

GOLF COURSE NEWS

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Superintendent Ken Wright with assistant superintendent Scott Clayworth at Devil's Paintbrush in Caledon, Ontario, Canada. See page 20 for Super Focus.

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OSHA pushes case for ergonomics

By MARK LESLIE

WASHINGTON, D.C. — Arguing that ergonomics is the solution, not the problem, the Occupational Safety and Health Administration (OSHA) ergonomics coordinator defended the agency's work to define guidelines for the workplace.

"Our Congressional mandate is to prevent injury and illness in the workplace," said Nancy Adams. "The way the debate gets framed, ergonomics is the problem. But it's not. It's an intervention strategy to prevent the injury from happening, by good engineering, good process design, fitting the job to the worker and not the worker to the job. You can't do that as one-size-fits-all."

OSHA's push into the realm of ergonomics is not new. The first ergonomist joined the agency in 1979, and talks with labor, trade associations and professional organizations began in the early 1980s. But the business

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Golf Trust adds \$79M. to the kitty

CHARLESTON, S.C., — Golf Trust of America Inc. has signed a commitment with Troon Golf of Scottsdale, Ariz., and Starwood Capital Group LLC of Greenwich, Conn., to loan the two businesses \$69.9 million and a subsequent \$9.0 million to buy two golf resorts.

The resorts include Innisbrook Resort, a 63-hole golf and conference facility near Tampa, Fla., and the Tamarron Resort, an 18-hole golf and conference facility near Durango, Colo.

The acquisition will be made by TM Golf Host, a partnership between Troon and Starwood.

The assets in the merger transaction will include the golf courses, the resort operation assets and developed and undeveloped land, but will exclude the hotels which are individu-

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CARVED ON THE STONE

Bay Harbor Golf Club has taken shape on a five-mile stretch of Lake Michigan shoreline in northern Michigan. It sits on the former site of a cement factory and a quarry that produced sand and gravel. Eighteen holes are ready, nine more will see limited play this fall. See story page 39.

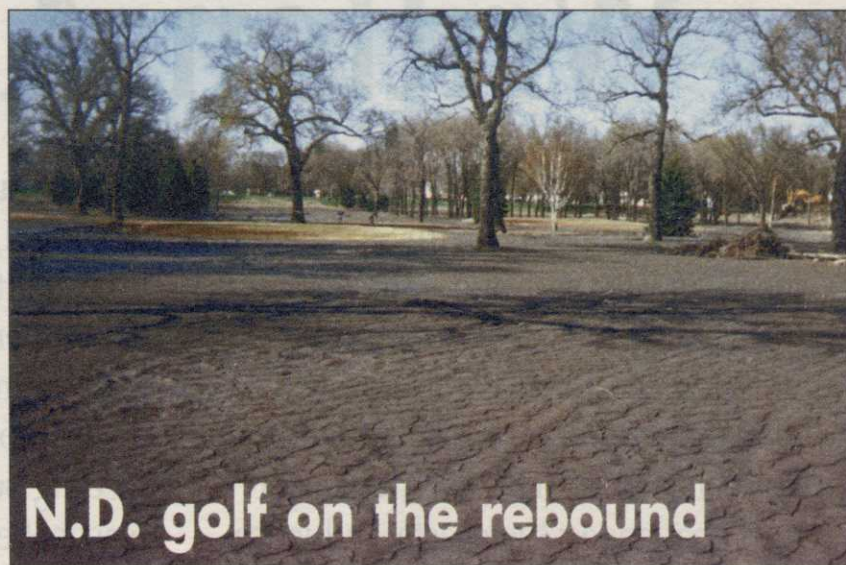
Irri-Tech on board with Smart Rain

By M. LEVANS

KOMOKA, Ontario, Canada — Irri-Tech Distribution Inc. is the latest on Smart Rain Corp.'s growing list of distributors for its new irrigation control system package that allows superintendents head-by-head sprinkler control.

Irri-Tech — a three-person division that Blue Jay Sprinkler Co. started specifically to accommodate the Smart Rain business — will be the exclusive distributor for Ontario, Western Canada and Northern Michigan.

Continued on page 60



N.D. golf on the rebound

By BOB SPIWAK

GRAND FORKS, N.D., — The Red River has receded into its banks after cataclysmic flooding this spring, but golf courses in the Red River Valley are still struggling to get back to normal.

In the Grand Forks area alone, damage estimates are around \$8 billion, and not one golf course is fully operating 18 holes again. Courses are still tallying up the damage with Federal

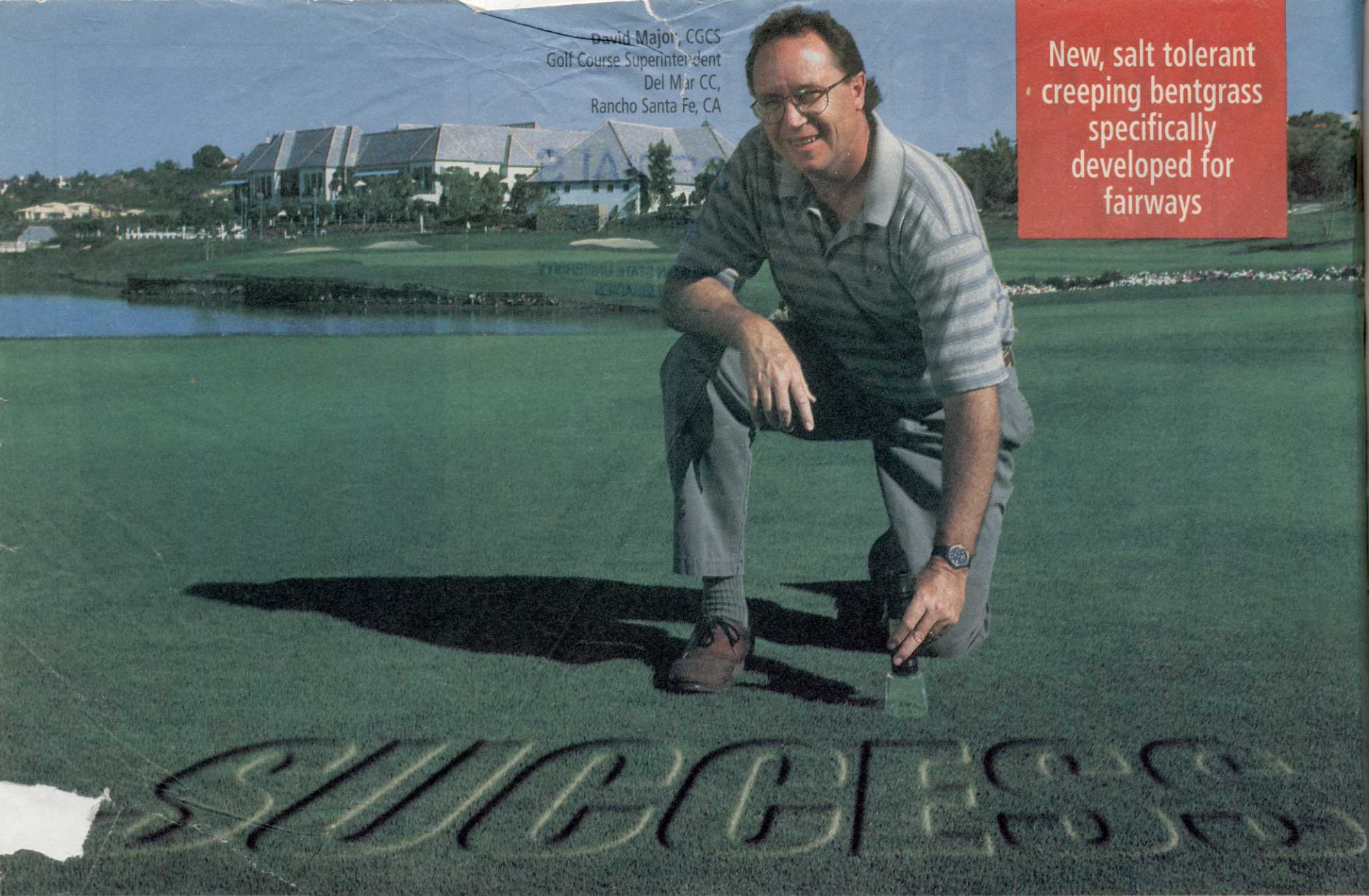
Emergency Management Administration (FEMA) — not only for facilities but lost revenues in an area where an estimated 80 percent of the population plays golf.

At Lincoln Park, a municipal facility run by the Grand Forks Park District, superintendent Steve Mullally said 60 acres of the 18-hole course will have to be reseeded, and nine of the holes

Continued on page 13

David Major, CGCS
Golf Course Superintendent
Del Mar CC,
Rancho Santa Fe, CA

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Ninth hole, Del Mar CC; Joe Lee, architect

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Seaside II has success written all over it.
- David Major

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San Diego course openings put city on development map

SAN DIEGO — It's been a while since San Diego county got a new golf course, but the drought will soon end with a flurry of new openings.

— A 27-hole facility designed by Ted Robinson and his son, Ted Robinson, Jr., is scheduled to open in Mission Valley in late November. The course was built on the former site of the Stardust par-3 course and driving range. Cushman Associates is developing the as-yet-unnamed course.

— Encinitas Ranch, a new 18-hole municipal course built on a former flower farm in Encinitas, is scheduled to open in March 1998. JC Resorts is the developer of the course, which will be situated on a bluff with views of the Pacific Ocean from nearly every hole.

Meanwhile, the new Carroll Canyon Golf Center has opened across from the El Camino Memorial Park. Carroll Canyon is a full-service lighted practice center that offers two unique attractions: a rough-lined 18-hole putting course with holes ranging from 30 to 165 feet, and a practice area with a chipping and putting green and another green that allows shots of up to 75 yards from grass and three bunkers.

CALIF. ARTIST CREATES MOUNTAIN MASTERPIECE AT PALM DESERT

PALM DESERT, Calif. — The new Desert Willow Golf Course features an unusual sight — 19 steel "mountains" created by a local artist. Allen Root used 23,000 pounds of steel to create the mountains, which attached to gaps in the course's perimeter wall. The rust-colored mountains, which cost \$180,000, are part of the city's outdoor public art program. Seventy permanent artworks and sculptures have been added throughout Palm Desert since 1986.

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Arizona high school students construct their own golf course

PEORIA, Ariz. — After nine months of hard work, students at Peoria High School just outside Phoenix now have what they are billing as the only public high school golf course in the state, and maybe the country.

Students in the school's agriculture and building trades and their supervisors built a short, two-hole golf course with bunkers and two greens covering 10,000 square feet. The small course will serve as a training ground for students who will take the school's first golf course management classes in the 1997-98 school year. The program was started with a

\$105,000 grant from the Arizona Department of Education.

John Mulcahy is the chairman of Peoria's vocational educational department and heads its award-winning agriculture program. He applied for the state grant after learning that turfgrass management is one of the fastest-growing horticulture jobs.

Along with the golf course management class, another class will focus on turf management while a third will teach students how to operate and maintain golf course-related maintenance equipment like sprinkler systems and mowers.

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IN BRIEF

BROOKLINE, Mass. — Architect Rees Jones has already met with officials at The Country Club to review preparations for the 1999 Ryder Cup to be held there. Jones, who frequently consults with courses in the U.S. Open rotation and worked with officials at Congressional leading up to last month's U.S. Open, is already very familiar with The Country Club, one of the oldest private courses in the country and the site of Francis Ouimet's legendary 1913 U.S. Open win as a young unknown amateur over famous British professionals Harry Vardon and Ted Ray. Jones handled the renovations to The Country Club course for the 1988 U.S. Open, which was won by Curtis Strange in an 18-hole playoff over Nick Faldo.

•••
TULSA, Okla. — Tulsa's public golf courses have joined the rapidly growing alternative-spike movement sweeping the United States. Metal spikes are now banned at all of the city's public courses — Page Belcher, Mohawk, LaFortune, South Lakes, Forest Ridge, Bailey Ranch, White Hawk and Battlecreek.



The 18th hole at Montlake Golf Club borders a former tourist attraction, a steep-sided sunken lake sitting atop a 2,000-foot mountain outside Chattanooga, Tenn. The 18-hole, par-71 course was designed by owners Earl and Fred Spear, who moved from Florida and opened the course in 1987. Due to health problems, the two brothers are selling the 5,845-yard public course and 4,800-square-foot clubhouse.

Merion being considered for U.S. Open

ARDMORE, Pa.—The Merion Golf Club, host of four U.S. Opens, was played and reviewed by some of the world's most famous golfers this spring to help the United States Golf Association determine whether the legendary layout outside Philadelphia still has what it takes to host a U.S. Open.

According to the *Philadelphia Inquirer*, David Fay, executive director of the USGA, confirmed that "players of note" would play Merion in the late spring and report their findings. Sources told the

paper that Greg Norman and Nick Faldo were likely candidates.

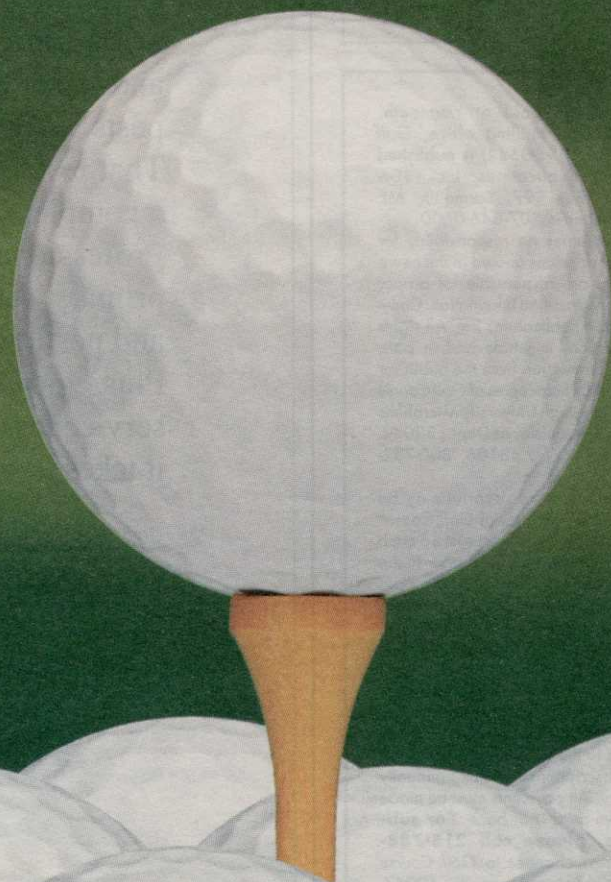
Merion has hosted 15 USGA events, including the 1934, 1950, 1971 and 1981 U.S. Opens. It has been a candidate for the last two U.S. Opens awarded by the USGA, but was passed over for Southern Hills in Tulsa, Okla., in 2001 and the Black Course at Bethpage State Park in Farmingdale, N.Y., in 2002.

Fay said Merion's relative lack of extra space for exhibition tents, parking and

other inevitable modern U.S. Open activities has not been one of the deciding factors against its selection in recent years. But some USGA officials have reportedly questioned whether the 6,500-yard championship course is sufficient to challenge modern golfers and modern golf equipment improvements.

Fay told the *Inquirer* that some have specifically questioned the strength of Merion's finishing holes. But he also said that players he spoke to had been very enthusiastic about Merion and the idea of a future U.S. Open there.

WHAT YOU NEED IS A WAY TO STAND OUT.



USGA ads go for the heart

NEW YORK — The United States Golf Association (USGA) premiered a major new advertising campaign, spotlighting its role as the guardian of golf's heritage and the promoter of its future, during the U.S. Open Championship.

The TV campaign, which started June 12, carries the theme line "For the Good of the Game" and is designed to raise awareness of the USGA's role in making the game of golf a better experience for players at all levels. Four 30-second TV commercials and one 60-second spot, created by BBDO New York, tap into the spirit and convey the emotion shared by those with a passion for the game.

The television campaign will be complemented with print and radio advertising.

The first commercial, "Birth," communicates the overall role of the USGA as the official conservator of all that is "good" about golf. The spot likens the USGA to a parent and the game to a child that needs constant care and protection.

The second commercial, "She Loves Me," uses the old rhyme to symbolize the almost mystical power golf exercises over its most avid suitors. The voiceover, "She loves me;

she loves me not," is paired in witty juxtaposition with film images of golf's pitfalls from bunkers to recalcitrant rim-hugging golf balls to rock slides and water hazards as well as inconveniently placed trees.

The third spot, "Rules," focuses on the USGA's responsibility to write and interpret the rules of golf and foster fair play. As spiritual music is heard in the background, golf rules are announced like commandments, "Thou shalt not carry more than 14 clubs. Thou shalt not ground thy club in a hazard," as offenses roll by on videotape.

The final spot highlights the key role the USGA plays in promoting the future of the game. The commercial, entitled "Kid's Address," showcases the association's involvement in underwriting programs for junior golfers and inner-city youth.

The campaign is scheduled to air in all the major televised USGA-sponsored championships in 1997, including the U.S. Open, the U.S. Senior Open, the U.S. Women's Open, the U.S. Junior Amateur, the U.S. Women's Amateur, the Walker Cup Match, and the U.S. Amateur Championships. All championships will be aired on the NBC and ESPN television networks.

Mouse-on-a-bun no laughing matter

WALKERSVILLE, Md. — A seasonal course maintenance worker at Glade Valley Country Club has been named in a \$500,000 lawsuit over a distasteful practical joke — he is accused of planting a dead mouse in a friend's sandwich.

Golfer Terry Lee, who bit into the sandwich, has filed the suit in Frederick County Circuit Court against the Glade Valley Country Club, the public club's manager James L. Reck, and maintenance employee Charles F. Shawver, who Lee contends handed him a mustard-covered rodent in a hot dog bun during a golf outing in December 1996. Lee and Shawver are, or were, friends and reportedly have played golf together off and on for the past 12 years.

According to the suit, Shawver, 57, handed Lee what he thought was a hot

dog wrapped in foil before his round of golf. Lee bit down and discovered that the bun contained a dead mouse covered with mustard. According to the suit, the incident sent passers-by into fits of laughter.

Shawver, who is retired and works at the course in the summer, told the *Baltimore Sun* he is surprised that Lee filed a suit. "It makes me irate to have something like this happen over a joke and then to think I have to go through litigation," he said. "This thing started out among friends, but the whole thing just went sour. I'm sorry it really did happen."

Meanwhile, Lee alleges in his lawsuit that the incident caused him to suffer "highly offensive contact" with the "hot dog" and "emotional pain" caused by his fear that dead rodents can carry potentially fatal diseases.

U.S. Open savior takes over Cave's Valley

BALTIMORE — Golf course superintendent Steve Glossinger, the man credited by many with saving the rain-threatened 1996 U.S. Open at Oakland Hills in suburban Detroit, left the prestigious club earlier this year for a similar position at Cave's Valley Country Club outside Baltimore.

Cave's Valley, designed by Tom Fazio, has 275 members, but only 75 of them are local. Some of its members include former

baseball greats Brooks Robinson and Jim Palmer, plus many U.S. congressmen and senators.

Glossinger, a former superintendent at both Signal Point in Niles and the Point O'Woods in Benton Township, has kept ties to southwest Michigan.

Glossinger is the architect of The Hills of Golden Pond, an 18-hole championship layout under construction near Berrien Center, Mich.

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Pittsburgh muni links receiving summer facelift

PITTSBURGH — The public courses in North Park and South Park are headed for facelifts this summer under the new management of Fore Star Golf, Inc. of Lubbock, Texas.

Fore Star, which operates courses in four states, has taken over management of the courses from Allegheny County and has pledged \$1 million in improvements to the 18-hole North course and the nine-hole South layout.

Plans call for green renovations, improved mowing practices on greens and fairways, better-defined rough areas, and rebuilt bunkers with new sand and expanded, level tee areas. Work is scheduled to start early this month and last about two months.

Okemo may add to Vt. course portfolio

LUDLOW, Vt. — Another new golf course in the Green Mountain state? Maybe.

Officials at Okemo Mountain Ski Resort have been buying up parcels of land for what they say could soon be an 18-hole course. In the past year, the resort has purchased four different parcels totaling about 172 acres.

Okemo vice president Dan Petraska said Okemo is considering developing an 18-hole layout on land that would be a mix of woodlands and old pastures. The town has only one golf course nearby, nine-hole Fox Run. Petraska said there is a pent-up demand for a larger course and that it would create more interest in the area during the summer and fall.

NEW 18 SCHEDULED TO OPEN IN SOUTHEASTERN PA

LIMERICK, Pa. — The new 18-hole Turtle Creek Golf Course designed by Ed Beidel of Hassenplug Associates is set to open for partial play this month. The course was eight years in the making. It sits on 167 acres and is owned and will be operated by the Waltz family, who have long been involved in the turf business and run a chip-and-putt facility in the area. At least nine holes are scheduled to open this month, with the other nine possibly opening in the fall.

Local residents team up to purchase R.I. golf facility

MISQUAMICUT, R.I. — A coalition of community residents and land preservationists teamed up to buy the nine-hole Pond View Golf Course that has been on the market for a year.

The 1350-member group, which includes members of the Weekapaug Foundation for Conservation and residents of West-

erly and other surrounding towns, bought the 60-acre course for \$1.67 million from Samuel J. Urso, Jr., of Westerly. The course has been renamed the Weekapaug Golf Club and will remain open to the public.

As part of the purchase, development rights for the Shore Road course have been retired, mean-

ing that as long as the group owns the property it will never be developed. The course sits on scenic land overlooking Winnapaug Pond, one of Rhode Island's three environmentally significant saltwater ponds.

The group that bought the course was aiming to raise \$1 million toward the \$1.67 million,

but ended up raising \$1.1 million from about 135 investors. Under the plan, investors could contribute between \$2,000 and \$10,000 to become a charter member of the new club.

Improvements are planned for the nine-hole course, which has been in operation since the 1960s. An automated irrigation system is planned and changes are proposed for some holes.

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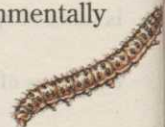
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State nixes plan for sixth course at Bethpage State Park...

FARMINGDALE, N.Y. — A plan to add a sixth 18-hole course at Bethpage State Park has been killed by state parks officials.

The idea of expanding the largest public golf complex in the country was originally praised. But a feasibility study showed the course could not be built without displacing longtime park activities.

Park users who were afraid of being displaced and environmental groups who supported keep-

ing the land undeveloped ran a strong campaign against the new course. That effort ultimately won support from influential politicians and Parks Commissioner Bernadette Castro.

Bethpage's Black Course, one of the park's five existing courses, will host the U.S. Open in 2002. That event will mark the first time a U.S. Open has been played at a non-resort, publicly-owned, public-access golf course.

...and closes Black for renovation

FARMINGDALE, N.Y. — The Black Course at Bethpage State Park will close this month for 10 months as part of a \$2 million renovation to get it ready for the 2002 U.S. Open.

The course will close July 21 and reopen in May 1998, according to parks officials. Officials said that when the course is reopened it will stay open to the

public until a week before the U.S. Open is played in June 2002. Bethpage will be the first public course to host the U.S. Open.

Dave Catalano, golf course superintendent at Bethpage, said the changes will be aimed at returning the 7,000-yard course closer to its original design. The course was built in the early 1930s and designed by the legendary A.W. Tillinghast. Catalano said the Black Course's bunkers will be re-edged and filled with new sand, greens will be regraded, and tees leveled. With several new tees, the course will measure 7,200 yards for the Open. The United States Golf Association is funding the renovation.

Wraps off two of Detroit's best

DETROIT — Two of Detroit's finest and most historic courses — Country Club of Detroit and Western Golf & Country Club — are unveiling major changes this summer.

The Country Club of Detroit in Grosse Pointe Farms, site of Arnold Palmer's 1954 U.S. Amateur win, has opened its renovated greens, five tees and several new bunkers that were designed by Robert Trent Jones, Jr. The course was designed by Harry S. Colt and Charles H. Alison in 1927.

