short Hole (3), the Double Plateau (1), and an Alps/Punch Bowl hybrid at the one-of-a-kind par-5 6th.

Black Creek's routing plan re-

flects the extraordinary amount of time Silva spent on the site prior to course construction. One example: The architect created a bit of theater with his placement of the 7th tee, which sits high on another ridge behind the Punch Bowl putting surface. Go-forbroke second shots to the 6th green might be blind from the fairway, but those standing on the 7th tee have an unimpeded, bird's-eye view of the drama.

"Brian really did a magnificent job routing this golf course to maximize the fun and the fairness," Stein said. "The 6th, for example, will yield a lot of birdies. But the 7th is a 245-yard par-3 where you can easily make 5. On the backside there are two drivable par-4s [10 and 15], but there are two par-4s [12 and 13] where it's very difficult to get home in two. The course is very fair that way..."



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DESIGN & DEVELOPMENT

Q&A: Schulties

Continued from page 45

really was such a thing as a golf course architect. I opened up the yellow pages and there were 10 golf course architects in Palm Beach County alone. There was Jack Nicklaus' name. And Gary Player. But I didn't know who Robert Trent Jones was. Or Tom Fazio.

So instead of getting up at noon everyday and laying on the beach, I started getting up at 7 a.m. and putting on a decent pair of pants and a shirt and visiting architects' offices. One morning I ended up at Gary Player's office and asked the secretary if I could talk to someone. The guy who came out was Tom Walker. He was vice president of design. He introduced himself and said 'Come on back to my office. I haven't got much going on this morning.' We sat back there and he talked to me for two hours about golf course design and how most people start in golf course maintenance or construction. I hope someday I can do that for somebody else, to sit down, take the time and talk to someone in school who needs guidance.

I left there all fired up and went down the street to PGA National, asked if I could get a job on the maintenance crew, and ended up getting a job for that summer. The next Christmas I came down and looked in the phone book under 'golf course construction,' because Tom Walker said that's what I needed to do. The first name I saw was Jerry Piermann. I went in and he offered me a job helping build Frenchman's Creek that summer. While I was in Florida I sent out resumes to five architects and heard back from two - Gene Bates and Robert Trent Jones Sr. Gene's office was two minutes away. I came back over Easter and he offered me a job for that summer. So I had to go back to Jerry Piermann and tell him I had a job with a designer, which is really what I wanted to do. I ended up going to work for Gene full time after I graduated the following January.

GCN: When did you decide to go out on your own?

KS: After five years I was starting to push the envelope to try some things. I decided to resign to go out on my own, but Gene rehired me the same day to work on the Boca Resort and Carolina National [in Southport, N.C.]. I was working out of his office, but was on my own when I brought on the Quail Lodge project.

GCN: What's been the hardest thing about being out on your own?

KS: When I was working for Gene, I could count on a paycheck every two weeks, whether I was on vacation or working 14 days straight. Now, when I'm not working, nobody's working. If I'm not bringing in money, no one is bringing in money. I also didn't realize the amount of time I'd spend on accounting. But the independence is great.

GCN: How do you view your role as an architect?

KS: I've gotten to know David McLay Kidd [designer of Bandon Dunes in Oregon] and he has a you're out there on a big project and you've got great shapers, contractors and people — then the architect is like the conductor of a great orchestra.' You just keep everyone focused and let them do what they need to do.

GCN: Is there anything you avoid or anything you like to include in your designs?

KS: I try to stay away from straight lines

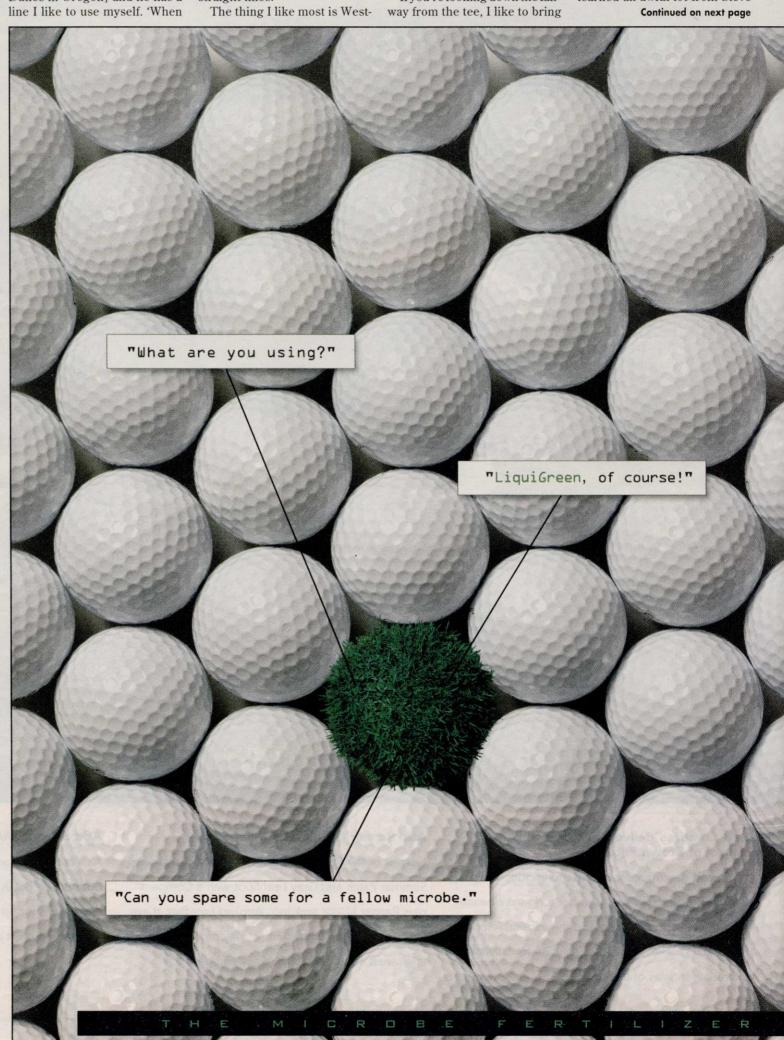
ern-style bunkers. I've been fortunate to play all the Northern California courses - San Francisco GC, Olympic, Pebble Beach, Spyglass, Cypress Point. They all have those very strong, steep faces and mellow out at the bottom. I love that look. That's what we brought back to Boca. It's a little more maintenance, but it's a great look.

If you're looking down the fair-

things that cross your vision perpendicular to the fairway so you see things coming in from the side. It's a very strong visual appearance. You have to have a wide fairway to make it work.

GCN: Is there any architect or courses you particularly admire?

KS: Everyone likes the classical architects - the Rosses, Mackenzies and Tillinghasts. I learned an awful lot from Steve







Reconstruction of a green at Inverness Club

Hills tackles Ross's Inverness finetuning

TOLEDO, Ohio—The Donald Ross-designed Inverness Club, site of four U.S. Opens, one U.S. Amateur and two PGA Championships, has undergone an improvement program that will position the historic track to host future major championships.

Construction of a number of new tees lengthened the course

to 7,234 yards, playing to par 70 or 71. The most significant portion of the renovation involved reconstruction of bunkers and regrassing of the greens.

"Inverness has a long and rich history of hosting major championships," said club President William Parker. "The improvement program will maintain the integrity of the course as a major championship site into the next decade and beyond."

Golf course architect Arthur Hills oversaw construction that began lastAugust. New sand and internal drainage will be added to each bunker, with several bunkers being repositioned. Bluegrass sod will be placed around bunkers and greens to remove heavy bentgrass rough around the putting surfaces. The greens are being re-grassed with Penn G-2 creeping bentgrass.

Hills used the collection of historical photographs at Inverness during his planning. A few greens have been expanded to reclaim cupping areas and several fairway and greenside bunkers were reshaped or added to return them to their original Ross design.

"One of the goals is that the course will have the same character and appearance as it has now," Hills said. "All of the work that will be done this fall has been done after consultation with the USGA [U.S. Golf Association]. I would call this program a modest finetuning which will allow Inverness to lengthen its course for future major championships the club may host. The key to the added length is added yardage to the long par-4s, in an effort to bring middle-irons into use."

Oliphant Golf Construction of Madison, Wis., was the contractor.

Construction was completed in November, and the course will reopen in April.

Q&A: Schulties

Continued from previous page

Wolfard [a former Bates' associate now working on his own in Dallas]. My favorite golf course is San Francisco Golf Club. You just feel the history. Among the modern courses I really like Shoal Creek in Birmingham, Ala., and I love Fazio's Pelican Hills in Newport Beach, Calif.

It's hard to compare designers. Everyone has a different canvas to build their courses on, every piece of property is different. What I'd like to do is give every architect a piece of ground where there isn't a foot of elevation change or a piece of vegetation that you particularly want to keep, and see what you get. Now Pebble Beach is a phenomenal golf course. Is it a great design? I'm not sure. Someone was smart enough in the way they laid it out. But they didn't move a lot of dirt. How could you mess up piece of property with 12 holes on the ocean? Some of the best courses may not be the best layouts, they just sit on a phenomenal piece of property.



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Olympia Fields' North Course fixes go beyond 'skin-deep'

CHICAGO - The North Course at Olympia Fields Country Club south of Chicago has seen its share of great golf tournaments since it was built in 1923. The U.S. Open was played there in 1928, Western opens and most recently the U.S. Senior Open in 1997.

When the USGA saw that the course had the potential of challenging the likes of Woods, Duval and other stars of the PGA Tour, it awarded the course the privilege of hosting the U.S. Open in 2003.

In order to make this happen, however, the USGA required that the course be made tougher. Even though it played tough for the PGA seniors in 1997, it was't brutal enough to suit the USGA, which has the reputation of making its championship golf courses a severe test of the ancient and royal game - narrower fairways, thick rough; deep sand traps, lengthened tees, lush, heavy fringe grass; and fast and hard greens. But getting these changes made is a big job and a complex one.

Dave Ward is head superintendent and Kevin West is the golf superintendent at Olympia Fields. If they thought they had plenty of meetings prior to shaping the course for the U.S. Senior Open in 1997, they were in for plenty more prior to 2003.

The task of reshaping or rehabilitating a golf course, which was built primarily in 1923, to suit new millennium hitters, with their high-tech golf clubs and balls, requires planning, a complete understanding of the systems involved and detailed project management.

Ward and West brought in Leibold Irrigation, Inc., of East Dubuque, Ill., Leibold Irrigation, specializes in golf course irrigation projects, building new systems and rehabilitating old ones.

Ward and West also organized course architects, construction design engineers, an excavation contractor, and their own large maintenance staff, as well as involve the Illinois Department of Natural Resources, Army Corps of Engineers, and Cook County.

The first major change was to lengthen the North Course. It played at 6,900 yards for the 1997 event, and they wanted it 7,100 yards or longer. This means moving tees back, which is the simplest of the reconstruction challenges. As a result of the tee lengthening, one par-4 will play to almost 495 yards and a par-3 will measure 240 yards.

The second set of changes involved the bunkers. The sand bunkers on the current layout are plentiful but not deep. The USGA required that all the sand traps be dug deeper. Fairway traps would have to be altered to penalize shots slightly off the mark. Greenside bunkers would be moved closer to the collar of the greens.

The most crucial changes involved the greens. The decision was made to put in all new grass on 16 of them and the practice green, and core out and totally restructure two of them. The old grass had to be killed so that the new seeds would start fresh. A plastic tarp was sealed over each green and methyl bromide was pumped under the tarp to gas the existing green grass and any weeds. This had to be done early in the rehabilitation process to give the grass time to grow prior to work being done around it.

The most involved and complex part of the changes had to do with the drainage and irrigation systems. With all the bunkers dug deeper, the existing drainage pipes had to be removed and new ones put deeper with pump systems created to drain the water away.

The current irrigation for the North Course was the major part of the project, West said.

"Years ago, golf course watering wasn't nearly as scientific as it is today, and Olympia Fields'

Continued on next page

Richard Yach is a technical writer working for Vermeer Manufacturing Co. of Pella, Iowa.



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GOLF COURSE NEWS

Olympia Fields fix-up

Continued from previous page reflected the older philosophy," West said. "You had a mainline down the middle of the fairway, and four sprinkler heads around a green, with all sprinkler heads activated by hydraulic pressure. Now, the playing surfaces, fairways, roughs, collars, fringe grass and greens are so demanding that you have to have different watering requirements for each.

To accomplish what the USGA wants, we had to have more control over watering each part of the course where each is affected differently by temperature, humidity and course playing requirements."

Championship-quality conditions means the greens have to be watered differently than the fringe, and the bentgrass fairways have to be watered separately from the rough. Areas like the mounds atop fairway bunkers, which may have escaped special watering under the older system, now require their own sprinkler heads to make the grass long and lush and difficult to play from.

The North Course uses a few wells that are inadequate to supply the water needs for the new irrigation plan. Where there are now four sprinkler heads per green, there will be 28. Where there are now 500 sprinkler heads, there will be three times as many - each with a specific area to water, with the time and amount controlled by computer.

To supply all the water needs, a 5,000foot-long transmission line with its own pump station had to be built from a large pond on the South Course. This water line had to extend throughout the North Course and feed all 18 holes.

Gary Leibold, the irrigation company's vice president, managed this project. His first task was to trench in the mainline from the lake on the South Course to the North Course and put in thousands of feet of mainline on the North Course, off of which the new laterals would be extended. He used a Vermeer T455 track trencher to put in the new mainline irrigation piping, which ranged from the initial 20-inch diameter at the lake source down to 6-inch diameter.

This part on the South Course transmission line was done while the new greens were growing, from the end of August through September," said Leibold. "We wanted to do the trenching work that created the most spoil first. Clean-up is as important to us as it is to the members of the clubs we work on.

"Once the superintendents felt that the new greens were growing well, then we would start putting in irrigation laterals and heads around the greens, and the modified triple-row down reach of the fairways.

