

GOLF COURSE NEWS

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INSIDE

Sophisticated Irrigation

Fertigation, filtration, acid injection and GPS technology take irrigation into the future 9, 21-23

Something Old, Something New

Renovations and restorations of older and classic courses complement new construction 25



A ROSSIAN TASK MADE EASIER

Poland Spring Golf Club superintendent Dick Fahey, left, and mechanic Ben Perreault hold an original Donald Ross rendering, from 1913, that has aided a bunker restoration at the Maine resort. See story page 25.

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New Turfgrass America eyes national market

By A. OVERBECK

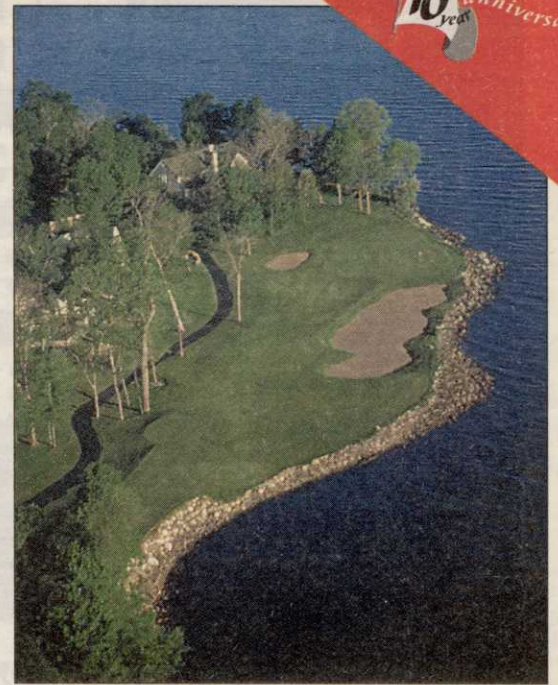
GRANBURY, Texas — In a move to expand beyond their regional reach, three Texas turf companies and a Florida grower have formed an alliance creating a new full-service firm here. The new entity, Turfgrass America, combines Thomas Brothers Grass, Crenshaw and

Doguet Turf and Milberger Turf Farms with Apollo, Fla.-based Elsberry Greenhouses.

While the merger was completed May 14, Milberger and Thomas Brothers have been considering the move for a year and a half.

"As we all looked at the

Continued on page 7



A SHORE BET

Black Brook, which has opened along with its sister track, The Sanctuary Course, is nestled along the shores of Mille Lacs Lake in Minnesota. The courses are designed by John Harbottle in collaboration with 1993 U.S. Amateur champion John Harris and owner Chip Glaser. The Sanctuary Course is geared toward the average player, with shorter yardage than its counterpart Black Brook. Harbottle feels the courses should be "instant classics." See story, page 30.

Z-Net may revolutionize slow-growing grasses

LITTLE ROCK, Ark. — Tannenbaum Golf Course on Greers Ferry Lake near Heber Springs may have written its name into golf course history when it opened for public play in June. No scoring records were broken. The big story was a process that doubles the speed of growth for zoysiagrass, an excellent turf many superintendents have not used because of its notorious slow growth.

Z-Net, a new patented growing method developed in Japan and brought to America by Winrock



A crew lays down a roll of Z-Net with zoysiagrass implanted in it.

Grass Farm, Inc. here, was used on the fairways and roughs at Tannenbaum for

the first time in America. The new technology produces complete grow-in

during just one growing season — about twice as fast as standard sprigs or plugs, according to Winrock President Frank Whitbeck.

"Z-NET worked beautifully," said Tannenbaum course superintendent Scott White. "We grew in our zoysiagrass fairways and roughs in a little bit longer than the four to six months they predicted. But last summer was a hot summer and it was hard to get anything to grow. Right now it's 90 to 95 percent

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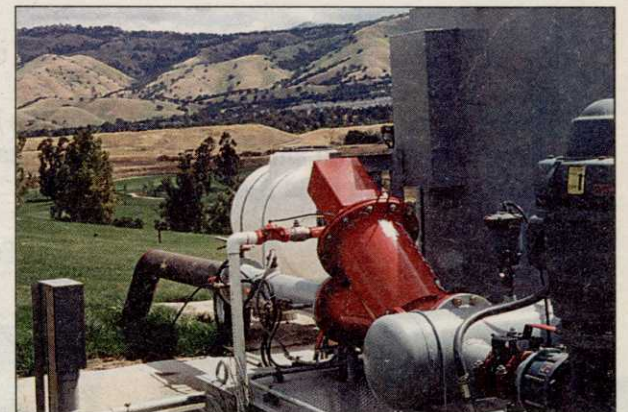
Fertigation, filtration systems said growing in popularity

By PETER BLAIS

Demands for improved playing conditions have led many courses to install fertigation, acid-injection and filtration systems as part of their pumping stations.

Tanks, tubing and controllers for both fertigation and acid-injection systems (which improve water quality) can be rigged up to a pump station at a cost ranging from \$7,000 to \$15,000, a dramatic reduction from the \$20,000 to \$30,000 price tag common just a few years ago, said

Continued on page 22



The red attachment filters water to this pump station.

Country club fertility on a public's budget

By DAVID WILBER

The subject of turfgrass fertility is an ever-changing and often complicated road of twists and turns. But by being aware of several essential areas, turfgrass managers at public, resort and daily-fee golf operations can untangle the knots that might otherwise keep them from having

the best possible fertilizer program.

There is a myth that only the private club is spending enough money to do the fertility management job correctly. From the standpoint of many golf facilities, public and private, fertility management and fertilizer purchasing is often a guessing

Continued on page 18

What they're saying about **The New 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 puttied.' 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

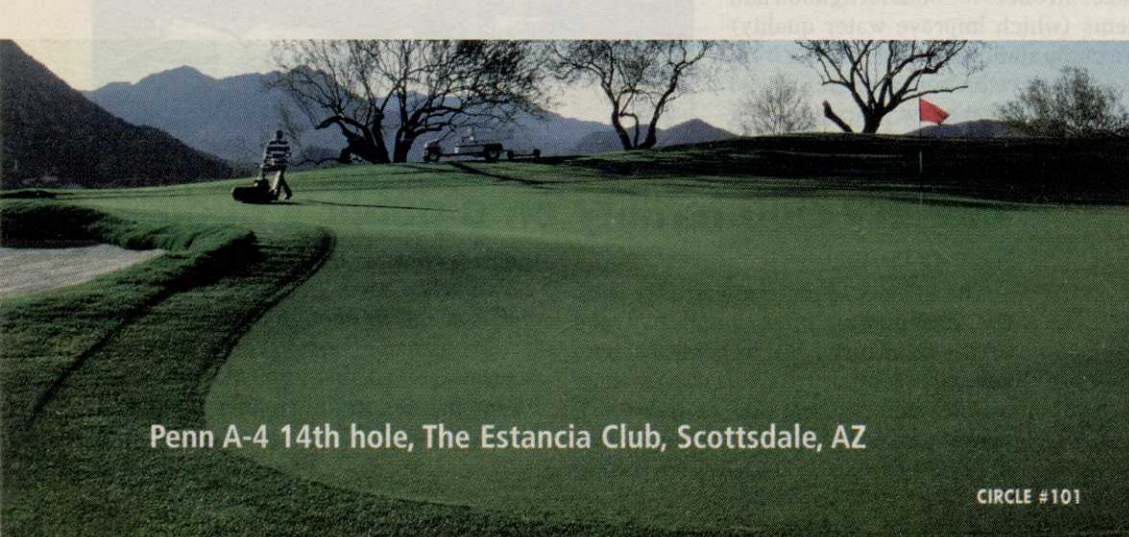
"We have 36 putting greens and 4 practice greens that have been converted from Toronto C-15 to Penn A-4 Creeping bentgrass.

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-4 14th hole, The Estancia Club, Scottsdale, AZ

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

GARLAND, Texas — RBI Golf, Inc. and course architect Richard Phelps have begun construction on the 27-hole \$6 million addition to Firewheel Golf Park here. Once complete, the course will incorporate many lakes as well as natural vegetation, including the "Firewheel" flower, for which it is named. Phelps and RBI have previously teamed up on 15 projects, including Saddle Rock in Aurora, Colo.

...

PAWLEYS ISLAND, S.C. — Pawleys Plantation is working on \$500,000 in improvements to enhance its Jack Nicklaus-designed course. Improvements include installing a computer-controlled irrigation system and sulfur generator in the lake to lower the pH level in the water and soil.

...

LONDON — American Golf (UK) Ltd. (AG-UK) has purchased Chartham Park Golf Club located in East Grinstead, Sussex, for £1.785 million. "Chartham Park Golf Club is an extraordinary and high-quality facility that fits perfectly in our national and South-London cluster-group of golf courses and clubs," said Geary Leathers, AG-UK managing director.



SUNRIVER, Ore. — Classic elements of design and style that are the hallmarks of early golf course architects Alister Mackenzie and Donald Ross reportedly were captured by John Fought in his newly opened redesign of Sunriver Resort's Meadows golf course, particularly in the placement and design of the bunkers.

"This was not a facelift," said Fought, former PGA Tour professional and 1977 U.S. Amateur champion. "The Meadows is

a completely new course built within the general framework of the old Meadows course, with a change in par, new greens and a spectacular bunkering strategy."

"Our goal was to produce a course that will measure up against any course in the region," said Sean Cracraft, director of golf for Sunriver's Meadows and Woodlands golf courses. "Meadows is a modern golf course, built with the latest technology, designed in traditional, classic style."

The course opened June 30 after a \$3.2

million renovation that included complete replacement of all 18 greens, addition and replacement of bunkers and tees, renovation of all fairways and strategic redesign of selected holes. New irrigation and a maintenance facility were also included in the project.

"Meadows is like a Brooks Brothers shirt or a pair of khakis updated for the new century," Fought said. "With this redesign, the Meadows is still a solid,

Continued on page 7

Changes afoot at GCN editorial offices

YARMOUTH, Maine — *Golf Course News* Publisher Charles von Brecht has announced several changes in the editorial and advertising staffs at the newspaper, including promotions of Mark Leslie and Peter Blais.

Leslie, the longtime managing editor, has been named editor, succeeding Michael Levans, who



Michael Levans
Western sales rep

has taken over the Western territory on the sales staff after two years at the editorial helm of *Golf Course News*. Meanwhile, Blais, the associate editor for nine years, has assumed the managing editor post and Andrew Overbeck has been named associate editor.

The three will work in those

same capacities with *Golf Course News International (GCNI)*, a bi-monthly newspaper which covers the golf industry outside North America.

Leslie has been with *Golf Course News (GCM)* since its inception in 1989. Before that, he worked in various editorial capacities with the Lewiston and Portland daily and Sunday newspapers in Maine. A 1971 graduate of the University of Maine in journalism, he has won a national award for his golf writing.

Blais joined *GCN* after a 5 1/2-year

stint as a sports and business writer with the *Central Maine Morning Sentinel*.

He has earned a master's degree in business administration from Western State College, a bachelor's degree in English from the University of New Hampshire.

As managing editor, Blais will continue to focus on the course management aspects of the golf industry and be responsible for day-to-day operations at *GCN*.

Overbeck joined *GCN* as an interna-

Continued on page 6

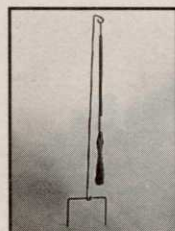
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CIRCLE #103

Massachusetts facility expands to 18 holes

REHOBOTH, Mass. — Hillside Country Club has celebrated its official expansion to 18 holes.

"The challenge of designing and building a beautiful course for all levels of knowledgeable golfers is now a reality," said owner and course designer George Cardono. "Players are impressed by the concepts inherent in each hole. They also tell me how the new holes blend overall to form a rewarding golf experience. They enjoy and respect the course. I couldn't ask for a better evaluation."

The semi-private course contains three par-5s, four par-3s and 11 par-4s over 6,000 yards. The slope is 126 and the course rating is 69.5.

Course enhancement and grooming will continue and is Cardono's uppermost project for the summer.

"Hillside is a work in progress," Cardono said, "and the progress is wonderful. Serafim Costa, our superintendent, is proud of our accomplishments here and his goal is to make Hillside the area's preferred golf course on the merits of its overall maintenance as well as its challenging design and natural beauty."

Foster to begin work in Iowa

MARSHALL COUNTY, Iowa — Dickson Jensen looked for a couple years to find a site for his vision. He found and assembled 800 acres and hired Keith Foster to design his landmark upscale daily-fee course.

The Harvester is now set to begin construction with high expectations. The site contains a 60-acre lake that will challenge the finishing holes. Foster said the ground is ideally suited for great golf, with elevation changes of 40 to 80 feet. Towering hardwoods, wetlands and natural creeks also further distinguish The Harvester property.

The par-72, 18-hole upscale track will play from 4,800 to 7,250 yards. In addition, The Harvester facility will have a nine-hole short course and a state-of-the-art practice facility. The Harvester is slated to open in the summer of 2000.

San Diego design receives facelift

SAN DIEGO — Rancho Bernardo Inn, located 30 minutes north of downtown, has completed extensive improvements to its William Bell-designed 18-hole championship Resort Course.

To create a more intimate experience, existing bunkers were remodeled with larger, more rounded profiles, while other bunkers were added or deleted. New Augusta

white sand was imported for contrasting color and playability.

Extensive landscaping includes adding mounds, trees and natural vegetation, a complete rebuild of the 13th green and a new pond along the 11th green. A fourth set of tees was added throughout the course, changing the original ladies' tees from 5,500 yards to 4,900 yards.



Rancho Bernardo Resort Course near San Diego recently completed improvement to the course and clubhouse.

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(Left to right)
Glenn Hickey,
Craig Schreiner,
Larry Mize and J.J.
Hickey.



Mize, Schreiner have Georgia on their minds

COLUMBUS, Ga. — Former Masters champion Larry Mize and architect Craig Schreiner have teamed to transform the formidable Maple Ridge Golf Club into a strategically challenging, playable golf course. Maple Ridge Golf Club is the centerpiece of the 600-acre Maple Ridge residential community.

Phase one of a three-year plan is complete, with reconstruction of all 18 putting greens, fairway drainage improvements, addition of multiple tees and construction of a new hole.

Mize has collaborated on two other golf course design projects, but the Maple Ridge project presents some unique

challenges. "We needed someone who had the professional knowledge of how to execute golf shots from tee to green on each hole," said Schreiner. "Larry has the perfect credentials to help with these details and he has an intimate knowledge of the course."

"When we first arrived we were very impressed with the quality of the overall development. However, the golf course generally did not fit the ground," said Schreiner. "This is where the majority of the playability, drainage, safety, slow play, and maintainability problems stem from. Our challenge was to figure out how to make the course work with the natural contour of the site, not against it."

The strategy of how the Mize-Schreiner team will transform Maple Ridge is detailed in a comprehensive plan that has been embraced by the owners and members. Removing an unplayable par-3 was the catalyst for improvements on several holes and allowed lengthening the golf course to a par-72, 6,981-yard layout.

"Eliminating the par-3 11th enabled the back-nine holes to unfold in a magical sort of way," said Schreiner. "We adjusted the tees on the 12th, 13th and 15th to take advantage of natural fairway landing areas. We also created value in the form of three new golf course frontage lots on the new 389-yard, par-4 11th hole."

"The membership is excited about the improvements taking place at Maple Ridge. The atmosphere is like young children on Christmas Eve," said Mike McCollum, director of golf at Maple Ridge.

Heartland Golf Construction is completing the work that requires the course to remain open for play during construction.

NORTHEAST GOLF HIRES COLE

FAIR HAVEN, N.J. — Brook Cole, a landscape architecture graduate from Utah State University, has joined The Northeast Golf Co. here. Cole received the Merit Award from the American Society of



Brook Cole

Landscape Architects for outstanding achievement in design while at Utah State. As a design associate, he will develop the firm's CAD production system. He will also assist in plan production tasks, including design development and construction documentation for new golf course and renovation projects.

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Sun International to purchase Vegas' Desert Inn GC

LAS VEGAS — Sun International Hotels Ltd., which operates casinos in the Bahamas, Atlantic City, and on the Mauritius and Comoros Islands in the Indian Ocean, is expanding to Las Vegas. The company has reached agreement to buy the Desert Inn Resort on the Las Vegas Strip for \$275 million cash from Starwood Hotels & Resorts.

Nevada gaming officials estimate it will take 12 to 16 months to process Sun International gambling licenses. In the meantime, the 715-room Desert Inn will continue to be operated by Starwood. The purchase includes the hotel-casino's 140-acre, 18-hole, championship Desert Inn golf course on the Strip as well as an adjoining 32 acres of prime un-

developed Strip land.

The *Las Vegas Review Journal* and *Las Vegas Sun* report that Sol Kerzner, sometimes referred to as a visionary and fearless developer similar to Steve Wynn, is talking with Starwood about joint development of 350 time-share units behind the Desert Inn Golf Course along Paradise Road, one block east of the Strip.

Starwood gradually is pulling out of the casino business. The company recently reached agreement to sell Caesars World, Inc., including Caesars Palace Hotel on the Las Vegas Strip, for \$3 billion cash to Park Place Entertainment Corp. Starwood acquired the Desert Inn Resort and Caesars Palace in Las Vegas when it purchased ITT Corp. for \$13 billion in 1998.

H.R. 1592 aims to end unfair pesticide assessments

WASHINGTON — In an effort to ensure the full and fair implementation of the Food Quality Protection Act (FQPA), H.R. 1592, "The Regulatory Fairness and Openness Act of 1999," has been introduced in Congress.

The proposed bill maintains the fundamental goals of FQPA but requires the Environmental Protection Agency (EPA) to use reliable information and sound scientific data to assess the usage of pesticides under FQPA.

The 1996 FQPA law dramatically changed the way pesticides are evaluated for risk, allowing the EPA to use unscientific assumptions and models in safety assessments. Under H.R. 1592 superintendents will continue to have access to effective, reliable pesticides as long as they meet rigorous scientific safety standards after full and fair review by the EPA.

As a result of the 1996 FQPA law, two classes of chemicals important to superintendents, organophosphates and carbamates, are under scrutiny at EPA.

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GCN changes

Continued from page 3

tional correspondent shortly after graduating from Earlham College in Richmond, Ind., in 1997. He spent close to two years in Southeast Asia researching the economic impact of golf course development and reported for *GCNI* on the state of the industry.

Since his return stateside Overbeck has been contributing to *GCN* and working for two of United Publication's other newspapers since last November.

As associate editor, Overbeck will continue to cover international golf course development as well as the supplier business and the new product beats.

Levens spent three years as a reporter at *The Pittsburgh Press* before joining the staff at United Publications, the parent company of *Golf Course News*. Prior to his tenure as editor of *Golf Course News*, Levens was responsible the editorial launch of *HME News*, a business newspaper in the medical equipment industry, the company's most successful start-up.

Turfgrass America

Continued from page 1

marketplace, we knew that we were strong in Texas," said Arthur Milberger, president of Milberger turf and sports field division for Turfgrass America. "But in order to do some of the things that we envision for the 21st century we recognized that we needed to expand outside of our region and that we needed to have brand names across the U.S. in warm season and some cool-season grasses."



Turfgrass America now has more than 30 warm-season varieties, including Bermuda, buffalo and zoysia, in the marketplace, 10 farms, nine retail outlets and more than 500 employees across Texas, Tennessee, Georgia, North Carolina and Florida.

According to Milberger, the company will be focusing its expansion around the golf turf market and the wide array of services it offers.