Western Golf & Country Club, designed by Donald Ross, has opened two resurfaced greens and a resurfaced putting green. The newly-sodded greens (with Penn State's G2 grass) are an experiment with the expectation that the rest of the greens will be resodded starting in the fall.


Former GCN editor is now On In Two

PORTLAND, Maine — Hal Phillips, former editor of *Golf Course News*, has launched his own media-relations consulting firm called On In Two Communications.

The new firm, based here, will specialize in the formulation and execution of media campaigns for golf industry firms, including manufacturers, architects and management companies.

"On In Two was created to help golf companies better connect with the media — print and electronic," said Phillips, who managed the editorial operation of *GCN* and *GCN International* from 1992 to 1997. "Good press doesn't just happen," added Phillips. "It takes somebody working on the company's behalf."

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Ill. golf links goes easy on environment

LEMONT, Ill. — While *Golf Digest* has named Ruffled Feathers one of Chicago's top five public golf courses, wildlife on the 18-hole, 175-acre course may have it better than the golfers themselves.

Endangered black-crested night herons nest behind the driving range. Elegant blue herons and great white egrets, rails, snipes and American bitterns abound. And waterfowl—from green-winged teals to golden eyes and mergansers—flock here.

To preserve its wildlife-friendly habitat, the staff at Ruffled Feathers maintains the course with sensitivity to the environment. Superintendent Dan Albaugh uses slow, long-releasing fertilizers to minimize impact to some 29 acres of federally mitigated wetlands. Rather than blanket the landscape, Albaugh selectively spot applies insecticides and uses newer, less damaging chemicals—such as a fungicide derived from mushrooms.

Located 20 miles southwest of downtown Chicago, Ruffled Feathers is the only Pete Dye and P.B. Dye-designed course in Illinois.

Wis. track set for fall unveiling

HAVEN, Wis. — It looks as if the highly-anticipated Whistling Straits may be ready for a soft opening sometime this fall.

David Longmeyer, project manager of construction at the Pete Dye-designed course, told *The Sheboygan Press*, "We caught up, everything's on schedule. A big variable is the weather."

The back nine of the links-style layout has already been seeded and the front nine was expected to be seeded by July 5. The fairways will be fescue, while tees and greens are bentgrass.

This is the second high-profile Wisconsin course for Herbert V. Kohler, the developer, and Dye. Dye also designed Blackwolf Run for Kohler. The new superintendent at Whistling Straits is Saeed Assadzandi, who worked with Dye as superintendent during the construction of the Mystic Rock course in Pennsylvania.

Palmer teams with Ohio developer to build six facilities nationwide

CINCINNATI — A Sycamore Township developer has formed a threesome with Arnold Palmer and a Florida contractor to build six multi-million-dollar golf course communities throughout the eastern United States.

Hines-Griffin Land Development Co., developer of Fairways at Pine Run in Warren County

and the Shriner's Oasis Golf Course Community in Clermont County, recently settled the deal with Palmer, according to partner Dan Griffin.

The team includes Hines Griffin, Palmer Course Design of Ponte Vedra Beach, Fla., and Ranger Construction Inc. of West Palm Beach, Fla. It plans to build

six courses valued between \$35 and \$40 million each over the next five years in Nashville, Tenn.; Indianapolis; Atlanta; Charlotte, N.C.; and in two cities in Florida. The projects will generally cover from 400 to 700 acres with about 550 homes each.

Hines and Griffin are both Cincinnati natives well-known in the

region's residential development industry for building upscale homes. The team recently received a strong reception during a membership drive at its most recent development, Tartan Fields Golf Course near Dublin, Ohio, which will feature a golf course designed by Palmer's design group.

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Calif. track starts construction after 12-year wait

GILROY, Calif. — Twelve years after the development was first proposed, preliminary construction has begun here at Eagle Ridge, a housing development of 650 homes (831 master planned) whose centerpiece will be an 18-hole golf course designed by Santa Rosa, Calif.-based Golfplan, The Ronald

Fream Design Group.

Located 30 minutes from San Jose, Eagle Ridge will serve the South Bay market that features a growing population of golfers but relatively few daily-fee facilities. According to David Dale, senior golf course architect with Golfplan, the course should open for play in spring 1999.

"It will be worth the wait," said Dale, whose team collaborated on the Eagle Ridge design with PGA consultant Johnny Miller. "The course will be laid out across 197 acres, with numerous barancas and riparian areas to play over and alongside. We've succeeded in getting back to some of the old shotmaking op-

portunities - allowing the ball to roll by extending fairways around the green areas. There are revetted [sod-wall] bunkers that occur on a few of the precision shotmaking holes. There are also flashed bunkers reminiscent of A.W. Tillinghast architecture. All of the green sites are unique, however they are somewhat elevated and rolled in key areas, reminiscent of the

Donald Ross philosophy of green design. The golfer will definitely experience a lot of variety."

William Zmistowski Associates of Boulder, Colo. will design the clubhouse. Zmistowski is responsible for the clubhouses at Sherwood Country Club, home of the Shark Shootout, and Castle Pines Golf Club, home of the PGA Tour's International tournament.

The realization of Eagle Ridge was a long time coming, as two separate environmental impact reports (EIR) and the endangered-but-resourceful Tiger salamander kept the project in limbo. Working with the developer, Shapell Industries of North California, the Golfplan team waded through red tape for 12 years before Eagle Ridge received permitting approval late last fall.

"We stood by Shapell because we pride ourselves in working with developers through thick and thin," said Dale. "We were impressed with Shapell's commitment to the development of this project, and its determination to make this the premier course north of Monterey. The EIRs delayed things significantly.

"Then there's the Tiger salamander - which was actually found in a housing area, not a golf course area. Needless to say, the housing is no longer in that area, although the necessity to consider the migrating paths of the salamander resulted in some interesting planning."

Golfplan has designed Eagle Ridge to measure 6,965 yards from the tips and 5,080 yards from the front tees. In between there are four more sets of tee boxes, providing "a dramatic and interesting mix of length and angles on each hole," said Dale.

"Three holes play along Uvas Creek, and hole 14 plays through a beautiful valley, then up into the highlands overlooking the city of Gilroy. It's a spectacular site: Live oaks, sycamores, valley oak, Manzanita. It really creates a special atmosphere out there, playing around and through excellent specimen trees and dynamic micro-environments."

OHIO'S BOB-O'-LINK TO EXPAND TO 36 HOLES

AVON, Ohio — The public, 27-hole Bob-O'-Link Golf Course, a popular layout for Lorain and Cuyahoga County golfers since it opened in 1969, plans to add nine more holes. The course opened with 18 holes. Avon residents Bill Fitch and Dale Smitek bought it in 1977 and then added another nine. Fitch said business has been good enough to support another nine holes, which would create a 36-hole facility.



Former Major League ballplayer opens new layout in Ore.

MONROE, Ore. — The 18-hole public Diamond Woods Golf Course, the newest layout in the Corvallis-Eugene area, recently opened its first nine holes and the second nine is scheduled to open in 1998.

The course, set on 168 acres, is owned by Jeff Doyle, a former Oregon State baseball player with the St. Louis Cardinals organization.

The story of Diamond Woods is a family one.

Doyle's brother, Greg, has worked at courses the past 17 years, including Trysting Tree in Corvallis and Pumpkin Ridge in North Plains, and the two of them collaborated on the building of Diamond Woods. Greg Doyle designed the course and the brothers teamed up to build it, with the help of friends and laborers. When fully opened, Diamond Woods will play to 6,919 yards from the back tees with a par of 72.

Asian investors buy Hawaiian links

HONOLULU — The Ewa by Gentry golf course being developed on the Ewa plain has been purchased by a group of investors in Pacific Rim countries and will be completed in 18 months, according to the project manager, Jasper Hawaii Investments Inc.

Coral Creek Golf Inc., the

buyer, and Gentry Homes Ltd., the seller, did not disclose the price. Howard Kihune, a former member of the Maui County Council and local representative of Jasper, told the *Honolulu Star-Bulletin* his company will be looking for other Hawaiian projects for Pacific Rim investors and lenders.

The golf course, Jasper's first venture, is part of the 1,000-acre Ewa by Gentry master-planned community being developed by Gentry Homes Ltd.

Major changes for Idaho's Thunder Canyon

LAVA HOT SPRINGS, Idaho — Big changes are on the way for the public, nine-hole Thunder Canyon Golf Course.

Nine new greens, two new fairways and nine new tee boxes are just a few of the projects being undertaken this year, according to new manager Jim Maughan. The pro shop is also undergoing a complete renovation and plans are in the works for a new practice range.

The revised layout is expected to add considerable length to the nine-hole course, and increase par from 35 to 36. The new course will be completed for play by spring 1998. The course will remain open throughout the 1997 season while the work is carried out.

Vegas track set for summer play

LAS VEGAS — The par-72, championship daily-fee course designed by Rees Jones for the Seven Hills master-planned community is set to open this summer.

Twelve holes will weave through the rugged canyons. The other holes are situated on plateaus offering expansive views of the Las Vegas valley and surrounding mountains.

When completed, Seven Hills will have 3,600 homes, parks, playing fields, trails, and other amenities. One-third of the 1,300-acre community will remain as open space. Seven Hills is a development of Forest City Enterprises; resort developer Terry Johnston; and American Nevada Corp., a Green-spun company.

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Hutchinson undertakes major Bahamian project

By HAL PHILLIPS

FREEPORT, Grand Bahama Island — A massive hotel purchase and renovation plan here will result in the refurbishment of one golf course and the resurrection of another. It also means management of both layouts, in addition to more than 1,300 hotel rooms, will be consolidated under a single operator.

That operator is Hutchinson Port Properties (HPP), a joint venture between Hutchinson Port Holdings and Hutchinson Whampoa Properties, a wholly owned subsidiary of Hong Kong-based Hutchinson Whampoa Ltd., an enormous multinational involved in port development, telecommunications and energy.

With its June purchase of the Grand Bahama Beach Hotel, the Lucayan Beach Resort and Casino and the adjacent vacant land, HPP has entered the resort business, too, while simultaneously bolstering the golf destination status of Grand Bahama Island, now a stronger player in the golf resort market.

HPP has also agreed, in principle, to purchase the Clarion Atlantik Beach & Golf Resort, the Lucaya Golf & Country Club and the now dormant Bahama Reef Golf Course.

"The Hutchinson deal, we believe, will take the tourism product of Grand Bahama Island to a higher level and will make the island a much more competitive destination in the marketplace," said David L. Johnson, executive vice president of the Grand Bahama Tourism Board.

According to Bahamian Prime Minister Hubert Ingraham, HPP has also agreed to match government funds of \$2 million annually for five years to promote the destination and attract more airlift from the North American market.

Ingraham said the Lucayan Beach Resort & Casino would close for two years of extensive renovations beginning July 16, with construction commencing in August.

"We are very excited about the development plan for the Lucayan Beach strip," said Ingraham. "We think that it will become to Grand Bahama what Paradise Island has become to Nassau."

Under Johnson's leadership, Grand Bahama Island (GBI) is bidding to match the tourism success enjoyed by its Bahamian sister island. The HPP purchase will also help GBI compete with the Caribbean's increasingly golf-centric resort market.

The massive redevelopment project will be undertaken in two phases. Phase I will last two years and include construction of a new hotel — on the vacant beach-front parcel — and complete renovation

of Lucayan Resort and Casino, which includes the golf course.

Phase II will entail renovation of Grand Bahama Beach Hotel and the Clarion Atlantik. These plans include development of a luxury health spa, eight new restaurants and bars, and other tourist attractions.

Though an architect has not been named, renovation of the Dick Wilson-designed Lucaya G&CC is the first step, according to Craig Martin, operations manager at the Grand Bahama Beach Hotel.

"As far as the Lucaya golf club goes, there will be a new clubhouse, pro shop and upgrades to

the golf course," Martin said. "We want the Lucaya course to be the best in the Caribbean. The Reef Golf Course will be renovated. It's just a question of when."

Refurbishment of the Reef course is the plan's most intriguing element, as the layout has lain fallow for 20 years. The Reef sits directly along the Caribbean and has the potential to offer spectacular views. A flat site and strong

trade winds will provide the as-yet-unnamed architect all the elements for a compelling links course.

When both course renovations are complete, GBI will boast four top-notch golf venues — a total few Caribbean nations can claim. Unaffected by the HPP purchase, the Bahamas Princess Resort and Casino currently manages a pair of fine designs, the Emerald and Ruby courses.



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N.D. floods

Continued from page 1

may be lost to either a diversion ditch or a new dike. The U.S. Army Corps of Engineers is deciding the path to take, but in either case, the course will be reduced to nine holes and a new 18 built elsewhere. By a stroke of good fortune, the land for 18 holes had already been purchased.

Mullally, as others, spoke of the high level of stress in the Grand Forks community.

"The people need diversion from their troubles and we're working as hard as we can to get them a place to play golf," he said. Reseeding will cost about \$60,000. Revenue loss is estimated at \$200,000 and it will cost at least \$500,000 to replace the destroyed clubhouse.

The north-flowing Red River is the dividing line of North Dakota and Minnesota, and is joined at Grand Forks by Red Lake River. The land is flat, comprised of rich, black soil. At normal flow, the Red runs at around 5,000 cubic feet per second (cfs.) At the peak of the flood, it was gauged at 150,000 cfs and ran 31 feet higher than normal. Millions of tons of water brought with it uncountable tons of fine silt, which choked the land when the river returned to its banks — silt so fine that when it dried, it hardened like concrete.

Mark Lindberg, superintendent at Edgewood Golf Course in Fargo, is having a hard time dealing with the dried silt. In an effort to reseed through an inch of the hardpan, his aeration equipment is suffering.

"We're doing a lot of welding and repair on equipment," he said. The turf is gone from the course which was under water for 40 days. He is attempting to aerify it and then re-seed with a slit seeder. The hardened silt does not wash away under high-pressure hoses. Breaking through, or removing the silt, is the only way to deal with the problem.

At Lincoln Park, which had more than four times the amount of silt, Mullally plans to break up the silt layer and haul it off in trucks, some 2,400 cubic yards. Then, he said, it will be harrowed and a box-scraper will be used crosswise on the fairways to take out the remainder. Then the earth will be rototilled to 2 inches and reseeded.

The flooding was not the only problem. When it was certain the water would rise, Lindberg and his crew hastened to erect the driving range net while there was still vehicular access to the poles. Once the net was up, a blizzard hit and was followed by a sleet storm which destroyed the entire netting system.

Grand Forks Country Club was under water for 20 days. Superintendent Mark Bergstrom figures at least \$250,000 damage was done there.

The course lost five fairways, and has been re-configured to a nine-hole venue. The day before the flood reached its peak, Bergstrom and crew boated to the maintenance shop and emptied the chemical building, put-

ting the materials on a tarp and moving it and the equipment to a green on higher ground. He had everything moveable on the floor put on shelving 18 inches off the floor. The waters rose to 17 inches.

At Edgewood, Lindberg had the fertilizer shed sandbagged, which saved the contents.

Despite billions of dollars in damages, the cost to the human

psyche has been phenomenal, and probably longer-lasting. Bob Leach, owner of the Golf Center driving range in Grand Forks, said his business is better than ever. He attributed this to people coming to combat stress and take their minds off their troubles as well as to possibly relieve some aggression.

Without a trace of self-sympathy, he said: "We live in a 52-

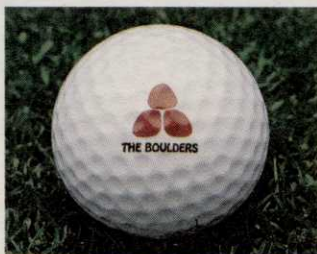
year-old house which never had a drop of water in it through past floods until this year. It completely flooded the basement and we had 4 inches in the upper level." (Many Dakotans center their living in finished basements, especially during the windy, sub-zero winters.)

"The water was 8 feet higher than ever before in history,"

Continued on next page



Grand National
Auburn/Opelika, AL



The Boulders Resort
Carefree, AZ



Grayhawk Golf Club
Scottsdale, AZ



Four Seasons Resort Aviara
Carlsbad, CA



Keystone Ranch Golf Course
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Floods

Continued from previous page

Leach said. "You look out on the [collection] berms around this town — there are 17,000 washers and dryers, 17,000 hot-water heaters, 17,000 furnaces, as many electrical services and some people are still without electricity."

But, he noted, "Golf is still alive and well here in North Dakota." Leach has regripped "thou-

sands and thousands of clubs this year," as they were recovered from homes after the flood.

Because FEMA will not allow relocation in a flood plain, which was virtually all the area this spring, Leach estimated that 15 percent of the population (about 80,000) will have to relocate.

What he finds rewarding is the manner in which people have been helping others: "There they

are, working 15 hours a day assisting someone else when their own homes have been destroyed, or their businesses were flooded, then burned in the fire [which destroyed half of downtown Grand Forks]," he said.

"Maybe," Leach added, "it's because there are so many Norwegians here. They're tough and resilient — and they look out for others."



Grand Fork, N.D.'s Lincoln Park GC, where all 18 holes were flooded.



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Interlachen Country Club
Edina, MN



Carmel Country Club
Charlotte, NC



Newton Country Club
Newton, NJ



Monroe Golf Club
Pittsford, NY



Bent Creek Country Club
Lancaster, PA



The Dunes Golf & Beach Club
Myrtle Beach, SC



Long Cove Club
Hilton Head Island, SC

Toledo golf market widens

TOLEDO, Ohio — The fast-improving Toledo public golf scene will gain a new player with the scheduled opening of The Legacy early this month.

The Legacy, designed by Arthur Hills, is an upscale, daily-fee, layout just over the Ohio-Michigan line near Ottawa Lake, Mich. The Legacy will be the area's highest-priced course, with an 18-hole round costing \$30 on week-days and \$35 weekends.

Golfers will get to play the only true island green around, a par-3 measuring anywhere from 96 to 155 yards with a 6,700-square-foot, humpbacked surface.

GCSAA says 'It's gotta be the shoes'

BROCKTON, Mass. — Etonic Worldwide has signed a three-year partnership agreement with the Golf Course Superintendents Association of America (GCSAA) that makes Etonic's Dri-Lite Series golf shoes the official "superintendent's shoe."

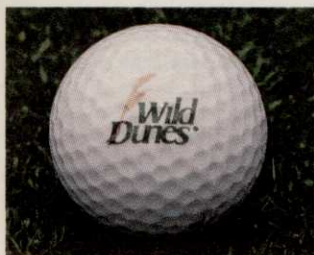
"Clearly there is a synergy between Etonic and GCSAA," said Bill Kirkendall, Etonic Worldwide's president. "By working in conjunction with the people responsible for maintaining golf courses nationwide, Etonic will gain input that will allow the company to produce golf shoes that are best suited for today's golf courses."

Corrections

An article in the June issue incorrectly reported the location of the new \$230 million Kingdom of the Evergreen Forest golf resort being planned by Illinois developer Bryan Clayton. The development would be located in Poynette, Wis.

In the story on Pursell Industries Inc. on page 54 of the June issue, the correct name of the company's controlled-released fertilizer technology is Polyon.

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Avoiding the standard



Michael Levans,
editor

There are a few standard jumping-off points for an editor's first column, and for your sake and mine, I thought I might try to avoid them all.

There's the sentimental column in which I'd wax *ad nauseam* about my favorite boyhood golf course in the rolling Western Pennsylvania hills — the many dew-kissed mornings I walked over its tender turf, dreaming of the day I finally knew every mound, every subtle undulation. A day that would never come, of course.

There's the way-too-standard "Industry Cheerleader" column that starts something like, "There has never been a more exciting time for the industry, bla bla bla...and we'll be right there with you tracking its trends, its movers and shakers...."

And of course there's the "getting to know you," followed by the plea for reader mail and story tips. "And don't ever be afraid to pick up the phone and give us a call."

In those standard formats, however, there's a deeply rooted dishonesty. They're formulaic, transparent, so interchangeable that I could tailor any of them to any industry newspaper and it could still hold ground as a competent first try.

It wouldn't be right to pull one of those stunts on the readers of *Golf Course News* — it never has, and never will be our style.

The one thing that has stuck out about GCN over the past nine years is its bare-bones editorial honesty. There's a familiar tone in its writing and such a familiarity of subject that its readers can't help but feel that the *GCN* editors and contributors truly know, and love, the game and its business.

I'm finding that it's the people who make up the industry that makes this "familiar" tone possible and, in turn, their open communication with our staff. It's inescapable. There's a passion present when you talk golf, something that people in other lines of work can only dream of establishing.

So far I've seen and heard nothing but enthusiasm for where golf and course development are going and how we can capitalize on where golf has been.

Ok, so maybe I'm cheerleading just a little.

In my travels during my first month for *GCN*, I've played rounds with a club general manager and four superintendents, I've met with several advertisers, got a personal tour of the USGA museum and testing center in Far Hills, N.J., and experienced my first field day. In all those situations the common thread was that the people I met held a strong knowledge of the business and a passion for the game — the likes I've never seen.

One stands out in particular.

It was wonderful to see Dave McGee, an ex-super who is now GM at Fiddler's Elbow in Far Hills, N.J., out of his office and back on the course for an afternoon. I could tell that Dave is pretty happy with his management post, but even after 10 years of being out of the maintenance shed, he couldn't keep his hands off the turf.

"Do you miss it," I asked him after we got three holes of Fiddler's Forest Course under our belts.

He gave me a hard stare, the kind you get when you insult somebody. "It's in the blood," Dave said. A reassuring smile directly followed.

Thanks Dave, I'm starting to understand.

...

My travels will take me all over the country, to many different courses — and maybe even into your office.

If you would allow me one standard "first column" note, I'm looking forward to meeting as many of you as I can. I like to listen and learn and the best way is by going face to face, course to course.

...

One last quick note: When was the last time you saw, in any media, any ballyhoo about a tennis tournament? Where are the characters and the glitz that surrounded the court in those free-wheeling '70s?

It's pretty easy to see that Golf — thank you Mr. Woods — is slowly turning into the "sexy" game that tennis once was.

So sexy, in fact, that while I was recently paging through *Rolling Stone* magazine (old habits die hard), I saw two advertisements placed by two prominent golf club manufacturers.

The flood gates have opened. You better be ready.

Please, accept my apologies

OK. OK. I apologize. I apologize to Donald Ross for all his sand bunkers being filled in at Portland (Maine) Country Club back in the 1950s — make that all the sand bunkers filled in at all his golf courses throughout the last six decades.

I apologize to golf course community homeowners who've been conked on the head by errant golf balls while they sat comfortably in their backyards.

I apologize to all the superintendents who have had to repair myriad divots made by poor golfers, which we all were at one point in our lives.

I apologize to all the golfers "from away" who were so taken with the view from the 7th green at Pebble Beach that they fell into the brink.

I apologize to all the environmentalists ever slurred by any builder/developer anywhere, anytime throughout history.

The Indian side of my heritage apologizes to the Scottish side for killing them; and the Scottish side of me apologizes to the Indian side.

"I'm sorry, Mark."

"I accept your apology. I'm sorry, Mark."

"That's OK."

"Go ahead, cry on my shoulder, Mark."

"That's impossible. My neck won't turn that far."

This, of course, is all part of Apolomania. No, not apologetics. Apolomania: that is, apologizing. Someday, somehow, but not until we get to heaven, will we be able to apologize to all the people who have been wronged, offended, or upended by someone in their lives.

Thinking as a golfer, our president surely would have realized that we in the golf industry should be thankful because 1) there was no golf in the United States during slavery, so the industry has no apologies to make for that time period; and 2) for class, golf has it all over baseball (no spitting on umpires here, Mr. Alomar), basketball (tattoos are not kosher, Mr., or is that Ms. Rodman?), football (keep those drugs in your pocket, Mr. Irvin!) and various other recreations which all have vices overshadowing our grand sport.