Leibold used Vermeer rubber-tire trenchers with vibratory plow attachments to pull in the 3-inch diameter and the 2.5-inch diameter down the center of the fairways and down each side. "We use the flotation tires on these 40 horsepower models," said Leibold. "And we like to put plywood sheeting down in front of our path so we minimize the footprint we leave."

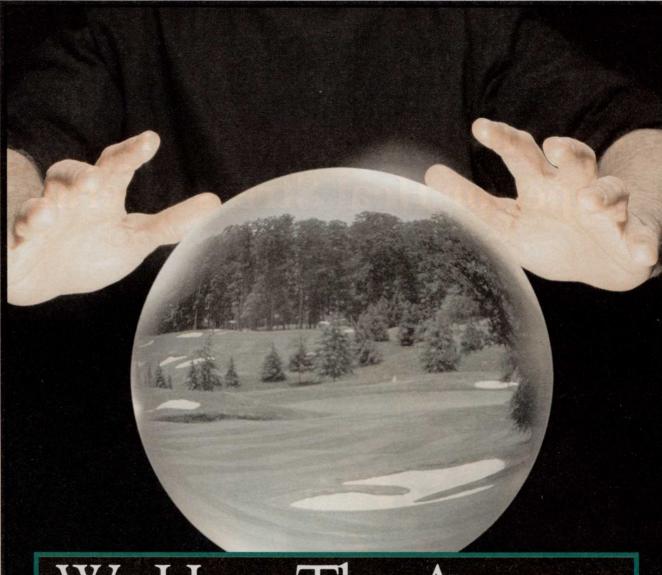
The existing irrigation system will be maintained up until the point that the new system is completely installed. That way, the new greens as well as the rest of the course can be watered up to the exact moment when the new system is completely functional.

Part of the mainline had to go under Butterfield Creek, which runs through both courses. Leibold's subcontractor used a Vermeer Navigator to make four bores under the creek. One bore consisted of pulling back 350 feet of 18-inchdiameter polyethylene pipe, while two others pulled in 400 feet of 10-inch piping line.

Moving tees, carving deeper sand bunkers and making sure that every part of a golf course receives proper attention involve the kind of meticulous effort that it takes to satisfy the officials who want to make their national champion truly earn the trophy at the U.S. Open.



Trench work at Olympia Fields' North Course



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The 8th hole grows in at the Mike DeVries-designed Kingsley Club.

Great site, great soils at Kingsley Club

By MARK LESLIE

TRAVERSE CITY, Mich. — "Wild land" and "phenomenal soils" have provided course architect Michael DeVries with a property here on which he will move only 25,000 square feet of dirt in producing the 18-hole Kingsley Club for developers Art Preston and Ed Walker.

The golf club will restore land that had been virtually blitzed by a clearcutting operation a dozen years ago, DeVries said, adding, "It was a mess."

Set at the edge of one of glacial starting or stopping points, The Kingsley Club is so perfect for a golf course, he said, that "there are only a couple of spots where we had to make a cut for playability or visibility on a hole.

"The land is severe in some places, but the routing works out so it will be walkable and very playable," he added. "All I have to do is flatten out teeing areas and shape greens and bunkers into the existing contours."

Wide fairways will be dry and firm "to allow the ground game to be an elemental part of the play, as the wind blows constantly," DeVries said.

The property boasts generous views in all directions because it is higher than the land around it.

And the soils? The weather can be "bone dry with no rain for three weeks," DeVries said, "and an inch deep the soil is moist. It's unbelievable."

The course is also marked by a number of large depressions that drain freely, he added.

DeVries, who worked at Crystal Downs while growing up and for about three years with architect Tom Doak, does all his own shaping and is handling the course construction in-house.

Preston and Walker, business associates who worked together for 25 years on oil and gas projects, bought the property 12 miles south of the city to create "a golf club exclusively for people who love golf ... a place with few rules and no starting times."

They brought in superintendent Dan Lucas from the beginning, and he is overseeing growin of the fescue fairways and bentgrass greens and tees.

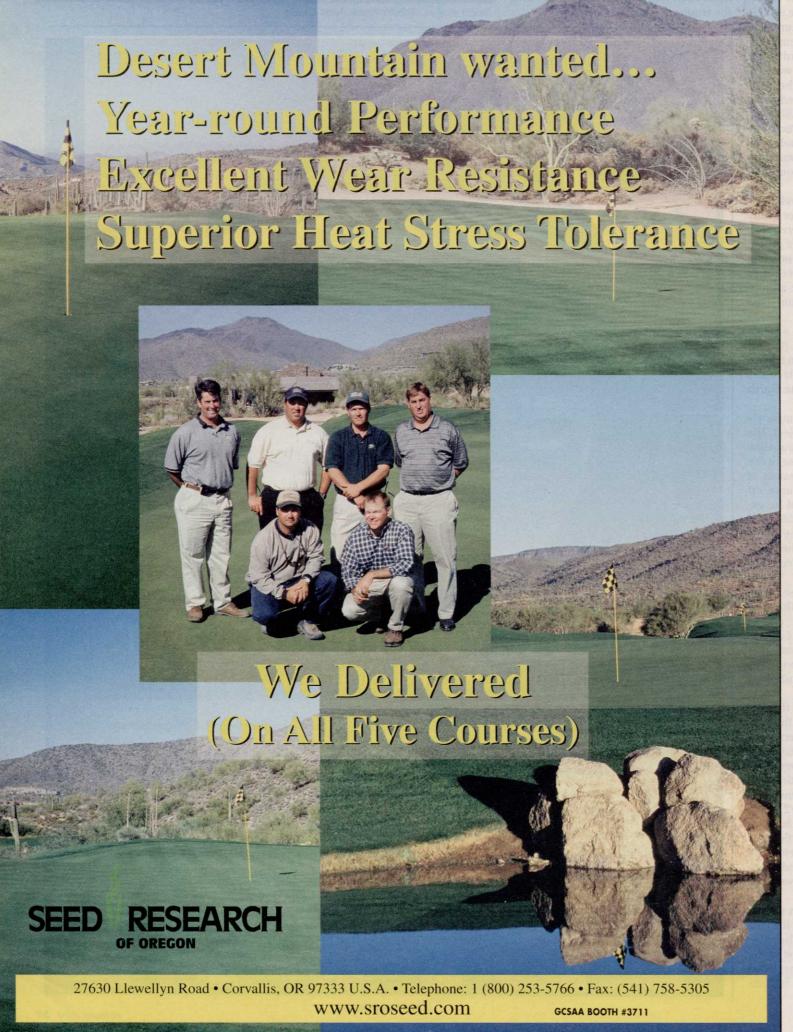
They expect to open the front nine this summer and the back nine in the fall.

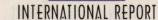
Childs signs 27-hole project

FLINT, Mich. — Don Childs Associates (DCA) has been awarded a contract to develop a 27-hole golf course here.

Childs was awarded the opportunity on county-owned land through a formal Request for Proposal process issued in January. The project will occur under a long-term concession agreement with the Genesee County Parks & Recreation Commission. Negotiations have continued for a year with the park officials, and final approval was granted by the Genesee County Board of Commissioners on Dec. 14.

Initial phases of construction are planned to begin in February. The budget is approximately \$8.5 million. In addition to the 27-hole golf course and 8,500-square-foot clubhouse, the site will feature a state-of-the-art training center. The city of Flint maintains the nation's largest junior golf program.







Bahamas draws big names

By TREVOR W. JACKSON

NASSAU, Bahamas - Not since the 1960s has the Bahamas experienced the attention of the world's leading golf course designers until now. Back then, Dick Wilson, Joe Lee, Gardner Dickenson and Robert Trent Jones Sr. were among those leaving their mark on these sun-splashed cays and islands. Today's golf course developments are being designed by Tom Weiskopf, Greg Norman and Robert Trent Jones Jr., ushering in a new age of golf on spectacular oceanside property from Grand Bahama to Paradise Island and to the Exumas.

Weiskopf has two projects in hand, the Island Club on Great Exuma and the Atlantis Resort Course at Paradise Island. Jones is working towards a June opening of his Reef Course at Lucayan Resort on Grand Bahama, making 36 holes available to guests of this destina-

The Lucayan Country Club's original 1962 Wilson layout continues to attract players from around the world, hosted by Director of Golf Gary Slatter. The Reef Course is being built on the site of an earlier course and is Jones' first effort in the Bahamas. His father's Cotton Bay Golf Course opened in the early 1960s, attracting Shell's Wonderful World of Golf to record a great match between Arnold Palmer and Julius Boros. Today, Cotton Bay remains open for play, but the resort hotel is no longer open waiting for re-development.

Continued on page 64

Returning the Olde World to the Olde World

OONBEG, County Clare, N. Ireland - Greg Norman is so enthralled with the property that he had been on site four times before ground was broken in December. His senior designer, Jason McCoy, had been here seven times to walk the land and route the 18hole golf course for Shannon Development and Landmark International.

'Doonbeg is 100 times the site of the Ocean Course [in Kiawah Island, S.C.]," said McCoy, who worked on the Ocean Course with architect Pete Dye. "It has 1-1/2 miles on the ocean and the dunes are 100 feet versus 10 feet at Kiawah. It's an unbelievable links site.'

Norman and McCoy have "routed, rerouted and rerouted it again," McCoy said. "Every time, we change a tee or green 20 feet. Every time, we find something even better. We might move just 25,000 square feet of dirt on this project. We will start cutting the fairways just as they are right



Greg Norman visits the site of his upcoming golf course in Doonbeg, Northern Ireland

Norman and McCoy plan to keep Doonbeg "old Irish style - old hard and creeping fescues," McCoy said. "We will not Americanize it in any way."

Flann Quilligan is working on the

project with Shannon Development, which has formed a joint venture with Landmark International. They hope to finish Doonbeg by mid-2000 and open it

Fream-Dale Golfplan rolling round the globe

By ANDREW OVERBECK

SANTA ROSA, Calif. - Newly renamed Fream-Dale Golfplan based here is rolling into 2000 with two courses set to open and new projects on the books and in the works. The firm's two openings this year prove there are still fabulous sites available for golf development.

Bonari Kogen Golf Club in Numajiri, Japan, which sits in the hills northwest of Tokyo, is slated to open June 3. Aiming to bring the course into the market as the best in Japan, the project owner opted to let the course grow in for an entire year.

The course was ready to open last May," said senior architect, David Dale. "They took a year to work on their maintenance practices and make sure their soil chemistry is balanced. As a result, it looks magnificent.

According to Dale, the most dramatic hole on the course is the par-5 3rd that runs along a canyon ridge and features views of the inactive Mt. Bandai volcano. "You can cut the corner off the tee," he said. "But it is a 260-yard drive to cross the canyon. It is a gutsy shot."

Also set to open in June is Sparrebosch Golf Resort in Knysna, South Africa. Nine holes opened this December and Dale expects to have the remaining nine shaped and seeded by the end of January.



The Dale- and Fream-designed Sparrebosch Golf Resort in Knysna, South Africa.

The course sits along the Indian Ocean, the estuaries of Knysna and is adjacent to an indigenous forest.

As a result, it took nine months to get the regulatory approvals. All the work was worth it in the end, said Dale. "These are both sites that you'd give your two

Fream and Dale will also be busy in Southeast Asia in the coming months.

In Korea, the firm is working the Nine Bridges Golf Club on Cheju Island and Dale is doing the grading plans for another course at Yong Pyong Resort. Movement is also possible at Sun Chon Country Club in Kwang Ju, a course that the firm first looked at 2-1/

In Singapore, Fream and Dale will be renovating the Sentosa Golf Club in Serapong that Fream designed in the late 1970's. The course will be getting a fullscale facelift, according to Dale. "It has been in the ground for 20 years," he said. "And we will be retweaking the course, flashing out the bunkers, etc. On a course that has mature vegetation it will make for real fun architecture."

New Golf Unlimited eyes German growth

By TREVOR LEDGER

ÖSTRINGEN-TIEFENBACH, Germany - Some of the golf industry's most experienced professionals in Germany have joined in a partnership designed to handle a golf project from concept to management.

Golf Unlimited is the brainchild of Managing Partner Christian Bohn, formerly a project manager with Paragon Construction and now the representative of Nicklaus Design in Europe.

"I don't think that anyone else in Europe has put together such a committed

team in order to actualize such a concept," said Bohn.

The 36-hole, Tony Jacklin-designed project at Stifterhof, south of Heidelberg, is the first to benefit from the formation of Golf Unlimited. The company has already successfully negotiated the planning phase, and building will commence this year. The multi-skilled nature of Golf Unlimited is highlighted by the ease of planning consent at Stifterhof.

While each new project receives individually chosen team members, project managers, superintendents and shapers, etc., a more permanent team of core partners has been established to ensure that reputable and acclaimed professionals are involved at every stage of the development - be it a small-scale renovation or full-blown resort project, Bohn said.

Key members include Nicklaus Design. Weitz Golf International, JL Piermann International Associates and Michael Redd Associates, all of whom are based in Florida, USA. Between them, they are responsible for some of the highest quality and famous golf courses in the world, including The London Golf Club in En-





gland, Muirfield Village Golf Club and Kiawah Island in the United States, and the Hyatt Regency Resort in Abu Dhabi.

It is this recognizable quality that Bohn believes will bring success for Golf Unlimited. "We know that there is a need in

Continued on page 65

INTERNATIONAL REPORT

Hiseman set to redo Dornoch's 'Struie' course

By TREVOR LEDGER

DORNOCH, Scotland — "My aim is to design a course of such quality, that if there were no other course in Dornoch, the members would be proud to play this one," said Robin Hiseman, setting himself a high standard with his new commission to redesign the secondary "Struie" course at Dornoch.

The world-renowned and extremely remote Royal Dornoch in the north of Scotland is to receive a course that is designed to rise from being the "much lesser course at Dornoch" to "a course of distinction in its own right."

This is the excitement that Hiseman is generating at the prospect of a spring 2000 start on the site.