"Golf is the fastest-growing market for us," said Milberger. "And now we can do virtually any job anywhere, be it washed turf on a green, sand-based turf or solid sod fairways."

However, Milberger is also working to position Turfgrass America to take advantage of the golf course renovation market that he expects will pick up in the coming years.

"The golf market is getting more and more competitive. Instead of giving away free martinis, courses are going to have to provide better fairways and greens than the course down the street," said Milberger. "That's why we are working to develop the new varieties that we are coming out with right now."

Turfgrass America produces several of the new "superdwarf" Bermudas, including TifEagle, Floradwarf, MS-Supreme and Thomas Brothers' own Mini-Verde.

"A lot of people still have bentgrass greens, but there is a huge drift of people coming over to these improved Bermudas," said Milberger. "We are putting 12 different Bermudas on golf courses at the moment."

While the market for new Bermudas is strong, Turfgrass America will

also continue to work with the new bent varieties.

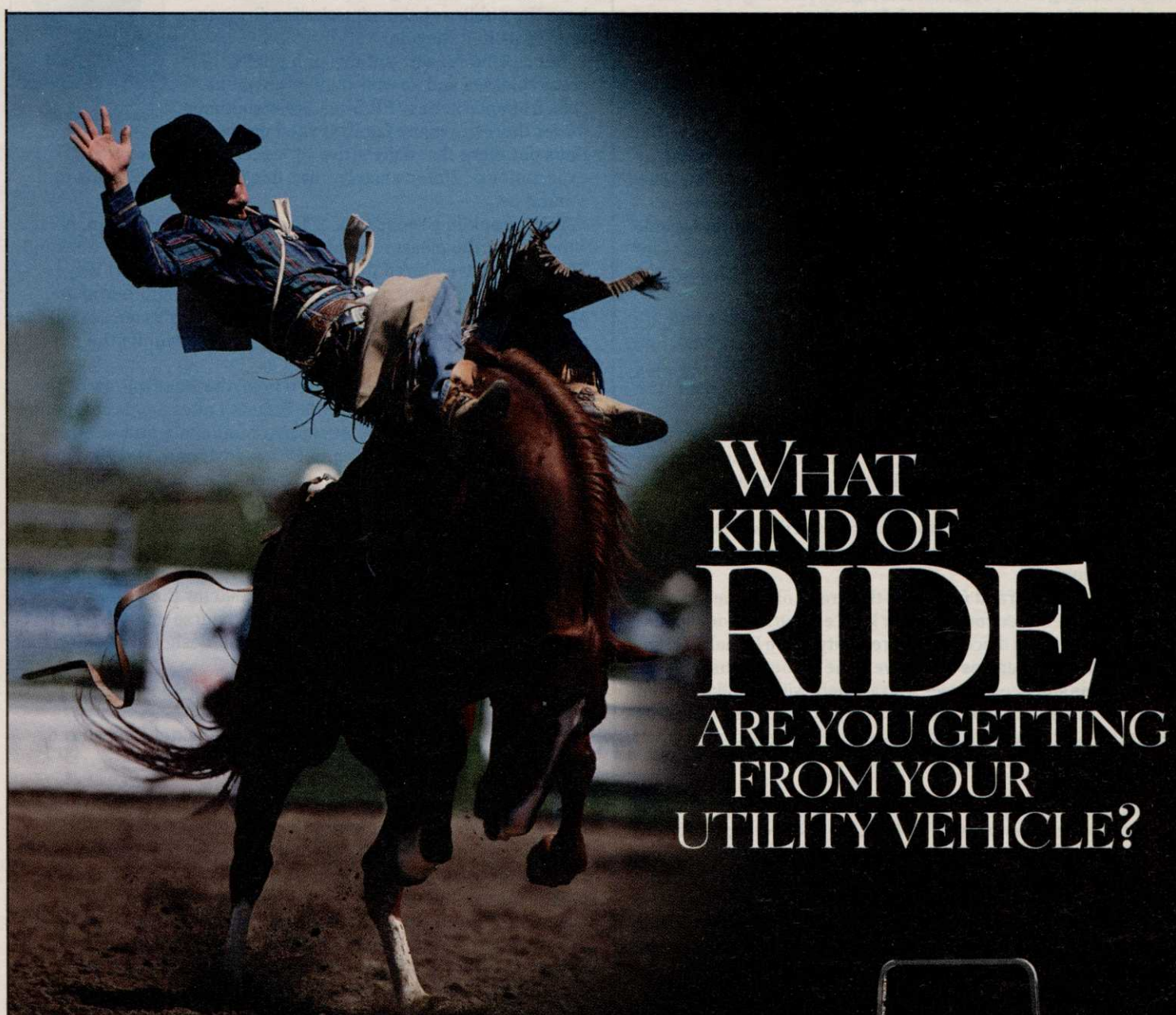
"We grow very little bentgrass at the moment, but we are working to up the ante on that production as well," said Milberger.

With that in mind, the company is looking to expand.

"We will be looking at new farm sites, but the object is to go out and acquire only if it makes good sense," said Milberger.

Olson designing in New Mexico, Nevada

SAN JUAN CAPISTRANO, Calif. — Cal Olson Golf Architects is busy with two golf courses under construction — Sonoma Ranch in Las Cruces, N.M., and Mountain Falls in Pahrump, Nev. — while Diamond Hill in Fontana is expected to start construction in October. Sierra Star Resort in Mammoth Lakes was completed last year and will open this summer. Olson is also remodeling El Dorado Golf Course in Long Beach, Calif., by adding and improving on the water features and bunkers and extending the yardage.



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Sunriver

Continued from page 3

entertaining, welcoming course."

Fought added: "I've spent a great deal of time studying and admiring the bunker designs of some of the classic courses like [Ross-designed] Pinehurst #2. At the Meadows I've been able to employ some of this traditional styling into bunker shaping and placement."

Of the three golf layouts available to Sunriver Resort guests, the Meadows is the most accessible to less-experienced players. The Woodlands, designed by Robert Trent Jones Jr., and Crosswater, Oregon's top-rated golf course and one of *Golf Digest's* America's Greatest 100 courses, offer a stiffer challenge to recreational golfers.

Births, birthdays and (golf) revivals

As the century clock clicks toward 2000, people at a number of American golf courses are dusting off their archives and celebrating 75th or 100th anniversaries. In many cases they are emptying part of their treasuries to perform lifts and tucks on the golf courses, smoothing or removing the wrinkles of old age. In some instances club members are awakening, or re-awakening, to the fact that their courses were designed by one of the famous architects of the early 1900s — so they are buffing shiny badges proclaiming that theirs was created by A.W. Tillinghast, or Alister Mackenzie, or another luminary.

Course renovation has for a long time been big business. But with these birthday celebrations — and normal “keeping up with the Joneses” remodeling everywhere — golf course renovations and restorations have reached new dimensions.

And all this at a time when record numbers of brand spanking new courses are coming on line. It is exciting times — for both the classical design devotees and those who love the modern-era courses.

Some folks, like me, fit in both those categories and are rejoicing as we tune up on new and old, links and parkland. And here in Maine — like the rest of the country — we are enjoying a rebirth of some classic courses as well as some terrific new ones (see page 25).

Last year, bad weather from California (El Nino) to Texas (drought followed by flooding) to Florida (hurricanes galore) dampened golfer participation, flattening out the game's growth numbers. So far this year, most of the nation has been blessed with good weather — a key to the success of these new courses as well as those that have undergone birthday facelifts for the new millennium.

It looks like a grand future for the grand old game. Encourage your parents, encourage your kids, encourage your spouse to take up golf and discover the creativity of the Donald Rosses and Alister Mackenzies who have gone on before us, and the Tom Fazios and Rees Joneses who are here with us today. If your game is struggling, and whose isn't, just relax and key in on enjoying God's creation in which your favorite golf course is set. And have a great rest-of-the-season.

•••

Greg Searle, longtime superintendent at Cape Arundel Golf Course which was opened in 1921, was reflecting on longer playing seasons and higher golfer expectations. “It's certainly a lot different in 1999 than it was in 1921,” he said. “In 1921, people golfed in July and August. Now it's April 15 to Nov. 1.”

Meanwhile, he said, “Golfers demand a higher standard, earlier, every year. If it's February and there's no snow on the ground, they want perfect playing conditions.”

Shoulder season? What's that?

•••

What a marketing ploy! Softspikes, Inc., the plastic golf cleat manufacturer, in May announced “the designation of June as National Cleat Changing Month.” Highlighting the program was a retail and consumer promotion that will send some golfer to the 1999 Ryder Cup matches.

Now that June is past, I can mention this blatant strategy to sell a certain product. It's like Hallmark Cards declaring Grandparents Day or National Secretaries Day. Could anyone believe card sales would not take a leap?

Continued on next page



Mark Leslie
editor

Quality product, customer service alive and well

Providing a quality product and first-rate customer service. That could be the credo of just about every golf course management firm in the world. Hardly a press release passes through this office without the words quality and customer service appearing somewhere in the text.

Management firms do a great job providing these two essential ingredients. And they have the public relations/marketing firms to remind us that they do.

But as editors, who sift through piles of press releases and answer numerous phone calls from marketing/PR firms, we sometimes forget there are many family-owned operations out there that daily strive to “exceed their customers' expectations.” Unfortunately, they don't have the PR firms to remind us.

Take Franklin Greens Golf & Country Club in Franklin, N.H., which I had the pleasure of playing over the 4th of July weekend. Those who have played the nine-hole, John Van Kleek/Wayne Stiles-designed layout may know the course by another name, Mojalaki Country Club. Gil and Lori Lambert, who purchased the property 18 months ago, changed the name to signify the new ownership.

The course plays along a ridge near the headwaters of the Merrimack River in the Granite State's Lakes Region. Opened in 1920, it still boasts the deceptive bunkering and subtle green contours Van Kleek and Stiles designed. But like any 80-year-old, Mojalaki/Franklin Greens was beginning to show signs of age.

“It had been sadly neglected for a long time,” Gil Lambert said.

The Lamberts — who operated a motorcycle business on the New Hampshire/Massachusetts border for 17 years prior to entering the golf industry — paid \$800,000 for the property. They invested another \$400,000 in clubhouse/course upgrades and \$600,000 on the nine-hole, George Sargent-designed addition that will open this fall.

“You always see someone out here working on a project,” noted one golfer I played with.

“The playing conditions just keep getting better,” remarked another.

A quality product.

There was no attendant to take my golf bag out of the trunk or valet to park my car at Franklin Greens, things I might expect at a \$100 green fee course, but plan to forego for the \$25 at a Franklin Greens.

So, while customer service may not “begin when you drive through the entrance,” it certainly did surface when I walked into the pro shop. The woman behind the register thanked me for coming to play; the mower operators stopped their machines while I struck my shots; the grill cook came by to ask how my fries tasted; and the woman behind the register offered directions that shaved five miles off my return trip home.

“They are just naturally friendly,” Lambert said when asked if he stressed customer service with his employees. “We treat our employees well and they treat our customers well.”

Customer service.

Management firms are to be commended for raising golfers' awareness and expectations for a quality product and customer service. They, and the many family-owned courses that still operate throughout the United States and Canada, are to be commended for following through.



Peter Blais
managing editor

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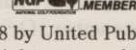
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LETTER TO THE EDITOR

GEESE POLICE OF ANOTHER KIND

To the editor:

I thoroughly enjoyed reading your article in the June 1999 issue of *Golf Course News* about border collies. I found the article to be very interesting. My golf course is Manhattan Woods Golf Club, located in West Nyack, N.Y., and we use a different breed of dog to control our geese problem. I would like to introduce to you the jindo breed. These dogs are from Korea, but the breed is originally from Mongolia.

They are used for herding, guarding flocks and as watch dogs.



One of Ken Lee's jindo dogs.

The dogs require no training, but act on natural instinct to chase geese, even in the water. We currently have three dogs on the property and they have completely removed the geese from the course.

Two of the dogs are females and will be used for breeding purposes soon.

If anyone is interested in this breed I invite them to come and see the dogs and Manhattan Woods.

Ken K. Lee, owner
Manhattan Woods Golf Club
West Nyack, N.Y.

Highest of technology coming to irrigation systems

By LARRY RODGERS

Many of us remember Hal 2000 from the film "2001: A Space Odyssey." In the end the computer takes over. In the golf irrigation business many people have turned over critical data processing to the central controller, but far more can be expected.

Today we have many interactive tools we use daily, and have used for many years. One is the alarm clock: This electronic device keeps the time of day and, at a pre-set time, activates an alarm that alerts you.

Tomorrow's tools are in use today in many other industries and will make their way to our industry soon. One term we will need to understand is "Real Time." Real Time is about exceptional responsiveness. As Real Time managers we must respond to changing circumstances in the smallest timeframe.

In today's competitive golf environment, superintendents' time is being consumed by many other management activities and the time spent on the course is diminishing. Real Time technology will

help the entire organization monitor, adapt, initiate, verify, and react to changing environmental conditions.

One type of Real Time/Interactive world we can look forward to comes from space. This technology is called "Space Imaging" or "Remote Sensing." There are companies developing a private satellite network that will offer "pictures" that were once reserved for spy agencies, to anyone with a desktop PC and a checkbook.

Soon it will be possible to call up the satellite vendor and order a high-resolution image and spectrum image of the golf course. This data is downloaded to the central controller. The image will show the turf stress. If this image is in "Real Time" you will have access to data never available before.

Today's central computer manufacturing companies have been promising interactive control for two years and are very close to having it available. The systems available today have a ways to go before they are fully up to "Industrial Standards."

In a typical industrial manufacturing plant, many of the processes are automated and controlled in Real Time by an interactive central computer.



Larry Rodgers

Imagine having the irrigation control system in Real Time communication with the pump station. In this environment, the central computer would be monitoring the pump station and field pressure transducers. As the pump station tops out with performance, the central computer turns on or off the proper number of sprinklers to match the pump performance all night.

In the real world, a Real Time interactive control system would sense a loss of pump performance such as a clogged filter, or motor failure, and reset the irrigation immediately to match the revised pump performance.

Soon it will become commonplace to see the irrigation technician with a Real Time, GPS-based, virtual map on a portable computer in the vehicle. With this type of computing power the irrigator can send any programming changes from the field computer image to the central computer via wireless communication.

Please keep in mind that this is my look at a few of the potential items that could affect our business and very few, if any, are currently being used. If someone can imagine it, someone can build it.

Leslie comment

Continued from previous page

So, here's my advice to you manufacturer types: Name your own week-month-year, declare it is "to raise consumer awareness about the importance of (your product name here)," and try to hide the smirk.

•••

Presidential candidates are heating up their campaigns (or dropping out) and it's interesting to probe the mind of the one man I know (and probably the only one in history) who has destroyed a putting green in his backyard — Vice President Al Gore. His book, *Earth in the Balance*, which we reviewed here when it was published several years ago, reveals some of the oddities filling this man's brain. Just to confound those who might support Mr. Gore, here is one quote from page 260:

"... the prevailing ideology of belief in prehistoric Europe and much of the world was based on the worship of a single earth goddess, who was assumed to be the fount of all life and who radiated harmony among all living things.... the last vestige of organized goddess worship was eliminated by Christianity as late as the fifteenth century.... it seems obvious that a better understanding of [goddess worship] could offer us new insights into the nature of the human experience."

Larry Rodgers is president of Larry Rodgers Design Group, an irrigation consultancy firm based in Lakewood, Colo. He can be reached at 303-989-6995.

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BRIEFS



TURF DIAGNOSTICS PROMOTES DIXON

OLATHE, Kan. — Turf Diagnostics and Design, Inc. (TD&D) has announced that Charles "Chuck" Dixon has been promoted to president and Sam Ferro to vice president. Dixon, a co-founder of TD&D and previously the corporation's vice president, will be responsible for the overall direction of company and oversight of the TD&D's technical operations. Ferro, who was the business manager, will be in charge of the company's financial, marketing and personnel efforts.

OTF PLANS RESEARCH FUND-RAISER

ZANESVILLE, Ohio — The Ohio Turfgrass Foundation (OTF) will hold its annual golf outing Sept. 27 at Eaglesticks Golf Club here. The annual OTF outing raises money to promote the turfgrass industry in Ohio through research, education and matters of policy. In 1998, more than \$17,000 raised from the outing went to research grants and student scholarships in Ohio.

Netwal running the grow-in race at Deere Run

MOLINE, Ill. — Energized by late-spring conditioning, the Tournament Players Course at Deere Run came a long way toward fulfilling its dream of being a world-class golf course that will serve as the site of the John Deere Classic in the year 2000 and beyond.

"I look at the photos from just a month ago and I'm amazed at how much progress has been made in just a short time," said John Netwal, who, as course superintendent, is responsible for the playing conditions.



"Some of the thin areas of grass on the front nine have thickened up," Netwal said. "We seeded the back nine tees in early June and we're preparing the back nine greens for seeding. The back nine fairways are starting to germinate. If the weather gets nice, we should be moving right along."

Kym Hougham, tournament director for the John Deere Classic, said he is looking forward to conducting the championship at Deere Run next year.

"All the feedback I have received from



The 5th at TPC at Deere Run, where grow-in continues under John Netwal (r).



Steven Trusky photo

people who have toured the course has been extremely positive," Hougham said. "We think the players are going to love it."

Now that the front nine has grown in despite an unusually wet spring, Netwal

Continued on page 13

Fixing damage from course vandalism

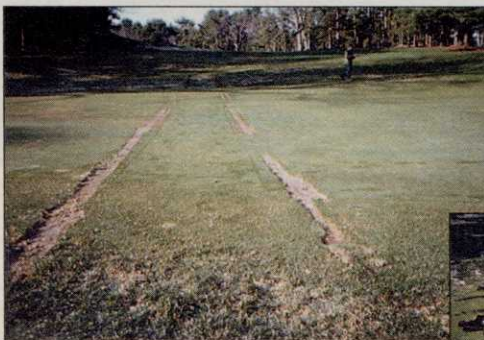
By PAT LEWIS

The situation is not unfamiliar to golf course superintendents. On a dark night and with nothing to otherwise occupy them, vandals decide to drive their car over the greens on a local golf course.

The challenge to the superintendent is a difficult one: How do you match the re-sodded areas with the rest of the green?

Here's a step-by-step solution:

- 1 Set the sod cutter to a depth of about 3/4 of an inch to an inch.
- 2 Strip the tire mark areas and remove the pieces of sod for disposal in your compost pile. Neatly square off the ends and keep these end areas at a depth even with the sod cutter depth.
- 3 Select a long, healthy patch of sod along the edge of the clean-up lap. After measuring the length required for repair, strip this sod out with the sod cutter depth being the same as when you started. Square off the ends in the same manner as in step 2.
- 4 Lay this new sod in the awaiting areas, then topdress.
- 5 Maintaining the sod cutter at the original depth, strip a long, healthy patch of sod along the outside edge of the apron (be sure to measure first). Lay this sod in the awaiting clean-up lap of the green, then topdress it.
- 6 The final awaiting area can be either seeded or sodded with purchased bentgrass or from your own nursery. If seeding, neatly staple down some type of greens blanket fabric or other breathable material to make it noticeable for the golfers to stay off it until it germinates. (Re-



Above, vandals "lay rubber" — only, on a golf course it is "lay turf." Right, a crew cuts a long patch of sod along the edge of the mower's "cleanup" lap. Bottom, that sod replaces the area destroyed by vandals, maintaining the same type of grass variety on the course.