All this being said, I do as the Good Book says and forgive all of you who have ever thought, said or done evil to me. (No need to call; it would flood our meager phone lines.)

...

Is there something in the air in Henderson, N.C.? A couple of years ago Tom Fazio bought a building and put up the money to fund a Boys and Girls Club in the community. Now his lead architect, Andy Banfield, has bought a house and is opening a crisis pregnancy center.

...

Sleeping Bear Press may be headquartered in Chelsea, Mich., but its arm reaches around the globe. Publisher Brian Lewis — who brought us Alister Mackenzie's *"The Spirit of St. Andrews,"* Donald Ross's *"Golf Has Never Failed Me,"* the reproduction of George Thomas' 1927 gem *"Golf Architecture in America"* and Tom Doak's *"The Confidential Guide to Golf Courses"* — has done it again.

This time it's a slight departure: production of a six-print lithograph collection from St. Andrews. Selected from a cool quarter of a million of photographs by Iain Macfarlane Lowe, who has lived at St. Andrews for three years, these 22-by-28s display the contrariness — and the beauty — of the home of golf, the Old Course.

Sleeping Bear printed 1,000 of each image, which are signed and numbered. Wonderful for a den or office. Then again, how many members in the Golf Collector's Society? Right, they've probably all been sold.



Mark Leslie,
managing editor

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Obituaries.....

LARRY KAMPHAUS 1943-1997

ORLANDO, Fla. — Larry Kamphaus, CGCS, superintendent of Disney's Magnolia G.C. in Orlando, Fla., died here at the age of 54. He is survived by wife Vilma; daughter Nicole and sons Larry, Jr. and Lance; and grandson Austin.

Larry had been with the Walt Disney World Co. for 26 years. He started his Disney career as a landscaper, planting the majestic oaks on Hotel Plaza Blvd. when Disney World was just a small pre-view center building off Interstate 4.

He moved into the golf course maintenance department and helped to grow in and open the Magnolia and Palm courses in 1971. He had been involved in the growth and development of all the remaining 99 holes of golf at Disney World, including the Lake Buena Vista, Oak Trail, Eagle Pines and Osprey Ridge courses.

He became a Certified Golf Course Superintendent in 1985.

During his tenure as the head superintendent for Disney World, he hosted two GCSAA Golf Championships and had been involved in all 26 of the Disney-Oldsmobile Golf Class PGA Tour Events, and three LPGA Healthsouth tournaments.

He and Vilma co-chaired the Central Florida Crowfoot Open Committee of the past decade. He also served many years on the Turf Advisory Council for the Orange County Extension Service.

STANLEY ZONTEK

CAPE MAY COURTHOUSE, N.J. — Stanley Zontek a famed golf course superintendent whose son Stanley J. is a regional director with the U.S. Golf Association Green Section, died at home here on Feb. 17 after a lingering illness.

He was in his early 80s.

A Polish immigrant who moved to America with his parents at the age of 7, Mr. Zontek had retired from Wildwood Golf and Country Club in New Jersey after a long career as a golf professional, superintendent and pro/superintendent.

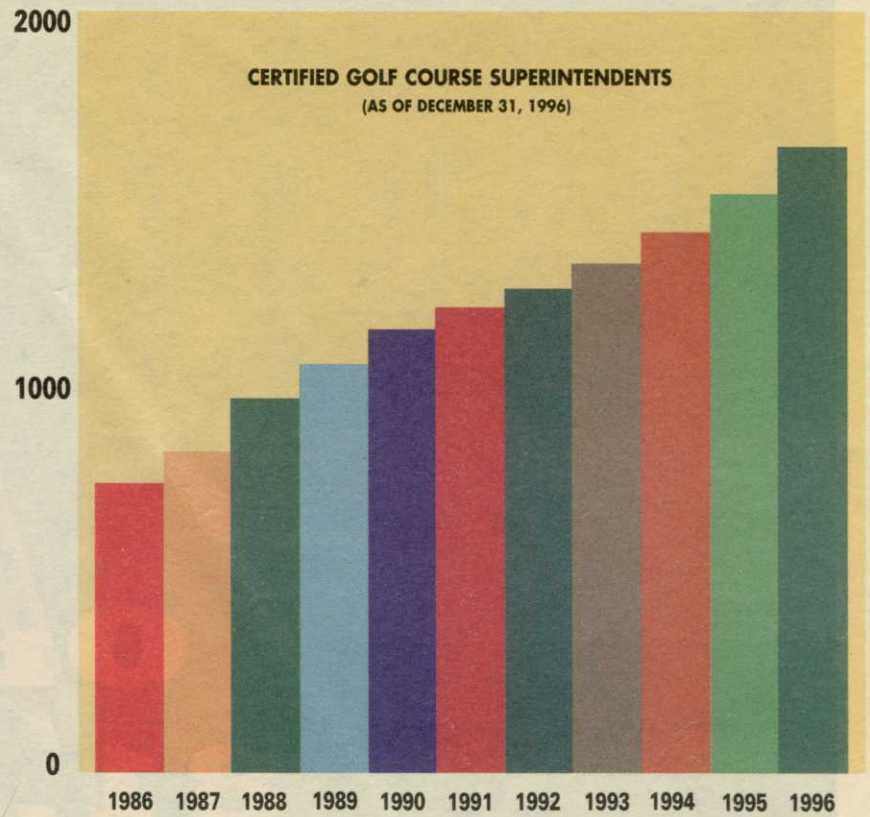
After beginning his career as a pro, he took a position as pro/superintendent at Oak Hill Golf Club in West Virginia, where he often played with Sam Snead.

He later moved to Manor Country Club in Rockville, Md., and to Rolling Green in Philadelphia and White Manor in Melvern, Pa., before taking his post at Wildwood.

Mr. Zontek was the first superintendent in the country to plant Penncross bentgrass. Most of the country later followed his lead.

Mr. Zontek is survived by his wife Laura, two brothers, one sister, three daughters and son Stanley J.

CGCS numbers on the rise



As of December 31, 1996, the GCSAA's Certification Program had 1,642 Certified Golf Course Superintendents. In 1996 the GCSAA reported a record year by adding 177 superintendents to the CGCS ranks. The association speculated that by the end of June, 1997, the number should be close to 1,800.

Source: GCSAA



Sun.



Wind.



Tournaments.



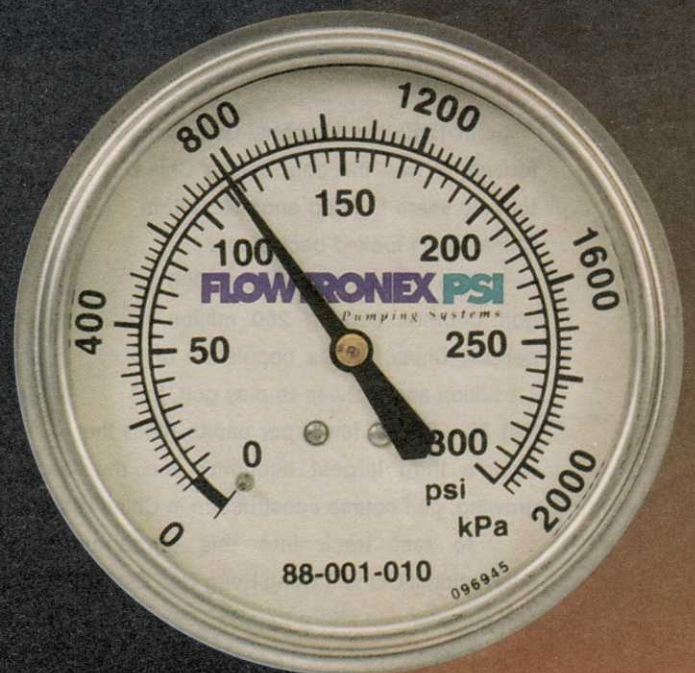
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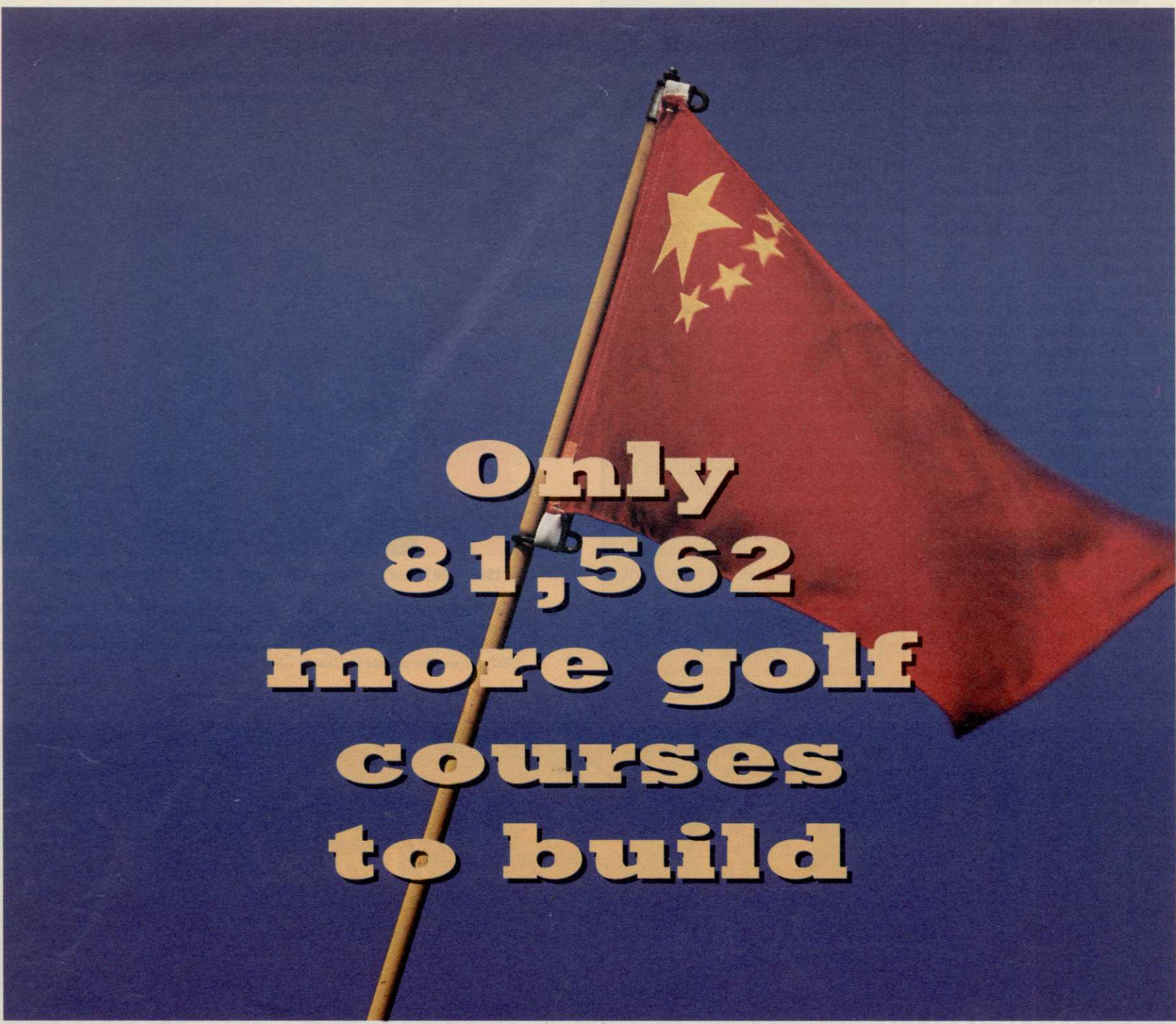
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The Exhibition will take place in Shanghai's prestigious INTEX Centre between the 10th and 13th December 1997. Space, unfortunately, is extremely limited. To secure your position contact:



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BRIEFS



TURF COUNCIL GETS NEW LOOK

The decades-old Southern California Turfgrass Council, with its 700 members, is enjoying a new look as well as an ambitious vision for the future, according to Council President Mark Hodnick. Central to the council's identity facelift is an undertaking by Uber Advertising & Public Relations, which has crafted a marketing and promotion package for the Turfgrass Council as well as for the organization's annual trade show in October.

ARIZONA SUPERS GIVE TO RESEARCH

A \$2,500 donation for research was made to Dr. David M. Kopec of the University of Arizona by Bill Walsh, vice president of Cactus & Pine GCSA, at the U.S. Golf Association Green Section Seminar at Moon Valley Country Club on April 3. Kopec accepted the gift to be used to further research at the UA turfgrass facility. It came from the proceeds of The Cactus & Pine GCSA tournaments.



GCSAA MEMBERSHIP RANKS SWELL

LAWRENCE, Kan. — The Golf Course Superintendents Association of America (GCSAA) has pushed its membership total over 18,000, according to its chapter/member services department. In the three-month period from March 1 to May 31, membership increased by 1,000, or 5.9 percent. The association last year passed regulations under which new members of chapters must join the national group, and chapters' officers must all be GCSAA members in order for the chapters to retain their affiliation.

VALDOSTA CC SIGNS IGM

VALDOSTA, Ga. — Valdosta Country Club has retained International Golf Management, Inc. of Lakeland, Fla., to provide maintenance services. This marks IGM's first major contract in Georgia, one of several states included under the umbrella of IGM's Atlanta-based Southeast Atlantic region.

HORTWORLD ON INTERNET

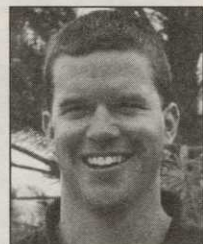
On June 2, Betrock Information Systems began to market HortWorld, a new horticultural site on the internet. HortWorld's site — www.hortworld.com — explores a network of four distinct pathways: products & supplies, services & information, research & education, and turfgrass industry.

Junk food for turfgrass? McCue serves up a batch

By MARK LESLIE

CASTLE ROCK, Colo. — The chef at the Country Club at Castle Pines may think superintendent Sean McCue is baking a batch of cookies with all the molasses he's buying but, in fact, he's heating up a meal that is producing healthy turfgrass and saving money.

For the past year McCue has been spraying his greens and fairways with a concoction of molasses and cane sugar, along with iron and a kelp product. "It's our own roots mix, if you will," McCue said. "It's a quick carbohydrate source — basically a junk food for grass. It heats it up and gives it a quick flush."



Sean McCue

The effect is very noticeable and almost immediate. "You notice it on greens in particular," McCue said. "The day before you spray, you might get a third of a basket of grass clippings. The next morning, after you spray, you get a full basket."

Besides the quick flush, the application improves grass color and increases its rooting mass, he said.

"We use this mixture to help break the greens out of dormancy without using N [nitrogen]," McCue said. "We use TGR, a plant growth regulator, for poa annua control in the fall. With TGR, you get a straw-colored discoloration in the spring."

"It's a substitute for a roots product. You try to generate some growth without adding nitrogen."

In 1996 McCue applied the molasses mixture every two weeks from April through late-September on this course which pushes through 26,000 rounds in a seven-month season.

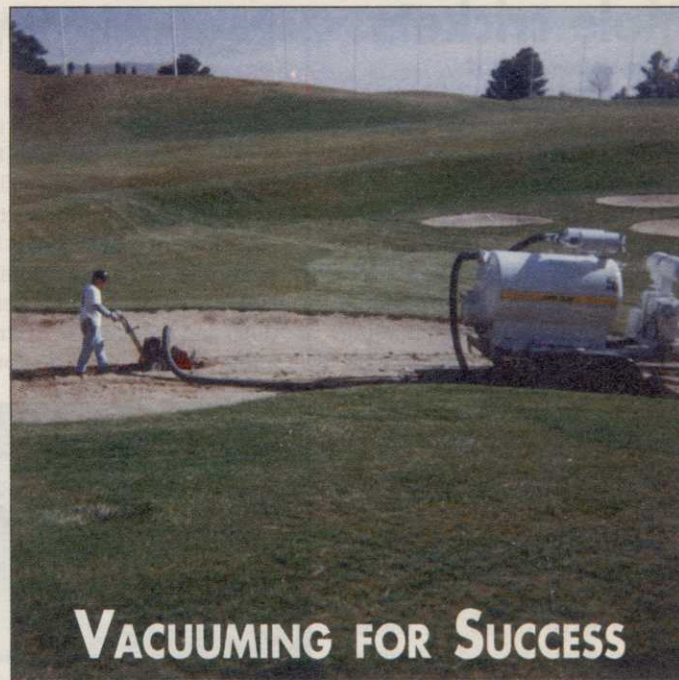
His crew generally adds nitrogen in a separate application. Sticking to a philosophy of keeping things lean, last year McCue applied 1.7 pounds of nitrogen the entire growing season.

"On the greens we put down .38 pounds of N last April 18," McCue said. "By supplementing with all these other sources of food, we were able to go without fertilizing again until July 29."

He said his molasses mixture costs about one-half the price of over-the-counter roots products.

Where does McCue buy such large amounts of molasses and sugar cane?

"Our chef orders it for me," he said. "I buy it by the gallon — 20 gallons at a time. He thinks I'm making cookies down here."



VACUUMING FOR SUCCESS

Hoover, move over, say Colorado superintendents

By MARK LESLIE

CASTLE PINES, Colo. — Colorado superintendents are praising a new machine that removes sand from bunkers without damaging the subsurface and does it twice as fast as other methods.

"The great thing is, after you get done you haven't disturbed the subsurface of the bunker," said Marshall Fearing, superintendent at Castle Pines Golf Club here.

"It's not damaging any turf. It's pretty slick," said superintendent Alan Ogren, who was just finishing work on the first of 32 traps he intended to refurbish at Snowmass Golf Course in Snowmass Village.

Custom-made for Hall-Irwin by a company that manufactures a huge vacuum for cleaning up during water-line excavation, the machine includes a 4-inch suction hose fastened to the expulsion chute of a snowblower. As the operator walks the snowblower back and forth in the trap,

Continued on page 22

Mole cricket challenge continues

By RICK BRANDENBURG

Although managing mole crickets on golf courses is a chore reserved primarily for superintendents in the Southeast, this pest has spread northward, with an occasional report in Virginia and moved west into Texas. Many of the lessons learned while trying to manage this pest in the South have implications that can improve control of other pests such as white grubs anywhere in the United States.

Like white grubs, mole crickets are a soil insect. They feed primarily on turfgrass roots and can be quite damaging. The fact that they are soil insects challenges us in two ways. First, it is difficult to get a good picture of exactly what the insect is doing below the soil surface. This keeps us guessing as to

Continued on page 18

Rick L. Brandenburg is a turf entomologist at North Carolina State University.



Equipment to apply pesticides below the soil surface has been developed and has shown modest success in enhancing mole cricket control.

Research sheds light on control

Under certain conditions, higher rates of some products will actually perform poorly as compared to lower rates. Poor control is often associated with the behavior of the mole cricket and its ability to avoid pesticides.

Following proper rate recommendations, rechecking application equipment calibration, directing control efforts against the small crickets, and avoiding treatment under extreme weather conditions help avoid these failures. Irrigation also influences control and this area is still under study because the response to irrigation is somewhat dependent

Continued on page 18

COMMENTARY

A look at turf: '60 to the future

By MICHAEL HURDZAN

Golf was just starting to boom around 1960, and turfgrass management was becoming a recognized curriculum at the Ohio State University. When I entered that program in 1961, there was one real turfgrass specialist — Dr. Bob Miller — but most of what other professors taught was based on pasture agriculture.

Life was pretty simple, with only a few turfgrasses (Merion, Windsor and Penncross were the high-tech cultivars). Automatic tee and green irrigation was in its infancy with electro-mechanical clocks, and fairways were watered using quick couplers. And the testing for sand-soil-peat for root zones was to mix some up in a bucket, look at it and run your

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Mole crickets

Continued from page 17

their abundance and life stage, until it is often too late to effectively control them. Secondly, their subterranean nature makes it more difficult to get control strategies, like insecticide, in contact with the pest.

A few recent findings on mole crickets are useful for managing this and other soil insect pests. While mole crickets still very much challenge us and the cost of control is quite high, the future looks bright for improving our success.

The first key to mole cricket management is scouting and monitoring. Since the pest spends most of its life underground, good records of where it occurs each year and when its eggs hatch are critical to success. The cricket is easiest to control when it is small. However, this usually occurs in April through July when the Bermuda grass is green and growing rapidly and no surface damage is visible. Effective management requires application of control measures at this time.

Detection of egg hatch is best accomplished by using a soapy water flush. This consists of applying a mixture of two gallons of water and two tablespoons of liquid dishwashing detergent to an area of approximately one square yard. Any small crickets within this area will come to the surface within a few minutes.

Weekly soap flushes in the late spring and early summer allow the superintendent to keep track of the initiation of egg hatch. The task of monitoring egg hatch may seem overwhelming in light of the acres to be covered. However, scouting for adult damage in the early spring and monitoring damage from crickets in past years can develop a map of "hot spots" where crickets are most likely to occur. Treatments should be applied soon after peak egg hatch.

Recent research has helped researchers understand why pesticides don't always work as well as hoped. First, mole cricket development varies from one year to the next. Simply treating based upon a calendar date will lead to disappointment.

Another factor is that mole crickets have a remarkable ability to detect and avoid insecticide applications. Under certain conditions they go deep in the soil and avoid the insecticide for a week or longer.

Irrigation also plays an important role in mole cricket control, but it is not as straightforward as simply irrigating following insecticide application.

During the past 10 years, many companies have produced a wide array of pesticide application

Continued on next page

Research: 'More' is not always 'better' with chemical applications

Continued from page 17

upon the specific product in use.

We naturally assume that watering the insecticide into the soil will increase its effectiveness against an insect that lives in the soil. Recent research has indicated that the picture is much more complicated than this and the use of pre- and post-treatment irrigations and the amount of irrigation can make a big difference in the control.

Research has demonstrated that subsurface application equipment, as a rule, improves performance of many insecticides. But, we have not always seen significantly improved control, nor always the reduced rates working as well. One must look carefully at the wide range of equipment available and consider cost versus benefit before leaping into subsurface application.

The production of biological control prod-

ucts has made great strides in recent years. Several companies have successfully produced commercial quantities of the spores of *Beauveria bassiana* and it is now available for turfgrass insect management, including mole crickets. These products have not been extensively tested in the field, but numerous trials are underway this year to further determine their fit in mole cricket management programs.



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Buyers alliance reports continuing growth

WATERLOO, Iowa — VGM Golf, Inc., a buying alliance for golf course superintendents and others in the green industry, has added 22 new participating manufacturers.

Signing on with the Waterloo, Iowa-based company are the Adam Dean Group, Antigua, Black Rock, Burlington Golf, Bushnell, C.L.K. & Associates, Canterbury Belts, Capitol Cigar, Cobra Eyewear, Dann Dee Displays, DME

Rangefinders, Florsheim Shoes, Gold Eagle, Golfers Gallery, Maxfli, Miller Sports, Mobile Pro Shop, Pickseed West, Pro Shot Golf, Real Golf Vacations, Signature Concepts and Sport Haley.

VGM Golf now has 85 participating manufacturers who offer its more than 900 members competitive pricing, as well as programs that may include improved terms, lower minimums, extended dating, cash rebates and/or freight discounts.

EPIC offers 4th super's training video in Spanish

WEST BEND, Wis — EPIC of Wisconsin, Inc. has released "Safety Basics on the Golf Course," the fourth in a series of Spanish versions of the "Superintendent's Video Workshop."

The 26-minute video promotes and stresses personal responsibility for a person's safety, using examples from the maintenance facility, on the

course and with power equipment.

Other Spanish videos are "Greens Mowing Tips & Operation," "The Knowledgeable Operator I" (for ride-on equipment) and "This Is a Golf Course."

More information is available from EPIC of Wisconsin, Inc., 600 East Progress Dr., West Bend, Wis., USA 53095; telephone 414-338-3700.