"A member of the golf club retired as a farmer and offered the club first choice on 300 acres of linksland on the Dornoch Firth," he said. "The new land encompasses some of the best golfing terrain you can imagine."

The original Struie course has managed to retain some of the original Dornoch course designed by Old Tom Morris. However, lack of land and boring terrain have restricted the length and the quality of golf available. With its illustrious sister next door, Struie was always going to struggle to attract players. The result is as predictable as Hiseman is succinct: "The Struie is a 5,500-yard ancillary course. It is very under-used, so the championship course is swamped."

A Scotsman, Hiseman was a natural choice for the job. "I think my living in Aberdeen was a contributing factor," he said. "They are a long way from anywhere and they are aware of it.

"The captain of Dornoch was playing at Deeside Golf Club, where I was marking out some bunkers. We got chatting."

Part of the new plan has already been initiated by greenkeeper Bob Mackay and his staff, who have built several new pot bunkers on existing holes which will be retained. Five holes will be dropped from the present course, two of which will be abandoned, while the other three will function as a practice course.

Ten of the 13 remaining holes have been redesigned to varying degrees, with three new green sites together with new tees and bunkers. The first phase of the project will see the lengthening of the course up to 6,500 yards with five new holes — 9 through 13 — being laid into the

new linksland.

Mountainous dunes and barren wastes are sure to become a feature of the new course.

"The most exciting change comes with the addition of the five new holes on the new linksland to the west of the 8th," said Hiseman. "These holes take full advantage of the natural links terrain and provide the Struie with a fresh style, scenery and challenge."

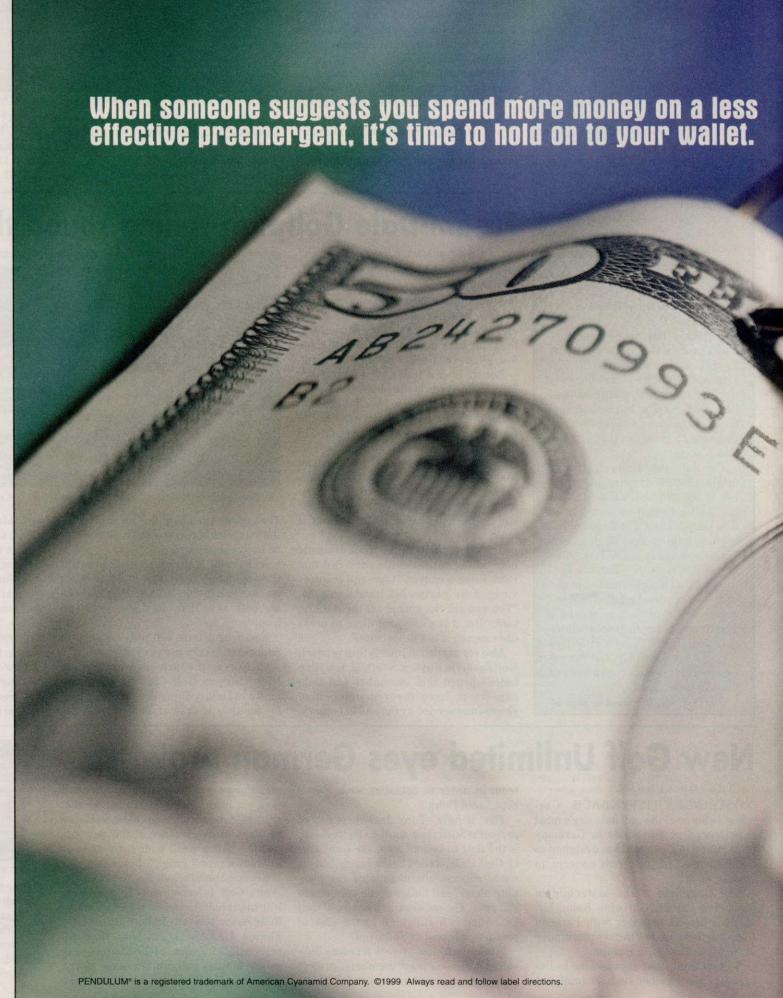
Part of Hiseman's design has included the familiar Royal Dornoch fingerprints of deep pot bunkers and large, undulating, elevated greens. But this is not a clone

"The 10th and 11th could become the two best holes on either course at Dornoch," Hiseman wrote to the membership. "The 10th has the potential to be one of the best par-4s in the

Continued on next page



Dornoch Firth is in full view from the 10th and 11th holes of the 'Struie' course





Creative Golf debuts in Germany

By TREVOR LEDGER

≺ YLT, Germany — Creative Golf Design (CGD) of Chester, England, has been awarded its first commission in Germany — the Marine Golf Club

"The golf club has acquired a further 120 acres for an entirely new, 18-hole course," said CGD Director Ken Moodie, "There are

a number of ecological issues to attend to, but far from being a problem, I am very excited by the challenge.

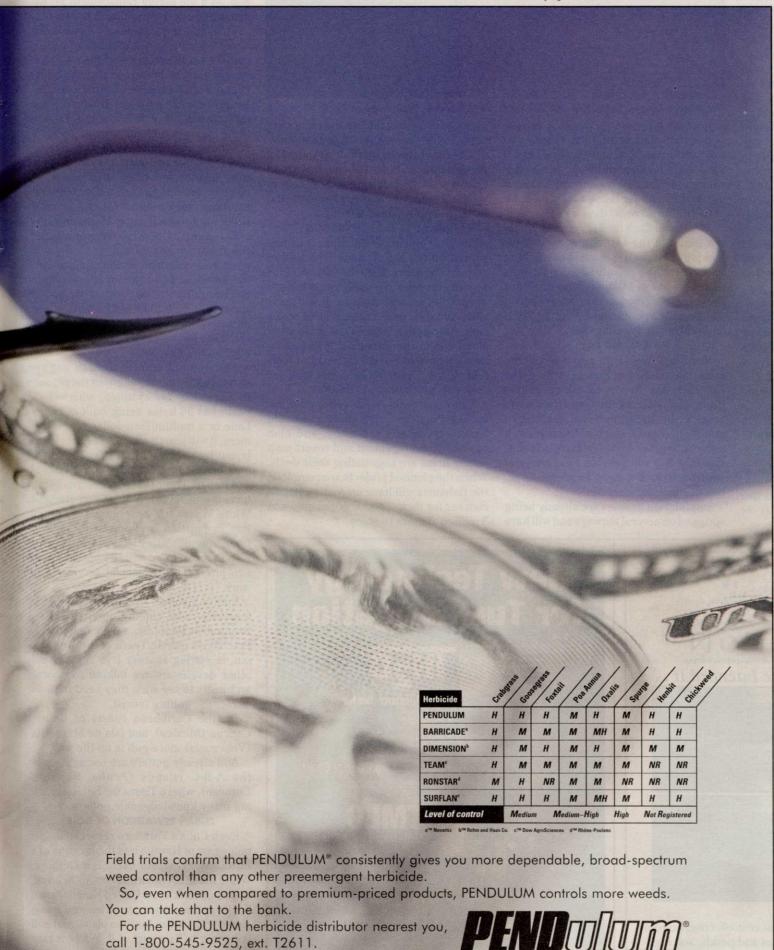
The Marine Golf Club was founded by a Royal Air Force (RAF) crew stationed on the island of Sylt, just off the northwest German coast, during the latter stages of World War II. The existing nine-hole course occupies 50 acres of Sylt which sits in the eastern section of the North Sea. The previous dune system was flattened to allow for runways and taxiways, but, for aesthetic, strategic and ecological reasons, Moodie hopes to reinstate the diverse and shifting landscape with sublime simplicity

"With the sandy nature of the soil, stabilization will be a major

Continued on page 67



The CGD-designed Marine Golf Club in Sylt, Germany.



Or visit our website at www.turffacts.com

Hiseman/Dornoch Continued from previous page

British Isles, with its supreme natural elegance and a beautiful green-site within yards of the Dornoch Firth."

Hiseman described the 10th as "one of the most stunning, natural golf holes in the world."

At 445 yards, slightly downhill from an elevated tee - the 10th will incorporate a wide fairway sandwiched between "a gaping natural sand hollow and the Dornoch Firth." When this natural fairway plain runs out at the green location, it is nestled gently between the sand wastes and the beach.

It is the simplicity of the hole which most appealed to Hiseman.

"There are no artificial bunkers or design tricks as the native hazards are abundant and perfectly placed to complement a thrilling golf hole," he said. The only tree on the course is perfectly placed to the left of the fairway to catch a hooked tee

While this hole just presented itself to Hiseman, some thought was necessary for the rest - but not much.

"I came up with the concept for the new layout in just half an hour on the back of an old scorecard," he explained. "I can only describe it as a 'eureka!' moment. It just fell perfectly into place and has changed very little ever since.'

Part of this 'synchronicity' involves rerouting the Black Burn which meanders across the course. In keeping with the traditional manner of Hiseman's approach, it is being diverted onto its original course. This is almost entirely cosmetic but with the intention of promoting its image to that of the Barrie Burn at Carnoustie, or the Swilken at St. Andrews.

The course will be unveiled in 2002, along with its new name. Hiseman suggests "The Witch," explaining: "This would commemorate the fact that the 18th hole is the site of the last execution of a witch in Scotland, in 1772. They first tried to drown her in a deep pond — still there - and when that failed they burned her at the stake. Her gravestone resides in the greenkeeper's front garden..."

Unmatched value. Unbeatable performance.

Bahamas goes big-time

Continued from page 61

PARADISE ISLAND

Atlantis Resort on Paradise Island has re-defined Bahamas' tourism since being taken over by South African hotel magnate Sol Kerzner. With the grand opening of the Royal Towers at Atlantis last season, the re-design of the Paradise Island Golf Course was inevitable. The Wilson layout opened as the "Arawak Country Club" in 1962, with owner Huntington Hartford at the helm. Gary Player was brought in as professional, along with Pancho Gonsalez and Pablo Segura on the tennis courts at the Ocean Club. Hog Island was still the name, although Paradise Beach was beginning to sound right to the "Thunderball" James Bond movie fans who flocked to see Sean Connery in the 1964 blockbuster filmed on the island's deserted beaches and lagoons.

Weiskopf will have a beautiful site to work on: the whole east end of Paradise Island, with nonstop ocean views and swaying palms. By closing the small airport and developing bayfront condominium residences, the course and surrounding beaches may become prized golf resorts.

THE ISLAND CLUB

Further south in the chain of islands known as the Exumas. Weiskopf is moving on the Island Club's 18-hole private resort project. A few miles from Georgetown, which sits right on the Tropic of Cancer, the Island Club is attracting a lot of attention for its unique get-away-from-it-all luxury concept. No crowds, no gambling, no hotels, no cruise

Trevor W. Jackson is an international golf development consultant, based in North Palm Beach, Fla. A founding member of the Bahamas Golf Assocation in 1964 he is always active in the Bahamas and the Caribbean.



Greg Noman-designed Grand Exuma's 15th hole is complete (inset), while crews work to finish the rest.

ships, just top-class service in a private residential club setting. Members can purchase estate lots, build custom homes for private residential living, or take advantage of the club's residential shared ownership plan for those who want to be at their club 30 or 60 days a year.

The Island Club boasts views to Stocking Island to the east and sunsets overlooking the famed western bone fishing flats. The club's private Citation jet runs members out of Miami for the one-hour flight to Georgetown. This fantasy island will be fully operational by spring 2001, and real estate is selling fast.

EMERALD BAY

Norman's design is also under construction on Great Exuma, where the Emerald Bay Resort is taking shape. Emerald Bay's crescent-shaped beach will provide the backdrop for a destination resort offering a 5-star hotel, marina, golf and real estate. As a destination resort, Emerald Bay will provide a full range of resort activities to keep hotel guests active during their vacation.

Salt-tolerant grasses are already being sprigged on several fairways and will have plenty of growth in time as the resort will not be open for another 12 to 18 months Projects of this magnitude take lots of money, time and care to bring to a grand opening. As the date approaches, golfers will be planning their own "shark attacks" on these family island fairways

BAHAMAS GOLF FEDERATION

Amateur golf in the Bahamas is administered by the B.G.F. under the leadership of volunteers. With the various clubs spread out over the half-dozen islands where golf is available, the B.G.F. provides a vital service to bring United States Golf Association and Royal & Ancient standards to the Bahamas. While some courses have fallen into disrepair or have folded, the future of Bahamas' golf for residents and visitors is bright.

The opportunities for golf course architects, builders, irrigation, grass and agronomy experts are many, and club operators, management and resort marketing firms are negotiating their deals. When the planned projects are complete, the Bahamas will have more than 12 golf courses for their 300,000 population and 3 million visitors to enjoy.

Caribbean leaders put golf high on priority list

By TREVOR W. JACKSON

IAMI — As tourism continues to grow in the Caribbean and Latin America, smaller island governments and British-dependent territories are looking to resort hotels, and golf, as a life-saving replacement for bananas and other agricultural products.

This was the consensus from seven heads of state and a number of others gathered at the third year Miami Conference on the Caribbean and Latin America, held here in December. More than 1,200 business and political leaders from throughout the Americas and Europe came to set the agenda for the region's economic development in the coming years. From cruise ports, to resort hotels, from health care to electric power, 14 country exhibitions, and 75 corporate exhibitors took over the Intercontinental Hotel for a week in early December.

The direction toward development of resort hotels and golf is almost inevitable as each small island nation and the Central American Latin nations improve their tourism infrastructure with new airports and cruise ports. The burgeoning cruise industry, in particular, needs onshore activities for its passengers, and golf is high on the list.

The trend of new destination golf resorts is underway throughout the region. In Barbados, for example, where Tom Fazio has 36 holes being built at Sandy Lane in a multimillion-dollar redevelopment, it will join the Royal Westmoreland layout by Robert T. Jones Jr. The Bahamas has Greg Norman, Tom Weiskopf and Robert Trent Jones Jr. designs being turned into reality. Robert von Hagge's White Witch golf course near Montego Bay in Jamaica is expected to open in June. Anguilla's tiny island is looking for a golf course to go with its upscale tourism product and financial services network.