A step-by-step approach to resodding areas damaged by tire tracks



ON THE GREEN

Former superintendent at Portland (Maine) Country Club and president of the Maine Golf Course Superintendents Association, Pat Lewis is co-owner of Lewis Brothers Golf Course and Property Services Inc. in Falmouth, Maine. This article was reprinted with permission from the Maine Golf Course Superintendents Association's Mainly Green newsletter.

move the cover when the grass begins to poke through it.)

7 It will be necessary to mark a new temporary edge for the clean-up lap of the green along the area that now has a higher cut of grass than it used to.

The superintendent's patience — and immediate communication to all potential greens mowing operators — will hopefully insure that this area does not get scalped.

The focus should be to define the new edge as it will be a few months before you can safely begin lowering the height to establish the original clean-up lap edge.

8 Water all sodded areas at least twice a day until they are rooted and continue to topdress these areas once a week until all is healed.

9 Because you now have, in theory, the same grass varieties in your damaged areas as the rest of the green, the tire tracks will match the rest of the green.



Assistant supers', turf students' learning experiences are everywhere

By TERRY BUCHEN

WILLIAMSBURG, Va. — In all of my vast travels around North America, I've seen an ever-changing new trend, especially during the past three years: Assistant superintendents and turf students are only making job applications for open positions at high-end private clubs and high-end public-access courses.

Why are these future stars of superintendency going to work only for the "household name" clubs and courses?

In an unofficial survey of many of these recent turfgrass college students and graduates, the vast majority said that, first and foremost, they want a "big-name golf course" on their resumé.

My next question to them is how much do they expect to learn at some of these famous courses. The standard answer that they want to learn a lot.

In the meantime, after working at some of the better clubs and courses nationwide and in Canada, countless turf students admit that many other students were working at many of these courses, and therefore their learning experience was nowhere near their expectations. It still helped to have the respected course on their resumé, but the learning experience was a disappointment.

I truly believe there is more and more of an epidemic of turf students and subsequent assistant superintendents who will not pursue working at anything less than a famous venue and it seems that it is only going to get worse. Some of these former students have told me they learned a lot at a famous club but their main function all summer long was to do one task and do it well — from raking bunkers to mowing greens.

It is very true that having the famous entity on their resumé will definitely help in their future job searches. But it is well known that even with the best job references, all future superintendents still have to know what they are doing. If not, it will quickly catch up to them.

When I was a superintendent, I felt many times that I did not spend enough time with our turf students, so I started a Turf Club in the early 1990s. It all boils down to the old cliché that a person will only get as much out of a job experience as they are willing to put into it. This is very true, but sometimes there are so many other turf students working at a venue that they simply cannot learn as much as the superintendent wants to

teach them, or that they want to learn.

One way to counteract this situation is to work for the vast majority of clubs and courses that are not the top of the list. Here, they can learn a lot by working for the many other top superintendents who may not have the big-name recognition

but are very good at what they do and are excellent teachers and mentors.

Further unscientific research has brought forward about the many turf students and assistants who are currently

SAVVY SUPERINTENDENT



working for, or who have worked for, some of the lower- to medium-level clubs and lower- to medium-level public-access courses who have had a wonderful, fully satisfying experience.

Many times they are the sole turf student, so they can have more personalized attention and are given much more responsibility and authority.

I have talked with many superintendent colleagues during the past three years who cannot find any turf

Continued on next page

Nothing looks better than a course



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Netwal prepares Deere Run for opening, Tour

Continued from page 11
said his next challenge is to make sure the course survives the inevitable heat and humidity of summer without losing ground. "Turfgrass doesn't grow in hot, humid months," said the certified golf course superintendent. "The best growing seasons are spring and fall. We just hang on

in the summer. It's a challenge even on mature courses." Two wet springs in a row in the Quad Cities have been the biggest challenge to the growing schedule, according to Netwal. But the PGA Tour construction staff has worked diligently to ensure that the TPC at Deere Run will be ready for tour-

namment play by the year 2000. Sod contractors from Michigan worked through last December laying sod. Erosion areas have been re-seeded and re-sodded in order to keep the project on schedule, Netwal said. Extra drain basins have been added on several holes to handle water run-off. Meanwhile, the spring rain

"The drought we were hoping for hasn't arrived yet. As soon as the drought arrives, we'll be praying for rain."

— John Netwal

was like a house guest who doesn't know when to go home. And it was still hanging around this summer. "We've been pummeled [with

rain] the last week and a half," Netwal said in June. "We got one inch in 15 minutes the other day and we've had two other downpours that were worse. It causes erosion on newly seeded areas and it undermined some sod in some areas. But that always happens in construction. It's not anything out of the ordinary."

Netwal has little choice but to remain stoic in the face of such uncontrollable weather uncertainties, so he goes with the flow and maintains a cool, just-dry-enough sense of humor consistent with his weather preferences.

"The drought we were hoping for hasn't arrived yet," Netwal said. "As soon as the drought arrives, we'll be praying for rain."

The construction of the TPC at Deere Run is part of Deere & Co.'s nine-year title sponsorship agreement of the PGA Tour's long-standing Quad City tournament. Deere gave the Tour 385 acres of rolling, wooded property on the Rock River to build the course. The Tour will own and operate the facility as part of its TPC network. Deere Run is being designed by D.A. Weibring, winner of three Quad City PGA events, and Chris Gray of the Tour's design department.

Savvy Super

Continued from previous page
students or assistants to work for them because they are not at a "household name" course. This is very frightening and very sad for our profession's future. I suggest that students intern with the lower- to medium-level clubs with knowledgeable superintendents. Try it and you and your career will really like it.

GCSAA BACKS 1ST TEE

LAWRENCE, Kan. — The Golf Course Superintendents Association of America (GCSAA) and its members are involved in a number of projects related to The First Tee Program, an initiative to create facilities and programs that make golf more affordable and accessible, with a special emphasis on youths. As part of GCSAA's 1999 Golf Championship, GCSAA and The Toro Co. teamed up to benefit The First Tee facilities being developed across the United States. In the previous two years of linking the golf championship to charitable efforts to benefit junior golf organizations, GCSAA members donated more than 225 golf bags, 7,000 golf balls, 450 golf clubs and \$1,700.

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Biggers assumes superintendent post at Wintergreen Resort

WINTERGREEN, Va. — Wintergreen Resort has named Fred Biggers of Greenville, S.C., its new golf superintendent, replacing Bob Ruff, a 20-year employee who has taken a similar position at Two Rivers Golf Club in



Fred Biggers

Williamsburg.

Biggers, 42, who will supervise maintenance of 45 holes at Wintergreen, including the resort's Stoney Creek and Devils Knob golf courses, holds a bachelor's degree in turfgrass management

from Clemson University. He has experience in managing resort and private courses dating to 1978, including Pinehurst Country Club and Alamance Country Club in North Carolina and, most recently, Greenville Country Club in South Carolina. Biggers also has specific experience managing 45 holes of golf,

which he did as director of greens and grounds in Greenville, including management of that club's highly ranked Chanticleer course.

Biggers is a past president of the Carolina Golf Course Superintendents Association and was the first president of the South Carolina Turfgrass Foundation.



WHERE THEY'RE GOING

MAGNOLIA, Texas — PGA Tour professional David Ogrin and David Goff, principals of Quality Golf Partners, have hired **Randy L. Broyles** as course superintendent at High Meadow Ranch Golf Club here.

Broyles has more than 21 years experience,

most recently as superintendent with Wind Rose Golf Club. He holds a bachelor's



Randy Broyles

degree in agronomy from Texas A&M University and is a Class A member of South Texas Golf Course Superintendent Association, Golf Course Superintendents Association of America and Lone Star Golf Course Superintendents Association.

High Meadow Ranch is an 18-hole, daily-fee course featuring more than 7,400 yards of rolling terrain. It is the first design work for Ogrin, who is collaborating with Nugent Golf Associates.

•••

ROANOKE, Va. — Roanoke Country Club, which is celebrating its 100th year anniversary in 1999, has appointed **Daniel M. Wheeler** its new grounds and golf course superintendent. At the same time, the club has awarded a contract with Quality Grassing Services, Inc. of Lithia, Fla., to perform the a three-year renovation plan.

Wheeler graduated cum laude from the Virginia Polytechnic Institute and State University in 1993, receiving an associate degree in agronomics. For the past seven years he was associated with the Country Club of Virginia. Since 1995, he was superintendent at CCVA's West-hampton course.

•••

CARMEL, Calif. — **Chad Scott** has been named superintendent at Carmel Valley Ranch.

Scott has more than 11 years experience overseeing course construction, maintenance and management at such courses as Castle Pines Golf Club in Colorado and Sable Creek Golf Course and Congress Lake Country Club in Ohio.

During his time at Carmel Valley Ranch, Scott has been involved in incorporation of the Audubon Cooperative Sanctuary System program, supervision of 20 staff members and extensive irrigation and drainage improvements.

Scott is a graduate of Ohio State University, with an associate of applied science degree in turfgrass management.



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Bunker rake blower used successfully for greens root aeration

By TERRY BUCHEN

NAPLES, Fla. — A new portable turf aeration blower system can supply oxygen to the root zone of putting greens, suck water out of a green's drainage pipes, and even blow away surface debris in sand bunkers.

Superintendent Darren Davis of Olde Florida Golf Club here reports the versatile blower is "another great tool in our golf course maintenance equipment arsenal."

Davis has two of the self-contained blower units, which can be mounted easily onto a turf truckster bed, trailer, tractor three-point hitch, or on the back of a riding bunker rake.

The blower, he said, can move a significant amount of air through the perforated drainage piping of a U.S. Golf Association-spec putting green. This influx of oxygen to the root zone removes gases, which helps stimulate root growth and improve soil quality.

"To keep the air volume (5,000 cfm - 175 mph) on each green high enough to get our desired results," Davis said, "we isolate our greens' drainage system after it exits the green, so any excess air does not enter the surrounding drainage systems."

Olde Florida has a buried vault setup on the 15th and 18th greens, with green-colored removable plastic covers. A 4-inch-diameter slide valve is shut off during the blowing operation so no air can escape.

Next to the slide valve is a 4-inch-diameter female hose fitting that is connected to the green's subsurface drainage piping.

The blower has a 4- or 6-inch-diameter flexible ADS-type non-perforated discharge hose that is easily connected in the vault, with or without a reducer, to begin the blowing operation. It is hooked up to the blower by a 4-inch quick connect cam lock male (plastic) and female (aluminum) apparatus.

"When we wish to remove excess



Olde Florida Golf Club demonstrates the effective use of existing equipment with a separate engine-powered blower. The blower can be used elsewhere, such as to blow debris from inside a bunker.

Terry Buchen photos

water from the green's subsurface drainage piping, we simply move the 4-inch-diameter hose to the cam lock quick connect in the center of the fan housing to provide a sucking action," Davis said. "The excess water proceeds rapidly through the blower discharge outlet."

Mounted on a riding bunker rake, the blowers remove surface debris from sand bunkers prior to them being mechanically raked.

When used on the rake, the blower's electrical hookup connects to the bunker rake's battery and its fuel hookup is connected to the bunker rake's fuel tank.

When the blower is mounted to a turf truckster bed, trailer or tractor three-point hitch, there usually is a separate fuel tank and battery to operate the engine starter.

"We have been blowing our greens' subsurfaces for five years now, giving each green one to two hours per day when needed, depending on the local climatic conditions," Davis said. "We



are fortunate to be able to blow during play because our vaults are far enough away from our greens for a mostly quiet operation."

Davis is involved in construction of the neighboring Golf Club of the Everglades that Rees Jones is designing, and said: "We are installing vaults to hook up blowers on all 18 greens, the putting green and chipping green there."

Davis said the manufacturer of the

self-contained blower also makes a new electrically operated low-pressure system that can produce heated and cooled air.

Specifications include an air volume of 1,000 cfm, dual mode sucking and blowing, two 3-horsepower 230-volt motors with a power draw of 13 amps full load with a 60-amp start, quiet operation at 51 dba at 30 feet, and 4- or 6-inch outlets with quick disconnect hoses.

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Troon certified by Audubon

SCOTTSDALE, Ariz. Troon Golf and Country Club has been designated a Certified Audubon Cooperative Sanctuary by the Audubon Cooperative Sanctuary System (ACSS). Troon is the third course in Arizona and the 183rd in the world to receive this honor.

In 1998, Troon joined the Audubon Cooperative Sanctuary Program for Golf Courses, which provides information and guidance to golf courses to help them preserve and enhance wildlife habitat and protect natural resources.

"Troon Golf and Country Club 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.

"Over a year ago, Mark Clark, my golf course superintendent, and Eric Watson, our assistant superintendent, and I attended an Audubon International seminar sponsored by the local golf course superintendents' association," said General Manager John Reyhones. "We felt that a program such as the sanctuary program would be beneficial to wildlife, then conservation, our community and members of the club. Both Mark and Eric are to be congratulated for a job well done."

Florida conclave set in August

GAINESVILLE, Fla. — The Florida Turfgrass Association's Conference and Show, "It's Time To Experience the Connection," will be held Aug. 9-12 on the campus of The University of Florida, Gainesville.

This year's conference offers various educational opportunities to professionals in the Florida turf industry. Included are 17 concurrent educational sessions, two GCSAA "Etonic" seminars, 16 innovative workshops, and an update of eight Florida research projects. Tours will be given of the university athletic fields and the research facilities, including Envirotron that was funded in part by the Florida Turfgrass Research Foundation and is maintained and operated through funds raised by the FTRF and the Seven Rivers Chapter of the Florida Golf Course Superintendents.

Other special events include the "Largest Warm Season Turf Show" in the Southeast, featuring more than 185 companies in 290 booths. New for the first time is The Social Hours and Awards Dinner combination taking place on Touchdown Terrace in Ben Hill Griffin Stadium. Dr. John Lombardi, president of the University of Florida, will be the keynote speaker for the Awards Dinner. Also being honored that evening will be Joseph Konwinski, the first president of the Florida Turfgrass Association in 1952.

CC fertility on a public budget

Continued from page 1

game. Any time a guess or any decision is made without all the information in order, a likely result is economic impact.

In short, turfgrass managers need to make sure that every pound of fertility product purchased is giving the best possible result.

Less expensive does not mean cheap. In fact, significant enhancement to fertility programming and economic impact does not always come from simply buying less or seeking inferior products.

Asking a few simple questions can lead to the beginnings of a plan. These questions can be broken down into the following categories and some sample questions:

How You Buy: Are you seeking competitive bids when possible? Are you buying in as much quantity as possible? Are you taking advantage of any discount programs for early- or late-season purchasing?

Who You Buy From: Are you competitive bidding when possible? Are you buying based on true or perceived quality of a line of products? Do you feel you need to use a turfgrass-oriented distributor, or will an agricultural fertilizer dealer meet your needs? Is transportation a significant price impact?

What You Buy: Do you need the technical experience of a distributor or line of products? Do you prefer 50-pound bags, bulk bags, bulk tenders or other means of storage and delivery? Do you desire to look towards composts and other organic-type fertilizers? Do you need slow-release products, dormant feeding or other special fertilization techniques? Do you need mineral products such as lime, gypsum, sulfate of potash, or are you seeking NPK-type fertilizers?

What You Need: Do you regularly use soil testing and other analytical tools? Do you know how to use analysis to track success and failure? Are you running mini-research and trials on your specific situation to compare products, application timing, and fertilization techniques? Do you know the different requirements of fertility for various areas of the golf course? Do you know the differences in cation exchange capacity (CEC)

from greens to tees to fairways? How does water quality impact your situation?

When You Can Apply: Do you have a schedule that allows you to make frequent applications? Do you need to have custom blends made to increase the number of units of material applied for your situation? Are

early- and late-season fertilization opportunities available? Can you water in a morning application, or do you need to apply late in the day to water in? Could fertigation help enhance the opportunity to keep fertility up on a busy course?

All of these kinds of questions can go a long way in helping to check if you are using as much of your resources as possible.

A necessary chore in fertility

When purchasing well ahead of schedule with some flexibility on delivery time, cost saving is usual.

management is the issue of dealing with the equation of price and service. A large impact on fertilizer budgets comes from the

overhead that a distributor or supplier carries. Technical support, while often sadly one-sided in relation to a product line, can be a benefit. But it will always have to be paid for in the price of the product.

Delivery efficiency and method also impact price, as the supplier who can have 10 tons of a fertilizer delivered by forklift the day after it is ordered is likely

Continued on next page

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David Wilber is a consulting agronomist and owner of Wilber Turf and Soil Services in Rocklin, Calif. He works with over 120 courses and clubs in the United States, Scotland and the Caribbean. He can be reached by phone at 916-630-7600 or e-mail at dave@soil.com.

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Country club-style fertility

Continued from previous page
to be charging for that kind of service. If quick service is really needed it may be of value.

When purchasing well ahead of schedule with some flexibility on delivery time, cost saving is usual. Superintendents must seek out their own landing area in the equation of price and service and know that there is a

give-and-take in regards to cost.

Planning the fertilization program is nearly impossible to do without analytical information. Fertilizer suppliers commonly offer soil testing. Superintendents may seek a more independent viewpoint from an independent lab.

Common fuel for the "Private Clubs Can Afford It and Public

Courses Can't" myth is that many private clubs do seek independent analytical services through a qualified soil consultant or other independent means.

Most superintendents report that the savings from this type of consulting advice are significant.

Information from analysis is often found confusing. It should never be a source of anything but answers, and superinten-



Dave Wilber photo

Soil amendments such as calcium from lime can be applied to golf courses. Often, larger quantities are needed which require the use of equipment often used in the agricultural environment.



dents who are left confused by their current testing should recognize this as a need to change. Testing should help in planning preparations, point out change brought on by applications, and monitor progress toward goals. Most importantly, good analytical information should eliminate guesswork.

BEYOND NPK

Balancing soil nutrients through amending means that purchasing must go beyond NPK-type fertilizers. With no doubt, nitrogen, phosphorus and potassium are very important in both agronomics and economics.

However, minerals such as calcium, magnesium, iron and manganese are extremely important in overall soil performance.

Purchasing these materials may bring the superintendent to new suppliers.

Frequently these suppliers do a good deal of business in production agriculture. Nevertheless, mineral is mineral, regardless of intended use. Prudence in selection for high-quality materials will still yield good prices for soil amendments.

Many times superintendents who are watching their budgets tell me they can not afford to "go organic." On the outside, this is true if the comparison is made between the standard NPK fertilizers and organics based on cost of nitrogen alone.

Looking at products this way may seem to make sense and look like an apples-to-apples view. In most cases, the overlooked issue in looking at the cost of an organic material is the value of carbon as a necessary element for soil performance.

Trials with various composts, granular organic fertilizers, ocean-borne materials and humates frequently show the enhancement of NPK fertilizers through their role in soil conditioning.

Many tight budgets will get great results adding carbon into the fertilization program. The key is remembering that it is not always the product line but the process of soil amending and conditioning.

As a consultant, I work to evaluate each situation from both an agronomic and economic standpoint. Taking a close look

Continued on page 20

More (air) power to you: the first step in getting 'clean'

By TERRY BUCHEN

NAPLES, Fla. — Superintendent Darren J. Davis has started a recent standard operating procedure at Olde Florida Golf Club here, having his crews pre-cleaning all the maintenance equipment with high-pressure air hoses prior

to the traditional cleaning with water.

"We found that using high-pressure air hoses first does a much better job of pre-cleaning our equipment prior to it being



cleaned with a high-pressure water hose and nozzle," Davis said. "Plus, cleaning up dry grass clippings is much easier and has less of an odor than wet clippings.