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Mole Crickets

Continued from previous page

equipment designed to place the pesticide below the soil surface. This equipment is now commonly available for use with granular and liquid pesticide formulations. The advantages of this equipment are reduced surface residue of pesticides, less chance of drift and runoff, possibly increased effectiveness, and lower rates of pesticides.

Meanwhile, the most exciting research may be in seeking biological methods to add to our arsenal for managing mole crickets. Using the red-eyed fly as a cricket parasite in Florida has shown success and recently we put a lot of hope in the commercial production and use of insect parasitic nematodes. While the level of control experienced from these nematode products was modest, they provided superintendents with an option to conventional pesticides, which was particularly useful in environmentally sensitive areas.

However, the economics and frustrations of commercial production, as well as the limited range of conditions for maximum effectiveness, have seriously limited development of biological control.

More recently, there has been renewed interest in commercial development of the naturally occurring fungal pathogen of insects called *Beauveria bassiana*.

Conventional pesticides have also made significant advances in mole cricket management. Chipco Choice is available through custom application and has proven quite successful. Numerous new pyrethroid insecticides with low mammalian toxicities and low use rates, such as Talstar and Scimitar, are also finding use. Products such as Merit, given "reduced risk" status during registration by the federal Environmental Protection Agency, are also being used more commonly to battle this pest.

Our research continues, with more effort being spent on understanding how the mole cricket's behavior permits it to escape much of our control efforts and under what conditions this behavior is most effective. Gaining better insight into the adaptive skills of this pest is the ultimate secret to more effective management.

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TORO

It's about *playability*

Wright's pursuit: perfection at Pulpit, Paintbrush

By MARK LESLIE

CALEDON, Ontario, Canada — Maintaining two of Canada's premier golf courses is no "trivial pursuit" for Ken Wright, even if his bosses are the inventors of the successful board game.

The challenge is twofold — since the Devil's Pulpit and Devil's Paintbrush courses are opposites in design and care — and it is Wright's lifeblood.

"I love what I do, am very dedicated, and have worked extremely hard at it," he said. "I look forward to coming to work. I'm 50 and still come in at 5:30 in the morning. I'm here before the staff every day. If you like what you're doing, you will do a better job."

The draw to come to Caledon had to be extraordinary. Wright was head superintendent for 10 years at The National, the top-ranked course in Canada, when offered this job in 1989. Dana Fry, who with Michael Hurdzan co-designed the Paintbrush and Pulpit courses, had known Wright from Fry's work with designer Tom Fazio at The National.

"They approached me about the job," Wright recalled. "I could see this being two spectacular golf courses and it was certainly a challenge. I had never grown



The 10th hole at the Pulpit — just another great view for superintendent Ken Wright, inset right, and his crew.

Photos by Doug Ball

in a course before and that was an incentive as well. I was at the National for 10 years, and it was the toughest decision I've made in my life."

Working for Trivial Pursuit developers Chris Haney and Scott Abbott, he said, "is great. Elsewhere, you have to satisfy all your members, but we don't have committees to deal with. The

National was owned by one person and we got good results there, too."

Situated across the top of the Niagara Escarpment here, the Paintbrush and Pulpit courses both offer golfers spectacular views but two very different styles. The Paintbrush is a links style layout despite its location and features fescue grasses and dry



conditions. The Pulpit is plush and highly manicured.

"The older members really like the Paintbrush because it's a walking course and it's rugged," Wright said. "Being a 12-handicapper, I like the fescue fairways on the Paintbrush. We cut the fairways at 3/4 inch and it's easier for the poorer golfer. The Pulpit's all bentgrass and we cut the fairways at 3/8 inch — sometimes shorter."

The maintenance regimes, he said, are very different.

"The Paintbrush really stands out because of the things you don't have to do that you do have to do at the Pulpit," Wright said. "At the Paintbrush the drier it gets the better it looks. The ball rolls much farther because we keep it dry."

"Our watering practices are totally different, with the exception of the greens. Bentgrass requires watering

Continued on next page

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Wright

Continued from previous page
pretty much every night. We water the fescues every two to three nights and don't use as much fertilizer."

Wright hasn't sprayed the fescues with fungicides since the Paintbrush opened five years ago. The fescues get a little disease in the spring when it's damp and cold, he said, "but that grows out when it warms up."

While the Pulpit features closely cut tees, greens and fairways and nicely trimmed bunkers, the Paintbrush is old-style, including sod bunkers. Those bunkers have to be rebuilt every once in awhile, Wright said, adding: "I've replaced some of them already, but others are perfect. There are some that will definitely have to be done every five or six years. At St. Andrews [Scotland] each year they rebuild one-third of the bunkers."

When fescues were planted at the Paintbrush it was an experiment, he said. It had been used at the Links at Spanish Bay on the Monterey Peninsula in California, but the weather conditions there caused major problems. "The site here is perfect for fescue, being open, windy and dry," he said. "We don't get much rain here, not compared to the East or West Coast."

Five years into the experiment it is a success.

Another factor that separates the two courses is the earth-moving involved. Hardly any ground was moved on the Paintbrush, while the 1st hole alone at the Pulpit cost \$1 million to build and involved building seven tee boxes, a pond and a fairway-length, 4-foot-high stone wall.

"The Pulpit is starting to look like the surrounding terrain again," Wright said. "A lot of the ridges and scrub trees are coming back. I would think in 10 years people will look at it and not be able to tell so much soil was moved here."

One attribute significant to the charm of the Paintbrush has also been significant to the work of the crew there: stone walls. "We add a half mile of stone wall each year," he said.

When the British-style clubhouse was built, they wanted herb gardens, roses and a stone wall around the clubhouse.

Once the wall was built, "we thought it looked pretty good, and it evolved from there," Wright said.

Wright's assistants, Scott Clayworth at the Paintbrush and Bob Rodrigue at the Pulpit, have crews of 21 and 24, respectively, to keep things in shape.

And they are doing so today with more sophisticated and technical tools than 1970 when he graduated from a teachers college in Nova Scotia and went to work for Gordon Witteveen, who was then at Northwood Golf and Country Club in Toronto.

"I think the superintendent has put a lot of pressure on himself," Wright said. "We cut greens shorter than ever, fairways shorter than ever. We've got a lot better tools to deal with it, but still we live on the edge. If you cut the greens another 1/16 inch higher you wouldn't put so much pressure on yourself."

"The green cut that short is under a lot of stress," he added. "Computerized irrigation has helped us a lot."

What new advance would help the most?

"Conditions at many courses are close to perfect ... I think research into controlling diseases better will help. And if they ever come up with a control for *poa annua* it would be tremendous. It has to happen. If they can prevent seed-head production, they can control *poa*."

And all these advances intensify the competition with colleagues.

"There are so many well-conditioned golf courses around, you're always striving to be better than your neighbor," Wright said. "That's a fact."

Portland CC gains Audubon certification

FALMOUTH, Maine — Portland Country Club has achieved designation as a Certified Audubon Cooperative Sanctuary by the Audubon Cooperative Sanctuary System, a program of Audubon International, and endorsed by the U.S. Golf Association.

Portland Country Club is the first in Maine and the 95th golf course in the nation to receive the honor.

"We are very proud to have achieved certification in the Audubon Cooperative Sanctuary Program and to have the Portland Country Club on the right course for the future," said former golf course superintendent and current independent turf consultant Patrick Lewis.

Lewis and his successor, James Christie, stressed the invaluable efforts of their crew, area volunteers and support from their club's membership as cornerstones of the project.

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Bridle borrowed vacuum idea from water-line equipment

By MARK LESLIE

GREELEY, Colo. — The mother of invention can sometimes be someone else's invention. And that is how a new super-powered vacuum that removes sand from bunkers without disturbing the subsurface or edges entered the golf world. The invention was birthed when Tom Bridle, director of golf services at Hall-Irwin Cos. in Greeley, happened upon a street

worksite in Las Vegas, Nev., where a crew was using a vacuum-type machine to suck big rocks out of a water-line trench.

"It enabled them to do a lot of water-line excavation and not destroy gas mains, electric lines, that sort of thing," said Bridle. "I saw that and immediately thought about sand traps."

Bridle contacted the manufacturer of the machine and work started on a ver-

sion that could handle golf course bunkers. It needed to be lighter and have a longer hose, so that surrounding turf would not be damaged.

The initial bunker vacuum was too powerful for a man to hold on to. So Scott Masi of Hall-Irwin thought of using a snowblower whose weight could hold the hose in place.

"The snowblower is simply mechanical

transport back and forth to hold the hose," Bridle said. "The snowblower kicks the sand loose with the auger whether it's wet or dry. It works very well."

Bridle said Hall-Irwin expects a four-to five-month wait on its application for a patent.

The machine's name?

"We don't have one yet," Bridle said. "Got any ideas?"

Sand-trap vac

Continued from page 17

the diesel motor-powered auger kicks up the sand through the hose to a hopper on a trailer that can be stationed 15 to 20 feet away.

"We just wanted to remove the sand, redo the faces and not mess with reshaping and regrading the subsurface," said Fearing, who refurbished about 20 bunkers during the winter and intends to do the rest next year.

"You can take the sand out of the trap without damaging the trap," said Tom Bridle, director of golf services at Hall-Irwin Construction Co. "After you get the sand out, if the superintendent wants to rebuild the trap or do the edges, he can do so without causing any damage."

"When we did the traps at Keystone Resort we used the backhoe, and that wrecked a lot of the edges. Prior to that, we did the Sheridan with a Bobcat, and that ripped the bottom apart."

The machine, as yet unnamed but with patent pending, "amazed us when we first tried it," Bridle said.

Superintendent Kevin Ross, waiting his turn at using the bunker vacuum at Country Club of the Rockies in Edmond, said his crews normally remove sand from small bunkers by hand shovel and larger ones using a mini-excavator. The excavator can complete three small bunkers in a day, or a large bunker in one or two days, he said.

Fearing said the savings in man-hours is "a tremendous amount of time. It was a real efficient way to redo a bunker. I would say we were able to accomplish this twice as fast."

While Castle Pines Golf Club re-did its bunkers during the winter when the course was closed, Fearing said that "especially in season, this is the way to go."

Subsurface damage is a key issue in bunker restoration, Fearing said. "One thing that happens with a big piece of equipment is, you destroy the subsurface and that's just getting the sand out. Then you spend a lot of time putting it

Continued on next page

GO GLOBAL

GOLF COURSE NEWS INTERNATIONAL

Reach 15, Decision Through Europe, A Canada w Golf Course Internatio

Circulation breakdown:

Europe	6,752
Canada	2,786
Asia	5,110
South America	368
South Africa	37
USA	47
Total:	15,100

Target audience:

- Owners
- Architects
- Builders
- Course & Grounds Managers
- Club Secretaries
- General Managers
- Developers
- Green Keepers

Editorial focus:

Written for top management & developers at golf facilities in Europe, Asia, Canada, South America, South Africa and the U.S. Editorial is directed toward course management & development with reports on maintenance management and supplier business.

By TERRY BUCHEN

TIMONIUM, Md. — Superintendent Douglas W. Petersan of Baltimore Country Club recently remodeled the existing maintenance building and added a new maintenance shop, employee lunchroom, bathrooms, showers, fully equipped kitchen, reception area, irrigation/computer room, assistant's office and superintendent's office, keeping the Five Farms

Inhouse sandblasting a money-saver

design theme throughout.

Petersan's philosophy has always been to do everything in-house, whenever possible, to keep costs down and to further maintain quality control. One example is how he and his staff built their own sand-blasting unit in the maintenance building.

"We went down to Sears and

purchased a sand-blasting unit for about \$120," Petersan said. "We built the box with a clear plexiglas hinged lid and added some thick, elbow-length industrial black rubber gloves. The rubber gloves do a great job protecting employees from the sand particles' driving force, and the clear, see-through cover makes for an easy, user-

friendly machine."

In the past, Petersan sent out metal objects to be sand-blasted, but many times the corners and other tight areas were not sand-blasted properly, or at all.

"Because we were not satisfied with the quality and cost, we built our own sand-blaster



SHOP TALK

and are now able to sand blast cheaply and with great quality," Petersan said.

"Our stamped metal tee markers, in the shape of our BCC logo, were all sand-blasted in-house last winter and look great. We periodically screen out any contaminants, such as paint chips, and we used about 200 pounds of sand for the complete operation."

The ceramic nozzles on the sand-blaster wear out from time to time and cost \$3 to \$4 apiece.

Petersan plans to do one-third of his tee makers each year and will sand-blast greensmower frames as well.

Any heavy metal item can be sand-blasted successfully, being extra careful when using any lightweight metal such as aluminum or magnesium, Petersan said.

Sand-trap vac

Continued from previous page back together.

"With this, there is no mess."

Fearing said the machine would work "perfectly" if a superintendent wants to remove just the top couple of inches.

The hopper will hold a couple of tons of sand, Fearing said.

At Snowmass, Ogren encountered slow going in a bunker filled with masonry sand. "It's like concrete," he said, deciding to use a small excavator to break through the hard top layer. "But as long as the sand is fluffed up and dry it works well."

"Anybody who does renovation work should have these," Briddle said. "They have the same problem I had when we did Keystone."

Hall-Irwin's plan is to have a crew accompany its super-vacuum from course to course. Any decision on mass-production of the unit, Briddle said, will have to wait until the patent is approved — perhaps by late summer or fall.

•••

Once the sand is removed, another machine pours in new sand. The Vancouver-made Ty-crop machine, whose hopper holds 4 cubic yards "works very well," Fearing said. Dakota Peat of Grand Forks, N.D., is also making two machines called Turf Tenders 420 and 440, carrying 2 or 4 cubic yards of sand.

The sand is delivered from hopper to trap by a conveyor belt, getting the job done without damaging the edges of the bunker.



Month	Editorial Focus/ Bonus Distribution	Space Closing	Materials Closing
September/ October	International Hong Kong & Chinese Exposition	8/18/97	8/20/97
November/ December	New Product Showcase	10/21/97	10/23/97

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Vaporizing means never having to say you're smoking

By TERRY BUCHEN

DUBLIN, Ohio — There are blowers, and then there are **blowers**. Just ask superintendent Ted Hunker, who, thanks to Ranger Construction Co., has seen the future when it comes to burning brush.

The scene: Tartan Fields Golf Club, about a mile from Muirfield Village Golf Club.

The cast: Hunker, Ranger Construction and Arnold Palmer's design team of Harrison Minchew and Joe Veal.

The star: a huge blower, powered by a V-8 diesel engine, that flames a fire so hot that wood burns quickly and virtually smoke-free.

"After the clearing process on our wooded holes," said Hunker, "we obtained burn permits from our township fire department and burned all of our trees in very large pits that were dug in far out-of-play areas and near high-tension power lines."

To speed up the burning and eliminate smoke, Ranger brought in the out-of-this-world blower.

"The fire department extended our burn permit indefinitely because of the great quality burning that is being done and we are being a good neighbor in the process without one single complaint," said Hunker, the former superintendent at TPC at River Highlands in Hartford, Conn. "It has made a big difference of what the neighbors will let us do."

Contractors have used between 12



A blower helps a crew keep smoke to a minimum after clearing brush on a golf course.



ON THE GREEN

and 15 pits thus far. The blower is portable and has needed very little maintenance. It is homemade and can be towed easily with a pickup or tractor, Hunker said.

Minchew, vice president of Palmer Course Design Co., uses this type of blower on other jobs "because of the great air quality, which virtually eliminates the smoke," he said. "Even if

it is not required by local codes and ordinances, we want to be a good neighbor and part of the team concept for the owner."

Minchew credited John Rielly of Ranger Construction and Mark Eitelman of Agriscapes with their attention to details like the blower and other quality-oriented jobs.

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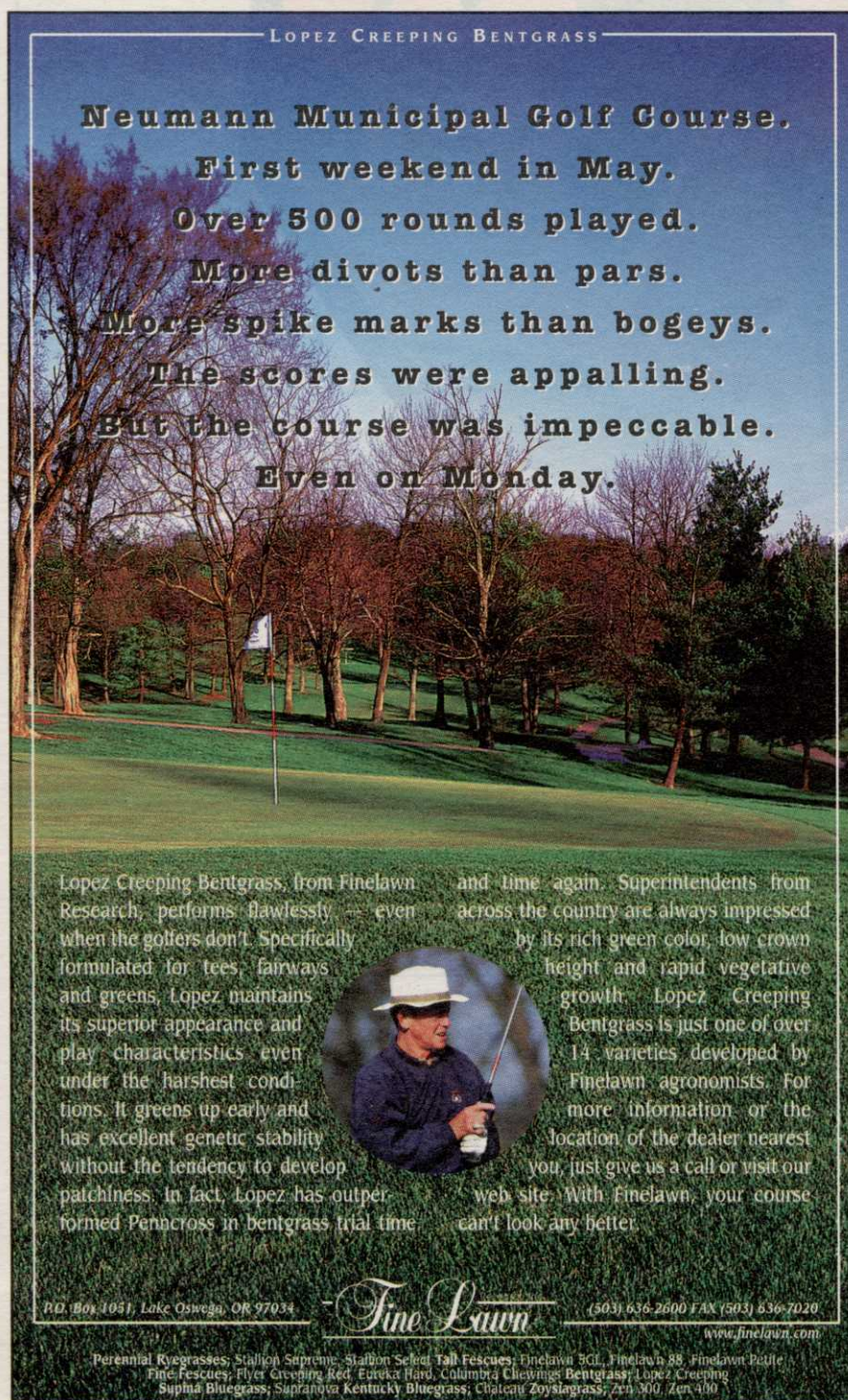
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'Winning Fields' field days planned around New York

ALBANY, N.Y. — The New York State Turfgrass Association is planning a series on sports turf maintenance, "Winning Fields," scheduled at Hofstra University on July 14, Dutchess Stadium on July 15 and SUNY Potsdam, July 17.

The goal of the programs is to provide basic and advanced topics with an emphasis on understanding the fundamental principles of sports turf management, stressing safety issues. Topics will include variety selection, fertilization for maximum rooting, mowing, watering techniques, seeding high traffic areas, communicating with coaches and administrators, integrated pest management for sports turf and spreader calibration.

Scheduled speakers are Dr. Frank Rossi, assistant professor and Extension turfgrass specialist at Cornell University; Bob Emmons, professor of plant science at SUNY Cobleskill; Dominic Morales, chairman of the Department of Plant Science at SUNY Delhi; John Liburdi Jr. from the town of Colonie and Kevin Trotta, head groundskeeper at North Rockland Central School District. Fred Soviero of Hofstra University, Mike Francese of Dutchess Stadium and Steve Bracy of SUNY Potsdam will give their perspective on managing a multi-use sports turf field and host tours of each facility.

These seminars will take place from 8 a.m. to 3:30 p.m. Participants will have the opportunity to attend a trade show with state-of-the-art equipment and supplies, held in conjunction with the seminar.

"Winning Fields" is sponsored by the New York State Turfgrass Association, Cornell University and the New York State Association for Superintendents of School Buildings and Grounds.

Rodgers takes Global Positioning to a new sphere

By TERRY BUCHEN

LAKEWOOD, Colo. — Using Global Positioning Surveys (GPS) and Geographical Information Systems (GIS), irrigation engineer Larry Rodgers has designed what he feels is the ultimate tool to quickly measure anything on a golf course and make color as-built blueprints and color surveys available.

Rodgers said the system makes as-built blueprints and color surveys available at "a reasonable cost" for course superintendents, owners, contractors and architects. The process takes a day or two on-site to completely measure a golf course's specific areas and a day in the office to print a 255-color laser plotter blueprint, he said.

"What we do," Rodgers said from his office here, "is recreate aerial photos adapted in a digital format, by using GPS technology and a Pentium-based Pentop Computer that resembles an Etch-a-Sketch that is totally portable and user-friendly.

"We can measure anything that can be 'defined' in a point, a line or an area. We can accurately measure a line, which could be a cart path; a point, which could be a sprinkler head, or catch basin or tree; or an area, such as a green, tee, fairway, rough, lakes, streams, bunkers, etc."

Once all of the information is in the database, Rodgers makes it site-specific to each course and can make a total tree survey; measure each green, tee, fairway, rough, lakes, streams, bunkers; and pinpoint every piece of irrigation and drainage equipment on a perfect as-built color blueprint.

"Everything and anything is possible with this equipment which can be custom-built for your golf course's own application," Rodgers said. "We can even measure the golf course yardage and do sprinkler-head yardage while we are measuring all of the areas of the course and doing a tree survey, pinpointing each and every tree variety."

New York offers turf scholarships

ALBANY, N.Y. — The New York State Golf Association (NYSGA) has announced the availability of \$8,000 in scholarships for the 1997-98 academic year.

With the cooperation of the New York State Turfgrass Association, the association needs to identify potential recipients who may be employed at clubs. Last year's scholarships ranged from \$500 to \$1,000.

The scholarship program is specifically for New York state residents who are matriculated in an accredited two-or four-year college or university. They must be studying a specific academic program such as agronomy, turfgrass management, or a related major leading to eventual employment as a golf course superintendent.

To receive an application for the NYSGA Scholarship Program, people may telephone J. Patrick Keenan, executive director, NYSGA, at 888-NYSGA-23 or Beth Seme, executive director, NYS Turfgrass Association, at 800-873-8873.

"We can even print out a color blueprint with each and every maple tree only on it, or any other specific item at the client's request," he added.

Architects and contractors can accurately measure a green that has been roughed in and determine the exact size and cubic yards of material needed or being used as the green is being built, or has been built.

The operator simply determines a start-

ing point and then walks the outside dimensions of the area to be measured. As he walks the line of definition, it appears on the portable computer exactly as an as-built form.

This comes from a man who, feeling his many years of mechanical engineering experience and technical college training weren't enough, is back in school part-time. His objective: a civil engineering degree.



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Hurdzan comment

Continued from page 17
fingers through it.