Puerto Rico has 16 courses now and at least two more coming on stream. The Dominican Republic, which is home to Pete Dye's classic Teeth of the Dog layout, is getting another Dye course, and other developers are talking to course architects to see what they need to do to attract the golfing tourist.

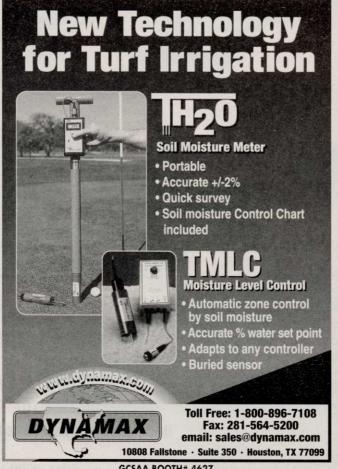
On the Caribbean coasts of Belize, Cancun (Mexico), and Isla de Margarita (Venezuela) more golf is on the way.

And already golfers are teeing it up in the A-B-C islands (Aruba, Bonaire, Curação), where Tierra del Sol is attracting many knowledgeable golfers.

CUBAN REVOLUTION OF GOLF

Even Cuba's Varadero resort island 60 miles east of Havana was the location of a European PGA Tour event last October. While the U.S. embargo remains in force. Canada, Mexico, the United Kingdom and Spain, among other countries, are going ahead with Cuban tourism plans, and golf is certain to be a part of it. While it may seem strange to some, it is not impossible that the Havana Open, an event that Arnold Palmer and Billy Casper once dominated, may return to the pro golf





Seychelles' Lemuria project shaping up for Wright

By ANDREW OVERBECK

PRASLIN ISLAND, the Seychelles — The Lemuria Course here in the Seychelles is shaping up nicely and is on track for its 2000 opening, according to designer Rodney Wright.

"Things have gone remarkably smoothly considering the fact that there were many unknown site conditions when construction started," said Wright.

"We have had a few surprises, both good and bad. For example, while excavating one of the main lakes, we encountered mud where we expected to find pure sand to use for filling the fairways. But we have also not encountered much bedrock or immovable rock which would have required blasting."

French golf construction company Benedetti, which has worked extensively in France and Italy, has been hard at work on the site with equipment that was shipped in from France.

Another Frenchman, European Tour player Marc Farry, has added to Wright's design along the way.

Golf Unlimited

Continued from page 61

Europe for a company that can take a project to the highest standard from start to finish," he said. "Having gathered the leading forces from the market, we can now ensure top-class results throughout Europe."

However, this is not an "exclusive" arrangement. In fact, Bohn pointed out that: "Our clients are investors and architects. We



don't only work with Nicklaus but have, in the past, been involved with such architects as Dave Thomas, Kurt Rossknecht, Robert von Hagge and Peter Harradine."

Bohn's operations director and partner is Mark van der Looy, owner and manager of golf course construction company Golf Project Management (GPM), as well as having served for five years as construction manager for Southern Golf GmbH. Both van der Looy and Bohn are keen to emphasize the "seamless coordination throughout the life of the project," and not just for those clients who take on the "full service" that Golf Unlimited offers. The widespread, network nature of the partnership means that customized teams can be assembled to slot in with existing professionals involved with the project.

Indeed, van der Looy and Bohn are continuing with their other commitments to GPM and Nicklaus Design, respectively, and that is where the "secret" of the "one-stop shop" lies, Bohn said, "adaptability."

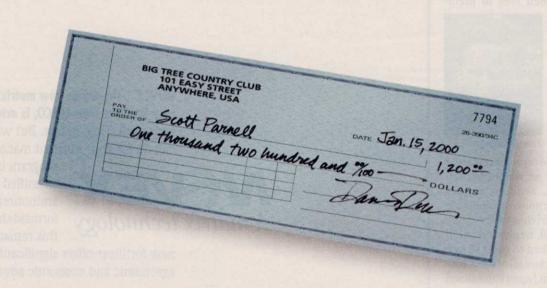
"Marc is one of the longest hitters on the European Tour," said Wright. "But he never loses perspective of the capabilities of the average player. He has offered very down-to-earth, common-sense ad-

One of the highlights of the par-70 course is the 15th hole, which is under construction. From the tee, there are unforgettable views of the Indian Ocean, with the green nestled 183 feet below in the Anse Georgette Valley.

Lemuria's front nine is scheduled to open in July and the full 18 is due to open in September.



Rodney Wright stands on the elevated tee of the par-3 15th hole at Lemuria Resort on Praslin Island in the Seychelles.



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Japanese golf economy in transition

olf is undergoing dramatic changes in Japan, for the better.

The changes have developed over the past decade as the "post bubble" economy is finding its footing. During the 1980s, golf clubs in Japan could sell memberships, pay for construction costs, and cover operating costs with high green fees to mem-

bers and guests. The only market that was developed over the past 30 years was the executive male, age 30 and



Tom Johnson

up, who played on weekends and occassionally on weekdays. Ladies, juniors, seniors, factory workers, afternoon or nine-hole players and driving-range devotees, were all neglected. Golf courses only had to cater to one market sector and all of the 2,000plus courses in Japan capitalized on that market.

Then the stock market dove, followed by the banks, and as a result the golf industry is searching for ways to rebuild its clientele with new players. Interest in golf is still very high. It remains a game that a wide variety of people can play and enjoy. However, the 13 million golfers need more access to the courses in Japan at a lower cost, and to do that the courses are undertaking a painful transition.

Daily green fees have been lowered at most all courses and each course has to decide how many annual rounds at a certain level of revenue are required to stay healthy. Instead of relying solely on the weekend corporate executive, courses need to promote their other times to local players.

Savvy golf course operators will begin to promote play at offpeak tee times. Many courses will start league play, where a local company may have employees playing nine or 18 holes on afternoons.

Tournaments can also help draw new players to a course and also draw attention to the facility through publicity in the local papers. Inexpensive teach-

Tom Johnson has designed courses in Niigata-ken, Gumma-ken and Okayama-ken, Japan. His office is located in San Francisco and he can be contacted by fax at 1-925-484-9335 or by e-mail at tsjgolf@pacbell.net Tokyo contact numbers are: 03-3719-2011 and fax 03-3719-1714.

ing clinics can bring new players to a course, then over time turn that new golfer into a returning customer.

Other new directions golf operations will focus on in Japan are revenues from carts and merchandise. Golf carts are rapidly replacing caddies as the bag carrier around 18 holes. The reduction in employees is a plus to the facility, and direct revenue

from cart rental is vital to the course. Merchandise, or pro shop sales, is another neglected item in Japanese golf operations. Many courses have a small area dedicated to sales for hats, balls. gloves and a few other items. The good operator will use the space available in the clubhouse and turn the pro shop into a new profit center. The on-course pro

INTERNATIONAL REPORT

lower cost per square meter than retail shops and a long line of customers looking for a bargain.

Cost reductions will also be a major factor in the rebirth of the golf economy. Staff reductions at many of the clubs will happen out of necessity. Clubhouse staffs of 25 to 40 people will be lowered by 30 percent or more. Service will be required, but from a more efficient staff. All of these difficult decisions will be borne out of the need to compete with other courses taking the same strong measures to make their facilities profitable. The result is that golf will become accessible to more people in the country at a more affordable price. The decade of hard economic times will cause changes that lead to new horizons for golf and golfers in Japan.

SCOTTS®

shop has another advantage, a



By ANDREW OVERBECK

ANGKOK, Thailand -Quality Golf Consultants (QGC) has weathered the Asian financial crisis of the past two years, riding a wave of renovation work that is on the rise as the country and the region begin to awaken from their economic slumber.

The company, headed by Tony Taylor, is performing extensive

QGC continues to make inroads into Thailand

renovation work at Alpine Golf Club and has added to its growing list of clients in 1999, snagging a contract at Rajpruek Club in Bangkok.

Taylor's work in Thailand began at Thai Country Club, where he has moved from superintendent to consultant.

"Getting through the storm

has a lot to do with our business management practices," said Taylor. "But having the Thai Country Club as a model maintenance operation made the whole high end of the golf market sit up and take notice."

QGC spent much of 1999 working on the Ron Garl-designed Alpine Golf Club. While the original owner spared no expense in constructing the facility and the course, the project was never financially feasible from opening day, Taylor said.

The course deteriorated considerably in the past five years," said Taylor, who helped prepare it for the 1998 Asian Games.

QGC is now halfway through a

two-stage US\$2 million renovation project. They are installing 15 km of herringbone drainage



and replacing the contaminated Tifdwarf greens with superdwarf

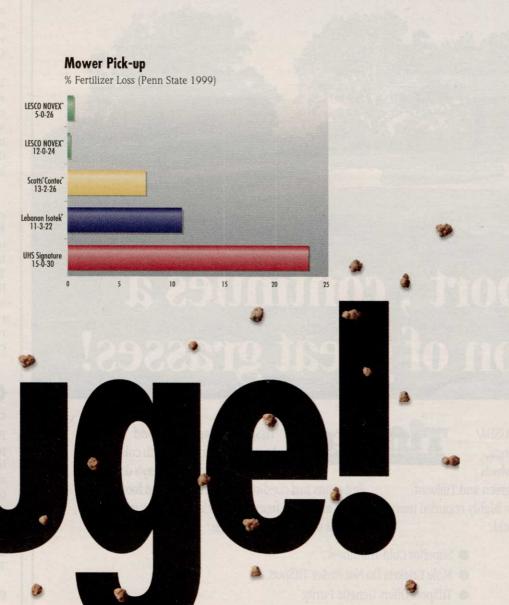
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should. And thanks to its homogeneity and particle size, speckling becomes a thing of the past.

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Creative Golf Continued from page 63

difficulty," he said. "We have had some restrictions on earth movement imposed upon us and it is more likely that we will import soil rather than cut and fill. To establish the dunes, we are planning to drive low, wooden piles into the ground and just allow the sand to blow up against them. As the 'dune' grows we will raise

the piles accordingly." Ironically the only dune-like features that still exist are the concrete bunkers, built as the dunes were being bulldozed.

Marine is being redesigned with new land at the same time as Turnberry's Arran course. Both were flattened for airfields during the war. This similarity has not been lost on Moodie, although it is the Ailsa course at Turnberry, redesigned after the war by MacKenzie Ross, that is Moodie's role model in recreating the links character on Sylt.

The architect has a high regard for the site, "The land has great potential and, from certain angles, bears a similarity to the landscape at Muirfield." He enthused, "Much will depend on the attitude of the local authorities and environmental groups, but we are confident that the environmental benefits can be shown to outweigh the objections."

Tourists do visit Sylt, but the project has been sanctioned by the Marine members primarily for their own benefit. Before the dream can be realized, however, Moodie has the site under close scrutiny.

"There are old asphalt roads to remove, underground tunnels to avoid and the possibility of coming across unexploded bombs," he said.

As yet, no contractors have been hired to build the course.

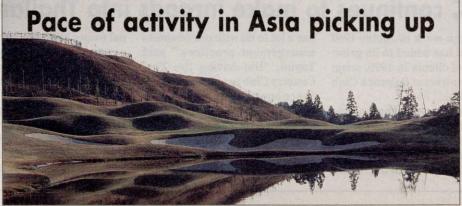
Creative Golf Design has made a positive step towards developing its Latin American interests. David Ross hails from Scotland and is an accomplished golfer who is fluent in Spanish. His appointment to CGD in a Santiago office is designed to provide a first point of contact for potential developers and will grow in stature when Ross completes his current studies with the British Institute of Golf Course Architects in spring 2001.



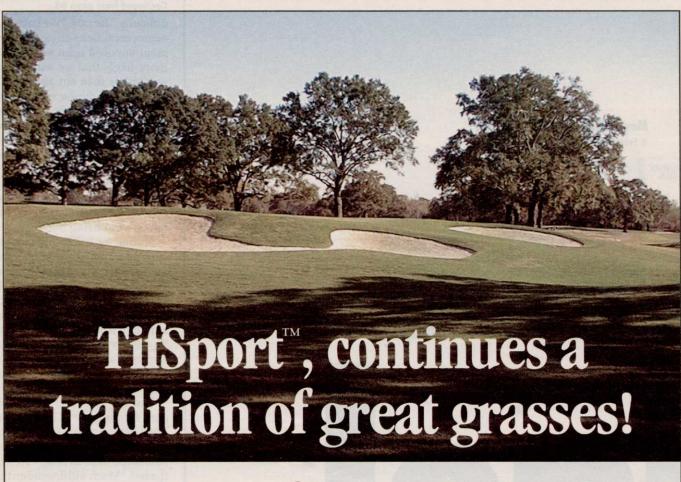
ASIAN UPDATE

• Tom Johnson Golf Design (TJGD) is busy in Japan, with a new course opening later this year and three renovation projects in the works. TJGD is designing 18 holes in Nagaoka at Green Hill Nagaoka Golf Club and the course is set to open in July.

TJGD's renovation work includes: Washu Golf Club in Kurashiki, adding four new greens and ladies' and seniors' tees, scheduled to be finished in 2001; AMI Golf Club in Ibaraki, an 18-hole renovation of greens to start in the fall; and



The 8th hole at Tom Johnson Golf Design's Green Hill Nagoaka Golf Club in Nagoaka, Japan.



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Akasaka Country Club, Okayama, an 18hole renovation to start in the spring.

KOREA

• MT. KUMGANG — The Hyundai Group is looking for foreign companies to take part in its North Korean resort project at Mt. Kumgang. Hyundai received a 30-year monopoly on the use of the property at the end of October. The group is seeking U.S. companies since the Clinton Administration lifted its business embargo on North Korea in September. Hyundai plans to build a hotel, condominium, ski resort, golf course and airport in the Mt. Kumgang region.