Olde Florida installed two

air hose reels adjacent to the service road leading into the maintenance complex and an additional one at the equipment wash rack. This second station helps relieve congestion at the end of the work day, Davis said.

Davis chose the Retracta Retractable Hose Reel



Terry Buchen photo

A high-pressure air station at Olde Florida Golf Course.

that has 50 feet of 3/8-inch high-pressure air hose coiled inside. It also has a blow gun with an 18-inch long, 1/8-inch diameter stainless steel wand on the end. The red-colored high-impact plastic hose reel housing swivels from side to side and is attached to the air line with a 3/8-inch black high pressure hose, with a quick coupler connection.

The hose reel is mounted on a wolmanized pressure-treated 4-by-4 post that is 8 feet long. Two feet of the post was installed underground using two bags of Sacrete concrete, said equipment manager Kim Ellis.

Hanging on the front of the 4-by-4 post is an orange-colored safety sign, in both English and Spanish, stating: "Warning — Eye Protection Required In This Area," with a Grainger Plexiglass Safety Glasses Holder for each employee to use.

Country club fertility

Continued from page 19

often reveals purchasing that influences both areas in a negative way. Some top examples I see include:

- √ Using often-expensive slow-release nitrogen incorrectly or when not needed at all can be very costly and easily corrected.

- √ Many so-called "biological" products are not much more than small amounts of mineral, humic material and carbohydrates that are diluted to the point of being highly ineffective.

- √ Selection of a fertilizer blend that is not exactly what is needed instead of shopping around leads to unneeded expense.

Agronomic and economic selection of fertility programming is not just the realm of the club that has a great deal of money to spend.

Public facilities can use the same techniques to plan, choose and purchase a better fertility program. This is a form of stewardship every superintendent can participate in regardless of budget status.



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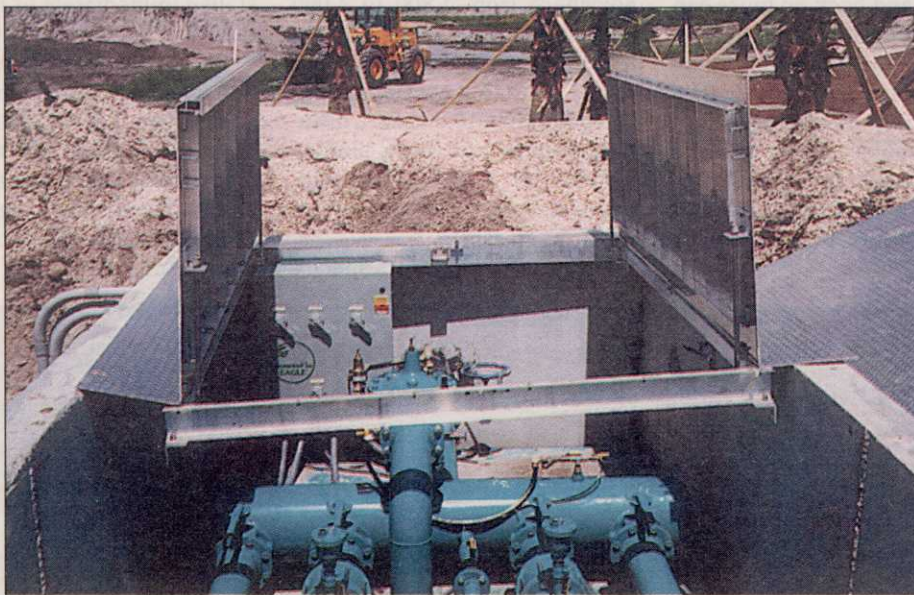
IRRIGATION

Buried irrigation pump stations may be an answer

Golf course pumping stations are usually located next to a lake that supplies it water. In most cases, a spot can be found around the lake that satisfies the technical requirements without detracting from the beauty of the golf course. However, some golf courses have home and/or "in play" areas bordering all sides of the lake. Finding a good place to put a pumping station can be nearly impossible on these courses.

One such golf course is the Bonaventure Country Club, managed by superintendent Steve Bernard, and located near Fort Lauderdale, Fla. At Bonaventure, the problem was compounded by the fact that the only practical location for the pump station is in full view of the clubhouse. Even worse, the spot was in between a green and a tee that are less than 100 feet apart. A pump house, no matter how small or beautiful, would stand out like a sore thumb at this location. Therefore, a conventional pumping station design was out of the question.

The solution for Bonaventure came from designer Hal Kilpatrick of Irrigation Services Group, in the form of an underground pumping system that uses submersible pumps and a remotely located variable-speed control panel. In addition, this pumping station actually sits inside the wet well. In other words, the wet well doubles as the underground vault. This



SyncroFlo Stealth Eagle pump station.

pump station is truly "out of sight."

This type of pumping station was an absolute necessity for the Bonaventure course, but the possibilities for it extended beyond this one special case. Any course can benefit from having its pumping station hidden from view. If we look at the irrigation system, the piping and sprinkler heads are underground while the satellite control boxes are above ground and set back out of the way. Why not do

the same thing with the pumping station?

The benefits include :

- The station mechanical package is hidden from view.
 - The station is very quiet — due to the submersible motors.
 - Less maintenance — no packing, motor oil, or grease to maintain.
 - There is no pump house to maintain.
- Kilpatrick has used this concept on a number of projects since with great suc-

Sanchez named Toro's Irritrol sales manager in Latin America

BLOOMINGTON, Minn.—The Irritrol Irrigation Products Division of The Toro Company has named Juan Carlos Sanchez as the Irritrol sales manager for Latin America.

Sanchez, who has experience in several facets of the irrigation business, now serves as a source of information, product support, and technical training for Irritrol distributors in Latin America. He will also establish new Irritrol distributorships to expand the brand's reach.

Sanchez earned a degree in architecture in Mexico and also attended Cuyamaca College in San Diego, where he studied irrigation design and horticulture. He is licensed as an architect in Mexico, and is licensed in Texas as an irrigator.

cess. The specific design and engineering work for Bonaventure is that of the manufacturer, SyncroFlo, Inc., of Norcross, Ga, which calls this new product the "Stealth Eagle."

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Fertigation

Continued from page 1

Gary Kaye, a principal with Golf Engineering Associates Inc., a Phoenix-based irrigation designer.

Filtration systems are becoming increasingly common, particularly in areas with water suffering from clam, mussel and suspended solids problems, Kaye said. These can clog the

gear-drive rotors on irrigation systems, which are much more sensitive and back up more easily than the old impact sprinklers.

"Filtration is becoming more and more necessary, rather than the luxury it used to be," Kaye said. "If you are going to buy a pump station for \$75,000 to \$100,000 minimum, an extra \$10,000 for filtration is not a big expense."

Pump stations in the Southwest and other arid areas pump anywhere from 1,800 to 4,000 gallons a minute, providing water to as many as 2,000 irrigation heads. With that cost, spending an additional \$10,000 for a filtration system and/or a similar amount for a fertigation/acid-injection system is a wise investment, Kaye said.

Irrigation consultants specify

pump stations with fittings that allow these systems to be installed immediately or in the future.

"When we order a pump station from a manufacturer," Kaye said, "we have them install threaded outlets and an extra piece of pipe, and then have them size the manifolding big enough to accommodate this extra equipment. Sometimes we order a

pump station with all these goodies right on there. Other times the client is not sure or doesn't have the money right away, so we have the manufacturer set up the pump station at the factory so that installing a filter or fertigation system in the future is a simple matter.

"You add an up-front cost of roughly \$1,000 to a pump station. But that prevents having to hire a welder to cut pipe later if you decide to add on a system. That can save you thousands of dollars. So, when you order a pump station, make sure to set it up to accommodate future fertigation, acid-injection and filtration systems."

Pump system manufacturers don't make these systems, but they will provide them if requested. "They are used to dealing with customers who want a turnkey package," Kaye said. "A typical course owner just wants to be able to call the pump manufacturer and say, 'Look, I need a pump station, we have dirty water, and I want fertigation.' He just wants the pump station sales person to provide it. He doesn't want to shop around for high-tech filters and fertigation systems."

"If you are a client and I'm your consultant, I'm going to set you up with a pump station so that, when I'm gone, you can come in later and add anything you may buy out there. You may get a good deal on a fertigation system from a manufacturer I never heard of. But I want to get the pump station set up so that a year or two later, it's easy for the client to plug in anything he wants."

Fertigation and acid-injection systems are generally located a short distance down the discharge line from the main pump, and generally in the same pump-station building. The filtration system, on the other hand, is generally an integral part of the pump station itself, Kaye said.

Some fertigation systems are relatively low-tech, allowing superintendents to "just turn the dial that lets you inject as much as you need," Kaye said. Other systems are very sophisticated. "They actually take a sampling of the water downstream and program the controllers to release more or less material at various times of the day," he added.

Older pumps can be retrofitted with fertigation systems. "It has to be worth it, though," Kaye said. "You don't want to take a 50-year-old pump that's on its way out and modify it for \$5,000 so you can do something."

When seeking pump-station bids, Kaye generally contacts two national companies and one or two local manufacturers.

Continued on next page
GOLF COURSE NEWS



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Rain Bird introduces confined-area rotor



TG-25 rotor

Rain Bird's Golf Division introduces the TG-25 rotor. Ideal for watering tees, greens or other confined areas on a golf course, the TG-25 is engineered to deliver high-quality performance at an affordable price.

The TG-25 features a 31- to 50-foot watering radius and uniform distribution across the entire distance of throw. A heavy-duty stainless steel retracting spring helps ensure a positive pop-down while the durable block-style case provides superior strength for golf applications.

Available in full- and part-circle models, the TG-25's tapered riser and pressure-activated wiper seal work in concert to protect the internal assembly from grit and debris — especially when it is used in non-potable water applications. The flush face nozzles also help keep debris from entering the internals.

The TG-25 is "top serviceable," meaning that the special rotor design eliminates the need to dig for repairs. A convenient snap ring at the top of the case also helps make servicing quick and easy.

Keeping problems from becoming major crises

IRVING, Texas — When Four Seasons Resort and Spa here needed a way to monitor lightning and pumping systems during the Byron Nelson Classic, it turned to HotWire, a new product from Flowtronex.

HotWire immediately alerts users to potential system problems. The device informs the user of a specific problem through a paging system easily programmed through Windows '95 or '98.

With HotWire, Four Seasons and other courses can monitor up to four specific functions, such as a power failure or a hard fault, by assigning each a one- to five-digit code. If a problem occurs, HotWire dials the pager service and punches in the code to appear on the end-user's pager.

At only 4 inches tall, 3 inches deep and 1 3/4 inch wide, HotWire fits inside a pump station control panel on even the smallest stations.

As HotWire beta tests continue, superintendents have become more excited about its widespread applications. Recent comments include:

Said one course manager, "We've

Other features of the new Rain Bird TG-25 rotor include:

- The water-lubricated gear drive designed to provide years of reliable service.



Flowtronex HotWire

been frustrated by these problems forever, and now you've given us a way to deal with them."

- A diffuser screw reducing the spray radius up to 25 percent without changing the nozzle.
- Interchangeable, color-coded nozzles that can be replaced without special tools.

Fertigation

Continued from previous page

Fertigation systems will inject anything a superintendent can apply with a sprayer (fertilizers, chemicals, pesticides, fungicides, etc.) onto the course. "But putting in a fertigation system doesn't mean getting rid of your sprayer or walk-behind spreader," Kaye said.

"There are some things the fertigation system just can't do. You will always need to put that special material on the green or tees by hand. But for things you put over the entire course regularly, fertigation is great."

Acid-injection systems are generally separate units requiring equipment that will not be corroded by acids.

Fertigation and acid-injection systems have evolved over the past 20 years from units placed atop a 50-gallon drum to very sophisticated items.

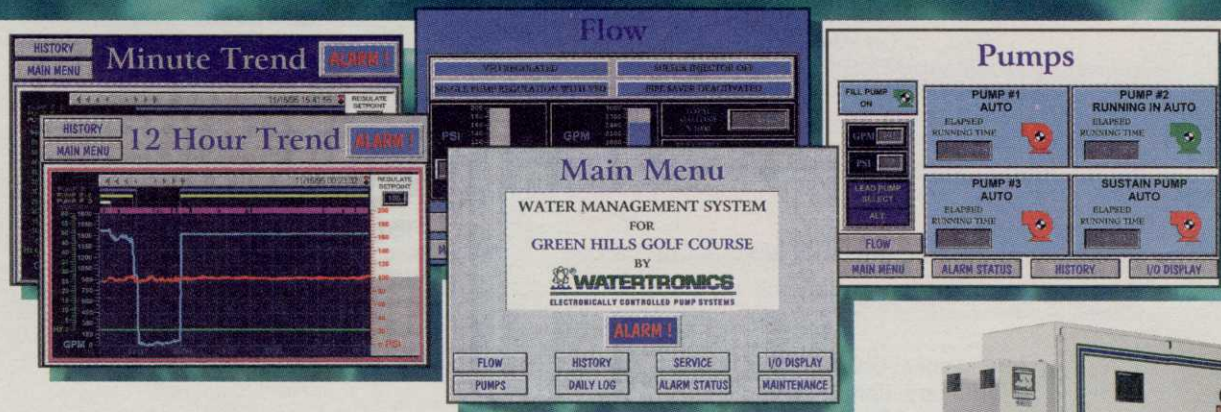
"Golfers' expectations are much higher than they used to be, especially in arid areas, where superintendents need all the help they can get," Kaye said. "And these things can help."

Different areas of the country have different needs. While many Southwest courses may require the entire filter/fertigation/acid-injection package, areas with high-quality water may not need filtration and/or acid-injection systems.

"You have to analyze each site individually," Kaye said.

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Something old ... something new



The 5th hole at The Ledges Golf Club in York, Maine.

Cape Arundel GC resurrecting Travis' design from 1921

By MARK LESLIE

KENNEBUNKPORT, Maine — Noted architect Walter Travis built Cape Arundel Golf Club here in 1921. George Herbert Walker kept the front nine open during World War II and grandson George Bush, the former president, calls it his home course. Its mere 5,869 yards has beaten up on such luminaries as England's John Major and Canada's Brian Mulroony, and on such golf greats as Arnold Palmer, Hale Irwin, Doug Sanders and Jose Marie Olazabel.

In July, Fred Couples and Davis Love III visited Bush and played Cape Arundel for a week, shooting a best of 65 in generally calm conditions on a site where winds can ravage a golf game.

"The old girl still holds up," remarked Bruce Hepner, a golf course architect with Tom Doak's Renaissance Golf Design in Traverse City, Mich., who is renovating Cape Arundel.

Calling the course "a great example of architecture," Hepner said it has "the two great variables in golf: putting surfaces and wind. Those are the great equalizers of golf. They will stabilize anybody."

Besides that, Hepner said: "There is quirky stuff here. But that's what I love about these old golf courses. There is character to them. Man has a hard time

The state of Maine is a microcosm of the entire country. New course construction... old course renovation and restoration... nine-hole additions from the Atlantic Ocean to the White Mountains. Great tracks like the Walter Travis-designed Cape Arundel Golf Club and Donald Ross-created Poland Spring Golf Club are being restored. Members at Penobscot Valley Country Club and Augusta Country Club — both Ross designs — are seriously considering restoration work. And at the same time new tracks, like Brad Booth-designed The Ledges Golf Club in York (at left), Dan Maples-designed Dunegrass in Old Orchard Beach (at right) and Clive Clark-created Belgrade Lakes (Maine) Golf Club, have opened.

This abundance of work is keeping course architects, builders and superintendents bustling from East Coast to West. Here we take a look at two particular projects in Maine.



Cape Arundel Golf Club's 18th green complex, with its bunkers and green restored to the way Walter Travis built it nearly 80 years ago.

making character. It's more difficult to make something look natural. Nature is random, very random."

Using old deeds, photographs, aerial photos, and Turn of the Tide magazine stories about Travis and his 16-man crew working here, Hepner has gone far in restoring the course's original greens and returning long-extinct bunkers.

Although not a lot is known about Travis' design philosophy — he was not a prolific writer like George Thomas or A.W. Tillinghast — Hepner said of the

three-time U.S. Amateur and one-time British Amateur champion: "Travis was a great player and one of the great putters of his time. He wrote a book about it, in fact. You see that here [in his design]. You have to have a short game here to be a player. Length has nothing to do with it. Equipment hasn't changed this course."

"We're doing fine brush-stroking," Hepner said, "getting the course back to the original elements of its design."

Foremost has been returning the

Continued on page 28



The 17th hole at Dunegrass in Old Orchard Beach, Maine.

Poland Spring GC reclaiming Ross' famous bunkering

By MARK LESLIE

POLAND SPRING, Maine — "Donald Ross was the father of golf architecture in the United States. He was the best. He still is one the best. But he's gone," says Dick Fahey. So Fahey, the course superintendent at Poland Spring Golf Club here, has shouldered the burden of restoring the track to the way Ross envisioned it.

Despite Ross' fame, Poland Spring Resort owners Mel and Cindy Robbins were not aware he had designed their course until Fahey attended a workshop taught by golf course architect and historian Geoffrey Cornish in 1988. "Cornish told me Poland Spring was a Ross course — an addition of nine and a revised nine," Fahey said.

The original nine holes, Fahey discovered, were designed by Arthur H. Fenn in 1896. In 1910 Ross visited the property, revised the original nine and added nine, completing the work in 1913.

Since the discovery, the resort has named its entrance road Donald Ross Drive. Its score card proudly states it is a Ross design. And Fahey has been given the go-ahead to use his staff in his restoration efforts as well as resolve drainage and cart-path problems.

Bolstering the bunker work was the

Continued on page 28

BRIEFS

HILLS' LEGENDARY RUN OPENS 9

CINCINNATI

— Legendary Run Golf Club, an 18-hole upscale public course here designed by Arthur Hills and Associates, opened its second nine on May 15. "Legendary Run is an intriguing golf course," said Hills. "The front nine, which is almost treeless, has a series of holes that are as good as any we have done; the back nine plays through deep, wooded ravines.."



PRESERVE PICKS PALMER

FENTON, Mich. — Arnold Palmer and Palmer Course Design Co. have selected to design the Preserve at Black Bear Resort here. The 18-hole championship course is being developed by the Preserve Corp. The Preserve at Black Bear Resort is scheduled to open during the summer of 2000.

Leaving behind other careers, Hammer opts for golf

By MARK LESLIE

SIREN, Wis. — "What would be your ideal job?" the career counselor asked civil engineer and MBA student Jim Hammer.

"To own a golf course," Hammer answered.

"Then why don't you?" the counselor asked.

That simple exchange several years ago, while civil engineer Hammer was two-thirds through his studies toward an MBA at the University of St. Thomas, changed his life.

"That question really got it rolling," recalled Hammer as he looked ahead to the opening of Siren Glen Golf Course here in midsummer 2000. "I decided then to chase my life dream of owning a golf course."

Married and working as a civil engineer, Hammer realized that something more fulfilling awaited him. He had returned to school part-time to pursue his MBA when he had that fateful meeting in 1993 with the career



Jim Hammer stands at the championship tee for the par-3, 240-yard 8th hole at Siren Glen Golf Course. Some 40 feet below, a pond will hug the green to the right and rear.

counselor. He was in a perfect position to tailor his education toward his dream. He enrolled in a course on

entrepreneurship and venture management and used the in-class training to

Continued on page 26

Hammer's dream: Siren Glen

Continued from page 25

prepare for his real-life dream.