The USGA construction method had just been introduced, but by far the majority of greens were pushed-up soil, or a concrete sand, soil and peat blended together with a rototiller on site. Greens had 4-percent slope and were mowed at 1/4 inch height; fairways were kept at 5/8 to 3/4 inch; and roughs were rough.

Hydraulic mowers were just introduced, triplex greens mowers were in the future, and the great new herbicide was 2(2, 4, 5-T)P originally called Silvex, and later Agent Orange in Vietnam.

We treated disease with mercury and cadmium, *poa annua* with lead and arsenic, and insects with chlorodane and DDT.

Aerification was by drilling with a 500-pound machine called a turfarator (I think), and when hollow-core aerification was introduced there were professors of turfgrass who argued it left too slick a hole so roots would not grow into the aerification hole.

We did all this just because we didn't know better.

Then in the mid- to late-1960s we realized some of what Rachel Carson said was true and science's improved ability to assay minute amounts of chemicals verified it.

Automatic and fairway irrigation were constantly improving, Dr. Reed Funk's Manhattan ryegrass looked like miracle grass, and Al Radko and Marv Ferguson were making the USGA Green Section into turf's most respected information source.

Nothing substantially changed for the next 15 years except for a proliferation of chemicals, turfgrass cultivars, irrigation innovations, and the introduction of the heavily sculpted golf course led by Pete Dye, Jack Nicklaus and Desmond Muirhead.

Environmental zealots were thought to be well-meaning quacks who espoused tactics like using the snail darter to hold up government projects like Tellico Dam construction. Economy was more important than environment until the nation recovered from the 1974 Arab Oil Embargo. Reaganomics in the 1980s revived a depressed golf industry.

The late 1980s and early 1990s saw environmental movements gain popular support through gloom-and-doom arguments based on emotion, not scientific facts. The turfgrass industry became a symbol of environmental mistreatment, simply because we did not defend ourselves.

Today, scientific research is vindicating golf courses and we recognize how to better balance the delicate social, economic and environmental concerns. Golf courses and turfgrass managers are being proven to epitomize the true stewards of the earth.

The only problem that remains is getting golfers to accept a less-

impacting form of golf course maintenance. They must allow the superintendent to further reduce the amounts of water, fertilizer, pesticides and fossil fuels they use. Golfers and lawn owners must recognize that healthy grass is not always green and lush.

IN THE YEAR 2020

How long this will take is unknown, but when it happens, it will change the face of American golf and landscapes. Golf courses of 2020 will look and play more like those of 1920, the golden age

of American golf, a wonderful blend of brown and green ribbons of grass, enjoyed as much by wildlife as golfers. Turf managers will better understand the dynamics of chemical, biological and physical interactions and how to manipulate them to minimize water, fertilizer and pesticide use.

Before applying treatments, superintendents of tomorrow will closely monitor the quality, quantity and duration of sunlight, measure soil temperature and moisture content, track water-quality

indexes, and determine biological activity of host plant and invading organisms. Manipulation of soil air and temperature will be far more important than soil water. Irrigation will be limited and an inferior quality compared to today, so intelligent planning and construction will be of a great premium.

As time goes on, golf will continue to be played with increasingly advanced technological equipment, although the average golfer won't play much bet-

ter. Courses will continue to become more environmentally friendly, with increasingly less-impacting materials and methods, and be more fun to play. And the superintendent will be much more of an analytically based researcher, who will have the talent, tools and knowledge to understand and monitor the entire golf course environment.

Just as the equipment and golf courses have evolved, so will be the demands and the qualifications of future superintendents.



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NTEP SCHEDULES FIELD DAY, EDUCATIONAL FORUM

BELTSVILLE, Md. — The National Turfgrass Evaluation Program (NTEP) will conduct a turfgrass research field day at the research plots on the Beltsville Agricultural Research Center-West here from 8:30 a.m. to 12:30 p.m., Aug. 7. Topics will include discussion and display of NTEP tests of Kentucky bluegrass, perennial ryegrass, tall fescue, fineleaf fescue, bentgrass, Bermudagrass, buffalograss, zoysiagrass; zoysiagrass/cool-season grass mixtures; low-maintenance performance of tall fescue, Kentucky bluegrass and zoysiagrass; organic fertilizer use on turfgrass; management of zoysiagrass/tall fescue mixture and overseeding of zoysiagrass. For information call Kevin Morris of Jennette Wills at 301-504-5125.

So. Illinois prof begins experiment on green

By K. C. JAEHNIG

Kenneth L. Diesburg is working with Illinois superintendents to develop a golf course putting green for research purposes.

Using a site at the Rend Lake Golf Course, Diesburg, a turf expert from Southern Illinois University at Carbondale, plans to fill the practice green cavity with

three kinds of soil, laid side by side and kept separate by large plastic sheets. He will plant three kinds of grass in each of those three soil strips. The goal: to see which combination will give Rend Lake the thickest, sturdiest, hardiest and fastest putting surface possible.

Diesburg has been working

with the region's golf course superintendents since his arrival on campus seven years ago. This research green was their idea.

"We'd go to turf field days and see research plots that look fantastic, but there's no wear and tear on them," said Rend Lake superintendent James D. Ashby. "You can't simulate what ball marks will do, or spikes, or someone taking a divot out of a green when they miss a putt. Traffic is a huge problem for greens, and so is daily maintenance.

"Field plots may be mowed every two, three, even four days, but on a course you have to do it every day, which makes wear patterns from mowers. We want to see what happens to a green that is in daily play."

Work on the putting green began last fall when Belleville resident Joe Munie hollowed out the hole for free.

"He owns a business that specializes in golf course construction. We were lucky to get that contouring donated," Ashby said.

The rough grading created a 7,000-square-foot, 16-inch-deep "tub," elevated and sloped to make drainage easier. Diesburg lined the tub with heavy-duty plastic, creating three compartments as he went. Then, using 4-inch plastic pipe and gravel, he put in a separate drainage field for each compartment.

Grass planting was scheduled for June.

Diesburg will be testing mixtures of sand and peat as rooting media in two of the compartments. The third will contain a mix of sand and calcine clay.

"It's the same stuff they make kitty litter out of but fired at higher heat so it's harder and less dusty," Diesburg said.

The clay's molecular structure makes it drain better than peat, cutting down on grass disease. But it also holds water near the surface, where greens tend to dry out.

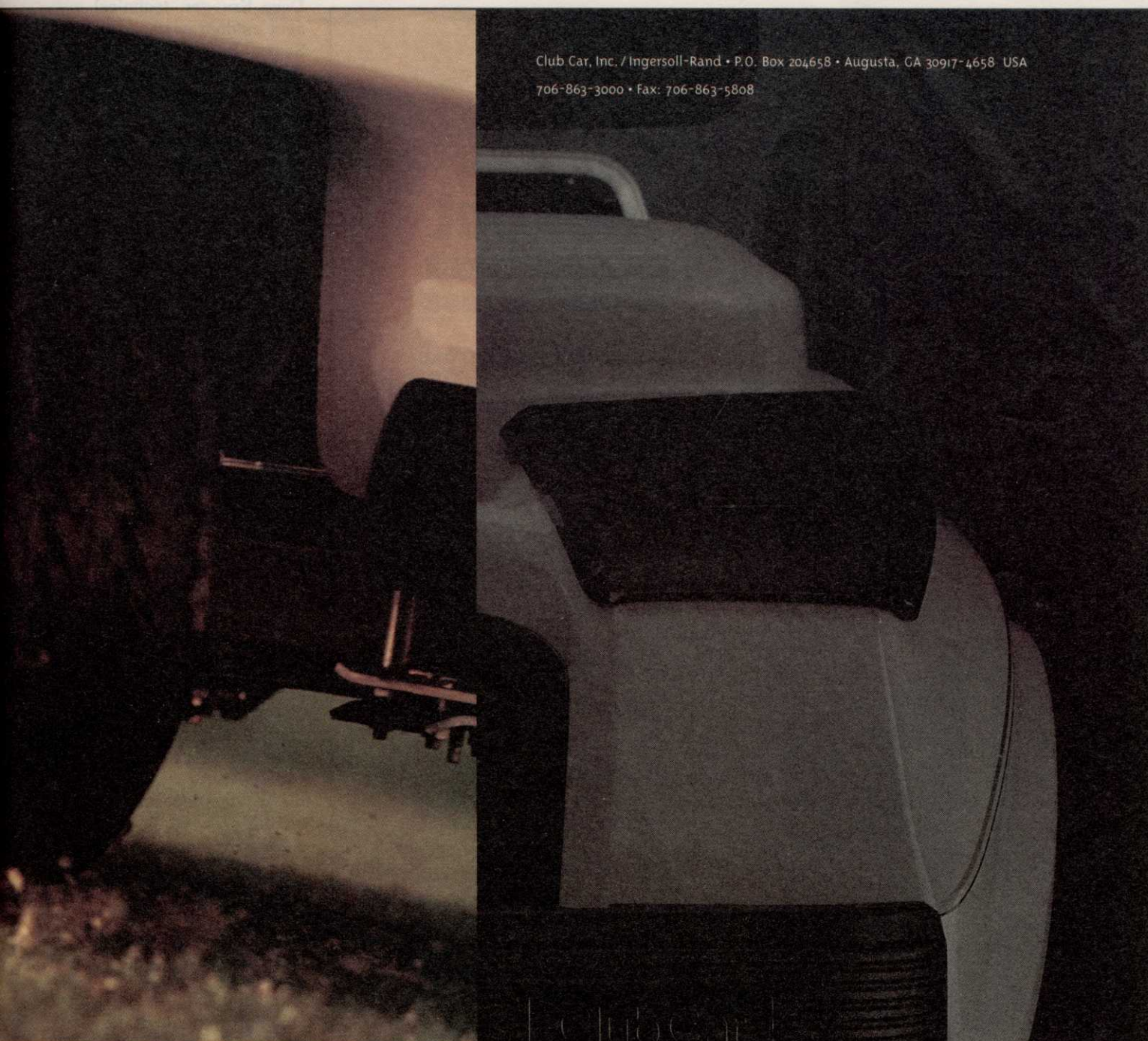
In his grass cultivars, he's seeking good color, speedy recovery, high leaf growth, shoot density and all-around hardiness.

"We're in a difficult climate zone for grass," Diesburg said. "We have cool springs, which are hard on warm-season grasses, and hot, drought summers, which make it hard on cool-season grasses."

Because the green will be a permanent golf course fixture, Diesburg will be able to track how it changes over the years. And as new products come on the market, he can adapt the green to test them — a strong selling point as far as Ashby is concerned.

"Right now, the big thing is the spikeless golf shoe," Ashby said. "We'd be interested in knowing how they might affect our greens."

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GOLF'S DRIVING FORCE.

Training Council elects board, sets parameters for the future

IRVING, Texas—The Engine & Equipment Training Council named a board of directors and set the education committee on its way to meeting the organization's goal of addressing the critical shortage of technicians in the outdoor power equipment industry during the

EETC's first official meeting held here.

More than 100 people, representing a broad cross section of the industry's educational and technical leadership, attended the May 5-6 meeting. They elected Andrew Kuczmar, director of National Service Training

for Echo Inc., the Council's new president.

Other executive officers elected at the meeting included Vice President Paul Scholten, manager of service and technical publications for the Kohler Co.; Secretary Chuck Bontrager, product training and education

manager for MTD Products; and Treasurer Bruce Radcliff, director of customer education for Briggs & Stratton Corp. Advisor to the executive board is Tom Kane, assistant director and national training manager of Kubota Tractor Corp.

Rounding out the board are

general members Clifford Kurkowski, president of Anoka Hennepin Technical College; Larry Case, national advisor and chief executive officer, agricultural education/FFA liaison, national FFA Center; Jerry Bernhardt, director of career and technology education, Windham School District, Texas Department of Criminal Justice; Tim Lawrence, director of business and industry partnerships, VICA; Dave Krueger, technical manager outdoor power equipment, Sears, Roebuck & Co.; Dan Wallace, instructor, Outdoor Power Equipment Excellence Center, Southern Alberta Institute of Technology; dealer representative Glen Whitt, Plano Power Equipment; distributor educator representative Larry Frogge, Grayson Co.; and distributor representative Jim Starmer, Dixie Sales Co.

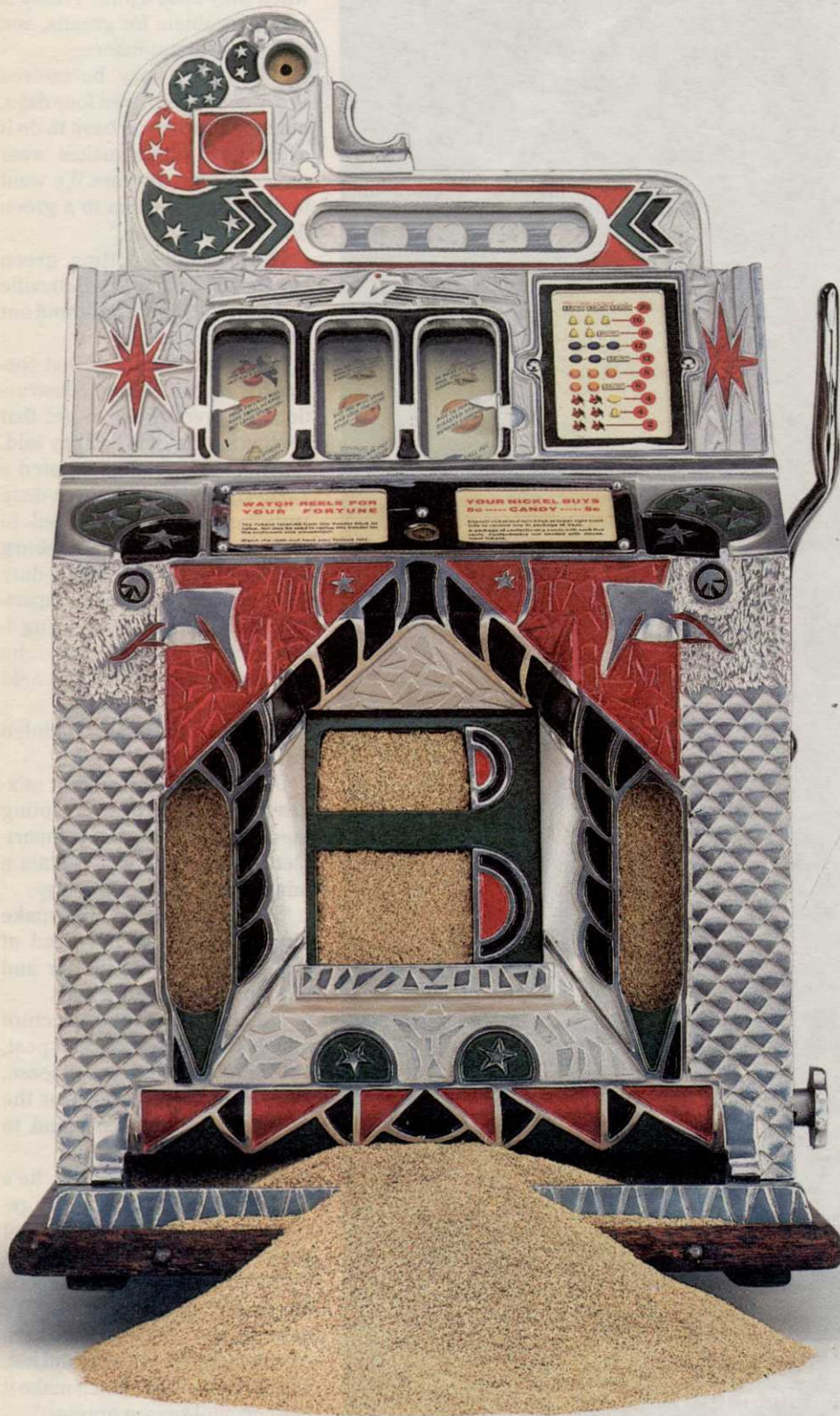
Other industry board members include Brad Beck, supervisor, service publications and training, commercial products division, The Toro Co.; Mark Erenz, technical service coordinator, Generac Corp.; Paul Jergens, director of customer service, Exmark Manufacturing Co.; Randy Richard, training specialist, John Deere Lands & Grounds Care Division; and Ralph Sylvester, manager, service training, Jacobsen Division of Textron.

During the meeting, Dave Zerfoss, president of Husqvarna Forest & Garden, said of the technician shortage "...recognizing the problem is only one very small step in what needs to be a major industry-wide push for improvement in the service department of our business.

"Improvement in wages, benefits and working conditions. Improvement in shop management, productivity and profitability. Improvement in training and recruitment efforts by dealers, manufacturers, associations and vocational schools. And, above all, improvements in the image and professionalism of the service department and the service technician."

Added Zerfoss: "We must also realize that training is a necessity in our industry, not a luxury. The biggest reason for this is the changing technology. Just like ignition point systems giving way to electronic ignition systems, we will see other operating systems become obsolete as they too give way to more advanced technical advancements."

For more information about the EETC, contact Virgil Russell, EETC, 1946 S.IH-35, Ste 100-A, Austin, TX 78704-3693; telephone 512-442-1788; facsimile 512-442-1789; e-mail address opecert@io.com.



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Extending battery life saves money and the environment

By BILL SIURU

Sulfation is the greatest killer of batteries. About 80 percent of the lead-acid batteries discarded, died because of excessive sulfate build up on the plates. Complete drains also drastically reduce the life of the battery. One deep discharge can reduce a battery's life by 30-40 percent. For those in cold climates, a completely discharged lead-acid battery will freeze at around +20 degrees F. One with a 25 percent remaining charge will freeze at about +5 degrees F. Usually, frozen batteries crack and are rendered useless.

Sulfation occurs when sulfur molecules in the battery electrolyte discharge to a point where they crystallize and coat the lead plates. The more the plates are coated, the less energy they can accept. Eventually, they become so heavily coated the battery dies.

A variety of products claim they reverse the sulfation process. Some probably work well, while others are worthless.

The Solargizer and PowerPulse Battery Maintenance Systems marketed by PulseTech Products Corp. appear to be based on sound technical principles. Perhaps the best testimony is the list of users of the PulseTech technology, which includes the U.S. Army, U.S. Marine Corps and Canadian military.

PulseTech's patented technique emits a pulsating DC current into the battery's plates. The current re-energizes the crystallizing sulfur molecules, coating the plates on an individual basis. The pulsing current affects only the sulfur molecule, not the plate. The removed sulfates are returned to the battery acid as "active sulfur" molecules. The pulses are at the resonant frequency of sulfur, so they affect only the sulfates and not the plates.

According to PulseTech, some other products designed to limit sulfation maintain the batteries by constantly charging or overcharging them. Too much charging can overheat and damage the lead plates. The process can also vibrate the plates to knock the sulfates off. This can damage the plates. Also, the sulfates removed fall to the bottom of the battery acid and do not re-enter the electrolyte as active molecules.

By removing all sulfates and returning them to the acid, it keeps the battery operating at 100% efficiency and can extend battery life by up to five times. It can also reduce recharge time, extend battery capacity so idle batteries go longer between charges and prevent complete loss of the charge when the battery is left idle for extended periods.

The PulseTech technology is incorporated in a variety of products. The Solargizer versions are powered by a small solar panel which absorbs sunlight, converting it into energy to desulfate the battery. The solar panel is efficient enough that it only needs one to two

hours of direct sunlight a day to accomplish its task for 24 hours. This is true even in areas where skies are cloudy or lightly overcast most of the time. If the skies are extremely overcast, it may take a bit longer to absorb sufficient sunlight. Since the panel is so effi-

cient, it can be installed either vertically or horizontally. Installing it vertically will prevent snow, dirt or other materials from covering the solar panel and blocking sunlight. PulseTech offers a model of the Solargizer with a 115-volt AC adapter to supply power for

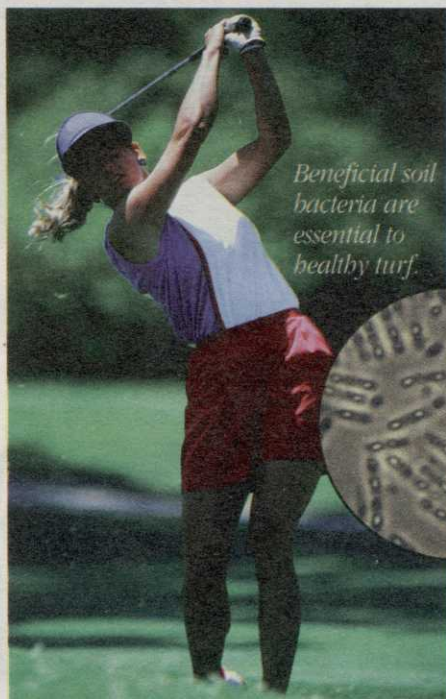
vehicles stored inside or under cover.

The technique can be used with any lead acid battery. Solargizer Battery Maintenance Systems are available in standard and industrial 12-volt, marine and 24- and 36-volt versions.

Continued on page 30

Why on-site fermentation for beneficial soil bacteria is overkill

A huge investment in on-site fermentation systems is made unnecessary by a new controlled-dose microbial inoculant that can be even more effective



Beneficial soil bacteria are essential to healthy turf.

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* Cook and Baker 1983. The Nature and Practice of Biological Control of Plant Pathogens. The American Phytopathological Society, St. Paul, MN.

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Colleagues coalesce at Congressional, come to the aid of super, U.S. Open

By TERRY BUCHEN

Paul R. Latshaw, superintendent at Congressional Country Club, has been a leader and trendsetter since his college days at Penn State. He still is and will probably be the only superintendent on the planet to host The Masters, PGA Championship and U.S. Open. One of his many innovations was to mow all of the fairways at Congressional during this year's U.S. Open with walk-behind greensmowers ... but more on that later.

One of Latshaw's proudest moments came during the Saturday telecast on NBC, in the midst of a rain delay. Johnny Miller said there were many superintendents on staff that

would help get the course playable quite fast after the rain stopped. Then Dick Engberg echoed Miller's sentiments, saying many superintendents stood ready to help, especially in shoveling sand and readying the bunkers for play to resume.

Every superintendent in the world probably got goose bumps listening to these long-overdue compliments that gave our profession more exposure than witnessed in a long time.