MALAYSIA

· E&G Parslow has announced that two of its Malaysian projects will be back on track in 2000. The firm's course in Karambunai, Sabah for Karambunai Resorts has been reactivated. The course is situated in an area of tropical real estate within the city of Sabah, Kota Kinabalu. Construction is set to begin at mid-year.

The second course is in coastal Terengganu on the east coast of Malaysia. Site clearing has begun under the control of Jason Winter, who has been working to ensure the numerous sites of native grasses were left untouched and the general course routing was adjusted to maximum advantage.

PHILIPPINES

• CEBU - In a move to settle the conflict over the redevelopment of the Kang-Irog Golf Course here the developer, Gotesco Land, Inc. has offered to buy the property from the Philippines Tourism Authority (PTA) for P250 million (US\$6.4 million). Development works were put on hold after the Cebu regional trial court issued a temporary restraining order barring the firm from continuing to work on the site.

Quality Golf

Continued from previous page

Bermudagrass. Taylor's crew has also placed 4 km of plastic curbing around the lake banks to prevent the build-up of aquatic plant growth and the invasion of torpedo grass.

Alpine has upgraded its maintenance facility and purchased a new fleet of equipment. This year's work will include working on the back nine and installing a new Toro LTC plus irrigation system.

QGC also signed on with J. Michael Poellet-designed Rajpruek Club and appointed Robert Barnes as the superintendent. So far, Barnes has upgraded the standard of the course without spending any more money.

"They have over 100 people on staff, but simply had no one who knew how to maintain the golf course," said Taylor. "We have helped to turn that around."

According to Taylor, renovation and consultant work will continue to be on the rise since many clubs don't have educated manpower. "We have the technology and we know what works," said Taylor. "There are still no schools that train for golf operations.

The renovation work will continue as the market settles out. Golf courses will simply want to improve conditions and reap the rewards from the massive golfing public."

GCSAA BOOTH # 1229



BRIEFS



NEVADA HONORS REVERE AT ANTHEM

HENDERSON, Nev. — Gov. Kenny Guinn and the Commission on Tourism in Nevada recently granted The Revere Club at Anthem in Henderson



the Tourism Development Award. The Tourism and Development Award is presented annually to businesses that strengthen the

state's tourism by adding appeal to the out-of-town visitor while helping create additional jobs for the area. The Revere Golf Club at Anthem was designed by golfer Billy Casper and architect Greg Nash and is the first of three new high-end, daily-fee courses planned for Del Webb's Anthem Community, located in the southeast corner of the Las Vegas Valley.

WORLD WOODS, IGM STRIKE DEAL

LAKELAND, Fla.—International Golf Maintenance, Inc. (IGM) recently

reached a multiyear, multi-million-dollar agreement with World Woods Corporation to provide maintenance services at World



Woods Golf Club, Southern Woods Golf Course and Sugarmill Woods Golf Course. It is the largest volume maintenance agreement ever executed by IGM.

MARICLE NAMED CFO AT DPC

ORLANDO, Fla.— Michael Maricle has been named chief financial officer of Diamond Players Club (DPC), a golf brand and management company. Maricle will direct all corporate financial control and planning systems. He is also a member of the DPC Board of Directors. Maricle will continue to head his own certified public accountant firm in Clearwater, which he established after serving in financial management positions with several prominent corporations, including, Sears, Roebuck.

TWO SC COURSES HIT MARKET

NEW YORK — Kennedy-Wilson Inc., a real-estate investment, marketing and property management firm, has been hired to sell the Charleston Golf Portfolio. The Pine Forest Country Club and the Crowfield Golf and Country Club are both located in Charleston, S.C. and feature 18-hole layouts.

eteetime.com names Raney new president

Internet tee time provider tops 160 courses with Walters Golf Management additions

By PETER BLAIS

LA QUINTA, Calif. — William Raney has been named president of eteetime.com, a growing Internet-based tee-time service provider that recently topped the 160-course client mark with the addition of five Walters Golf Management facilities located in Las Vegas.

Raney will direct eteetime.com's worldwide sales, marketing, administration, technology, financial management and customer-service initiatives.

Raney has considerable experience in the Internet industry and had been a consultant to eteetime.com since February 1999. Previously, Raney held an associate position with Rader Reinfrank & Co., a Los Angeles-based Internet and telecommunications private equity fund. While at Rader Reinfrank & Co., Raney focused primarily on the firm's Internet-related transactions. He also worked at Whittier Trust Co., an asset management and private equity company based in Los Angeles.

Through www.eteetime.com, golfers secure real-time, tee-time reservations over the Internet 24 hours a day. Courses also use eteetime.com's proprietary eteesheet software as a tee sheet management tool, as well as to sell a number of otherwise unfilled golf rounds with www.eteetime.com as their booking agent.

It is one of only a handful of golf teetime reservation software programs written in Java script, one of the codes easiest



read by computers.

Among the 160 courses in the eteetime network are facilities in the United States, Mexico, Canada, Argentina and Puerto Rico. They include:

- Walters' Stallion Mountain Country Club, Desert Pines Golf Club and Royal Links Golf Club in Las Vegas.
- More than 50 courses in California, Nevada and Arizona ranging from Johnny Miller-designed Badlands Golf Club (Las Vegas) and the Arnold Palmer-designed Tahquitz Creek Resort (Palm Springs, Calif.) to the value-oriented Kokopelli Golf Course (Gilbert, Ariz.) and Eastlake Country Club (Chula Vista, Calif.).
- Garland Resort's four, 18-hole courses in Northern Michigan.

According to Executive Vice President Michael Stone, eteetime.com started three years ago with the idea that selling tee times on the Internet was fine, but if courses and golfers didn't end up on an electronic tee sheet that was at least as good as paper and pencil, then the sys-

tem wouldn't work. After considerable research, the company launched its site in January 1999.

Stone claims his firm's site is the easiest electronic tee sheet for golfers to use. "We want to make this as easy as possible for the course and the golfer," he said.

A course must list at least two tee times a day with www.eteetime.com. It may make available its entire tee sheet or any number in between. In addition to public facilities, some private clubs make a limited number of rounds available. Northern California's private Granite Bay, for instance, sells some Monday rounds to the public.

Stone said eteetime.com will take reservations as far as 90 days in advance. Typical golfers reserve tee times three weeks ahead of time. The company prepays the course a week before the golfer shows up to play.

The firm makes its money by charging the golfer an additional fee per round (usually roughly 10 percent over the going rate) or the course may pay eteetime.com a commission ranging from 15 to 20 percent of the pre-sold green fee rate.

Stone said the company may go public at some point, although raising capital has not been a problem because of the firm's state-of-the-art technology and quality management. In addition to Raney, Chief Executive Officer John Hoffmaster is a former top executive with Info USA of Omaha and several other successful Internet ventures.

The company plans to have 8,000 courses signed on within five years, Stone

Continued on page 73

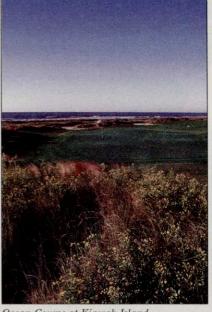
Ocean Course earns NGCOA top course honor

HARLESTON, S.C.—The National Golf Course Owners Association presented its 2000 Course of the Year Award to the Ocean Course at Kiawah Island at an awards dinner held during the NGCOA 2000 Annual Conference in Fort Lauderdale, Fla.

To be eligible for the Golf Course of the Year Award, a course must demonstrate four criteria: exceptional quality of the course; exceptional quality of the management; outstanding contribution to the community; and significant contribution to promotion of the game.

Pete Dye designed the Ocean Course at Kiawah Island, located 45 minutes from Charleston, along a secluded stretch of the Atlantic Ocean. In 1991, the United States recaptured the Ryder Cup in the match remembered as the "War of the Shore." In 1996, The Ocean Course hosted the 43rd World Cup of Golf.

"The Ocean Course meets all of the criteria for consideration," noted Mike Hughes, NGCOA executive director. "Obviously, it's a great course. But as



Ocean Course at Kiawah Island.

a leader in the industry, The Ocean Course has also helped give back to the community by hosting numerous charitable events and helping grow the game. It is very deserving of the distinction."

Superintendent George Frye — in concert with Dye —is always looking for ways to make the course more playable, the experience more enjoyable. Their efforts have led to the course's designation as a Certified Audubon Cooperative Sanctuary.

ClubLink enters London, Ontario market with Greenhills purchase

KING CITY, Ontario, Canada — ClubLink Corporation has agreed to purchase all the assets of Greenhills Golf & Country Club in London, Ontario, from the Simpson family and related corporations. The transaction is dependent on certain third-party conditions.

Greenhills features an 18-hole course that winds through mature forest and valley lands on London's southwestern



ACQUISITIONS

perimeter. The club also includes a clubhouse with banquet seating for 200, a nine-hole academy course, the Greenhills Golf Dome for indoor practice, a pool, eight indoor tennis courts and five outdoor clay courts. The tennis facilities will be leased back to the Simpson family.

"We are pleased to make our initial acquisition in London, a strong financial

Continued on page 74



Walker named NGCOA's Rossi winner

CHARLESTON, S.C. — The National Golf Course Owners Association presented the 2000 Don Rossi Award to Curt Walker at an awards dinner January 27 during the NGCOA Annual Conference in Fort Lauderdale, Fla.



Curt Walke

The Don R o s s i A w a r d, named in honor of NGCOA's founding president, recognizes individuals

who have made significant and long-lasting contributions to the association. Recipients are nominated and voted on by the board of directors. Walker was the association's first executive director, taking the helm in 1984 when it was being run by a management company. He negotiated a separation from the company, moved the association's headquarters to Minnesota and changed its name from the National Association of Public Golf Courses to the Golf Course Association - all while running Fort Snelling Golf Course, a nine-hole public layout.

"Curt took over the association at a time when it was heavily in debt and basically 'dead,'" said Peter Trenchard, NGCOA board member and founding member of the association. "He agreed to take the office to his home and ran it free of charge. He was single-handedly responsible for keeping the association alive and making it financially solvent."

Although Walker's first charge was restoring the association's financial integrity, education remained a key initiative. Under his direction, the GCA developed a number of marketing manuals, as well as the "Uniform System of Accounting Practices for Public Courses." He also helped grow the association from 250 members to more than 450.

Walker stepped down as executive director in 1989 to devote more time to his course. He remained out of association management until 1997 when he helped found the Minnesota Golf Course Owners Association, a chapter of the NGCOA. A year later, he became its executive director.

After a career of aggressive initiatives, however, Walker is humbled by the Don Rossi Award. "Given the fact that Don Rossi was the first authority figure I met in the golf industry, receiving an award named after him is daunting."

Also at the NGCOA show, the Golf Course Superintendents Association of America received the Award of Merit The Award of Merit is presented to an individual or group who has made significant and long-term contributions to the game. Past recipients include Chi Chi Rodriguez, The PGA Tour, Peggy Kirk Bell and Robert Trent Jones Sr.

Since its founding in 1926, the GCSAA has been committed to

the ongoing education of its members. To fulfill its mission, the association provides more than 200 days of educational programming at the national and regional level.

The NGCOA also announced it is expanding its marketing and communication activities. The cornerstone of the new program is *Golf Business* magazine, the

official publication of the NGCOA, which began publishing in-house in December. Waterfront Publishing Inc. had published the magazine since its inception four years ago.

The current editorial staff from Waterfront Publishing that has been responsible for *Golf Business* magazine's editorial content and design will accept similar positions with the NGCOA.

Editor Jack Bacot will continue in the same role and be NGCOA director of marketing and communications. Wendy Saari is director of public relations and associate editor for *Golf Business*. Ronnie Musselwhite, managing editor and Robbin Stratford, art director, will remain in the same positions and take on expanded roles in the NGCOA communications department.





ClubCorp to develop Texas A&M layout

DALLAS—ClubCorp has signed a letter of agreement to develop Traditions Golf and Country Club in Bryan, Texas.

The country club will cater to the alumni membership of Texas A&M University as well as serve as the home fairways to Texas A&M University's men and women golf teams. "This is a wonderful example of how the private sector is pairing with public institutions, like Texas A&M, for mutual benefit," said Robert Dedman Jr., chief executive officer of ClubCorp. "By developing and operating this country club, we are creating a revenue source for the school that hadn't existed previously."

ClubCorp has developed similar "university club" concepts such as the Boston College Club for alumni of Boston College; the Carolina Club for the University of North Carolina at Chapel Hill; University Center Club for Florida State University; the University of Texas Club for the University of Texas at

Austin; the George Washington Club for George Washington University; and ClubFlorida for the University of Florida.

After a marketing phase, construction is expected to commence on the university club property this summer. A limited number of memberships will be available, but they are not offered exclusively to Texas A&M alums.



"Our men and women golf teams will have a first-class, world championship, tournament-style golf course for their practice and playing," said Wally Groff, Texas A&M athletic director. "This will benefit the golfing program for years to come because of what it will do for our recruiting efforts."

The signed agreement includes the participation of Golden Bear International, the city of Bryan, C.F. Jordan, and Campus Hotels of Chicago, Ill.

Golden Bear International is designing the 18-hole course.

The city of Bryan has made the land available for lease and expects the development to contribute significantly to the area's tax base.

C.F. Jordan is a 30-year-old professional construction company that has completed more than \$4 billion worth of projects for both public and private clients across the country. With headquarters in El Paso, the company also has offices in Dallas, San Antonio and College Station.

Campus Hotels has agreed to oversee the development of a hotel on the property adjacent to Traditions Golf and Country Club. In addition to the course, clubhouse and hotel, a residential component is a part of the overall plan.

Palmer to take over Bay State college course

SOUTH HADLEY, Mass. — Arnold Palmer Golf Management has entered a long-term lease to renovate and operate Donald Ross-designed The Orchards Golf Course here. Laid out in 1922 and operated ever since as a semi-private club, The Orchards is wholly owned by Mount Holyoke College.