Then Hammer got really serious, quit his job in 1994 and spent the next three years learning the ropes:

- toiling on a golf course grounds crew at a golf course in 1994;
- working in a pro shop on a daily-fee course in 1995; and
- working for a general contractor building the nine-hole Glen Lake course here in 1996, followed by two months working with an irrigation firm installing a system at an area country club.

"I wasn't expecting to become an expert in any field. I only wanted to be good enough to do it once," said the civil engineer, referring to his role as general contractor overseeing construction of Siren Glen.

The year working in maintenance, he said, "was a soul-searching time. I knew I loved playing the game and loved the idea of the environment of golf courses. But my engineering licenses were good and I wanted to make sure [golf ownership] was something I wanted to do. That was confirmed my second year working in the clubhouse, which was quite a different setting than the grounds crew. I enjoyed the interaction with customers."

While working those golf course jobs, Hammer and his wife Colleen, a budget analyst and computer systems support person at the city of Minneapolis Public Works Dept., searched for an appropriate piece of ground.

"We looked for location, features and price," Hammer said. "Getting the three variables took awhile."

What they finally found, he said, was a perfect 160 acres — with a 100-foot elevation change and two-thirds wooded with 100-year-old white pines, oak and maple. The property sits a one-hour-and-20-minute drive from downtown Minneapolis in a recreation area with 5,000 to 6,000 second homes and in a town, he said, that is becoming a tourist destination.

"We see the market as comprised of, one, the commuter golfers from the metropolitan area — because good courses are harder to get on in Minneapolis, golfers drive over two hours to get on a good course — and, two, the recreational property owners and their guests," Hammer said.

He feels Siren Glen will be one of the better tracks in the region.

Golf course architect T.L. Haugen of Shakopee, Minn.,

who owns two courses and has designed about a dozen courses in Minnesota, Iowa and North Dakota, "fit the course into the property real nicely," Hammer said. "We got over 7,000 yards from the tips, water is in play on eight holes, we'll have bentgrass greens, tees and fairways and we will

have four sets of tees. It's going to be a great golf course. People ask about signature hole and it could be one of eight holes."

It is, indeed, his dream come true, Hammer acknowledges, adding his accolades for Colleen. "I would not nor could not have done it without her," Hammer said. "We went from a two-income family with no kids to a one-income family

with one child. That created some challenges but we managed to get through those. She has been providing the income because working at golf courses in the capacities I did, you don't make a lot of money."

With Colleen's assistance on planning, permitting and financing, Haugen's help with permitting, design and construction and an advisory board of other experts, spade finally

turned earth last September.

It was no small chore for a person who did not have the small fortune necessary to build a course.

FINANCING

"We have a sizable bank loan with SBA [Small Business Administration] participation," Hammer said. "Plus the vast majority of our life savings is invested in it, and about two

Continued on next page

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NIAGARA FALLS — Two of Canada's leading golf course architects, Thomas McBroom and Douglas Carrick, have been chosen to design a 45-hole destination golf facility along the Niagara River Parkway, said The Niagara Parks Commission Chairman Brian Merrett.

McBroom and Carrick teamed up for the first time to win the bid to design the 700-acre devel-

Carrick, McBroom team up along Niagara

opment south of Niagara Falls. Each will design his own 18-hole course, and combine their talents on a nine-hole executive course and practice facility.

"Our goal is to attract golfers from across the country and around the world, to golf Niagara again and again," said Merrett. "This facility will act as a catalyst

for Niagara's entire golf industry, and will serve as a major draw, clearly putting Niagara on the international golf tourist market."

The Niagara Parks Commission is taking a lead role in the plan to market Niagara as a golf destination. The commission recognizes the golf industry as an opportunity to add a significant piece to

Niagara's tourist infrastructure, fitting in with such attractions as Casino Niagara, the burgeoning estate wine industry, and the Shaw Festival.

"This is a very ambitious project. Golfers will be able to play two distinctively different ... courses," said McBroom.

Of the design, Carrick said,

"We will incorporate the scenic, natural environment of the land, including Ussher's Creek and the spectacular view of the Niagara River. Our goal is to combine the natural beauty and environment with a challenging, yet highly playable course."

Construction of the courses is slated to begin in October and be completed in September 2000. The facility is scheduled to open in July 2001.

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Siren Glen

Continued from previous page

dozen family and friends have purchased stock. The last component is prepaid packages, where people get golf privileges for advanced tee times."

BUILDING

Hammer used his civil engineering background and golf course training to lower the costs of construction, citing "sweat equity" as his greatest savings. "From planning to doing legwork for the architect, being the general contractor and saving the general contractor markup — it has paid off," he said.

Hammer's background exposed him to all facets of construction, including earthwork, drainage systems and stormwater studies. He hired an excavation contractor who did the heavy work, dug the irrigation pond and performed some significant land shaping.

Haugen used his own bulldozers to shape greens and tee complexes. In all, about 75,000 cubic yards of earth were moved.

Though he expects the course to open in midsummer next year, Hammer has mapped out a long-range plan for improvements to the facility.

"For instance," he said, "we only built a few sand bunkers. We will add them as we go. I look at it as a 5- to 10-year project. It will be a \$3-million project when we're done."

Hammer is leasing a structure for a clubhouse for the first three or four seasons.

"It's primarily economic," he said. "A new golf course takes a few years to reach full stride in terms of volume of play. Until the potential is there for the complimentary or spin-off revenues in pro shop and food and beverage, it's hard to justify a \$300,000 to \$400,000 clubhouse. That can be a fatal flaw."

For the kid who started golfing when he was 12, who played on his high school golf team and attracted the attention of some small college golf coaches, fatal flaws are to be avoided when pursuing his dream. He thinks that will be more than evident when he opens Siren Glen's doors next year.

Cape Arundel

Continued from page 25

greens to their original shape. They had lost 30 to 40 percent of the putting surfaces.

"When they went to triplex mowing, they couldn't get all the tight corners and nuances. It's usually the corners, the great little tuck pin positions, that you lose. The key strategic pins — the ones in the corners or behind bunkers — are the ones that went away.

"You lose so much character, and just by mowing a golf course correctly you get greens back out, the approaches out so you can bump-and-run in."

"From our experience with old courses," Hepner said, "we can tell you exactly where the green was. They used a mule and men to build the fill plateaus, and I guarantee they weren't going to waste all that sweat and mule power to build a green that small. They had putting surface right to the edge [of the build-up]."

Meanwhile, Cape Arundel superintendent Greg Searle "has done a better job of any superintendent I've ever worked with in getting the putting surfaces back so that you can't even see where our expansions were," Hepner said. "He has the greens right out to where they need to be."

Searle has been slit-seeding L93 bentgrass into the bentgrass-poa annua greens for the last four years to increase the bentgrass population.

Bunker Restoration and Tree Removal In his bunker work, Hepner said, Travis used "simple construction — an economy of dirt. You dug a hole, took that material and built a mound right next to it. But in a very artistic way. It sounds simple but there's an art form to it. It's scraping the dirt out, digging a hole and putting the dirt somewhere. Here, it's in mounds."

Restoring mounds, too, is part of the plan.

Director of Golf Ken Raynor, coincidentally a descendant of course architect Seth Raynor, said: "I'd like to return some mounds. Every one out here is in a grouping of mounds, just like every white pine is in a grouping. I want to return the fairway bunkering."

"Travis used mounding complexes as a hazard," Hepner added. "We have photos of where the mounds used to be. He used them to frame and define the tee shot. It's artificial looking, but there's some antiquity to it that makes it interesting to me."

While bunkers are being restored, a number of arbivitaes and ornamental trees are being removed.

"You want indigenous species here," Hepner said. "The main species are the white pines. They get real windswept. We've tried to get the course back to being windswept. This is short and an old-style design where the wind is supposed to affect the ball."

Short, because Travis had just over 100 acres to work with. "But it's as efficient a golf course as you'll find," Hepner said. "He used natural features, some ravines and the stream [tital Kennebunk River] to its fullest."

Cape Arundel is a golf-only facility. Players come, they golf, they go home. It has a small pro shop and no dining.

Raynor reflects the club's position on Hepner's restoration. "My feeling," he said, "is that if you are going to do a restoration project, you can't do any personal preferences. You have to do 'restoration.' If you know what used to be here, it's not your choice. It's an obligation."

To that end, Greens Chairman Jim Stephenson and the members are committed to the project, Raynor said.

As Hepner said, "There are some places in this country that still have the feel of how golf was. Cape Arundel is holding onto the heritage. It's one of those special places in golf. There is a lot of character here that you don't see elsewhere."



Superintendent Dick Fahey stands amidst three greenside bunkers he has restored on the 11th hole at Poland Spring (Maine) Golf Club. Donald Ross had originally designed the bunkers in 1913. But, as at many courses around the country, the bunkers were bulldozed over during World War II to save maintenance dollars.

Mark Leslie photo

Poland Spring reclaims Ross' intricacies

Continued from page 25

Robbins' discovery, in 1997, of Ross' original drawings. They show that during the World War II, "most of the fairway and approach bunkers were bulldozed over to keep maintenance costs low," Fahey said. "What we'd love to find is the 'as-builts'."

Thus far, Fahey's crews have resur-

rected five lost bunkers on the 7th fairway and three greenside bunkers on the 11th hole. This fall he hopes to work on the 12th, 13th and 14th holes, "if we have a good season."

Future projects will get done as soon as they can be worked into time and budget constraints. The 9th and 10th holes, for instance, have seven fairway bunkers waiting for rebirth.

Ross's bunker variety here was wide — from the series of small pot bunkers on the 7th fairway to sweeping cross bunkers on a couple of holes.

Studying Ross "fueled" his interest in reintroducing the Ross philosophy to the game at Poland Spring, Fahey said.

The cross bunkers in particular, Fahey feels, will challenge the games of the club members and resort visitors as they climb up and down its hills overlooking Sabbathday Lake and Range Pond and with Mount Washington in the background.

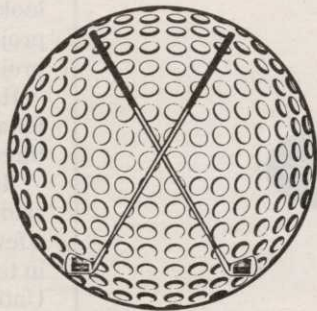
"Everybody wants to play what I call 'lay-down golf,' Fahey said. "Golf is a game board. It's not just a green lawn that you walk on and hit a ball off. The game was formed around three points — the strategic, heroic and penal aspects. But 90 percent of the average golfers have forgotten those aspects of the game, or don't even know they exist."

"It's not just stand up there and hit the ball as long and far as you can. It's strategizing. Then you put the risk-reward aspect into effect."

Soon, Fahey and the Robbinses hope, golfers will be able to play Poland Spring Golf Club and know they have truly played a Donald Ross layout.

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Bruce Hepner — with Tom Doak a Renaissance man

Restoring the classics is a career goal



Bruce Hepner is casual but intense on site of one of his design projects.



Restoring classic courses designed by the likes of Donald Ross, Walter Travis, Seth Raynor and Willie Park has earned a reputation for Renaissance Golf Design of Traverse City, Mich. Vice President of Design Bruce Hepner, who works with principal Tom Doak, is in the midst of several restoration projects, as well as new courses in 1999. Before joining Doak in 1993, Hepner was a design associate with Forse Design in Pennsylvania from 1989-93. He holds a bachelor's degree with distinction in civil engineering from Michigan Technological University in Houghton, Mich. We spent a day with Hepner at Cape Arundel Golf Club in Kennebunkport, Maine, where he is restoring a 1921 Walter Travis design. Though our conversation was not carried out as a question-and-answer session, it was so intriguing we have restructured it as such.

GCN: You're a proponent of minimalism in design. Have you seen a major shift in that direction in the last few years?

Hepner: When people talk about minimalism, some architects say, 'We haven't moved earth all of our life. What's all this minimalism talk?' Minimalism is understanding how to route a golf course on a good piece of land. You can still route a bad golf course on a good piece of land. Minimalism is maximizing the land.

GCN: On old courses, it seems the greens have changed the most, doesn't it?

Hepner: Yes. At Cape Arundel Golf Club, they had lost 30 to 40 percent of the putting surfaces. That's normal all over the East Coast. When they went to triplex mowing, they couldn't get all the tight corners and nuances. And it's hard to see. These are 80-year-old courses. If you lose an inch a year it's 80 inches. Unless you have a keen eye coming in... That's what we do. From our experience with old courses we can tell you exactly where the green was...

I always say when a putting surface is really natural it drapes the land. It's almost like you took a sheet and went "poof," and it laid right over the ground. It's almost like a vacuum form sucking it to the ground. When we came to Cape Arundel, we found the greens were little circles inside what had been the old greens.

GCN: On older courses, water was not such an issue either. How do you feel about that?

Hepner: Come to Cape Arundel in August and the fairways are brown and

purple. It's hot and hard. It plays perfectly.

One thing great about coastal golf in Maine is that it's bedrock. It's a blessing because they can't put irrigation in the ground. So they have hard conditions like they used to. People don't understand that healthy turf is a little brown, not green. Lush green turf is not healthy. The plant is getting all its moisture in the crown and leaves, not in the root.

In a nuclear war you could still play golf out here pretty good. I always think the perfect test of a design is if you had a nuclear war, would the golf course still hold up. Conditioning should have no effect on how good the golf course is. Unfortunately in America we do that. A lot of people who go to St. Andrews the first time say, 'Ugh!'

GCN: What is your feeling about blind shots?

Hepner: The problem with American golf is the same as with our society: instant satisfaction. Golfers want to know everything in the one round of golf they play at a course. But golf is a game of adaptation. You adapt yourself to the course. You should play a golf course many times. It's like a wine; you should try it a lot to understand its nuances.

Resort golf is, play it once — wow, wow, wow — and drop your 200 bucks and go back to the office on Monday and say, "Boy, I had fun."

Great architecture is not that.

GCN: Do you find drainage to be a major problem in restorations?

Hepner: The old-time architects found the dirt as close as they could. They took it from little valleys to create or enhance drainage and used it to build bunkers.

The world generally drains before you build a golf course. Otherwise you have wetlands. The ground drains naturally over thousands of years. When you put turfgrass on it, that slows drainage and runoff, so sometimes you want to enhance it. And you put in catch basins.

They didn't do much to fairways. They added features. They built great greens. They found the dirt on site, within 100 yards of the green sites because they didn't have big equipment...

If you have pushup greens, as long as they adequately surface-drain you should have no problem with them. Top soil is a good growing medium.

The best superintendents can grow grass on anything. It's the weak superintendents who need all the bells and whistles so somehow maybe it will grow itself.

GCN: Tell us some ways in which equipment has changed golf course construction.

Hepner: They [old-time architects] found the greens and

tees and left everything in between and mowed it...

See the randomness of the natural tree line. It's not perfect. Man would make it perfect. Today, it's shapers on dozers showing off that they can make a perfect mound.

Some golf architects make the most beautiful landscapes. They are landscape architects almost and make gorgeous golf courses. But they are not that natural because everything is so perfect, so polished. Human nature is to polish things. When do you stop polishing furniture? When you're happy. Modern architects and shapers polish. That's why they have these perfect mounds. To recreate nature you have to know when to stop polishing.

A lot of times you should just gouge and slash and get off it.

This [Cape Arundel] is not polished. The fairway grass is long here. Usually it's tight, it's brown, awkward lies, goofy stuff going on. If you play golf overseas it's the same thing. You love it. You don't know what you're going to get.

GCN: You talk about long grass. What's the difference?

Hepner: They didn't manicure courses. When you look at old photos of the U.S. Open in the '40s they had [long] grass in bunkers.

We've eliminated the step cut. We have three cutting heights: putting greens, fairways and tees, and roughs. They didn't have triplex mowers. They had gang mowers and kept it simple. They didn't have collars.

In the old days it was called a "fairgreen," not a "fairway." Greens are an extension of the fairway and fairways are an extension of the green. It's all one.

GCN: What about the saying "An architect who hasn't gone to Scotland is like a divinity student who hasn't read the Bible?"

Hepner: It's a sales pitch. I know so many guys who have gone over and played and they just don't get it. There is a certain thing that you get about architecture in golf and understanding the spirituality of golf, and understanding that having a quirky lie is okay. The ASGCA [American Society of Golf Course Architects] takes 100 guys over there, and maybe 20 get it and they come back and still build their perfect mounds. And that's fine. Those are nice products and there is a market for that. But you can still read the Bible and not get it.

GCN: But in many cases, isn't it a good idea to add shapes because our equipment today makes it so easy?

Hepner: Here's a good lesson in modern versus old architecture. A modern architect would have put mounds behind this green [pointing to a green ahead] for depth perception. If you put mounds behind it, you'd lose all the contours. Right now,

Continued on page 30



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Hepner: Watch the wind and greens

Continued from previous page

what defines that green more than anything is the light green with the dark background. You see all the contours. You might get depth perception but you lose the contour. And as a golfer all you need is two pieces of information: the yardage and where the contour is.

Depth perception is the golfer not feeling comfortable with his yardage. He wants as much information as he can get to allow himself to get a good shot. Depth perception is you not believing your eyes.

If you're out there hitting in God's country don't try to change it. It's pretty good as it started.

GCN: You're a proponent of "walking" golf courses, and Tom Doak designed Stonewall Golf Club in Bulltown, Pa., a walking-only course. What's your feeling about golf cars? And, while we're at it, what about outings?

Hepner: Golf cars and outings are a false economy. [Outing] golfers probably do more damage than members do, because they're probably all taking golf cars and many of them are half in the bag by the 6th hole and are driving all over the place. It's good revenue, but if I were a member of the club I would pay higher dues to not have the outings.

And I'm a big proponent of giving some of that revenue to the superintendent to clean up the mess. I've never seen a case where the cart revenue pays for the \$300,000 worth of cart paths on a golf course.

GCN: One thing the old-time architects did not have to contend with was building on some of the gravel pits and dump sites that they deal with today.

Hepner: That's where modern architecture does help. Some guys are masters at creating a course on those sites.

We don't take those projects. We can't build every golf course because not every client fits our style. This [classic courses] is what we love and this is what we try to build.

GCN: How's your own golf game going?

Hepner: We get two or three calls a week from kids wanting to get into golf architecture. The first thing I ask them is, "How's your game?" They're pretty proud and tell you what it is. I say, "You might as well forget that. In two years it will double and in five it will triple. Forget about playing serious golf ever again because you're going to be out in the dirt."

But I enjoy playing golf more now than I ever have.

Harbottle, Harris collaborate on 36 in Minnesota

MILLE LACS LAKE, Minn. — Nestled near the shores of Mille Lacs Lake 90 minutes northwest of Minneapolis are two new golf courses designed by John Harbottle in collaboration with 1993 U.S. Amateur champion John Harris and owner Chip Glaser.

The courses meander over gently rolling terrain, through a hardwood forest and along the shore of Mille Lacs Lake. Natural wetlands border several holes, giving the

feel of playing golf inside a large nature preserve.

The Sanctuary Course is geared toward the average player, with shorter yardage than its counterpart Black Brook. It plays in and out of the forest and through a more open landscape. Just right of the 9th-hole tees sits an historical building, the restored chapel which lends the course its name. Resort guests and neighbors can make the

short trail walk each Sunday morning to church.

Black Brook stretches to more than 6,800 yards, winding through trees, around ponds and along Black Brook which guards the 13th hole.

On both courses, old-style architecture is adapted to the milled terrain to create a variety of holes demanding skilled shotmaking and careful thinking.