Miller's many compliments about the "perfect playing

conditions" and the overall condition of the course, along with a thank-you to Latshaw for a job well done made all of us in the trenches feel great. "We had 50 regular employees and 75 volunteers, many of whom

were superintendents and assistants from around the world," said Latshaw. "And these supers and assistants weren't supervising or anything like that. They were doing the actual mowing and attention-to-detail work, or as we called

Continued on next page



Battery life

Continued from page 29

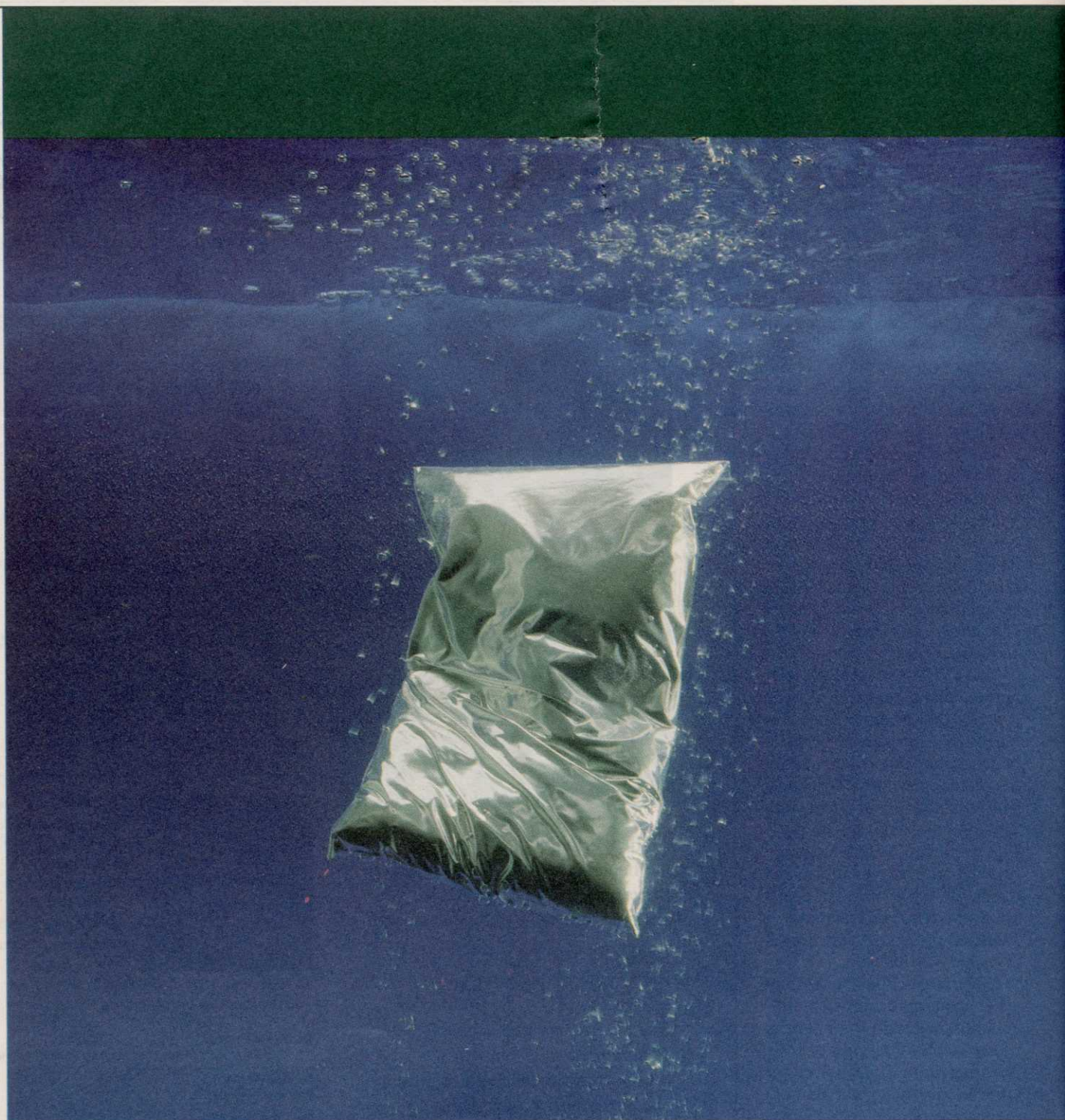
The PowerPulse Battery Maintenance Systems in 12-, 24- 36- and 48-volt obtain their power for desulfation from the battery itself. PulseTech also offers both a solar cell-powered Solargizer Solar Charger and normally-powered Pulse Charger that both charge and desulfate the battery.

PulseTech offers a couple of other products that also extend battery life. The Connector is an all-brass terminal which creates an airtight seal at the battery terminals to eliminate leaking acid gas, a leading cause of battery terminal corrosion.

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Making batteries last longer not only saves money, it also helps protect the environment. Since batteries last longer, there will be less contamination by battery lead and sulfuric dumped from discarded batteries.



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Marriott cites Mountain Shadows' super Kovacs

Otto Kovacs, superintendent at Marriott's Mountain Shadows Resort and Golf Club, has been named Marriott Golf's Golf Course Superintendent of the Year.

Kovacs won the award for a consistently well-maintained golf course and hotel grounds, a sound team work environment, significant cost-saving programs, and for receiving a perfect score two straight years on Marriott's

annual associate opinion survey.

"All of us at Marriott Golf applaud Otto's achievement," said Claye Atcheson, vice president-operations for Marriott Golf. "No one is more deserving. His leadership and dedication to promoting an ecologically-sound environment is an inspiration to everyone."

Kovacs is a member of the Golf Course Superintendent Association of the Southwest. Marriott's Mountain Shadows Resort and Golf Club, along with the 16 other facilities in Marriott's golf portfolio, is a participant in the Audubon Cooperative Sanctuary Program for golf courses.

Congressional

Continued from previous page it, the 'Latshaw Weight Reduction Plan.'

"Steve Glossinger, super at Caves Valley Golf Club, brought the same 12-person bunker crew that he used at last year's Open when he was at Oakland Hills Country Club. They left at 4 a.m. each day for the one-hour drive for our 5 a.m. start.

"Steve even brought an assistant along to help with the excellent bunker maintenance, which I thank them all dearly for. No one can do bunkers like they do."

Latshaw also singled out Matt Shaffer, superintendent at The Country Club, near Cleveland, "whom I leaned on heavily during the entire week and who made everything run smooth."

He cited Scoot Armstrong, Gary Dempsey, Bruce Kemp and Garry Smith from Australia; Tony Taylor from Thailand; Louis Bettencourt, Tom Cassat, John Gabbeitt, Steve Glossinger, John Haley, Dave Horton, Ray Nash, Paul Ramina, Bob Shaffer and John Zimmers from Ohio, and Tom Wait.

"I was talking with [Atlantic City Country Club superintendent] Dick Bator regarding using walk-behind greensmowers on fairways for our respective USGA Championships," Latshaw said. "We mowed our No. 2 fairway, a par-3, entirely with a walk-behind greensmower for our media day, about three weeks before the championship. Buzz Taylor said he really like it, so we mowed No. 17 fairway the same way, cross-cutting it perpendicular to the play of the hole, and we were very pleased with that as well.

"Tim Moraghan, championship agronomist for the USGA, and I were concerned about the triplex greensmowers being used on fairways turning into and knocking over the grass in the primary rough when they made their turns. So we decided to mow all of the fairways each morning, beginning the full week before the championship, with walk-behind greensmowers. And we mowed the fairways after play, during championship week, with triplexes each day, effectively double-cutting fairways each day."

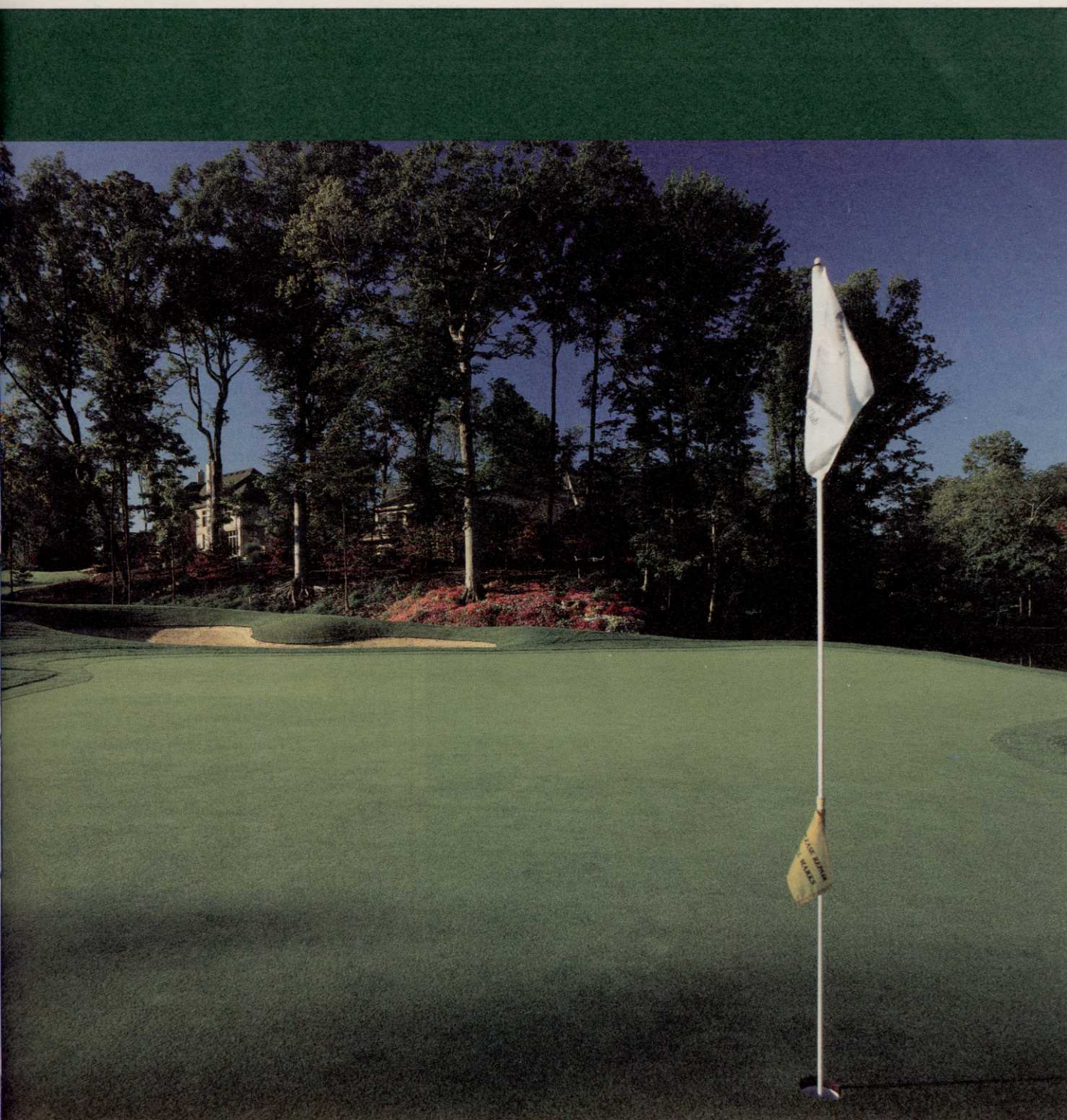
The crew used 24 walk-behind greensmowers and 24 local volunteers to mow fairways each morning, beginning at 5:30 and finishing up at 8:30.

"We caught the clippings, put them on tarps, then they were picked-up and thrown into manure spreaders," Latshaw said.

The walk-behind greensmowers, with solid rollers, set at .360 (triplex greensmowers using rollers were set at .400 for the afternoon mowing). After initially mowing the fairways with two walk-behind mowers, they used six mowers on the par-5s; four mowers on the par-4s and three persons mowing the par-3s and collars.

"The results," Latshaw said, "were excellent."

"We have a very close-knit industry of which we all should be very proud of," he added.



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Efficacy of ureaform and Milorganite in cold soils

By LARRY LENNERT

As early as four decades ago, researchers had reported that the nitrogen release rate of ureaform (UF) was quite slow in soils with temperatures below 50 degrees F [Kralovec, 1954]. In addition, it has been widely reported by numerous researchers that the level of microbial activity in soils drops significantly when soil temperatures fall below 50 degrees F. Given that the nitrogen release rate for UF is governed by the level of microbial

activity in the soil, it seemed easy to explain the poor performance of UF in cold soils as simply the result of reduced microbial activity.

Given these observations, it has been commonly assumed that not only UF, but all fertilizers that depend on microbial activity for mineralization of organic nitrogen, will perform poorly in cold soils. This includes the various forms of methylene urea and natural organic fertilizers like Milorganite. While this as-

sumption seems logical, decades of observations from professional turfgrass managers and several research studies seem to indicate that this assumption is not valid.

Almost 30 years ago, Dr. Richard Skogley [published in 1983] established a fertilizer trial in Rhode Island to examine turfgrass responses to fall-applied, slow-release nitrogen fertilizers. Treatments included in the trial were: UF, Milorganite, IBDU, 75 percent UF/25 percent urea, and urea. The UF,

Milorganite and IBDU were applied in September and late November from 1968-1972. Skogley was quite surprised to observe an early spring green-up from the November Milorganite application in each year of the study from 1969-1973.

Also, Skogley could not explain why the quality of Milorganite-treated turf was equal to or greater than all other treatments, even in November. Skogley said, "Considering that this is an organic product requiring biological breakdown before nitrogen is available, it is difficult to explain this good season-long performance."

As expected, Skogley observed a poor response from UF in cold spring soils.

Twenty-five years later, Wayne Kussow initiated a study in Wisconsin in 1995 to investigate spring bentgrass responses to Milorganite application in November. Kussow applied Milorganite in November in 1993 and 1994 to creeping bentgrass at 25 pounds per 1,000 square feet (1.5 pounds of nitrogen per 1,000 square feet). An early spring green-up was observed in April 1994 and 1995 as a result of the November application of Milorganite.

Kussow discovered that by snow melt in early March each year, about 10 percent of the nitrogen applied, or 0.15 pound of nitrogen per 1,000 square feet, had been mineralized under the snow cover. From March 12 to April 15 each year, another 5-9 percent of the nitrogen applied had been mineralized, giving 0.23-0.28 pounds of nitrogen per 1,000 square feet that was microbially converted from organic to inorganic nitrogen between November and mid-April each year.

These observations prove there are micro-organisms in the soil that mineralize the nitrogen in Milorganite at soil temperatures much lower than 50 degrees F. This mineralized nitrogen is available for turfgrass uptake as soon as roots become active in the spring, and explains the early spring turfgrass green-up observed by Skogley [1983], Kussow [1995] and hundreds of golf course superintendents who have applied Milorganite in the late fall to their golf turf.

It is clear that Milorganite performs much better in cold soils than theoretical assumptions based on UF performance have predicted. Apparently, the micro-organisms that mineralize the nitrogen in Milorganite are different than those that mineralize UF nitrogen, or if they are the same organisms, they do not significantly mineralize UF nitrogen in soil temperatures below 50 degrees F. Either way, the assumption that Milorganite performs poorly in cold soils is incorrect.

Perhaps other synthetic and natural organic fertilizers also perform better in cold soils than has been commonly assumed. However, this is another assumption that should first be verified by a review of the literature.

Larry Lennert is manager of research and product development at Milorganite, based in Milwaukee.

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Paul Latshaw
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Von Hofen leaves John's Island for Naples National

NAPLES, Fla. — Naples National Golf Club has appointed Eric J. Von Hofen head superintendent in charge of all golf course and grounds maintenance.

Von Hofen, a Class A member of the Golf Course Superintendents Association of America and South Florida GCSA, received his college education at Ohio State University. He interned in 1988 at Muirfield Village Golf Club, where he assisted in preparations for the 1990 Memorial Tournament. His first superintendent's position was at PGA National Golf Club, where he last supervised operations on the Champion's Course and Croquet Club, preparing the course for the 1992 and 1993 Senior PGA championships. He moved to Doral Golf Resort and Spa, where he was superintendent of the Blue and White courses. He was in charge of preparations for the 1994 and 1995 Doral-Ryder Opens during this period.

Von Hofen came to Naples National from John's Island Club West, where he had been the superintendent since August 1995.

...

TUCSON/MARANA, Ariz. — **Tyler Swedberg** has been named superintendent for the Brian Huntley-designed Links at Continental Ranch golf course under construction in Marana.

Swedberg will oversee grow in, golf course and facility maintenance, budget planning and the daily work assignments for maintenance staff.

Prior to joining The Links at Continental Ranch, Swedberg served as an assistant superintendent at the Raven Golf Club at South Mountain in Phoenix and Las Sendas Golf Club in Mesa. Swedberg, a graduate of Kansas State University, holds a degree in horticulture and dual minors in agronomy and business.

The Links at Continental Ranch is scheduled to open in November and will be a traditional Scottish links-style layout with wide fairways, generous green complexes and native grasses which will emulate the heather and gorse of the British Isles.

VALDOSTA, Ga. — **Howard Hulsebosch** has been named superintendent at Valdosta Country Club here by International Golf Management, Inc. (IGM).

Hulsebosch will supervise an 18-member IGM staff which is responsible for maintaining the

clubhouse grounds and three nine-hole, par-36 golf courses — the 3,324-yard Bellemeade, the 3,350-yard Plantation and the 3,347-yard Bottom.

Huselbosch joined IGM's staff earlier in the year after serving as acting superintendent at The Med-



alist Golf Club in Hobe Sound. Prior to becoming acting superintendent, he served one year as assistant superintendent at The Medalist.

Before going to The Medalist, Hulsebosch served five years as assistant superintendent at Tampa Palms Golf and Country

Club in Oshkosh, Wis.

He earned a degree in business administration from Marquette University in Milwaukee, Wis., and is a member of the Florida Golf Course Superintendents Association and a former member of both its West Coast and Treasure Coast chapters. He holds a Florida pesticide license.

DESIGN SEMINAR PLANNED

DELHI, N.Y. — A course design and construction seminar will be held at State University of New York Delhi on Aug. 5 from 9 a.m. to 4:30 p.m. Sessions will be taught by golf course architect Ron Forse and superintendents Scott Dodson of Park Country Club of Buffalo and Joe Hahn of Country Club of Rochester.



Eric Von Hofen



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Q&A Rutgers' Dr. Bill Meyer: Singing the blues — the Kentucky blues

Dr. William Meyer took over as the primary director of turfgrass breeding at Rutgers University last June. Meyer and Bill Rose founded Pure Seed Testing, a Hubbard, Ore.-based seed production firm 21 years ago. Meyer has bachelor's, master's and doctoral degrees in ornamental horticulture and plant pathology from the University of Illinois. He has developed or co-developed more than 60 turfgrass varieties in the past 20 years.



Dr. Bill Meyer

Golf Course News: What makes Kentucky bluegrass a good golf course turf?

Bill Meyer: It has good general disease resistance. It doesn't shear when mowed with dull blades, recuperates well, has a wonderful color and is fairly heat and disease resistant.

But when mowed short, like the 3/4-inch fairways common today, annual bluegrass (*poa annua*) invades and Kentucky bluegrass has trouble competing.

Other grasses do better in most fairway situations. Ryegrass does well at the lower cutting heights, but dies off in the

cold when ice sheets occur or when subjected to diseases like gray leaf spot. Bentgrass has become popular in fairways because it can withstand fairway mowing heights of 3/8-inch and the cold temperatures.

But I'm hopeful we'll see a Kentucky bluegrass that can stand the lower fairway mowing heights within the next five years. Until then, it does best in roughs in the Northeast and Midwest and some fairways in the Rocky Mountain states.

GCN: What research is Rutgers doing on Kentucky bluegrasses?

BM: We're doing an immense amount of breeding work, crossing some experimental bluegrasses that are heat and drought tolerant with traditional turf types like Unique, America and Midnight. The experimentals look great in summer, but are disease-prone in spring. Some of the traditional bluegrasses are just the opposite, greening up quickly in the spring but having problems in summer. This year we experimented with 175,000 individual seedlings, of which we're testing about 10,000 in the field. We ran a similar program last year, experimenting with 125,000 seedlings, testing 7,000 in the field and ending up with 700 to 800 that look promising.

GCN: Are you experimenting for other characteristics with Kentucky bluegrasses?

BM: We're testing other crosses in the hopes of getting better seed production and improved turf quality. Those grasses that have good seed production tend to have more disease problems. Shamrock is a grass that was developed here [Rutgers] that shows good seed production and fewer disease problems.

GCN: Where else have you searched for better Kentucky bluegrasses?

BM: We did a big grass collection in Eastern Europe, particularly Poland, last year. We collected the grass there, grew it in Holland and should have the seed here next year. We found samples in parks, along roadsides and in pastures that have been growing for 100 years. We have another team going over this summer.

GCN: What are you looking for in an ideal golf course Kentucky bluegrass turf?

BM: We want a more aggressive turf that can compete with annual bluegrass at fairway mowing heights of 3/4-inch or less. We don't have that yet and I wouldn't recommend that anyone in the Northeast or Midwest consider switching to Kentucky bluegrass fairways. My brother has had some success with a 30-

Continued on page 37

GOLF COURSE NEWS

How To Save Time And Money With One Clean Sweep

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Bluegrass on comeback trail, turf breeders say

By MARK LESLIE
BELTSVILLE, Md. — Bluegrass, out of fashion since perennial ryegrasses broke onto the scene, may be on the road to a comeback in golf course circles. Turfgrass breeders are conquering the obstacles of lower height of cut and density, and are hoping to improve seed yield and heat tolerance.

"We've opened the door for closecut bluegrasses," said Dr. Doug Brede, research director at Jacklin Seed Co. "In fact, I think we've started a whole phenomena... It opens up a totally different option for people. On a scale of 10, I'd give it an 8 on an order of earth-shattering if I were a superintendent."

"Where superintendents have had the difficult choice of a ryegrass fairway which does not have the ability to spread and repair divots, or bentgrass fairways with much higher maintenance costs, bluegrasses will become a much more considered choice," said Dr. Virginia Lehman, director of research at the Lofts Seed

Co. research farm in Lebanon, Ore. "People used to use Kentucky bluegrass on fairways almost exclusively, partially because there were not a lot of options," said Kevin Morris, national director of the National Turfgrass Evaluation Program (NTEP), headquartered here. "They worked pretty well except that summer patch and necrotic ring spot started to become a problem and we had no control for them. When the perennial ryes came along, and were easy to seed and looked nice, people started to use them exclusively. But, since then, we've found that rye is not perfect, either."

"You can blow out a lot of ryegrass with winter kill," said Dave Oatis, director of the U.S. Golf Association Green Section's Northeast Region. Ryegrasses also suffer from poor divot recovery, attacks of snow mold, brown patch and red thread. And now gray leafspot has emerged as a devastating

Continued on page 36



Buffalograss breeders hoping for supers' change in attitude

By MARK LESLIE
PHOENIX, Ariz. — Hailed a few years ago as a solution to water restrictions and chemical applications, buffalograss

has instead drawn more attraction as an "accent" grass on golf courses. Yet turf breeders remain optimistic about the future of buffalograss on golf courses. A native grass on prairies, buffalograsses are known for drought-hardiness, low fertility requirements, disease and insect-resistance, heat and cold-tolerance and other attributes. They require only one-fourth to one-half the water needed for Bermudagrass, so with growing concern about water availability, research on buffaloes has drawn widespread attention. They re-emerged in a handful of research programs just a dozen years ago — a New York minute in the time clock of turf breeders.

"We're looking at this as developing a grass for the next century," said Dr. Terry Riordan of the University of Nebraska, a key breeder of buffaloes. "We're only in our 12th year, but the new varieties we

have are much better than we've had in the past." Riordan touted the density, color and uniformity of the newer buffalograsses and said two Northern types that can tolerate mowing down to 5/8 inch should be available next year.

Nevertheless, buffalograss hasn't been without its critics among those who have tried it in the field. The main negative is that stands of buffalograss may be invaded by the more aggressive Bermudagrass.

Golf course architect Ken Dye of Houston, who has specified buffalograss on a couple of courses, said: "We don't do it anymore. Our overall experience has been mediocre. The newer varieties are definitely better... But the experience we've had is that contamination over time is significant. Within five or 10 years, 10 to 20 feet of your buffalograss rough is taken over by Bermudagrass that has spread from the fairway."