Palmer's proposed \$1.5 million in improvements will focus first on completing the 1997 refurbishment plan put together by Mount Holyoke and The Orchards membership. Architect Ron Prichard is scheduled to complete his refurbishment work in 2000. The shingle-and-fieldstone clubhouse will also receive a substantial face lift.

The management company has also established a \$500,000 endowment to be administered as the college sees fit, geared toward support of the Mount Holyoke golf team.

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Meadowbrook

Continued from page 1

Florida and Wisconsin. The 30 courses are a mixture of private, semi-private and public facilities.

"They are in a segment of the market we are very comfortable with, the mid-market, daily-fee and private segment," said Meadowbrook Chairman Arnold Rosenstein.

Meadowbrook has retained

the staff at the former KSL Fairways properties. "We don't intend to make major changes at the golf course level except for some capital improvement programs at some courses," the chairman said.

Meadowbrook and Apollo purchased the 30 courses from KSL Fairways through a jointly owned company called Fairways Acquisition Corp. last Sept. 30. In Janustra

ary, Meadowbrook issued 18.4 million shares of its common stock, valued at \$2.75 per share, to Apollo Real Estate Investment Fund IV in connection with the transaction. Apollo basically converted its interest in the former KSL Fairways courses for shares in Meadowbrook, Rosenstein said.

In addition, all the holders of all the Meadowbrook Golf Group Inc. Series A, Series B and Series C convertible preferred stock converted their preferred shares into Meadowbrook Golf Group Inc. common stock simultaneously with the acquisition. Meadowbrook Golf Group has approximately 34 million shares of common stock outstanding, taking into account the acquisition of the balance of Fairways Golf and the conversion of the Series A, Series B and Series C preferred



shares into common stock.

The company has also authorized a share repurchase program for up to \$3 million of its common stock in the open market and/or privately negotiated transactions from time to time, depending on the market conditions.

"We continue to be acquisitive," Rosenstein said. "The conversion of all the preferred stock into common stock will allow us to consider acquisitions that involve our stock. It cleaned up the balance sheet for additional acquisitions in the future."

The KSL Fairways purchase represents Meadowbrook's largsingle acquisition, Rosenstein said. Meadowbrook now owns, leases and manages 60 golf courses, including Fairway Golf's properties. Additionally, through its International Golf Maintenance subsidiary, the company provides outsourced golf course maintenance services for another 39 courses nationwide. Meadowbrook is developing another five courses and, through its Golf Ventures Inc. subsidiary, supplies and distributes equipment and products to more than 1,000 courses

Meadowbrook and IGM together are believed to be the third-largest operator of golf courses nationwide behind American Golf Corp. and ClubCorp.

The courses included in the KSL Fairways purchase are Birkdale Golf & Country Club (G&CC) in Chesterfield, Va.; Broad Bay Country Club (CC) in Virginia Beach, Va..

The Club at Hidden Creek in Navarre, Fla.; Countryside Golf Club (GC) in Roanoke, Va.; The Gauntlet in Hartwood, Va.; Indigo Lakes GC in Daytona Beach, Fla.

Kiln Creek G&CC in Newport News, Va.; Lake Windsor GC in Madison, Wis.; Marlboro CC in Upper Marlboro, Md.; Memphis Oaks GC in Memphis, Tenn.; Mequon (Wis.) CC; Monroe Valley GC in Jonestown, Pa.; Montclair (Va.) Golf, Tennis & Swim Club; Patuxent Greens CC in Laurel, Md.

Pebble Creek CC in Tampa, Fla.; Prince William GC in Nokesville, Va.; Scenic Hills CC in Pensacola, Fla.; Shalimar (Fla.) Pointe G&CC; Silver Spring CC in Menominee Falls, Wis.; Tantallon CC in Fort Washington, Fla.

Tiger Point G&CC in Gulf Breeze, Fla.; Walden Lake G&CC in Plant City, Fla.; Wellington (Fla.) G&CC; and Willow Run GC in Pewaukee, Wis.



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Fairway Systems launches Internet site

ENGLEWOOD, Calif.— Fairway Systems, Inc. recently launched an Internet-based reservation system with the support of a \$15-million capital infusion.

The product, to be branded under the E-Golf moniker, comprises three modules: "I,' the Internet Edition, offering golf courses the opportunity to publish tee times on the Web free of charge; "S," the Standard Edition, an electronic tee sheet and POS solution for a single course, including Internet access; and "P," the Premium Edition, a comprehensive golf software solution designed for multiple courses operated by a single owner, regional destination or management company.

The Internet strategy was developed by Organic, a San Francisco-based Web integration firm. The theme of the site will be about "getting things done on the Web relating to golf."

The site will offer direct, realtime access to a vast aggregation of tee time inventory initially targeting 20 metropolitan areas within seven countries

TSC RESHUFFLES MANAGEMENT DECK

MYRTLE BEACH, S.C. - TSC Golf Inc., a Myrtle Beachbased management company, has made some upper management changes. Steven Taylor has been named chief financial officer and Scott Baugh as the assistant chief financial officer. Darrell Childers has been named chief operations officer with Janet Friddle Danehart as assistant chief operations officer. Jennifer Paumier has been promoted to director of accounting. TSC Golf is a design/build and management company that is managing several Grand Strand area courses.

GolfSwitch signs on with GolfServ

SCOTTSDALE, Ariz. GolfSwitch, a maker of tee time connectivity software, has signed an agreement with GolfServe Online Inc., a provider of personalized golf content and services to 180 Internet sites, giving course owners access to potential customers.

The agreement means golfers can use GolfSwitch when they book tee times online through all GolfServ syndication partners, which include Internet sites like CNNSI.com, chipshot.com and USATODAY.com.

GolfServ will use GolfSwitch's software to add tee time reservations to its existing services that allow golfers to track their handicap and playing performance, find detailed information on 20,000 golf courses worldwide, and obtain private lessons from golf professionals.

More than 250 courses now have the ability to broadcast their tee times with GolfSwitch marketing partners such as America West Airlines Vacations, Delta Airlines Dream Vacations, Pam's Golf, Resort Suites of Scottsdale, and PGA.com. GolfSwitch software enables marketing partners to access and book tee times at multiple golf courses in multiple cities in real time.

eteetime.com

Continued from page 69

said. He expects to strike agreements with some major, multicourse operators sometime in the near future.

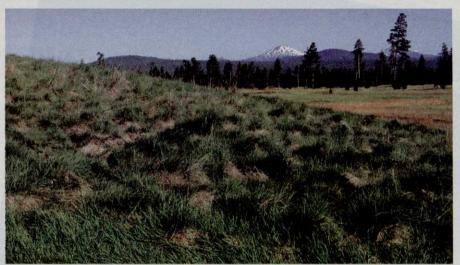
"I think any operator with more than 50 courses will have signed up with an Internet partner before this summer," Stone said. "They can't afford to get too far behind.

"The convenience factor is unbelievable," he added. "No-body likes calling the pro shop only at designated hours and waiting on hold to make a tee time. This way you can book your tee time on the Internet early in the morning or late at night and be done with it.

"The days of having to call or make sure your buddy is at the pro shop at a designated time are disappearing."

GOLF COURSE NEWS

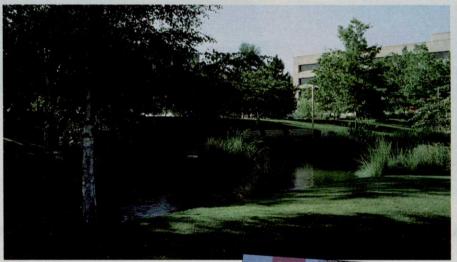
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GCSAA BOOTH #1120



Western Golf, U.S. Home team up again

SCOTTSDALE, Ariz.— Western Golf Properties, Inc. has been selected to manage another golf club for U.S. Home Corporation.

Golf course architect Arthur Hills has designed Heritage Ranch, located in Dallas. The addition of this golf course totals five properties that Western Golf Properties will manage for U.S. Home Corp. The other courses are Heritage Highlands in Marana, Ariz., Heritage

Palms in Indio, Calif., Heritage Eagle Bend in Aurora, Colo., and Heritage Hunt in Gainesville, Va. All the courses are 18-hole, upscale, semiprivate layouts designed by Arthur Hills.

U.S. Home Corporation is a leading home builder of single-family homes. Heritage Ranch is a gated, active adult community. Construction of the 6,964-yard course is underway, with a projected opening in November.

Kemper to manage Pa.'s Whitetail

MERCERSBURG, Pa. — KemperSports Management signed a long-term agreement with the Hummelstown General Authority to manage The Golf Course at Whitetail, an 18-hole layout under construction here. KemperSports will act as development and management consultant during the construction phase and assume management

upon opening in spring of 2001.

The Golf Course at Whitetail, a 6,915-yard layout 17 miles north of Hagerstown, Md., is nearly complete. While the grow-in process is underway, KemperSports will focus on additional capital improvements to the public course as well as plans for the clubhouse and planned 90-room lodge and conference center.

ClubLink Continued from page 69

and manufacturing center for economically vibrant Southwestern Ontario," said Bruce Simmonds, president and chief executive officer of ClubLink. "By way of its proximity to the western edge of the Greater Toronto Area, London represents a natural extension of ClubLink's clustering concept."

London is less than one hour from ClubLink's Heron Point Golf Links, on the western periphery of the Greater Toronto Area where the majority of ClubLink's other golf course are located.

As part of the agreement, Sonar Corporation will provide marketing and consulting services to ClubLink. The principals of Sonar are Don Simpson and his sons David and Craig. David was president of Greenhills and Craig was a standout with the NHL's Edmonton Oilers.

Sonar will continue to own and operate 18-hole daily-fee Bear Creek Golf & Country Club in nearby Strathroy. The transaction provides access for ClubLink Members to Bear Creek, The Greenhills Golf Dome, tennis and swimming facilities.

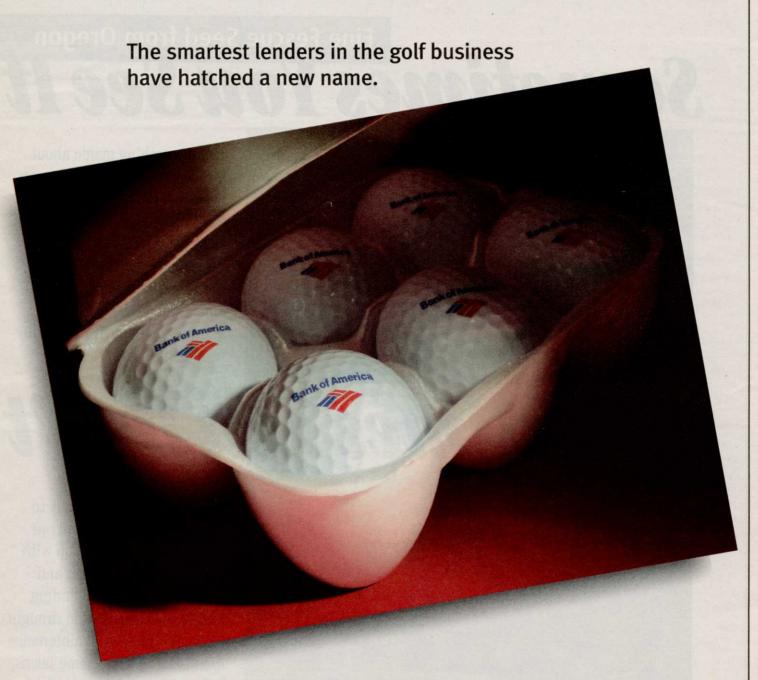
ClubLink has completed three debt financings totaling \$115 million. The transactions provide it with short- and long-term debt lines and cash reserves.

Textron Financial Canada has provided a \$57-million, five-year floating rate revolving line of credit. Security for the line is a portfolio of ClubLink's Torontoarea golf properties.

The company said it has drawn down \$50 million of this facility and the \$25 million balance is available for subsequent draw.

ClubLink said it has also received from Pacific Life Insurance Co. of California a \$25-million, fixed-rate first mortgage on its Glen Abbey golf course property.

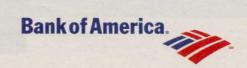
The company said Toronto Dominion Bank has become its lead corporate banker and has provided a \$15-million operating line of credit. The company said these transactions have reduced its bank debt to zero, increased its cash position to about \$16 million and boosted its reserves for additional funding.



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Texas/Mountain States, Steve Sparks 775-832-4447 • Southeast/Midwest, Debbie Suppa 770-643-7788.



BRIEFS



ROSS TAKES ZENECA POST

WILMINGTON, Del.—Dave Ross has been named national accounts manager for Zeneca Professional Prod-

ucts. Ross will be responsible for coordinating all Zeneca activities with golf course management companies and national lawn-care companies throughout North America.



Dave Ros.

Ross most recently served as technical business manager for the professional turf products group.

ROHM AND HAAS NAMES WIRTH

PHILADELPHIA — The Rohm and Haas Co. has named Gray C. Wirth, strategic market manager for turf and ornamental products. In this capacity, Wirth is responsible for pricing, promotion and positioning strategies for turf and ornamental products.

TORO PROMOTES FINKENBINER

RIVERSIDE, Calif. — The Irrigation Division of The Toro Co. has pro-

moted Bob Finkenbiner marketing manager for golf. Finkenbiner will be working with sales and category management to focus products and programs. Within Toro Irriga-



Bob Finkenbiner

tion, Finkenbiner has been the category manager and software and central controller.

PURSELL APPOINTS LACY

SYLACAUGA, Ala. — Tim Lacy has been named director of customer and facility development for Pursell Technologies, Inc. Lacy's new assignment includes development oversight of all current Pursell facilities and the construction of a new corporate office, lodge and golf course. He will also coordinate customer visits and train golf course interns.