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At left, in six weeks, the zoysiagrass is firmly established at Tannenbaum Golf Course in Arkansas. Z-Net's biodegradable netting disappears during grow-in. At right, zoysiagrass a fairway and rough is grown in and ready to play in 4-1/2 months.



Z-Net maker thinks revolution

Continued from page 1
grown in, and in many places it's entirely grown in.

"I'm excited by it and love the results I'm getting."

White had the zoysia installed nearly wall to wall — "fairways, roughs, tees, everything," he said. "We have bentgrass greens and fescue underneath the trees,

but we even used zoysia on the slopes to the greens."

The Z-Net process allowed Tannenbaum to open one year ahead of schedule, White said, adding that the cost is between that of row sodding and sprigging.

"We were the guinea pigs," White said. "Everything was under the microscope. A lot of superintendents came out to see it."

Much of the attention is because zoysiagrass is known for its low requirements for water, mowing, fertilizer and herbicides, and its wide tolerances to temperature, sun and shade. But its major deterrent has been its slow growth. Whitbeck feels Z-NET is the answer since it greatly speeds up slower growing grasses and its costs less than zoysiagrass sod.

Z-NET contains specially grown soil-free sprigs held between layers of biodegradable netting.

It is then simply rolled out like a carpet and top dressed. Z-NET typically grows in completely in four to six months, with some variance for growing conditions at the site. Conventional sprigging, plugging and strip sodding normally require between 15 and 24 months to achieve full grow-in.

During the first few months, the netting, which helps prevent erosion from wind, irrigation and rainfall, completely dissolves.

Z-NET can be installed any time the ground is not frozen. Once established, it offers all the maintenance benefits and environmental advantages of conventionally installed zoysiagrass. Since Winrock Grass Farm grows Meyer Z-52 zoysia, that is the cultivar it has been using, but Whitbeck said he could use other varieties.

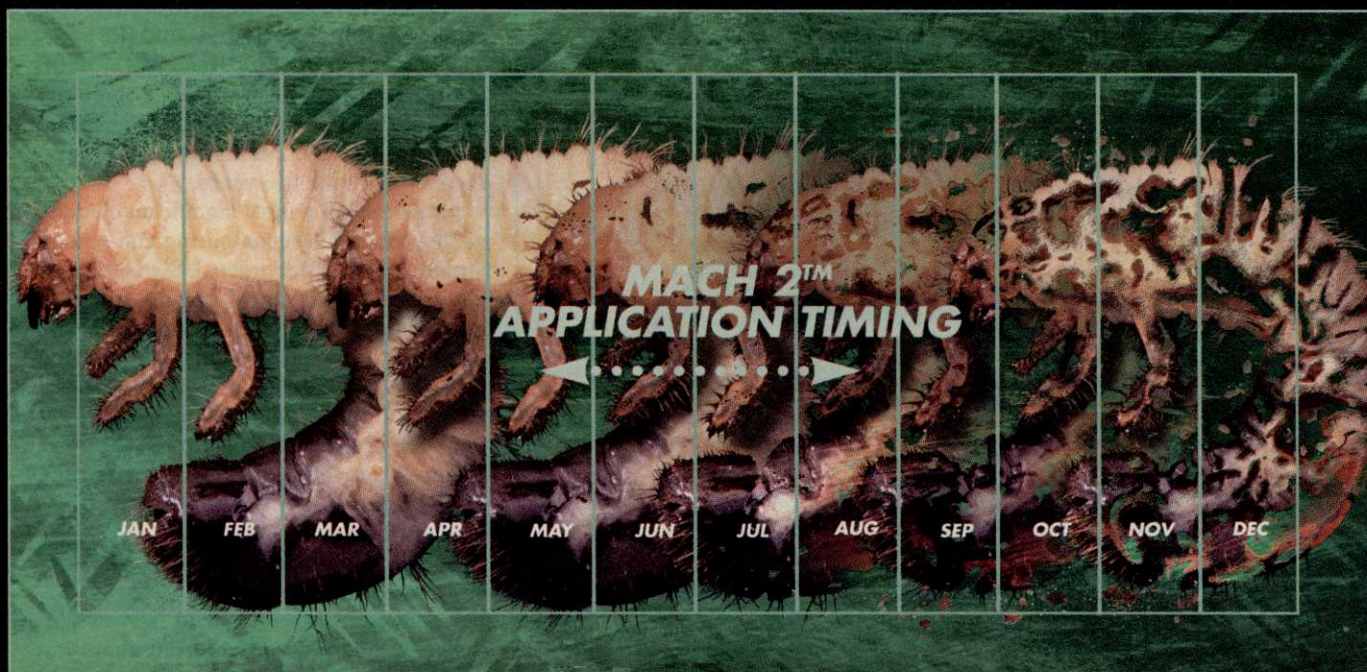
At maturity, Z-NET produces a dense turf with a strong divot-resistant root system and vertical leaf blades that many golfers prefer.

"We believe Z-NET will revolutionize the turfgrass industry and bring the benefits of Meyer Z-52 zoysiagrass to more golf courses, cities and home lawns at a lower cost than ever before," Whitbeck said.

"Most turfgrass research is headed in the wrong direction," he added. "Fast-growing grasses do not benefit the consumer or the environment. They only benefit the seed company or sod grower."

"That is why Z-NET is such a break-through technology. We can now grow in slower growing, environmentally friendly grasses faster."

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The 18th green at Des Moines Golf and Country Club is one of those renovated.

Jacobson renovating Dye's Des Moines club

DES MOINES, Iowa — Rick Jacobson remained true to Pete Dye's 1968 vision when he renovated Dye's Des Moines Golf and Country Club in advance of the 1999 U.S. Senior Open.

"We respected Pete's original plan and actually were able to implement some of the features that were left out during the original construction," said Jacobson, owner of Jacobson Golf Course Design, Inc. of Libertyville, Ill.

The 36-hole Des Moines complex will

host its first U.S. Golf Association (USGA) championship when Hale Irwin defends his title July 8-11. It is only the third time the state of Iowa has hosted a USGA championship.

"I think Rick Jacobson has done an excellent job of giving us a top-notch golf course to host the U.S. Senior Open championship," said Tom Meeks, director of rules and competitions for the USGA. "I've worked with some architects who let their egos get in the way during a renovation project. I didn't find that at all with Rick. He's very easy to work with."

Unlike some of Dye's later courses — which feature his characteristic railroad ties, island greens, gargantuan mounds and vast waste areas — Des Moines is a traditional course in the style of Crooked Stick (1964) in Carmel, Ind., and Harbour Town (1969) in Hilton Head, S.C., both earlier Dye designs. Yet Des Moines reflects some of the Scottish and Irish influences that have recurred throughout Dye's work over the years.

Meeks said the most significant change at Des Moines is recontouring and reconstruction of the 18th green. USGA officials, with the concurrence of the club, requested that Jacobson soften the angles of the original green — which was unusually convex — to provide more pin placements.

Dye originally had sketched in two bunkers in front of hole No. 15, but the builders left them out during construction. Jacobson made sure they were included this time around.

At the request of the USGA and the club Jacobson also:

- reduced the width of 11 fairways to between 26 and 34 yards from about 38 yards;
- replaced putting surfaces with A-4 bentgrass;
- added chipping areas on holes 5, 13 and 16;
- restored a signature Dye sod wall bunker on No. 16;
- restored and reshaped all 41 bunkers;
- added a new fairway bunker on No. 16 to punish errant tee shots;
- expanded several greens to increase the number of potential pin placements;
- upgraded tee boxes; and
- installed native grasses in out-of-play areas to add character.

Jacobson believes the most difficult hole on the course will be No. 5, a 461-yard dogleg par-4, which the members normally play as a par-5.

The most diabolical hole is No. 3, where Dye placed a bunker between the lower and upper tiers of the green. The USGA did not ask Jacobson to alter the design even though some players might hit lob wedges over the sand from the lower tier to the upper tier of the green.

Unlike many older courses now under renovation for championship play, Des Moines did not require added length. At 6,904 yards from the championship tees, it is expected to present a stern challenge to the world's best seniors.

The back nine of the north (Blue) course will be used as the front nine of the championship course. The championship back nine will be comprised of the first seven holes of the south (Red) course's front nine along with the south's original 17th and 18th holes.

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BRIEFS



DPC NAMES DEVELOPMENT CHIEF

ORLANDO, Fla. — Bob DiMarcantonio has joined Diamond Players Club (DPC), an Orlando-based golf management company, as vice president, strategic planning and development. DPC is headed by Arizona Diamondbacks pitcher Todd Stottlemire.



Bob DiMarcantonio

Stottlemire said DiMarcantonio, a former Walt Disney World business development executive, "will play a key role in the expansion of Diamond Players Club into

an internationally recognized provider of affordable golf facilities, golf and travel programs and branded clothing and equipment. His extensive experience in development, leasing and operation of golf, resort and theme properties adds a management dimension vital to our growth." DPC operates Sweetwater Country Club and Diamond Players Club Wekiva, both in Longwood, Fla., and is building a new course, Diamond Players Club Clermont, scheduled to open in September.

MATRIX ADDS TWO

CRANBURY, N.J. — Matrix Golf & Hospitality is continuing its expansion with the purchase of Jumping Brook Country Club in Neptune and Ashbourne Country Club in Cheltenham, Pa. Matrix teamed with Senior Tour Players Inc. of Boston on the Jumping Brook acquisition. Matrix, which leased Ashbourne for the past four years, plans to take the semi-private club private over the next three years.

RDC COMPLETES FORSGATE PURCHASE

PARSIPPANY, N.J. — An affiliate of RDC Golf Group, now owns 100 percent of Forsgate Country Club in Jamesburg, having purchased the 49-percent interest of its former partner in the property, National Fairways Inc. The two originally bought the property in September 1997 for \$24.4 million. Since the 1997 purchase, RDC has invested more than \$3.5 million in capital improvements.

CMAA'S SINGERLING HONORED

ALEXANDRIA, Va. — James Singerling, executive vice president of the Club Managers Association of America, has been nominated to serve on the U.S. Chamber of Commerce Association Committee of 100. The committee is a prestigious group of chief staff executives in the association community.



Missouri Bluffs Golf Club, a Walters Management layout in Missouri.

Walters strikes gold in St. Louis golf market

Management firm content to stay put — for now

By PETER BLAIS

Dennis Walters is bullish on the St. Louis marketplace. "Twelve years ago it was probably on the endangered species list, according to the National Golf Foundation," said Walters, president of St. Louis-based Walters Golf Management. "Since then we've opened a number of new facilities. It's become a very competitive market."

Walters entered the golf business in 1962 when his father bought Bogey Hills Golf & Country Club, a Wayne Clark-designed layout in St. Charles, Mo. The course had laid dormant for 25 years. Walters, who was in high school at the time, did some redesign work with his dad (an optometrist), and the course re-opened as a nine-hole layout later that year. Bogey Hills expanded to 18 holes a decade later and went private in 1980. Walters became the club pro.

In the early 1980s, Walters decided to follow in his father's entrepreneurial footsteps and developed Whitmoor Country Club, a private, 36-hole, Karl Litten design in St. Charles that opened in 1988. That was followed by:

- Missouri Bluffs Golf Club, an 18-hole Tom Fazio layout in St. Charles that opened in 1995 and Golf Digest later ranked the No. 1 public golf course in the state.
- The Links at Dardenne, an 18-hole public course in O'Fallon, and Gateway National Golf Links, an 18-hole Keith Foster design with bentgrass fairways in Madison, Ill., both came on line in 1998.
- The Golf Club of Wentzville (Mo.), an 18-hole public facility

Continued on page 34

Palmer receives additional \$50m from Olympus

SAN FRANCISCO — Arnold Palmer Golf Management LLC and Olympus Real Estate Corp., a Dallas-based private real-estate investment firm affiliated with Hicks, Muse, Tate & Furst Inc., have announced that Olympus has committed an additional \$50 million to expand their partnership to consolidate the golf course industry in a branded chain format.

"The relationship with Olympus and Hicks, Muse has been very successful so far," said Palmer Management founder Arnold Palmer. "Their capital and real-estate expertise have enabled us to greatly accelerate the growth

Continued on page 36



HEARIN' THE RATTLE IN TORONTO

Tim O'Connor photo

ClubLink Corporation-managed RattleSnake Point Golf Club in Milton, Ontario, opened recently. Thomas McBroom designed the 45-hole private club, which spreads over 685 acres with views of the Niagara Escarpment landmark that is its namesake. RattleSnake Point represents ClubLink's second development initiative, following on the heels of The Lake Joseph Club in Muskoka.



The Links at RiverLakes Ranch, an Environmental Golf facility under construction in Bakersfield, Calif.

Environmental Golf busy in Calif.

CALABASAS, Calif. — Environmental Golf has been busy building several Southern California courses over the past few months.

Westridge Golf Club in La Habra and The Links at RiverLakes Ranch in Bakersfield are expected to open in early fall. Both are 18-hole, daily-fee courses and will be operated by Environmental Golf.

The Links at RiverLakes Ranch, a Ronald Fream/GolfPlan-designed layout, is in the "grow-and-mow" stage with all holes complete and all of its 12 lakes filled. Construction of the 8,000-square-foot clubhouse is underway with opening scheduled for September.

The back nine at Westridge Golf Club in La Habra is complete. The construction crew is concentrating its efforts on the

Continued on page 35

Walters Golf

Continued from page 33

opened in 1999. Walters also signed a management contract with Cherry Hills Golf Club in Woodward, Mo., earlier this year.

Walters' facilities cover the price spectrum, ranging from \$20 per round at The Golf Club at Wentzville, to \$30 at The Links at Dardenne, \$40 at Cherry Hills, \$50 at Gateway National and \$80-\$100 at Missouri Bluffs.

As for the two private facilities: "We probably do more tournaments than anyone in the marketplace," Walters said. "We do about 90 a year at Whitmoor. Missouri Bluffs does about 75. We can help any tournament organizer, from the group that wants to spend \$40 per player to the one that wants to spend \$200 per player."

With the exception of Cherry Hills and The Links at Dardenne, which is owned by the Whitaker family, Walters has an ownership interest in all these facilities.

"We would prefer to build rather than acquire courses," Walters said. "We know what we get when we build it ourselves. That doesn't mean we wouldn't look at acquiring a course if everything we wanted were in place, the numbers worked right, and the quality of the course were adequate to make it the way we would want to have it."

Whenever he has built, Walters has attempted to hire local contractors. "It's not that outside contractors don't do quality work," he said. "It's just that they have to make a profit when they do that. If we hire local contractors, we feel we can get more for our dollar."

To date, Walters has concentrated on the St. Louis marketplace. "From one end to the other of our holdings is roughly a 45-minute drive," Walters said. "We like to be hands-on with our management style, so we've clustered in St. Louis. We've had opportunities to venture outside St. Louis, but at this time we've chosen not to do that. Down the road, we may look at becoming a more regional company with access into Kansas City, Memphis and maybe into central Illinois."

"We'll be another 18 months to two years in just St. Louis. We have two potential projects in St. Louis we want to look at first. After that, we may look to go more regional."

The desire of Walters and his key staff to remain "hands-on" is one reason the firm is moving cautiously in its expansion plans.

"We've all been in the golf business for a long time," Walters said of his staff. "[Golf Director] Jeff Smith was involved with the PGA for a number of

years. [Director of Operations] Lucy Mitchell has been in the food service business over 20 years. Rob Dillinger, our director of agronomy, came from the Arnold Palmer Golf Management Co. We've tried to get the top people in each area.

"Our only business is golf. Our roots are in golf. Our whole management, from top to bottom, has grown up in the golf business."

Which makes Walters hesitant

to consider other careers. He has been approached by other firms, especially between 1995 and 1997, that were interested in acquiring some or all of his firm's properties.

"I would never say that something can't be bought," Walters said. "But our goal isn't to sell properties. We feel very comfortable in our location. I'm 54 and I plan to be in the business for awhile yet."

CCA GROUP, FUJI STRIKE DEAL

PARIS — The Fuji Country Group, owner of Apremont Golf Club near Paris, has entered a management agreement with CCA Europe Ltd.. The Fuji Country Group is a leading owner and operator of golf and country clubs in Japan. Fuji owns and operates 21 golf clubs in Japan, three in the United States and one in the United Kingdom. CCA Group was founded in 1980 and is a major developer and operator of private clubs in the Asian Pacific region. Operating in 14 countries, CCA Group manages 30 clubs in Asia with six more under development around the globe.

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NGF directory now available

JUPITER, Fla. — The 1999 edition of the National Golf Foundation's (NGF) directory of who's who in the U.S. golf industry is now available.

The *Directory of Golf* contains the key names, addresses and other contact information on 10,000 executives and 6,000 companies and organizations con-

ducting the business of golf in the United States.

It also features some 2,000 corporate e-mail and 1,350 Web-site addresses. The number of listed Web-site addresses is more than double the number in last year's edition. Furthermore, more than 50 percent of the listings have

been revised with totally new or updated information.

"These changes and additions are indicative of the way the directory is growing and improving," said Barry Frank, the National Golf Foundation's vice president of membership services.

As in previous editions, the 1999 edition features the following three sections:

- Business to Business Sec-

tion — Corporate names, addresses, phone/fax numbers, e-mail and Web-site addresses; plus names and titles of top management personnel.

- Executive Section — Company affiliations and telephone numbers of top management personnel in the United States.

- Products & Services Index — A complete listing of all companies and organizations

categorized into 114 different product or service groupings.

Every NGF member will receive a complimentary copy of the 1999 edition. It retails to non-members for \$60, plus shipping and handling.

Non-members can place their order through NGF Information Services at 800-773-6006 or the foundation's Web site at www.ngf.org.

McGuire joins Environmental as Western chief

CALABASAS, Calif. — Terry McGuire has joined Environmental Golf as Western region manager of golf course maintenance. In his new position, McGuire will be responsible for golf course maintenance operations of all Environmental Golf facilities in the Western United States. Prior



Terry McGuire

to joining Environmental Golf, McGuire was involved in the \$4-million capital improvement project at the Presidio Golf Course in San Francisco. This project included renovation, new construction, and upgrades to the irrigation system, tees, fairways and green complexes. He facilitated course renovations, capital improvements, grow-in and maintenance operations for Palmer Course Design Company in Thailand and the United States.

Environmental

Continued from page 33

front nine. Four holes are left to shape and irrigate, with landscaping and grassing following close behind. Lakes and decorative walls are complete and the clubhouse is being framed. A fall opening is expected.

Construction of Cascades Golf Club, an 18-hole championship public course in Sylmar, Calif., is in its final stages with an August opening anticipated. Yucaipa Valley Golf Club in Yucaipa, Calif., has 90 percent of its shaping complete, four lakes built, irrigation in process and greens installation now beginning. The owners of the 18-hole, daily-fee course anticipate an early 2000 opening.

At Indian Ridge Country Club in Palm Desert, Calif., an additional nine holes have been added to the existing 27 holes previously constructed by Environmental Golf. The course was completed in July.

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Friedlander joins Kohler as new general manager

KOHLER, Wis. — Stephen R. Friedlander has joined Kohler Co. in the newly created position of general manager and director of golf. His responsibilities include management of overall operations at both Blackwolf Run and Whistling Straits golf courses, the two championship venues that are

components of the Kohler resort complex in Wisconsin. Friedlander will direct golf, retail, food-and-beverage, and turf management.

Prior to joining Kohler Co., Friedlander worked for the golf management firm KSL, most recently as director of golf at Doral Golf Resort and Spa in Miami,

Fla. At Doral, he supervised 99 holes of golf as well as tournament arrangements for the Doral-Ryder Open on the PGA Tour. Simultaneously, he directed 54 holes of golf at Grand Traverse Resort (Traverse City, Mich).