"So until someone figures how to make stronger buffalograss, or a chemical to keep out Bermuda, I can't see putting the two

Continued on page 38

National Kentucky bluegrass test progress report for medium-high input

Name	AB1	IA1	IA2	IL1	IL2	IN1	KS1	KY1	MA1	MD1	ME1	MI1	MN1	MO1	MJ3	NC1	NE1	NJ1	NJ2	OH1	OK1	ON1	PA1	QE1	RI1	UB1	UT1	VA1	WA1	Mean
*Midnight	6.3	6.5	5.7	6.6	6.5	6.3	7.0	7.5	6.0	5.0	6.7	6.4	6.1	4.4	7.0	5.8	6.3	6.7	7.2	8.0	6.5	5.5	6.3	7.8	6.3	6.8	5.8	4.4	6.7	6.3
*ZPS-2572	6.7	7.3	6.1	7.2	6.4	5.4	6.8	7.3	6.1	5.7	6.4	6.3	6.2	4.5	7.2	6.3	6.5	5.2	6.8	7.6	6.5	4.9	6.3	7.4	6.3	6.9	5.5	4.2	5.8	6.3
*Unique	7.0	6.8	6.8	6.2	5.9	6.1	5.8	7.4	6.3	5.7	6.5	6.4	6.7	5.0	6.7	5.4	6.5	5.3	5.3	7.8	6.9	5.1	6.6	7.6	5.3	5.8	6.8	5.9	6.0	6.3
*Total Eclipse	6.0	6.2	6.4	7.3	5.3	5.5	6.7	8.0	6.3	5.2	6.6	6.0	6.0	4.1	7.2	5.4	6.3	5.1	7.3	7.3	6.2	4.5	6.7	7.8	6.6	7.3	6.2	4.1	6.4	6.2
*Award	7.0	7.1	6.0	6.9	5.3	5.5	6.4	7.3	5.5	5.8	6.4	6.6	5.8	4.4	7.0	5.6	6.2	4.5	6.9	8.0	6.5	4.7	7.2	7.2	7.0	6.3	5.9	4.5	6.5	6.2
PST-B2-42	7.0	7.2	6.4	6.7	6.3	6.5	6.3	7.3	6.0	4.8	6.6	7.1	6.0	4.5	6.3	6.0	7.0	4.5	5.3	7.9	5.9	5.1	6.0	7.8	5.7	6.0	6.6	5.2	6.0	6.2
PST-B0-141	5.7	6.7	7.0	7.3	6.7	6.0	6.1	7.1	6.7	5.7	6.4	6.2	6.0	4.3	6.3	6.5	6.5	4.4	5.4	8.0	6.4	4.8	6.2	7.9	6.0	5.3	6.7	5.8	5.8	6.2
*Blacksburg	6.7	7.3	6.9	6.3	6.2	6.2	6.7	6.0	5.5	6.0	6.4	6.5	6.2	5.6	6.5	5.4	5.5	4.9	5.4	8.0	5.8	5.2	7.8	7.8	6.2	5.5	6.3	5.1	5.9	6.2
Absolute	7.0	6.9	5.9	7.3	5.3	6.1	5.7	6.6	5.1	5.8	6.4	6.7	6.2	5.0	7.0	5.7	5.5	5.0	5.8	7.9	6.4	5.5	7.2	7.8	6.1	6.4	6.2	4.4	6.4	6.2
*Odyssey	7.0	5.7	6.8	7.4	5.2	5.6	6.3	7.2	5.9	5.4	6.7	6.6	5.4	3.9	6.9	6.1	5.3	4.8	6.8	8.1	6.8	5.4	6.5	7.4	6.2	6.8	6.0	4.8	5.7	6.2
*Nuglade	6.3	6.0	6.6	6.5	5.3	5.3	6.4	7.3	6.3	5.5	6.8	6.1	5.7	4.5	6.9	5.8	5.3	4.5	6.7	8.1	7.3	4.9	6.8	7.3	6.5	7.0	5.8	4.0	6.8	6.1
*Quantum Leap	6.7	6.3	5.7	6.8	5.7	5.3	6.4	7.5	5.5	5.3	6.0	6.3	5.8	4.8	6.4	5.7	6.8	4.8	7.1	7.7	5.9	5.3	7.0	7.5	6.6	7.0	5.3	4.7	6.3	6.1
*America	5.3	5.7	6.5	6.9	6.5	6.5	5.8	7.0	6.3	5.7	7.0	6.3	6.0	4.4	6.4	5.8	7.0	5.6	5.3	7.7	5.9	4.7	6.2	7.3	6.3	5.7	6.7	5.7	5.8	6.1
*Rugby II	7.0	5.6	6.3	7.0	5.3	5.6	6.2	7.0	5.8	5.4	6.2	6.7	6.0	4.2	6.9	5.3	6.0	5.1	6.5	7.6	6.5	5.0	6.7	7.3	6.5	6.3	5.9	5.0	6.6	6.1
J-1576	6.0	5.8	5.7	6.9	5.9	5.2	6.3	7.8	5.9	5.4	6.2	6.3	5.8	4.4	6.5	5.9	6.0	4.7	6.7	7.5	7.0	4.8	6.2	7.6	6.8	7.1	5.9	4.7	6.6	6.1
PST-B3-180	6.0	5.7	6.2	6.8	6.5	6.0	7.0	7.2	6.3	5.5	5.8	6.0	6.0	4.7	6.3	6.0	5.2	5.0	5.3	8.1	6.4	5.3	6.1	7.4	6.5	5.7	6.6	5.1	6.2	6.1
PST-638	6.3	5.9	6.0	6.7	7.1	5.6	6.2	5.8	5.0	5.7	6.8	6.7	6.3	4.4	6.7	5.6	6.2	5.8	6.6	7.3	6.1	4.8	6.6	7.6	6.6	5.6	5.1	4.7	5.8	6.1
LSD	1.3	1.6	1.1	0.7	1.2	0.8	0.9	0.9	0.9	0.9	1.6	0.6	0.6	1.0	0.5	1.0	1.0	0.9	1.0	0.7	0.9	0.9	1.0	0.5	0.8	1.1	0.8	1.0	0.6	0.2

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- Blacksburg — Turf-Seed
- Absolute — Medalist America
- Odyssey — Peterson Seed
- Nuglade — Jacklin Seed
- Quantum Leap — Roberts Seed
- America — Pickseed West
- Rugby II — Medalist America
- J-1576 — Jacklin Seed
- PST-B3-180 — Olsen-Fennel Seed
- PST-638 — C.R. Funk, Rutgers University

The following are conditions at the sites of the bluegrass national tests, including, in order, location, soil texture, soil pH, nitrogen applied (in pounds per 1,000 square feet), mowing height (in inches) and irrigation practiced:

- AB1 — Olds, Alberta, Canada, N/A, N/A, 2.1-3.0, 0.5-1.0, N/A.
- IA1 — Ames, Iowa, sandy clay loam, 7.1-7.5, 2.1-3.0, 2.6-3.0, to prevent stress.
- IA2 — Ames, Iowa (traffic), sandy clay loam, 7.1-7.5, 2.1-3.0, 2.6-3.0, to prevent stress.
- IL1 — Urbana, Ill., silt loam and silt, 6.1-6.5, 3.1-4.0, 1.1-1.5, to prevent stress.
- IL2 — Carbondale, Ill., silty clay loam, 6.1-6.5, 4.1-5.0, 1.1-1.5, to prevent stress.
- IN1 — West Lafayette, Ind., silt loam and silt, 7.1-7.5, 3.1-4.0, 0.6-1.0, to prevent stress.
- KS1 — Manhattan, Kan., silt loam and silt, 6.6-7.0, 3.1-4.0, 0.0-0.5, to prevent stress.
- KY1 — Lexington, Ky., silt loam and silt, 6.1-6.5, 3.1-4.0, 1.1-1.5, only during severe stress.

- MA1 — Amherst, Mass., silt loam and silt, 6.1-6.5, 5.1-6.0, 0.0-0.5, to prevent stress.
- MD1 — Silver Spring, Md. (dense shade), loamy sand, 4.6-5.5, 2.1-3.0, 2.1-2.5, to prevent stress.
- MD2 — Silver Spring, Md. (shade), silt loam and silt, 6.6-7.0, 2.1-3.0, 2.6-3.0, to prevent dormancy.
- ME1 — Orono, Maine, N/A, 5.6-6.0, 5.1-6.0, 1.1-1.5, to prevent stress.
- MI1 — East Lansing, Mich., sandy loam, 7.1-7.5, 2.1-3.0, 2.6-3.0, to prevent stress.
- MN1 — St. Paul, Minn., silty clay loam, 7.1-7.5, 2.1-3.0, 1.6-2.0, to prevent stress.
- MO1 — Columbia, Mo., silty clay loam, 6.1-6.5, 3.1-4.0, 1.1-1.5, to prevent stress.
- MO3 — St. Louis, Mo., silty clay loam, 6.6-7.0, 4.1-5.0, 2.6-3.0, to prevent dormancy.
- NC1 — Raleigh, N.C., sandy clay loam, 5.6-6.0, 2.1-3.0, 1.1-1.5, to prevent stress.
- NE1 — Lincoln, Neb., N/A, N/A, 3.1-4.0, 0.0-0.5, to prevent stress.
- NJ1 — North Brunswick, N.J., sandy loam, 6.1-6.5, 3.1-4.0, 1.1-1.5, to prevent stress.

- NJ2 — Adelphia, N.J., sandy loam, 6.1-6.5, 5.1-6.0, 1.1-1.5, to prevent stress.
- OH1 — Columbus, Ohio, silt loam and silt, 6.6-7.0, 2.1-3.0, 2.1-2.5, to prevent stress.
- OK1 — Stillwater, Okla., silty clay loam, 6.6-7.0, 3.1-4.0, 1.6-2.0, to prevent stress.
- ON1 — Guelph, Ontario, Canada, Sandy loam, 7.6-8.5, 3.1-4.0, 2.1-2.5 no irrigation.
- PA1 — University Park, Pa., silt loam and silt, 6.6-7.0, 3.1-4.0, 1.6-2.0, to prevent stress.
- QE1 — Quebec, Quebec, Canada, N/A, N/A, 3.1-4.0, 0.6-1.0, N/A.
- RI1 — Kingston, R.I., silt loam and silt, 6.6-7.0, 3.1-4.0, 1.1-1.5, to prevent stress.
- UB1 — Beltsville, Md. (high maintenance), silt loam and silt, 5.6-6.0, 3.1-4.0, 0.6-1.0, to prevent stress.
- UT1 — Logan, Utah, silt loam and silt, 7.1-7.5, 4.1-5.0, 0.6-1.0, to prevent stress.
- VA1 — Blacksburg, Va., N/A, N/A, 3.1-4.0, 1.1-1.5, N/A.
- WA1 — Pullman, Wash., silt loam and silt, 5.6-6.0, 5.1-6.0, 1.6-2.0, to prevent stress.

Bluegrass comeback

Continued from page 35

fungi on ryegrass. Add to this, sharp price increases for ryegrass the last two years.

From his test trials, Prof. Bill Torello of the University of Massachusetts is reportedly "sold on moving back to bluegrasses with new types of bluegrasses," said Brede following a field day.

The older-type bluegrasses, when cut short, "got diseases you just wouldn't believe," said Brede. "They would increase a thousandfold with disease... The new types, when cut close, respond just as they do when they're taller, with nearly perfect disease resistance.

"We couldn't even suggest this [fairway use] if they didn't have that resistance at this low cut."

Agreeing to the claims of lower-cut bluegrasses, Morris said: "It used to be that people would not recommend less than 3/4-inch mowing height for Kentucky bluegrass, and not many would tolerate that height. Now there are a number that can be mowed at 1/2 inch, which puts them in the fairway category. And you'd be surprised at the density of some of these."

But Lehman cautioned: "Industrywide, there are promising new varieties that tolerate low mowing heights, especially relative to fairways. Underline 'promising.' We're trying to make great strides, but progress is much slower in blues because of their reproductive behavior: They are apomixis, meaning that every seed has the same maternal constitution except in rare deliberate crosses."

At Lofts, researchers are excited about progress with varieties that will take low mowing heights and are very dense and aggressive. "Hopefully, with good seed yields, we can make it more readily available," Dr. Lehman said. "We have limited release this year, and will have more material next year.

"With bluegrasses, there is also an emphasis toward more heat-tolerance as well as disease-resistance ... and we are working on winter-fall color retention versus early-spring green-up — two traits that may not be the same in a variety."

"I see greater strides ahead," Jacklin's Brede said. "But the varieties coming out this summer are great. I think these ones people could jump in with and have very successful close-cut fairways."

How far south can these bluegrasses be grown?

"Practically, bluegrass fairways are suitable down to the Mason-Dixon line," Brede said. "They could be used in mixtures with perennial rye a couple hundred miles south of that. I see a natural match in that warmer zone. Ryes are susceptible to

gray leaf spot in that region, so it's knocking them all out and it's expensive to treat chemically. But bluegrass has good immunity for it [gray leaf spot]."

"I've had more and more calls about mixing the two," said NTEP's Morris.

So, what are the negatives to the new breed of blues? Researchers agree that since it is a small seeded grass it is more difficult to get established than a ryegrass.

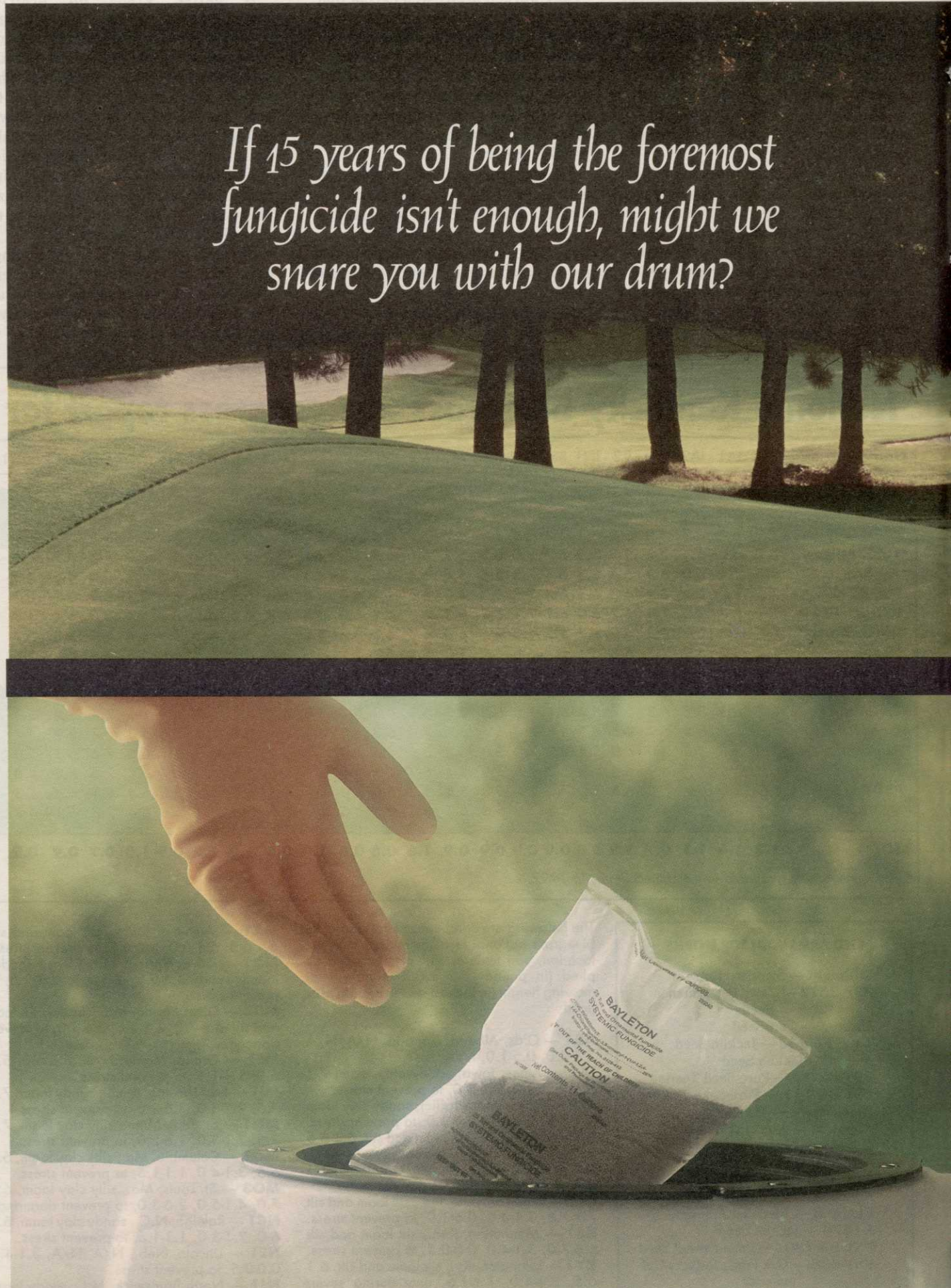
And time may be a factor as many superintendents will wait for university researchers to show the way with real-life results, positive or negative.

As Dave Oatis said from his Northeast Region headquarters: "People are speculating about using newer [bluegrass] cultivars on fairways. In the Great Plains and Colorado it's a viable choice. But in this climate, I wouldn't be a guinea pig at this point."

NTEP TRIALS TO YIELD MORE SPECIFIC FINDINGS

BELTSVILLE, Md. — The National Turfgrass Evaluation Program (NTEP) has upgraded its bluegrass trials by garnering more specific test results. "Initially, we grouped the locations by different mowing heights and nitrogen levels to have a balanced level of each," said NTEP National Director Kevin Morris. "We then separated mowing heights and analyzed those together. Then the nitrogen levels were grouped and we ran those. We also attempted to group the locations by geographic region and ran the analysis. This is not perfect, but it's a start," he added. "Hopefully it will help people pick out cultivars that will perform well under different conditions and in different regions." This type of categorization will be done on the new tests with other species as well, he said.

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Overseeding with bluegrass a 'tricky' process, says Dr. Brede

By MARK LESLIE

POST FALLS, Idaho — Superintendents considering overseeding with bluegrass should be prepared for a tougher job than usual, according to one turfgrass expert.

"Overseeding is tricky with bluegrass because it's a small seeded grass," said Dr. Doug

Brede, research director at Jacklin Seed Co. here.

Superintendents must get the timing right, he said, overseeding the bluegrass in the fall when temperatures are conducive. Also crucial to success is seeding so as to open up the stand to sunlight.

"The best thing is to make sure when you cut it in — whether by

aerification holes or vertical mower — that you take more than one pass," Brede said. "I've seen people take four or five passes when they're doing a bang-up job of overseeding. It's done to get sunlight into the stand."

Any type of renovation, he said, will encompass overseeding every fall for three to five years be-

fore the bluegrass takes over the turf stand.

The entire process relies on the first two weeks after overseeding. But once the bluegrass is up and growing "it's pretty tough and will hold itself very well against rye," Brede said.

The process can be done without interfering with golf play, he

said. Sweeping after each pass makes the fairway look simply like a cross pattern and doesn't affect the ball roll.

Don't expect, however, to overseed bluegrass entirely on tees, however, Brede warned.

"On tees it's nice to have a base of this grass to form a little bit of thatch, whereas ryegrass tees won't do that," he said. "But with tees you're always going to be coming in and overseeding with ryegrass, or a ryegrass-bluegrass blend periodically just to establish something green. They [bluegrasses] will fit the tee market, but moreso when planting new tees or renovating a tee, rather than periodically filling in bare spots. Rye is still the seed to use in that case."

Q&A: Meyer

Continued from page 35

percent rye, 70-percent Kentucky bluegrass mix at his course, Hughes Creek Golf Course near Chicago. It looks good, but, to me, it still seems risky to try to compete with *Poa annua* with the bluegrasses we presently have available. We're hoping that in the next five years we'll develop a high-end Kentucky bluegrass for fairway use that will also have good seed yields.

The golf industry also wants bluegrasses to be tested for traffic tolerance. Traffic simulation is one of the hardest tests to run. We've developed a traffic simulator that uses rotating rubber paddles. Unlike the traditional rollers you have to use four times a week, you can make a single pass with the paddles and get reliable results. It looks interesting.

GCN: What are the biggest differences between working in private industry and working in an academic environment like Rutgers?

BM: In private industry you won't find a team of researchers from different companies who are willing to work together. But the collaborative support among university researchers here has been tremendous. Dr. Funk has been particularly helpful, sharing the knowledge he's gained during his 41 years of turfgrass research.

Some things do move more slowly in a university setting. To buy something here, you have to go through a bid process that can take up to six months. In private industry, if we wanted to buy a truck, for instance, we just went out and bought the truck.

I certainly don't have any regrets about the switch, though. Most people go the other way, from academia to the private sector. My path was just the opposite. Rutgers is the only university I would have considered.



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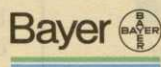
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Buffalograss being used for 'accent' more than water-saver

Continued from page 35

next to each other without problems."

Indeed, at two courses here — DC Ranch and The Raven Golf Club at South Mountain — superintendents speak of the aesthetics of buffalograss rather than its attributes of drought- and disease-resistance.

"We've used buffalograss as an accent turf," said Bob Clarkson, who is in his first summer at The Raven. "Ninety-five percent of the buffalo here is between tees and fairways and adjacent to common ar-

eas. We don't overseed it in the winter. It goes dormant and has dark brown contrast. In the summer the color is different than Bermuda and defines the hole."

"We like the contrast, the light green with the dark 419 Bermuda that we have everywhere else," concurred David Bergstrom at DC Ranch. "We have a different theory. We're maintaining it — mowing it at 2-1/2 inch height, and watering it fairly consistently. We're not dealing with it as though it is completely

drought-tolerant, but not using a lot of fertilizer, either."

DC Ranch also uses the buffalograss around the bunker faces. "Those come into play more often than not," Bergstrom said. "We did not want the ball to get caught up in the bunker sides."

He said buffalo can be allowed to grow "natural, 6 inches high and lazy, or tight and playable at higher maintenance levels."

Clarkson has seen some Bermudagrass

encroachment into the buffalograss areas in his 1-1/2-year-old course, and Bergstrom has not witnessed any in his 1-year-old track.

"Some of the perimeters have encroachment and contamination where clippings have blown in and established themselves," Clarkson said. "Over time, it will probably encroach quite a bit. We may treat it like poa annua and cut it out."

Clarkson said the situation, however, was exacerbated by poor-quality soil and the decision to not install irrigation for buffalograss areas. "I'm proposing to irrigate these areas," he said.

Riordan acknowledged the criticisms and said management practices determine the outcome of using buffalograss.

"With management it's possible to keep them separate," Riordan said. "In areas where hybrid Bermuda is getting mixed in with the buffalo at planting ... Bermuda becomes a weed in the buffalo and will take over. The bugaboo is when they plant plugs through a machine. The planting device for sprigging throws the sprigs, and so the two grasses get mixed in the process. They just need to be separate."

Riordan added that common Bermudagrass is not as aggressive in stands of rough and thus causes less of a problem as hybrids.

"One of the first courses Dye did was an installation problem, I thought," he added. "They had problems on installation. The first nine is a mess. The second looks pretty good. They took the care to keep them separated at planting."

Riordan said that if an area is overwatered, Bermudagrass will be much more aggressive. "But if it is kept a little drier — which I think roughs should be — Bermuda won't be as aggressive and buffalograss will grow quite well. This is something the superintendents will have to work out."

Researchers, he said, are trying to devise a way to keep Bermuda out of buffalo stands.

"That's still in the lab situation right now," he said. "I think we can get it done in the next five years."