MUTTER JOINS EI

CALABASAS, Calif. — David Mutter has joined Environmental Industries, Inc. (EI), as vice president of sales and marketing. He will be responsible for the sales and marketing programs for EI and its divisional companies: Environmental Care, Environmental Golf, Valley Crest, Valley Crest Tree Company and U.S. Lawns.

AgrEvo, Rhone-Poulenc finalize merger, launch Aventis Environmental Science

Chipco Professional Products division to serve the golf industry

By ANDREW OVERBECK

MONTVALE, N.J. — As the pace of mergers within the agrochemical industry continues to quicken, new corporate identities are starting to emerge. After a year of working out the details, the parent companies of AgrEvo Environmental Health and Rhone-Poulenc have created Aventis Environmental Science (AES).

The new company is, for the time being, believed to be the largest global manufacturer of turf and ornamental industry pest products. AES is a separate legal entity of Aventis S.A., the life sciences merger of Hoescht and Rhone-Poulenc.

Within the golf industry, AES will be known as Chipco Professional Products (CPP) and will hold a 15-percent share of the turf and ornamental market.

According to Joshua Weeks, vice president of CPP, professional product lines from both companies will be carried forward.

"There is a remarkable lack of overlap," said Weeks. "There are a couple of areas in fungicides and one in insecticides, but for the most part it is a complete fit."

The new company will concentrate much of its efforts on research and development.

"The reason these mergers happen is twofold," said Weeks. "The research and development requirements and the regulatory costs that it takes to be successful

in this business are substantial. By joining forces you can concentrate more dollars on research and development and there are certain synergies in terms of expertise on the regulatory side."

As a result, the new product pipeline is primed.

be rolling out a new turf fungicide, triticonazole, as well as an ornamental insecticide, acetamiprid. Expanded turf uses for Chipco Choice are also in the works. In the long term, CPP is working on both a transgenic turfgrass that will impart herbicide resistance and a postemergent herbicide.

To keep the new products coming, CPP

Continued on page 78

Deere, Toro tangle over aerator patent

By ANDREW OVERBECK

MOLINE, Ill. — Deere and Co. has filed a lawsuit in U.S. District Court in Peoria against Minneapolis-based Toro Co. alleging that the company's line of ProCore aerators directly infringe upon Deere's patented aeration technology. The suit also names Bettendorf, Iowa-based Toro distributor, Tri State Turf and Irrigation.

"The lawsuit has been in the works for awhile," said Deere spokesman Mike Scalletta. "It refers to a specific type of aeration technology that we have a patent on."

According to the complaint filed by Deere: "Acts of infringement of the patent by Toro and Tri State were undertaken with actual knowledge of the patent and in complete disregard for Deere's rights."

Deere is seeking damages and legal fees as well as a ruling that would force Toro to cease and desist both distribution of the dis-

Continued on page 78

Flowtronex PSI, Waterscapers team up for landmark Vegas project

By ANDREW OVERBECK

BOULDER CITY, Nev. — Even golf courses are larger than life in Las Vegas. Construction work is underway here at MGM Grand's expansive 36-hole Cascata Golf Club that will fea-

ture an irrigation system that will pump 2 million gallons each day. Combining electronics with telemetry, Flowtronex PSI will be able to monitor the course systems' water us-

age from the company's Dallas headquarters.

"Because of the number of systems, irrigation stations and water features we have networked the pumping stations so that you can call one and get to any of the others through a single modem connection," said Flowtronex

General Manager Tom Male.

The system will use 11 different pumping stations to control the irrigation, potable water and water features on the course. The \$1-million project is one of the largest completed by the

company.

According to water feature designer Richard McGuire of Buena Park, Calif.-based Waterscapers, the mountainous site has a number of unusual features.

"We have 200 to 300 feet of relief from the top to the bottom of the site, so pump stations are significant," said McGuire. "With the combination of streams, ponds and waterfalls, the most economical way to accomplish that hydraulically has been to combine the

Continued on page 78

Pharmacia & Upjohn, Monsanto to merge

ST. LOUIS, Mo. — After three failed merger attempts, Monsanto Co. has agreed to terms with Pharmacia & Upjohn in what is being called a deal-of-equals. The proposed merger would create a company with combined 1999 sales of \$17 billion and a market capitalization of more than \$50 billion. The deal is subject to shareholder and regulatory approval.

Wall Street and investors have so far reacted coolly to the merger announcement amid fears of taking on Monsanto's troubled agricultural-chemical business. While sales of Monsanto's popular herbicide Roundup are impressive, the company has been embroiled in controversy over its genetically modified seed business.

Under the deal, 19.9 percent of Monsanto's agriculture business will be offered in an Initial Public Offering (IPO) and it will become a separate legal entity with a stand-alone board of directors and its own publicly traded stock upon completion of the IPO. The new agricultural business will be headquartered in St. Louis.

Leading the combined organization as president and chief executive officer will be Fred Hassan, the current CEO of Pharmacia & Upjohn. Monsanto Chairman and CEO Robert Shapiro will become the non-executive chairman for a period of 18 months, after which he will be succeeded by Hassan. Monsanto's Hendrik Verfaillie has been appointed CEO of the agricultural business.

The combined company will have a research budget of \$2 billion and will save an estimated \$600 million within three years. The merger is expected to close in the second quarter of 2000.

Golf Course News STOCK REPORT (1/14)*

Company	Symbol			%Change 12/15/99		52-week Range	Proj.5-yr Earn. Growth
Astrazeneca	AZN	41	-1.80	-2.96	31.16	35-48.94	10.20%
Deere & Co.	DE	48	13.27	12.28	24.87	31-47.5	9.20%
Dow Chemical Co.	DOW	139.375	5.09	13.33	25.56	85.25-141.5	8.40%
Family Golf Centers	s FGCI	1.53	8.80	9.29	N/A	0.72-18	25%
Golf Trust of Amer.	. GTA	16.88	-0.34	13.44	13.36	14.5-26.88	8.30%
Ingersoll-Rand	IR	53.47	-2.89	9.12	15.36	44-73.82	12%
Lesco Inc.	LSCO	14.88	-12.47	-3.25	12.2	12.25-19.5	15%
Nat'l Golf Prop.	TEE	21.375	8.23	13.22	18.8	18.38-29.75	10%
Toro Co.	TTC	36.375	-2.51	5.80	14.09	28.5-39.5	12.5%
Textron Inc.	TXT	68.975	-10.06	-5.36	4.79	65.88-98	15%
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DATA PROVIDED BY VALUE TREND LINKS, LINKS FUND UP 47.20% IN '99, WWW.GOLFMUTUALFUND.COM

ILMINGTON, Del. — Cambridge Discovery Chemistry (CDC), a wholly owned subsidiary of Oxford Molecular Group plc, and Zeneca Agrochemicals, the crop protection and plant science business of AstraZeneca have formed a chemistry research and development collaboration.

CDC will take over responsibility for Zeneca's chemistry research facility within Zeneca's re-

Zeneca, Cambridge to collaborate

search and development center in Richmond, Calif. The collaboration gives CDC research facilities in both the U.S. and Europe.

Research carried out by CDC will be funded, for a defined period, by Zeneca, providing flexibility in managing the level of resource required in its discovery programs. The agreement initially involves CDC providing

chemistry services to Zeneca, with the potential to increase the number of participating research scientists.

Additionally, CDC will be able to expand the facilities to accommodate ongoing growth requirements, and new discovery programs from its agrochemical and biotechnology business.

"This collaboration offers us the opportunity to combine world-class combinative chemistry expertise in a flexible research arrangement which will greatly benefit both our businesses," said Zeneca's Director of Research and Development Dr. David Evans.

The transaction is subject to the parties entering into definitive agreements and other customary closing conditions.



WENTWORTH, Surrey. England — The Toro Co. has secured five-year partnership deals with both the PGA European Tour and PGA European Tour Courses. Under the agreement, Toro will become the official supplier of turfmaintenance equipment and irrigation systems. PGA European Tour Courses owns and operates seven golf course venues in the UK and Europe, five of which are used for the European Tour.

As part of the deal with PGA European Tour Courses, Toro has won a \$1.3 million contract to supply turf machinery and irrigation systems for the four new courses at the Fleesensee golf and hotel complex near Berlin, Germany, which opens in April.

For the European Tour, Toro will supply tour venues with full tournament support covering both turf machinery and additional irrigation requirements. Additionally, there will be full technical support, service and training for operators and service technicians.

David Garland, director of tour operations for the PGA European Tour, expects the deal to improve the conditions of the Tour courses. "Toro is a market leader and can provide us with a total solution," he said. "One of the main reasons we selected Toro was that it offered irrigation expertise, too. We have had some concerns about the standard of irrigation at tournament venues. But with Toro on board I am confident that we can solve these problems and keep the courses in top condition."



SOLO APPOINTS DISTRIBUTOR

NEWPORT NEWS, Va.— SOLO, Inc. has appointed North Coast Distributing Inc. as a distributor for its line of outdoor power equipment with responsibility for dealer sales in the states of Kentucky and Ohio.

North Coast Distributing, headed by President John B. Strang, serves nearly 200 small engine shops and independent outdoor power equipment dealers from its warehouse in Warrensville, Ohio.

GOLF COURSE NEWS



Ferris snapped up by Simplicity

PORT WASHINGTON, Wis. - Simplicity Manufacturing, Inc. has agreed to purchase Ferris Industries, Inc., a New Yorkbased manufacturer of professional turf-care machinery. Terms of the agreement were not disclosed.

"The addition of the Ferris product line positions the company to serve the fast-growing market for larger, commercial grass-mowing machinery," said Warner C. Frazier, chairman and chief executive officer of Simplicity.

According to David A. Ferris, chairman of Ferris Industries, recent developments, including introduction of the first independent suspension system for heavy-duty riding mowers, have fueled demand for Ferris products and necessitated increases in production capacity.

"These opportunities led to our decision to partner with a firm such as Simplicity that could provide the capital and management necessary to accelerate the product development and manufacturing modernization programs planned for the near future," said Ferris.

"This alliance with Ferris, a pioneer in the commercial market provides us with immediate access to one of the best, most respected, and complete lines in the industry," said Jim Wier, president of Simplicity.

Simplicity will continue marketing the professional mowers under the Ferris name and through independent distribution.

Ferris employs approximately 120 people in its Munnsville, N.Y., facility and has annual revenues of nearly \$25 million. The Ferris line now includes a wide variety of walk behind and riding mowers with cutting decks ranging from 36-inches to 72inches in width.

Simplicity, which has 500 employees, manufactures riding lawn mowers, lawn and garden tractors, chipper shredders, chipper vacuums, tillers and snowthrowers.

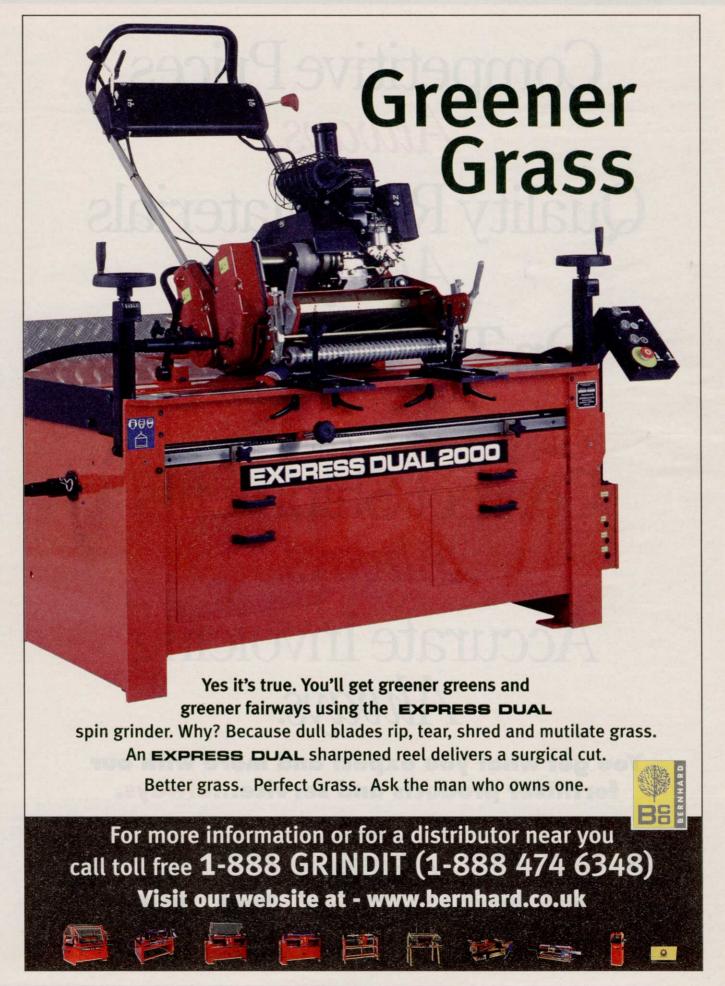
Textron, TRIMS sign marketing pact

RACINE, Wis. — Textron Turf Care and Specialty Products (TTCSP) has signed a five-year marketing agreement with TRIMS Software International, Inc., the developer of TRIMS Grounds Management Software. Under the terms of this agreement, TTCSP will sell and distribute a custom version of TRIMS software called Track-it.

Track-it contains the latest TTCSP preventative maintenance schedules, preventative maintenance checklists and illustrated equipment specifications. The software is designed to help golf course and grounds superintendents manage equipment, make repair or replacement decisions, inventory spare parts, budget for future purchases and staffing, calculate chemical applications, maintain employee records, plan daily activities and control operational

Track-it contains a complete library of TTCSP turf and grounds equipment. Customized maintenance schedules and product specifications for the

Cushman, Jacobsen, Ransomes and Ryan lines are pre-installed to simplify record keeping. The program also contains a bar-coding feature for equipment tracking. The program will allow users to assign bar codes to equipment. Users are able to scan a piece of equipment, key in odometer or hour-meter readings, and upload the information into the records.