Friedlander previously worked for Ventana Canyon (Tucson, Ariz.) and several private clubs in

his home state of Minnesota. A PGA Class A-4 member, he has been a golf professional since 1975 but considers that he actually began his golf career as a caddie at age 10. He holds a master's of science degree in exercise physiology from Arizona State University in Tempe, and a bachelor's of arts degree in physical education from the College of St. Thomas in St. Paul, Minn.

Kemper signs on at former naval base

NORTHBROOK, Ill.—The Village of Glenview, Ill., selected Kemper Sports Management to build and operate a daily-fee facility at the former Glenview Naval Air Station, a 1,121-acre former military base being converted to a mixed-use development.

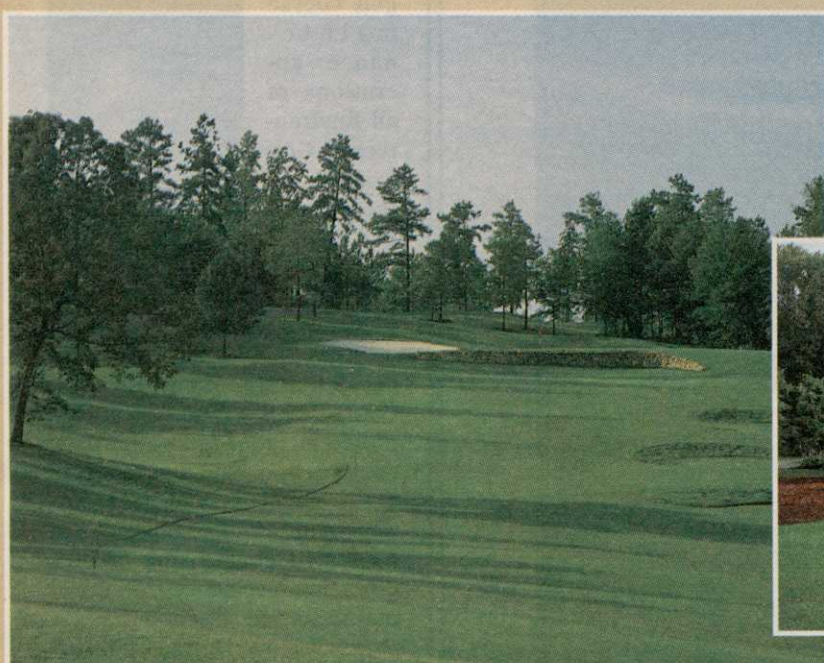
Glenview village trustees approved the sale of approximately 180 acres of land at the air base to Kemper Sports for use in building a course and clubhouse that will include a golf museum, restaurant and banquet facilities.

Kemper Sports' vision for the planned \$20 million project is to create a world-class course and practice facility. As part of its bid, Kemper Sports formed an alliance with the Illinois Section of the PGA (IPGA) enabling the IPGA to move its headquarters to the Glenview site. Upon opening, the new facility will also house the Illinois Golf Hall of Fame, an interactive museum celebrating the history of golf in Illinois and those who have made contributions to the game.

Plans are to start construction this fall and open the course by spring 2001.

In other news, Kemper, in association with a group of local investors, has purchased Shady Lawn Golf Course in Beecher. Kemper will manage the property. Shady Lawn, located 40 minutes from downtown Chicago, is a 27-hole, public facility consisting of three, par-36, nine-hole courses.

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CIRCLE #126

Palmer/Olympus

Continued from page 33

of our courses and Golf Academies.

Peter J. Nanula, president and chief executive officer of Palmer Golf, said: “Our partnership with Olympus facilitated the acquisition of \$85 million of golf properties and three new brands during the last 12 months alone. Olympus has been particularly instrumental in the development of our joint ventures with TOUR 18 and University Clubs of America. This new equity commitment gives us some \$150 million in purchasing power at a time when purchase multiples have contracted.”

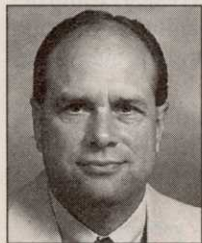
GOLF COURSE NEWS

BRIEFS



MARK JOINS MEDALIST AMERICA AS TURF SPECIALIST

POST FALLS, Idaho—Alan Mark has joined Medalist America, a division of Simplot Turf & Horticulture, as a regional turf specialist. With 10 years experience in the seed industry, Mark will be responsible for sales of Medalist America seed varieties, distributor relations and technical agronomic support for customers in Ohio, Indiana, Michigan, western Pennsylvania, West Virginia and Kentucky. Prior to joining Medalist he was a sales representative for Lofts Seed.



Alan Mark

TORO MOVES GUNTER TO CANADA

BLOOMINGTON, Minn.—The Toro Company has named Mark Gunter manager, irrigation specification sales for the company's irrigation products across Canada. Gunter will be involved in the sale of Toro irrigation products for residential and commercial markets, and will also be responsible for administering training programs. Prior to assuming his new role, Gunter was technical services and training manager for Northern Europe.

AMERICAN CYANAMID PROMOTES KALIK

PARSIPPANY, N.J. — American Cyanamid has named Rich Kalik national accounts manager for the professional turf and ornamental products group. Kalik will manage and develop business with national accounts for Cyanamid's turf and ornamental products. He will also support the marketing efforts for MACH2 turf insecticide, marketed by RohMid LLC, a joint venture between American Cyanamid and Rohm and Haas Company. Kalik will continue to serve on the RohMid board of directors. Kalik previously served as market manager for the turf and ornamental group.

ROBSON TAKES POST FOR E-Z-GO

AUGUSTA, Ga.—E-Z-GO Textron has appointed Bill Robson director of marketing and business development. Robson previously served as director of industrial/commercial sales for Cushman and director of North American sales for the Jacobsen division of Textron.

New research, marketing partnerships take shape

Seed Research, Advanta develop cooperative breeding projects



By ANDREW OVERBECK

CORVALLIS, Ore. — In an effort to improve and enhance its current cool-season turfgrass offerings, Seed Research of Oregon (SRO) has acquired the North American turfgrass marketing program of Netherlands-based Advanta Seeds Inc. In addition, SRO has assumed responsibility for Advanta's turf and forage seed production. Terms of the agreement were not disclosed.

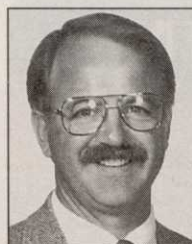
The two companies have also agreed to participate in a cooperative research program to develop new and improved turfgrass varieties through conventional breeding and biotechnology.

"We are entering into cooperative breeding projects, primarily in perennial ryegrass, tall fescue and Kentucky bluegrass, and we will also be getting into genetic engineering," said Mike Robinson, president of SRO.

The research agreement between SRO and Advanta will manifest itself in new products down the line, according to Robinson.

"There are 160 varieties of perennial ryegrass and they are relatively similar," said Robinson. "We would like to come up with something that is unique and there is a lot of work going on in Europe at the moment."

The agreement gives SRO an instant fix to what it saw as an inadequate cool-season grass program. "With all the species that we work with and the expansion of our warm-season grass program, it is hard to keep the intensity up," said Robinson. "We were toying with two new breeders before we talked with Advanta."



Mike Robinson

Continued on page 38

Griffin, Nation's Ag team up to enter chlorothalonil market

By ANDREW OVERBECK

VALDOSTA, Ga. — In order to fill gaps in its turf and ornamental fungicide product line, Griffin L.L.C. has teamed up with Knoxville, Tenn.-based Nation's Ag II L.L.C. to form a global business alliance to source, develop, register and market chlorothalonil-based fungicides.

"A year and a half ago Griffin made the decision to get more involved in the turf market," said Owen Towne, Griffin's global business director for specialty products. "We already have a number of products on the market, but none have the widespread appeal of chlorothalonil fungicides. This move provides us with an opportunity to compete head to head with other companies."

Common chlorothalonil-based fungicide products found on the market today include Daconil and Bravo.

By signing on with Nation's Ag, Griffin not only gains instant expertise with chlorothalonil-based products but also a partner who has the ability to cost-effectively provide quality registered products to the marketplace.

"Nation's Ag has some unique technology related to chlorothalonil that we will be taking advantage of, and they also have an excellent source and quality control," said Towne.

In turn, Griffin will serve as the marketing arm for Nation's Ag products worldwide.

According to Towne, Griffin will be working with Nation's Ag to develop new chlorothalonil formulations and product combinations that will delineate its product line from others in the industry.

"We will be working to bring value-added and superior formulation technology to the turf marketplace and to the superintendent," said Towne. "We will not only have our own

Continued on page 38

SportsGrass opens two new testing sites

GAITHERSBURG, Md. — SportsGrass Inc., developer of stabilized sports sod, is building two new testing fields at the Kidwell Organics Research and Development Center in Baskerville, Va.

The newly constructed fields on the four-acre research site are specifically designed to test turfgrasses growing on underlying soil and sand matrices, which replicate a variety of rootzone mediums ranging from well-drained USGA sand blends to heavy clay-loam materials. The 16 test plots will be compared with conventional sod.

"As a leader in the stabilized sod industry, SportsGrass has made a commitment

to find out what works best," said Jack Kidwell, president, Kidwell Farm Foundation. "We are looking to come up with long-term solutions."



SportsGrass athletic surfacing is a 100-percent natural grass playing surface that incorporates synthetic fibers tufted into a sand-filled backing. The resulting matrix of grass roots and synthetic fibers creates a stable and durable turf base and provides protection to the roots and crown of the grass plant. The sports sod is ideal for use on golf courses and for the stabilization of high-traffic areas.

Metallic Power partners with Textron

SAN DIEGO — Metallic Power, developer of rapidly refuelable zinc/air fuel cells has partnered with Textron Turf Care and Specialty Products to develop a prototype zinc/air fuel cell to power non-road industrial utility vehicles.

The new cell will give operators the ability to have a dependable source of power and a battery that will recharge in five minutes.

"Zinc/air gives us the opportunity to meet the ever-changing customer needs for improved product performance," said Peter Whurr, vice president of product management for Textron. "Metallic Power's system will allow our equipment to be more fuel efficient between battery charges and provide a power source in our vehicles that delivers the performance our customers expect tomorrow."

Metallic Power is using Cushman products as its mobile test bed for developing the new battery.

In other news, Metallic has launched its web site, www.metallicpower.com. The site contains information concerning uses, applications, developmental challenges and upcoming field tests for zinc/air fuel cells.

NEW PRODUCT OF THE MONTH



THE WEED WAND

The Beckley Group introduces the Weed Wand, a patented hand-held herbicide applicator that allows superintendents to kill weeds with a touch. The Weed Wand is designed for accurate spot applications and eliminates costly and time consuming hand spraying. The Weed Wand consists of a 31-inch-long section of clear tubing that holds a pre-measured amount of herbicide. By pushing down on the Weed Wand, herbicide is transferred from the tube to the weed via a spring-loaded sponge that applies the desired amount of herbicide. For more information, contact 915-543-9855.

Toro inks exclusive deal with ClubCorp

BLOOMINGTON, Minn. — ClubCorp and the Toro Company have signed a new six-year deal that makes Toro the preferred supplier of turf and landscape equipment, irrigation and precision turf management technology to all

ClubCorp properties.

ClubCorp owns and operates more than 230 properties worldwide, including Pinehurst Golf and Country Club in Pinehurst, N.C., Mission Hills Country Club in Rancho Mirage, Calif., Firestone Country Club in Ak-

ron, Ohio and The Homestead in Hot Springs, Va.

The first new ClubCorp golf course project to benefit from the Toro agreement will be the Nicklaus Golf Club at Birch River in Dahlonega, Ga.



AgriBioTech looks toward profits in 2000

HENDERSON, Nev. — Richard Budd, chairman of the board and chief executive officer for AgriBioTech, Inc. (ABT) announced July 1 that the company's restructuring plan associated with the integration of ABT's 34 acquired companies has been approved and that the company is on track to achieve profitability in fiscal year 2000.

While ABT also announced that the company will not break even on the pre-tax profit line for the second half of 1999, the approved restructuring plan will result in an estimated \$14 million cost savings and allow ABT to recover costs associated with the integration process.

ABT is slated to close 33 facilities and eliminate over 300 positions in order to achieve profitability.

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CIRCLE #127

Seed Research

Continued from page 37

While SRO will benefit from Advanta's strong technological knowledge and research and development capabilities, Advanta will gain a powerful marketing arm.

Advanta found it tough going as a new entry in the North American market. "They decided that in order to be a player in this market they had to go through another company," said Robinson. "SRO offers them a large distributor base, a distinct market presence and it, in turn, will be easier to move both the existing and the new products that come out of our agreement into the marketplace."

SRO has taken over all of Advanta's varieties and customer base and has hired Advanta salesman Scott Harer to handle Advanta's Royal product line and the new products that emerge from the joint research efforts.



Griffin

Continued from page 37

formulations but also develop combination products that will broaden the spectrum of chlorothalonil and give it more modes of action."

In order to handle the expansion, Griffin will be beefing up its distribution capabilities, adding a dedicated technician support group for chlorothalonil products and ramping up its marketing efforts.

Griffin's initial chlorothalonil-based fungicide products are due to be available in the first quarter of 2000. Chlorothalonil products utilizing new formulation technology will follow soon thereafter.

"We expect to have two to three different new formulations on the market by the end of next summer," said Towne.

Aerway introduces Sportstine aerator

Aerway, Inc., has introduced a new 6-inch Sportstine Aerator for sports fields and fairways. The new tine is offset like Aerway's original Shattertine, but is less aggressive and ideal for mid-season aeration.

Its use will not disrupt play, and allows for compaction relief to be accomplished regardless of the playing schedule. Sportstine offers fast, low-cost turfgrass aeration up to 6 inches deep. For more information, call 800-457-8310.

CIRCLE # 201

New low-noise blower from SOLO

Using new technology, SOLO Inc. has introduced the industry's first gas-powered backpack blower to meet Category I sound levels of the new ANSI Standards.

The SOLO Model 470 blower, which operates at less than 65 decibels, is a completely new design incorporating a highly



The quieter SOLO 470

efficient two-cycle engine that produces increased power at sharply reduced engine speeds. The blower's lower operating speeds also offer less vibration, less exhaust pollution and greater fuel efficiency.

The blower is powered by a 52.6cc engine that produces 705 cfm of air volume, at 235 miles per hour velocity. For more information, contact 757-245-4228.

CIRCLE # 203

Garon introduces Tigerguard

Tigerguard 4SA from Garon Products is a specially formulated system with high mil build, more thickness, giving your floor the protection barrier it needs to stand up to the punishment and environmental conditions of any facility.

Tigerguard 4SA consists of a high saturation, 100 percent solids epoxy primer and an abrasion resistant urethane/epoxy top coat that provides maximum wear life and gives the surface superior gloss retention, fills in surface defects and resists mars, scratches, abrasion, chemicals and impact. For more information, contact 1-800-631-5380.

CIRCLE # 204

Textron launches new Jacobsen Hawk utility vehicle

Textron Turf Care and Specialty Products has introduced the Jacobsen Hawk, a medium-duty utility vehicle designed to meet a wide range of golf course, park and other turf maintenance applications.

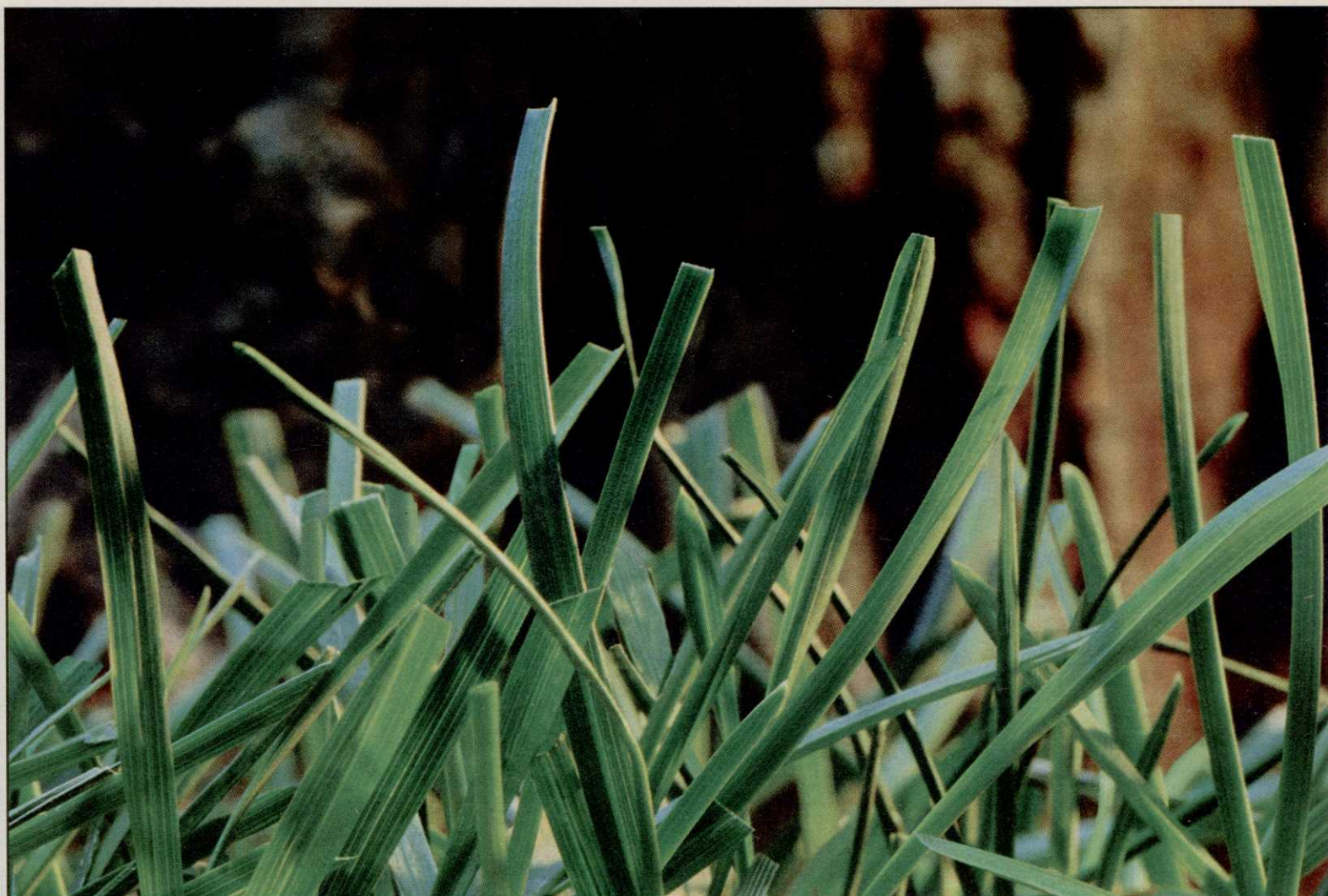
The Hawk is designed around a heavy-duty steel frame with reinforced front suspension, a

rugged transaxle and rack-and-pinion steering. These features combine with a choice of a 14-hp gasoline engine or a 6.5-hp 48-volt electric engine to provide a stable, maneuverable off-road vehicle with wide adaptability to specific job situations. For more information, contact 1-888-922-TURF.



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CIRCLE # 202



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Excel's new Hustler 3400 series tractor

Excel Industries introduces new Hustler tractors

Excel Hustler has introduced a new all-wheel drive, front mount tractor mower model. The 3400 Rear Steer AWD features full-time, all-wheel drive — forward and reverse. Large 18-inch rear drive tires provide traction and stability on slopes.