John Deere, Toro lawsuit

Continued from page 75

puted product and the misuse of the patent.

At the core of the disagreement is Toro's claim on its patented RotaLink system that allows the tines to enter and leave the soil vertically.

The ProCore line was part of

Toro's February 1999 acquisition of Multi-Core, a European distributor of aeration equipment.

"The product is new to the Toro family," said Toro spokeswoman, Jody Hinkle. "The history of it goes back to the Multi-Core product line and some earlier product versions that John Deere bought from the original Australian company. These are different products that have similar applications.

"ProCore has been on the market in Europe for about five years and we feel very strongly that the patents that we have purchased are in no way in conflict with John Deere's.

The lawsuit was filed Dec. 17 and is still in the early stages.

In the meantime, Toro is rolling out the ProCore line of aerators. "We filled our first orders



The disputed Toro ProCore 660.

for ProCore at the end of January," said Hinkle.

Flowtronex system

Continued from page 75

systems as much as possible. The challenge then is to get the pressure that is needed to overcome the amount of lift."

As a result, some of the stations will run at 6,000 to 8,000 gallons per minute.

The centerpiece of the course is the water feature that runs from the top of the property down to the clubhouse. "The falls are more than 250 feet long," said McGuire. "That distance is covered by sheer waterfalls and running streams."

The Rees Jones-designed course at Cascata is now under construction and is expected to be completed in October 2000.

Aventis Continued from page 75

will be building a specialty technical center. "We are finalizing the plans for a center that would be totally dedicated to turf and ornamental and structural pest control research for Aventis and will have both field and laboratory facilities for product research as well as for training and technical communications for our customer base," said Weeks.

Bolstered research and development infrastructure will keep CPP focused on the golf market.

"Both companies have a significant presence in the golf market and together we plan to be a bigger contributor," said Weeks. "The golf market is tremendously important to us.'

Going forward, Weeks and his staff are still integrating the two companies.

"We have basically completed the combination of personnel and we have integrated sales, management and technical services," said Weeks. "We are now in the process of relocating to Montvale and working on crossproduct training."

The structure of CPP's international business will also be tweaked in the coming months as its management teams from Asia, Latin America, Europe, South Africa and the Middle East and Africa come together to get organized on a global level.

Amid all the reorganization, Weeks is working to help keep the organization from losing its sense of identity.

"The point that I am making internally, is that being bigger does not mean that you are better," said Weeks. "We still need to prove ourselves worthy of our market share by demonstrating leadership in product innovation, participating in trade organizations and hiring and maintaining a quality employment base. We have to challenge ourselves to be a leader in the this industry, not just in market share." >

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COMMENTARY

A case for open architecture

By TOM MALE

Technological advancements in communications now allow us to create a "thinking link" between pumping systems and sprinkler heads — and tee up a host of benefits for golf course superintendents.

That link ought to be open to everyone.

These communication evolutions can cut down on system breakdowns as the "brains" of the sprinklers unite with the pumping system to make intelligent decisions.

For example, a golf course relies on three 50-hp pumps to power 1,500 gallons per minute (gpm). One night while watering, one of the pumps fails, leaving the system with only 1,000-GPM capacity.

The current irrigation system would continue to demand 1,500 gpm until finishing its cycle. The pumping system, unable to keep pace, would have shut down on low pressure. In the morning, the course would end up with dry greens despite the irrigation system's "virtual watering."

With united brains, the system would have notified the user of the situation via a pager or phone and could have reconfigured itself to run at 1,000 gpm. The watering window might be longer, but it would be real water.

What other new benefits are possible?

· Smart water use and intelligent pumping - Sprinklers and pumps can share data that compares theoretical water flow to actual water flow. The data allows users to adjust the irrigation program, minimize the water window and improve pumping-system efficiency.

· Early detection of pipe leaks or blow-outs - By comparing data, the system can detect a leak or blow-out.

· Coordinating reset programs - Working together means the irrigation heads will pause when the pumping system faults, and resume once the pump is reset.

• Tailored pressure — Automatically fine tune pump-station output pressure to match actual requirements, accommodate high or low elevations, drip irrigation, nearby homeowners and

· Pre-starting the pumping system - Pre-starting pumping systems means the system is ready when sprinkler heads start.

We could offer these benefits if the industry takes the next step. The concept of open architecture may seem a bit mystical. After all, you can't touch or feel it. Most of us can't even see it.

SUPPLIER BUSINESS

That's because open architecture refers to a specific way of programming a system to make it universally accessible. Think of it as a toolbox designed so that any irrigation sprinkler manufac-

turer can open and use it. No one needs a special key. Nor is ac-

cess restricted to only certain



companies. In other words, Rain

Bird, Toro, Hunter and more can grab as many tools as they want.

Further, they can take this information and easily work with it. Why? Because our

"tool box" is written in TCP/IP protocol, the same common language that makes the Internet accessible to different computer

Why is open architecture critical?

Imagine how well the web would work if it were "closed." Only a select few could surf, download and e-mail — limiting interaction and diminishing its value.

In the golf market today, there are hundreds of different kinds of pumping systems and dozens of variations of irrigation controllers and sprinkler systems. Shouldn't we employ technology that works, regardless of manufacturer or style?

Open architecture is the best way to keep things simple, accessible and convenient. It's time to build that technology bridge.

Tom Male is general manager of







The ST Sport is powered by an 11-hp engine

E-Z-GO rolls out ST Sport

The WorkHorse ST Sport, the newest addition to the E-Z-GO WorkHorse family, is designed to meet a variety of offroad utility needs. The ST Sport combines an 11-hp, 4-cycle 350-cc twin-cylinder overhead cam engine-capable of reaching a maximum speed of 15 mph-with a 650pound payload capacity. In addition, the multiple leaf-spring suspension with hydraulic shock absorbers and self-compensating rack and pinion steering provides a smooth ride and precise handling.

Additional features include a tubular steel front bumper with brush guards, a welded high-strength tubular steel chassis with a flexible impact-resistant front cowl, a heavy-duty bed liner with tailgate cover, a 6-gallon tank with fuel gauge, dual rear-wheel self-adjusting brakes, an automatic parking brake release with selfcompensating system, a reverse warning indicator and a dash-mounted key switch. For more information, contact www.ezgo.com.



Hunter's Vista system is reality driven

Vista offers realitybased control

Tunter Golf introduces Wista, a new central control system with reality-based animated graphics to enhance golf course irrigation management.

Golf superintendents can view their entire course layout and irrigation system in Vista's overhead PlanView or through the program's realistic VistaView animation. The animation feature allows the superintendent to actually "drive down" an exact representation of every fairway on the course and make real-time irrigation programming adjustments.

Vista's screen images, base irrigation program and flow balancing are accurate because they are created directly from the irrigation designer's Auto CAD plan. The program can be finetuned to meet course-specific micro climate and soil conditions. As adjustments are made, Vista calculates a new schedule using its dynamic flow balancing utility for optimum pump and system efficiency. Vista is based on Internet Explorer. For more information, contact 800-248-6561, or www.huntergolf.com.



The Hustler snow thrower.

Hustler attachment throws snow

The Hustler snow thrower is PTO driven and hydraulically controlled. The open-center auger design comes in either a 54- or 60-inch model. A three-blade impeller feeds snow directly to the hydraulically angled spout that is controlled from the operator's seat. Snow can be blown in any direction within a 190-degree radius. Many Hustler models also offer V-blades, dozer blades, ROPS cabs, heaters, wheel weights, tire chains, and a Sweepster broom. For more information, contact 800-



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For more information, con-630-627-6900 www.parkersweeper.com.

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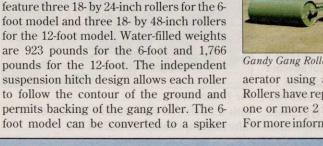
Gang rollers from Gandy

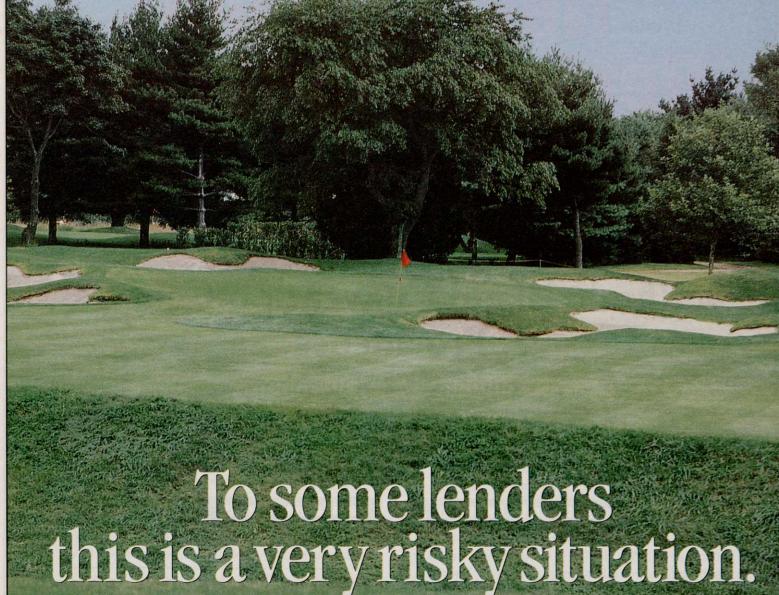
andy Co. now offers gang rollers in 6-Jand 12-foot widths. The gang rollers feature three 18-by 24-inch rollers for the 6foot model and three 18- by 48-inch rollers for the 12-foot model. Water-filled weights



Gandy Gang Rollers.

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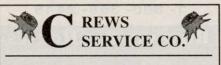


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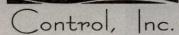
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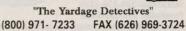
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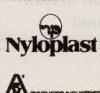
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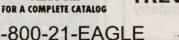
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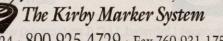
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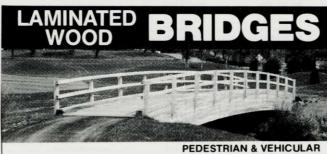
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February

9-11 — Western Pennsylvania Turf Conference & Trade Show in Monroeville, Pa. Contact 412-848-1674.

14-20 — GCSAA International Conference and Show in New Orleans."

22 — GCSAA Seminar on Bentgrass Management and Rootzone Maintenance in Albany, N.Y. *

- GCSAA Seminar on Golf 24-25 -Greens: History, Theory, Construction and Maintenance in Bloomington, Ill. *

28-29 — Rutgers University course on Better Landscape through Better Soils in New Brusnswick, N.J. Contact Kurt Martens at 732-932-8451.

29 - NYSTA Southeast Regional Conference in Suffern, N.Y. Contact 800-873-8873.

March

2 - GCSAA Seminar on The Superintendent as Grow-In Manager in Birmingham. Ala.

4-7 - Canadian GSA Annual Conference and Show in Ottawa. Contact 905-602-8873.

6 - GCSAA Seminar on Turfgrass Ecology in Sioux Falls, S.D.

6 — GCSAA Seminar on Managing Turfgrass Root Systems in Providence, R.I.

6 - GCSAA Seminar on Management of Localized Dry Spots and Water Repellent Soils in Providence, R.I. *

6-9 - New England Regional Turf Conference & Show. Contact 401-848-0004.

- GCSAA Seminar on Maximizing Job Satisfaction in Gaylord, Mich.

7-8 — GCSAA Seminar on Physical Problems of Turfgrass Soils: Identification and Correction in Valley Forge, Pa. *

7-8 — GCSAA Seminar on Golf Greens: History, Theory, Construction ad Maintenance in St. Louis Park, Minn.

8 - GCSAA Seminar on Maximizing Teamwork in Gaylord, Mich.

9 - NYSTA Western Regional Conference in Buffalo, N.Y. Contact 800-873-8873.

14 — GCSAA Seminar on Management Strategies for the Turfgrass System in Cincinnati. Ohio. *

* For more information contact the GCSAA Education Office at 800-472-7878.

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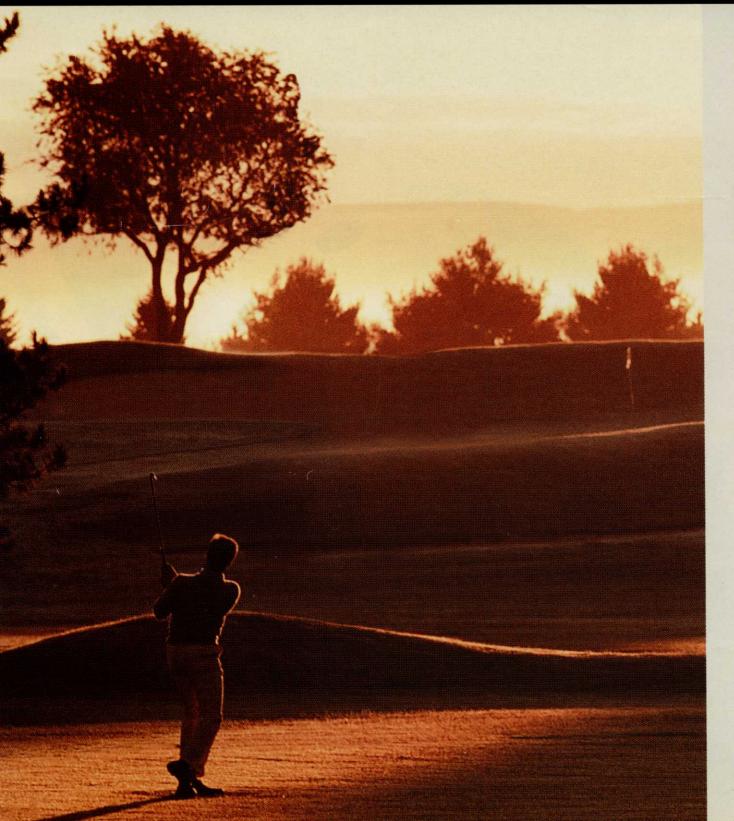
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