All 3000-Series models can utilize attachments such as the extra high-lift BAC-VAC catcher, tractor-mounted edger, 55-inch snow thrower, and a wide assortment of mowing decks.

Also new from Excel Industries, the 60-inch Flail Mower for the 3000 and 4000-Series front-mount turf tractors. The rugged, heavy-duty Flail Mower offers a dual-trim, rear-discharge design and the cutting blades can be configured for rough or fine cut applications and verti-cutting. For more information, contact 1-800-395-4757.

CIRCLE # 205



The new FireShield 2410FS

Safety Storage's new FireShield

Safety Storage, Inc. introduces the new Model 2410FS FireShield prefabricated, relocatable building designed for the safe storage, handling and use of chemicals and hazardous materials.

The 2-hour fire-rated buildings are 24-by-10-feet, providing 179 square feet of storage space and feature two outward-swinging, fire-rated double doors, measuring 60-by-80 inches. The buildings are fabricated from heavy-gauge steel, structural channel and tubing in combination with UL classified fire resistive gypsum wallboard. Features include built-in secondary containment, removable galvanized steel floor grating, chemical resistant coatings inside and out, and a security locking system with an inside safety release. Forklift openings are provided for ease of relocation. For more information, contact 1-800-344-6539.

CIRCLE # 206



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By Sybron

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selected for their specific turf benefits, formulated into safe, stable products, and proven in university studies and on over 2,300 golf courses around the world. Unlike chemical regimes, GREEN-RELEAF is self regulating, providing you with an extra measure of assurance for healthy, luxurious greens, tees and fairways.

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New turbo mower from Jacobsen

Textron Turf Care and Specialty Products' new Jacobsen HR-4600 Turbo is designed for efficient mowing in a variety of applications including golf course roughs. The mower is engineered around a 44-hp Kubota turbo diesel engine that delivers mowing speeds up to 7.5 mph. That, combined with 92-inch cutting width, enables the operator to cover more than 6.5 acres per hour.

Each of the HR-4600's three hydraulically driven rotary decks features twin 18-inch blades that can handle thick or wet grass. Cutting height is adjustable from one to four inches. The rear-discharge decks are designed to closely follow ground contours for even turf appearance without scalping. Decks fold up to provide a 60-inch transport width for easy movement from site to site.

For more information, contact 1-888-922-TURF.

CIRCLE # 207

New 4x4 from Metro

The new MicroTruk four-wheel off-road utility vehicle from Metro Motors Corp. is designed to take on the



The new 4x4 Metro MicroTruk

big jobs with a 1900 lb. payload capacity. The two 38-hp models available (76-inch bed or 85-inch bed) will transport personnel or cargo around construction sites, golf courses, campuses, and recreation areas. The MicroTruk features an all-weather steel cab and provides the ergonomics of a compact pickup.

Features include one-piece molded main frame, rugged bed construction, heavy-duty shock absorbers and 4-wheel hydraulic brakes. For more information, contact Metro Motors Corp., 2595 North Orange Blossom Trail, Kissimmee, Fla. 34744.

CIRCLE # 208

NEW IRRIGATION PRODUCTS

Neptune ready with PX series pumps

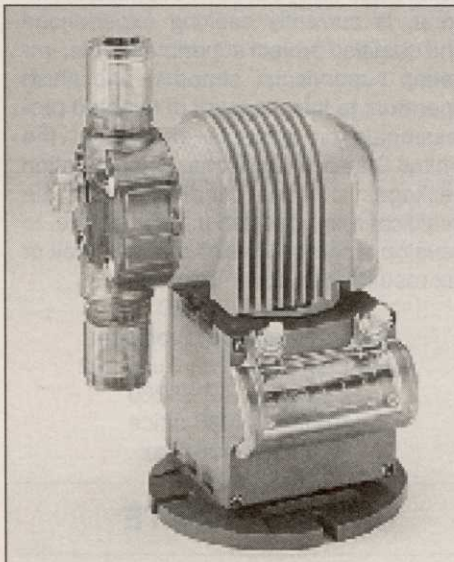
Neptune Chemical Pump Co., Inc. has introduced the new Series PX electronic-pulsed metering pump, ideal for accurate, reliable injection of a wide range of liquid materials, including chemicals, nutrients and disinfectants.

The Series PX features revolutionary design that eliminates the need to change power supply to match source voltage. The pump operates at any voltage from AC90 to 264V and 50/60 Hz.

The PX pump offers extraordinary accuracy, with a low flow rate injection starting at 0.1 milliliter-per-minute. The number of pulses per minute can be set from 0 to 300 pulses, either manually using the keypad or automatically based on a DC 4-20mA current signal.

The injection amount can also be automatically controlled in response to the pulses generated by a water meter contact.

Available in three varieties, ranging from a capacity of 11 gpd to 38 gpd, the Series PX features a compact design

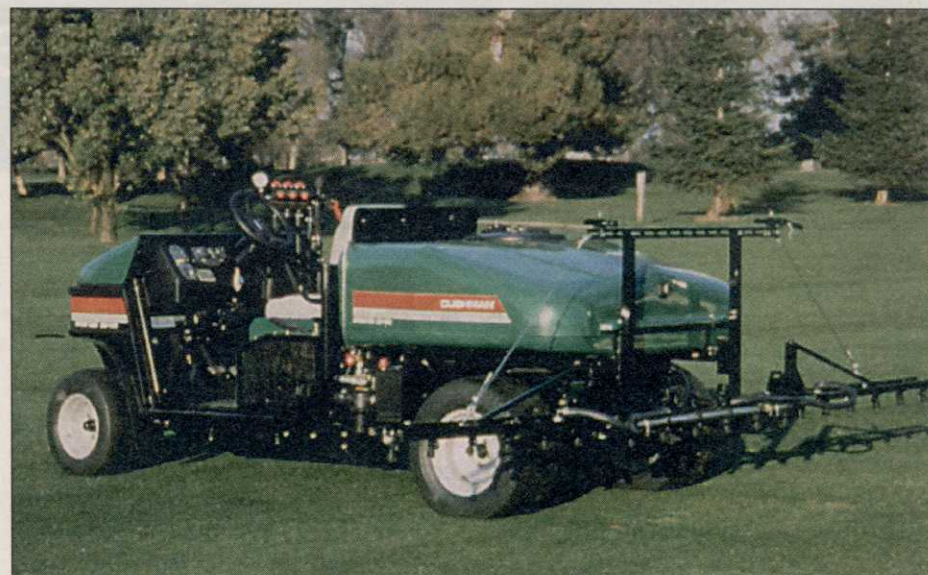


Neptune's new PX pump

and a rotating pump head that can be mounted remotely for tight-fit areas. The unit is suitable for outdoor service with its dust-proof, UV and water-resistant enclosure.

For more information, contact 215-699-8700 www.neptune1.com

CIRCLE # 210



The new Cushman SprayTek DS-300

New Cushman SprayTek offers precise control

Textron Turf Care and Specialty Products introduces the Cushman SprayTek DS-300 which combines precise spray control with the components of the Cushman Turf-Truckster work vehicle. The DS-300 features a lightweight 300-gallon tank that is manufactured by SDI. The tank is both chemical and impact resistant and the tank pump is directly mounted to the engine with a heavy-duty, 56-pound electric clutch which reduces the chance of turf damage from hydraulic leaks. The unit is powered by a 34-horsepower, liquid-cooled engine which has a top transport speed of 17.6 mph.

The new SprayTek DS-300 will be available fall 1999. For more information, contact 1-888-922-TURF

CIRCLE # 209

TRIMS introduces new management software

TRIMS Software International, Inc. announces the release of its grounds management software system, TRIMS 2000. TRIMS 2000 is filled with new features designed to simplify golf course and operations management. Unique importing features allow TRIMS 2000 to interface with recordable time clocks, key/card fuel systems, bar code scanners, and portable data recorders.

TRIMS 2000 is GPS/GIS mapping system compatible and has an incident log feature that tracks when and where chemical applications and grounds work occur. TRIMS 2000 is compatible with Excel, Access and Microsoft Word.

For more information, contact 602-277-8027.

CIRCLE # 211

Century RainAid releases new 1999-2000 catalog

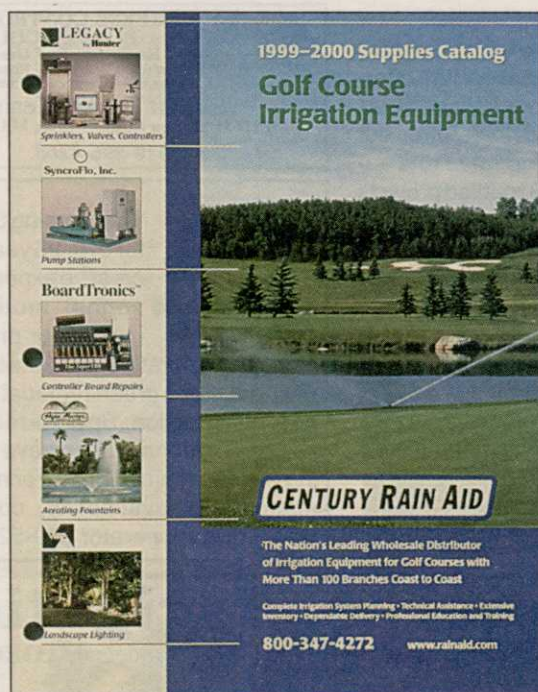
A new golf course irrigation supplies catalog has been released by Century Rain Aid, a leading wholesale distributor of landscape irrigation products.

The 1999-2000 Golf Catalog is available free to industry professionals by calling Century at 1-800-347-4272. The catalog is also offered at all 110 Century branches nationwide or by contacting Century on the Internet at www.rainaid.com.

Century features the complete line of Legacy products in the new catalog, including: Genesis Central/Satellite and Viking Decoder Control Systems; Genesis Data Retrieval Sensor Devices; GRU Retrofit Units; and Legacy G60, G70 and G90 Golf Rotors. The Legacy product line is manufactured by Hunter Industries.

Accompanying most products are manufacturer's tips, feature lists and job site applications. The new Century National Service Center for Controller Board Repairs is also spotlighted with updates on repairing and upgrading Toro and Rain Bird controllers with new components from Century/BoardTronics, Inc.

The reference section includes information on pump troubleshooting, landscape lighting guidelines, fountain/aerator anchoring instructions, irrigation formulas, precipitation rates, lightning



Century Rain Aid's 1999-2000 catalog

and surge protection tips.

The catalog also includes maps to Century locations that specialize in golf course supplies and services. Century sells golf course irrigation equipment in 28 states, Canada and the Caribbean.

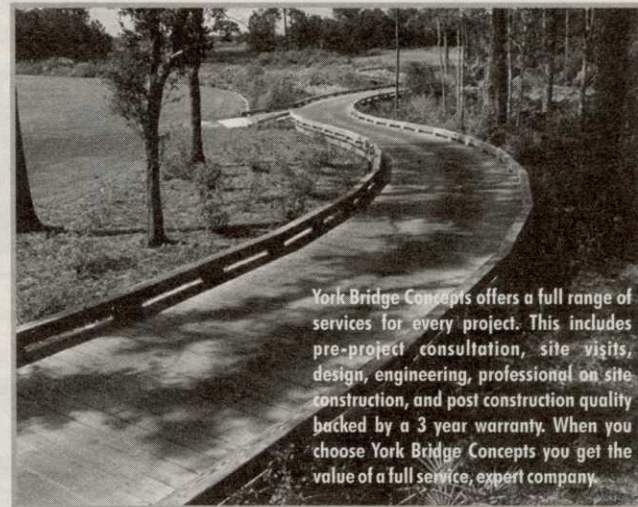
CIRCLE # 212



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CIRCLE #130

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17 — *Cornell Field Day in Ithaca, N.Y.* Contact Joan Gruttadaurio at 607-255-1792.

18 — *Michigan Turfgrass Field Day in East Lansing.* Contact Bridget Ruemmele at 401-874-2481.

18 — *University of Rhode Island Turf Field Day in Kingston.* Contact Bridget Ruemmele at 401-874-2481.

September

9-10 — *Southwest Horticultural Trade Show in Phoenix.* Contact 602-966-0923.

14 — *Southern Illinois University Turf Field Day in Carbondale.* Contact SIU Division of Continuing Education at 618-536-7751.

14-15 — *Turfgrass and Landscape Research Conferences and Field Days in Riverside, Calif.* Contact Victor Gibeault at 909-787-3575.

November

9-12 — *New York State Turf Association Turf & Grounds Expo in Syracuse, N.Y.* Contact 518-783-1229.

13-16 — *Professional Grounds Management Society Annual Conference and Green Industry Expo in Baltimore.* Contact 410-584-9754.

18-20 — *Oklahoma Turfgrass Conference & Trade Show in Oklahoma City.* Contact 918-251-4868.

December

6-9 — *Ohio Turfgrass Foundation Conference & Show in Columbus.* Contact Kevin Thompson at 888-683-3445 ext. 3151.

1999

February

14-20 — *GCSAA International Conference and Show in New Orleans.* *

March

4-7 — *Canadian GSA Annual Conference and Show in Ottawa.* Contact 905-602-8873.

* For more information contact the GCSAA Education Office at 800-472-7878.

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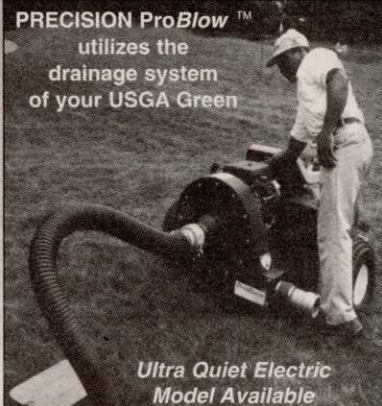
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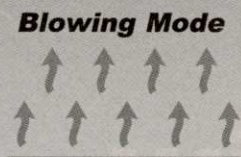
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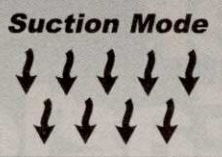
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STONE MOUNTAIN, Ga. — Stone Mountain Golf Club, a 36-hole championship public layout managed by Marriott since 1998, has announced the grand re-opening of Stonemont Golf Course following a \$1 million renovation. Originally designed by Robert Trent Jones Sr., in 1969, the course was nationally ranked as one of America's top 100 public courses by *Golf Digest* magazine for several years. With an additional nine-hole expansion in 1992, the original Stonemont rotation was di-

vided between both 18-hole courses.

In 1969 the state of Georgia commissioned Jones to design the course inside Stone Mountain Park.

In 1991 an additional nine holes, designed by John LaFoy, were built and attached to the original front nine of Stonemont. The original back side was subsequently connected to the Lakemont nine holes built in 1988 to for its own rotation.

Stone Mountain completes \$1M redo

Stone Mountain's head golf professional, Jim Keane, said: "As professionals, I felt it was our responsibility to restore the Stonemont layout back to its original state. This was done not only out of respect for Mr. Jones' work and style, but also for the thousands of golfers who held the original course in such high regard."

The original front nine greens have been rebuilt, maintaining Jones' playing

characteristics, and have been sodded with Crenshaw bentgrass and zoysiagrass aprons. Several of the tee complexes and bunkers have been restored as well. A state-of-the-art irrigation system was installed.

"Great care was taken to restore aspects of the course to their original specifications, including reverting to a par-70," said General Manager and Director of Golf Operations Steve Hupe. "Our goal was to restore the integrity of the original layout while providing a total golf experience second to none in the Southeast."

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After 5-year delay, Geneva National ready for Player

LAKE GENEVA, Wis. — Gary Player is overseeing construction on the new second nine holes at Geneva National here. The first nine holes opened for play in 1994, but several land issues delayed further work to complete the originally planned 18-hole course. In the interim, the Paloma development group took over the project and paved the way for the second nine.

"I am thrilled to be back here again and to have the opportunity to work with Garth Chambers and his Paloma team," said Player. "We had such a good piece of property on the front nine, and walking through what will be the second nine has really excited me. I cannot believe the magnificence of this property. I am truly proud with the way our design team fit the course so naturally into the land."

Although the available land is restricted by large wetlands adjoining beautiful Lake Como, and the merging of the existing nine holes with the new routing plan offered additional challenges, the design of the new nine takes advantage of the property's considerable natural features. Special attention has been given to preservation of trees on site and no wetlands will be impacted, apart from a few narrow boardwalk crossings.

Meanwhile, in Grand Traverse, Mich., Player has opened the Wolverine, an 18-hole layout at KSL-owned Grand Traverse Resort here. The front nine is routed through a landscape that incorporates the large wetlands that have been protected, as well as expanded. The second nine holes feature substantial elevation changes that offer views of Traverse Bay and the entire property.

Hardwoods and spruce trees line many of the fairways. The Wolverine's bunkering is some of the most dramatic of all Michigan courses with bold faces and bright white sand, which is in contrast to the darker-colored sands that more often are used in the state's designs.

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INSIDE

Upfront Prep

Dr. William Torello has ideas on sparing turf the effects of harsh winters. Start in the fall ... 17

Sod Stock

High demand for sod stock ... 53

COPY FRANK ON THIS!

Image enhanced but golfers insist on 'green' look

BY PETER BLAIS
ORLANDO, Fla. — Most golfers view superintendents as trained professionals and the person most responsible for course conditions — news course managers should find encouraging considering national efforts to elevate their image. Disturbingly, however, few golfers recognize the Golf Course Superintendents' Association of America (GCCSAA) as the superintendents' national organization. Also troubling was the unwillingness of most golfers to accept poorer playing conditions in exchange for reduced chemical and water use on their courses. According to a recent survey of golfers conducted by the National Golf Founda-

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SENSITIVE STROKES

Architect Ron Carl worked sensitively around wetlands at the newly opened Indian River Club. Located in Vero Beach, Fla., Indian River is only the third course in the world to be granted Audubon Signature status. The course also embodies the Environmental Principles for Golf Courses recently issued at the conference on Golf & The Environment ... see page 16

Finally someone is steering!



ALL IN THE FAMILY
Robert Trent Jones Sr. (left) has teamed with elder son Bobby to form a new architectural entity, RTJ Golf Ventures. For story, see page 37.

COURSE MAINTENANCE

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Shinn Golf Club in Nigata, Japan, a new design from incoming ASGCA president, Denis Griffiths.

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on course costs

BY MARK LESLIE
Worried the cost of golf is starting to drive people from the game, the incoming and outgoing presidents of the American Society of Golf Course Architects have presented arguments that would lead developers to make harsh choices about their projects. Picking sides in a point-counterpoint atmosphere, Past President Jeff Braner of Goldscapes in Houston and new President Denis Griffiths of Braselton, Ga., agreed construction costs have escalated too high but disagreed over the cure. "Ten years ago there were few upscale daily-fee projects," Griffiths said. "Everyone today is doing

COPY & ROUTE

Ciba-Sandoz deal creates new firm: Novartis

BY HAL PHILLIPS
Consolidation in the chemical trade continues apace, as Des Plaines, Ill.-based Sandoz Agro and Greensboro, N.C.-based Ciba — both divisions of enormous Swiss-owned pharmaceutical and life sciences conglomerates — have agreed to join forces, creating a \$6 billion agricultural giant. The new entity will be known as Novartis, providing Bill Liles, head of Turf & Ornamental for Ciba, his fourth corporate identity in a decade. First it was Geigy. Then came Ciba-Geigy, fol-

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