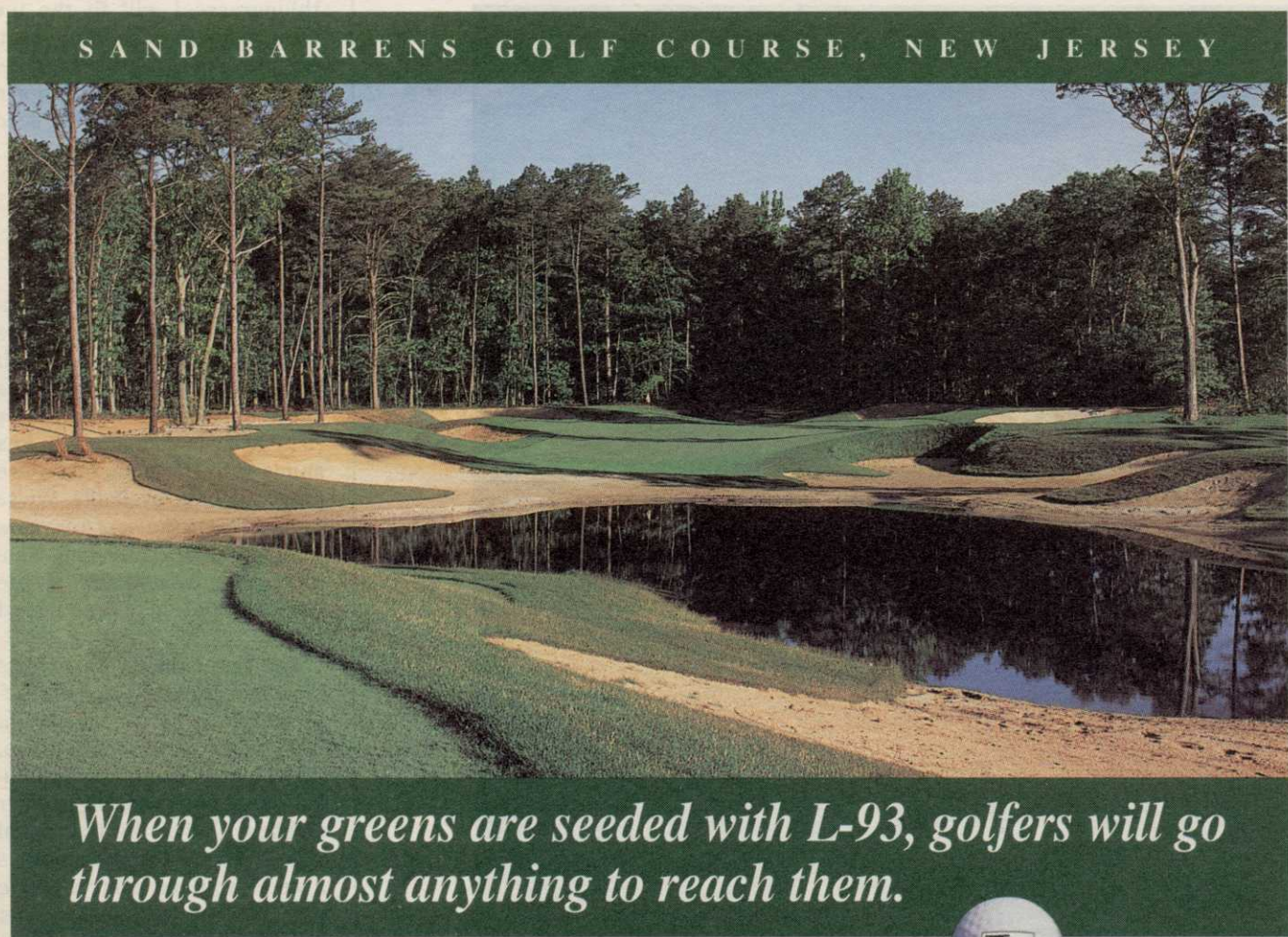
Meanwhile, the new trials on buffalograsses will not be ready until 1998, according to Kevin Morris, director of the National Turfgrass Evaluation Program. But he observed: "The seeded types have improved characteristics. There will be several good fairway types."

UCAL-RIVERSIDE PLANS FIELD DAYS

RIVERSIDE, Calif. — The Turfgrass Research Conference and Field Day and the Landscape Management Research Conference and Field Day will provide two full days of updates for turf and landscape professionals on Sept. 17 and 18 at the University of California at Riverside here.

Both programs will begin at 8 a.m. with detailed briefings on the latest research in turfgrass and landscape topics, followed by on-site examinations of test plots that conclude at about 3:30 p.m.

More information is available from Susana Velez, registration coordinator/research conferences, Department of Botany and Plant Sciences, University of California, Riverside, Calif. 92521-0124; 909-787-4430.



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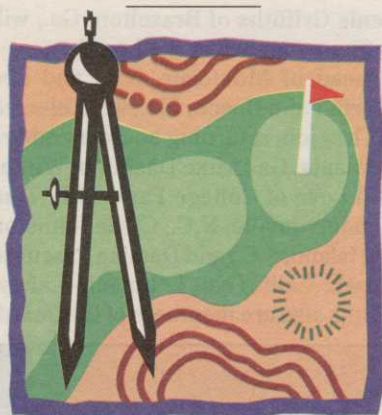


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Regent	5.8
Pro/Cup	5.7
Penncross	5.4

Turfgrass Quality Ratings: 9 = Ideal Turf
LSD = 0.2
Page 8



BRIEFS



IC&E OPENS CHARLOTTE OFFICE

CHARLOTTE, N.C. — Irrigation Consulting & Engineering, Inc. has opened an office here, expanding regional service to its design and management operations in the Mid-Atlantic region. Irrigation Consulting & Engineering, Inc. is based in Pepperell, Mass., with other offices in Cleveland and Elgin, Ill. "Our increased reach offers clients greater local service opportunities, while employing the same proven advances in irrigation design and technology that IC&E has always provided its clientele," said President Brian Vinchesi.

SCHREINER HIRES HELLMAN

KANSAS CITY, Mo. — Craig Schreiner Golf Course Architects has appointed Douglas Hellman vice president of business development. Maintaining an office in Illinois, Hellman will guide the firm's marketing and business development activities in the United States and abroad. He began his career in golf as a project architect with Dick Nugent Associates and was most recently director of business development for Jacobson Golf Course Design, both Chicago-based golf firms.

GCBA A ON THE WEB

The Golf Course Builders Association of America (GCBA A) has debuted on the Internet, with the completion of its World Wide Web site: <http://www.gcbaa.org>. The site includes names and addresses of all current GCBA A members, as well as general information about the association, and an on-line version of the GCBA A's bimonthly newsletter, *Earth-Shaping News*. The site can be accessed via the *Golf Course News* site at www.golfcoursenews.com.



TRAVIS, RAYNOR TRACKS FACE CHANGE

HAWORTH, N.J. — The Northeast Golf Co. is developing renovation plans for White Beeches Golf and Country Club here. White Beaches is a circa 1920s Walter Travis layout. Plans are to rebuild and expand many of the tees and restore the bunkering throughout. Meanwhile, Gardiner's Bay Golf Club, which maintains many remnants of Seth Raynor's design philosophy, is planning to restore the bunkering back to the forms and strategic positioning of the original layout. Gardiner's Bay is on Shelter Island on Long Island, N.Y.



The 14th hole at Sultan's Run.

JASPER, Ind. — The heralded remodeling plan at Sultan's Run Golf Course here was unveiled May 21. The \$1.5 million project, under golf course designer Tim Liddy, affected all 18 holes.

The original design was done by General Manager Allen Sternberg and then head pro Tom Jones. Wadsworth Golf Construction of Plainfield, Ill., began work on Liddy's redesign in 1996.

Course situated on former horse farm

"We felt it was time to take a good product and make it a showcase," said head PGA professional Rusty Mason. "What we had the past five years was a good layout, but one that wasn't functional for the long haul. We decided

Continued on page 41

Cement factory, gravel quarry transformed in Mich.

By NORMAN SINCLAIR

PETOSKEY, Mich. — Golf critics are running out of superlatives to describe Bay Harbor Golf Club, taking shape on a five-mile stretch of Lake Michigan shoreline in northern Michigan where once stood a cement factory and sand and gravel quarry. The 27 holes, 18 of which are open this season and nine of which will be ready for limited play in the fall,

"shreds every adjective in the book," said golf writer Jack Berry.

Architect Arthur Hills had high praise for the site, describing it as the opportunity of a lifetime. The golf course is the centerpiece of a mega-million-dollar Victorian-theme development that includes a yacht club, condominium-suites hotel, and shopping and restaurant village.

Seven holes play along the water, some

on bluffs 170 feet above Little Traverse Bay. Hills routed the 27 holes over and through four diverse geological formations — sand dunes, a quarry, lakeshore and wooded uplands.

The Links Course holes flow along the top of the rocky bluffs above the water, with fairways and some greens perched on the edge of those bluffs. Four of the

Continued on page 40

Kay gaining design stature

Stephen Kay entered golf course architect in 1977, joining William Newcomb's firm. He was made an associate in 1980, then started his own practice in 1983 in Bronxville, N.Y. He was voted into the American Society of Golf Course Architects two years ago.

Golf Course News: You've been called a new, up-and-coming architect, but you have quite a history. What was your foundation in golf course architecture?

Stephen Kay: Besides my academic education of a degree in landscape architecture from Syracuse and a turfgrass management degree from Michigan State, I was a superintendent for a couple of years and worked in construction a couple of years. But when I left Michigan and came back to New York to start my own practice renovating the old classic architects (Donald Ross, A.W. Tillinghast, Devereau Emmet, Seth Raynor) and trying to duplicate what the masters did, that's been a great foundation for me to then leap into new golf courses.

GCN: Especially with Blue Heron Pines [in the Atlantic City area], you seem to be doing more new projects.

SK: Yes. I did a couple of new courses in the '80s, but my bread and butter was renovation work. Then, Blue Heron Pines



The 534-yard, 1st hole at New York Country Club, a new 18-hole private course designed by Stephen Kay, which opened June 14 in Rockland County.

was really the start of getting a lot of work. The golf course has gotten a lot of nice press... That has snowballed into basically doing one or two new courses every year since 1992.

GCN: It seems that The Links at North Dakota has put you up another echelon.

SK: Thank you. It probably has in the fact that *Golf Digest* named it second-best

Continued on page 46

ASGCA accepts Fought, Benkusky and Kavanaugh

TORONTO — The American Society of Golf Course Architects elected three new associate members — Mike Benkusky of Marengo, Ill., Ken Kavanaugh of Tucson, Ariz., and John Fought of Aurora, Ore. — during its 51st annual meeting here.

An associate of Lohmann Golf Designs, Benkusky's work includes Bishops Bay Golf Course (GC) in Middleton, Wis., and Boulder Ridge Country Club (CC) in Lake in the Hills, Ill.

As principal of his own firm, Kavanaugh has designed Southwyck GC in Pearland, Texas; The Vistas at Westbrook Village in Peoria, Ariz.; Seasons Ridge GC in Lake Ozark, Mo.; and the Oregon GC in West Linn, Ore.

Fought is principal of John Fought Design/OB Sports LLC and is responsible for such layouts as Big Sky Golf & Country Club in Pemberton, B.C., Canada; and CrossWater in Sunriver, Ore.



Gary Player and Stephen Kay at Manhattan Woods which they co-designed in West Nyack, N.Y.

Bay Hill turns quarry into golf

Continued from page 39

Quarry Course holes play down into the old limestone quarry; then out to two more bayside holes. Several are routed through natural sand dunes. The rest are cut through northern Michigan hardwoods.

The 10,000-square-foot clubhouse has a commanding view of the bay as well as the 9th hole on the Quarry Course.

The golf course reclaims what was once a scarred and browned-out cement factory, adjacent to a sand and gravel quarry, jutting out over the pristine bay.

Three years ago the land was an environmental disaster dotted with poisonous piles of kiln dust, a 90-acre hole in the ground, and two huge cement and brick smoke stacks. "The place looked like a windswept lunar surface," said Andy Stempke, an environmental quality analyst of the Department of Natural Resources (DNR).

No vegetation would grow on the piles of kiln dust which contained arsenic, lead and other metals — residues of the cement-making process. The poisons wafted up into the atmosphere when the wind blew off the big lake, while some of the polluting metals constantly seeped into the bay.

Today the smoke stacks are gone. The kiln dust has been replaced by rolling green fairways, and the huge hole in the ground is a deep blue-water harbor.

With the permission of the Michigan DNR and the U.S. Army Corps of Engineers, the developers blew a hole in the sea wall, allowing water from Lake Michigan to flood the old quarry and creating the 75-foot-deep Quarry Lake where 100-foot Hatteras yachts regularly congregate. Bay Harbor has already hosted more than 50 Hatteras yachts for one function, the largest such gathering of those luxury models on the Great Lakes.

The yacht club boasts a 23,000-square-foot clubhouse and 500 slip marina. The "slipominiums," as they are called, sell for \$150,000 and include a yacht club membership.

The ramshackle cement factory buildings have been replaced by 10,000-square-foot Victorian-styled waterfront mansions. Where fences once encircled browned-out land, green park land now invites passersby to enjoy the view of Little Traverse Bay.

The peninsulas created on each side of the dredged-out entrance to Quarry Lake gave the developers prime frontage that they turned into \$1 million

lots featuring the bay in front and the new lake in the backyard.

The 1,100-acre site will have 800 homes and condominium units, clustered in groups of 25 neighborhoods, each with different themes. There are waterfront homes where owners can walk out their front door to their yachts; homes on the golf course; and clusters of condominiums near a shopping and restaurant district.

Alice Dye heads new slate of ASGCA officers

TORONTO — Alice Dye of Carmel, Ind., became the first woman president of the American Society of Golf Course Architects at its recent annual meeting here. Dye's election also signals the first time that a husband and wife have both served as society president. Her husband and design partner, Pete Dye, was president in 1989.

Also elected at the meeting were Vice President Bob Lohmann of Marengo, Ill.; Treasurer John LaFoy of Greenville, S.C.; and Secretary Brian Ault of Kensington, Md. Immediate Past

President Denis Griffiths of Braselton, Ga., will serve as ex-officio member of the board.

Greg Muirhead of Montclair, N.J., and Lee Schmidt of North Palm Beach, Fla., were elected to the board. They join returning board members Bob Cupp of Atlanta, Ga.; Mike Dasher of Winter Park, Fla.; Bill Love of College Park, Md.; Tom Marzolf of Hendersonville, N.C.; Clyde Johnston of Hilton Head Island, S.C.; and Damian Pascuzzo of Walnut Creek, Calif. Dye, Lohmann, LaFoy, Ault and Griffiths also are members of the board.

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ZENECA Professional Products

By BOB SPIWAK

MAZAMA, Wash. - In an April 29 press release, Seattle's R.D. Merrill Co. and Harbor Properties, Inc., also of Seattle, announced an Agreement in Principle linking the two family corporations in the Arrowleaf golf resort project here. (GCN Feb. '97.)

The new partnership will remove Lowe Development Corp. of California as a participant, ac-

ording to the joint statement from Charlie Wright, Merrill's CEO, and Stimson Bullitt, chairman of Harbor. "We owe a debt of gratitude to Lowe Development for their excellent services to date," said Wright in the prepared statement, "Going forward, we feel that Harbor would be a superb partner - the Bullitt

family takes a long term view, as we do, and joins us in our enthusiasm for the resort plan that the county has approved."

Along with the long term view Harbor had another asset - money. In an interview prior to the formal announcement, Wright said that Lowe Development was offered the opportu-

nity to buy into the project. Lowe opted not to invest any money and Merrill found Harbor Properties a willing participant.

The project, literally at the end of civilization a few miles from North Cascades National Park, has a convoluted history of being thwarted by environmental lawsuits for the past quarter cen-

tury. Merrill is the fourth developer of the property, whose golf course will lie in a spectacular mountain bowl. In the previous developer's plan, Robert Muir Graves was to be the course architect, but when Lowe became involved in 1993, President Andy Norris chose Bob Cupp to design the course, citing past experience with the latter's work. According to Wright, Cupp will remain on the job. The fairways have been cleared, but progress has been halted by yet another environmental roadblock.

Arrowleaf ownership changes again

Sultan's Run

Continued from page 39

that for the eternal success of Sultan's Run, we needed to go in and rectify all of the course's internal problems. Along with that, we wanted to enhance the playing characteristics and aesthetics of each hole."

Liddy had a couple of goals in his approach to the renovation. First was the functionality of the course such as improving the bunkers by tying them into the proportions of the course, and widening fairways, making them more receptive to the average player.

The second goal was adding strategy to each hole to keep the interest of the better players. For example, "You orient the bunkering to the good player, and keep it out of the way of the bad player," said Liddy.

All of the existing 52 bunkers were blown out and 72 new ones were sprinkled throughout the layout. Three greens were rebuilt due to their environmental setting, three due to severity of slope, and one due to a routing change.

All of the green surrounds were reshaped with pitching and chipping hollows and collection areas, and covered with zoysiagrass sod. More than 25 additional acres of zoysia sod was added and 200,000-plus yards of total sod was laid.

Trees were cleared to help better turn holes and to lessen the visual intimidation of some tee shots. Fairways and irrigation were expanded, and several new tees have been erected.

A short-game complex has also been added to the practice facilities so players can warm up and see what's to come when they head to the first tee.

The course derived its name from the World Champion American Saddlebred Horse "Supreme Sultan," who used to roam the land. It has been the birthplace of more World Champion American Saddlebred horses than any other place on earth — all sired by this horse.

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CIRCLE #109

Citizens raise \$2.2M toward county course

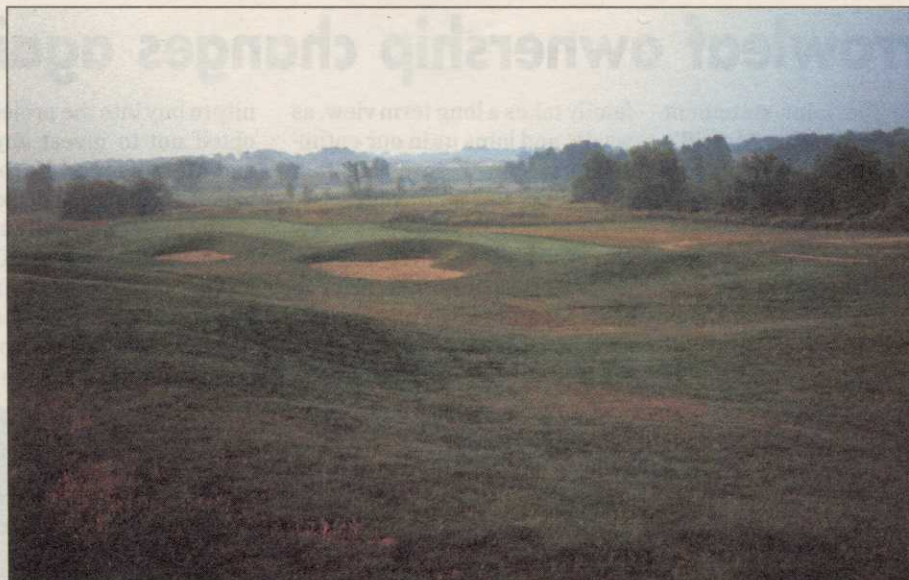
By MARK LESLIE

HARTFORD, Wis. — A monument to what one man can generate, Washington County Golf Course has opened for play in this community 30 miles from downtown Milwaukee.

Thanks to Walter Malzahn — who saw just one fairway seeded before his death — the 18-hole, Arthur Hills-designed course cost the county taxpayers nothing.

Malzahn, a non-golfer, raised \$2.2 million in donations from a dozen private citizens, including \$300,000 himself to buy the land, according to PGA professional and clubhouse supervisor John J. Statz. That got the project off the ground and put Malzahn in a position to finance the remaining \$5.3 million to build the course.

The course "is not supplemented by the government at all," Statz said. "It is run on an enterprise account, which means we are a business and all our oper-



Washington County's 189-yard par-3 6th hole.

ating budget comes from user fees. No tax will be levied for us."

The facility was built, Statz said, "to get families involved. The short game and practice facility is one of the best in the state."

It contains a three-acre practice tee, two adjacent practice greens and sand bunkers for short-game practice, and three practice holes — two par-4s and a par-3.

The course opened April 30 and Statz projected 20,000 rounds for the year.

Creating the 18-hole layout along the Rubicon River, Hills moved a half million cubic yards of material to shape four major water features, four sets of tees and 50 bunkers.

The par-72 track plays from 5,200 to 7,007 yards and is all bentgrass tee to green, with a lot of native grasses used in out-of-play areas.

Maxwell's Starmount Forest faces renovation

GREENSBORO, N.C. — Lester George has been selected by Starmount Forest Country Club to create a master plan of improvements for the club. The plan will outline the initiatives for future consideration of renovation and restoration for the 67-year-old course.

Starmount Forest CC was designed by Perry Maxwell in 1930. The club hosted the inaugural Greater Greensboro Open in 1938, and hosted or co-hosted it 15 times between 1938 and 1960. It was one of the most popular stops on the PGA Tour.

George will concentrate on renovation of the tees, greens and bunkers. The Richmond, Va., architect will also oversee the delicate restoration of some of the original Maxwell features that set Starmount Forest apart from many clubs.

"The primary focus of any master plan is to significantly improve the architectural quality, maintainability, playability, strategy, drainage and aesthetic appeal of the course without going overboard," George said. Specifically, George will improve the shot values and flexibility of the course by adding a fifth set of tees, making the course more diverse for all skill levels of golfers.

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The Cliffs at Glassy signs Fazio to design third golf development

GREENVILLE, S.C. — Jim Anthony, CEO of The Cliffs at Glassy and Cliffs Valley communities in upstate South Carolina, has announced his third residential golf development, The Cliffs at Keowee Vineyards. A Tom Fazio-designed golf course will be the focal point.

Situated on a pristine piece of

land along Lake Keowee in Pickens County, The Cliffs at Keowee Vineyards makes up 1,400 acres of property bordered by 16 miles of shoreline. Surrounding the community is 50,000 acres of forest land laced with trout streams and wildlife.

Homesite selections are expected to begin in July and con-

struction of the golf course is scheduled to begin near the end of the year. Proposed club and recreational amenities include 18 holes of golf, tennis, swimming, clubhouse, beach area, marina and dock facilities. Plans are to open the golf course to public play in the year 2000.

The Cliffs at Keowee Vine-

yards course will be Fazio's second in upstate South Carolina.

"The first time I went with Mr. Anthony to visit The Cliffs at Keowee Vineyards I knew this project was going to be special," said Fazio. "On one hand I saw an owner with a commitment to quality, and on the other hand an awesome piece of property

with tremendous possibilities for golf. The Cliffs at Keowee Vineyards gives me the opportunity to design a golf course next to a beautiful, pristine lake and over dramatic rolling terrain ... a unique combination to have to hold on a single site."

Fazio routed eight holes along the lake.

Casper, Nash completing work at Sun City Grand

PHOENIX, Ariz. — Construction is underway on the second 18-hole course at Del Webb's Sun City Grand community northwest of the city. Designed by Billy Casper and architect Greg Nash, the 6,840-yard, par-72 course is expected to open for play in late 1997 or early 1998.

"This is a very exciting project for us," said Nash. "Billy and I have incorporated some new techniques and landscape treatments into the design of this golf course that we think will make it an absolute joy to play.

"It's kind of a hybrid between the best of the old- and new-style golf course architecture. I'm really looking forward to seeing the final result."

One of the first differences players will notice is the absence of the free-flowing style of tee box so prevalent today. Instead, Casper and Nash have opted for rectilinear designed tees to give the course a more traditional look and feel.

Also, gone are the multitudes of "bumps and humps" that many modern courses use to define the direction of play, but that often does more to intimidate players.

Casper and Nash will instead move more than a million cubic yards of earth to create long, flowing slopes and recessed fairways.

The aesthetic effect of this, according to Nash, will be more dramatic shadowing on the golf course, and a greater sense of solitude for players.

However, the slopes and the recesses also will help the golf course serve a functional role within the development by allowing it to retain up to 265 acre-feet of runoff water from the community during severe storm conditions.

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Los Angeles CC's South Course readied

By MARK LESLIE

LOS ANGELES—The remodeled South Course at Los Angeles Country Club should be open for play in late fall, a milestone in a very busy year for golf course architect John Harbottle.

The Tacoma, Wash.-based Harbottle has five courses under construction, collaborating

with Johnny Miller on a layout 15 miles outside Lake Tahoe and with Fuzzy Zoeller on a track in Reno, Nev.

Harbottle, who co-designed Genoa Lakes with Peter Jacobsen, said designing golf courses with Tour pros is interesting in several ways.

"Contouring and bunker place-

ments are the key elements they comment on," he said. "They aren't always trying to make it flatter, like people think. Peter and Johnny put bunkers in very interesting places that made for dramatic situations." He hasn't worked with Zoeller yet, as major earthmoving has just begun on their 18-hole Arrow Creek course.

Crews were grassing Miller-Harbottle-designed Sierra Nevada Golf Club outside Lake Tahoe in June, and developers hope to open it by next spring. Built on more than 200 acres of dramatic high-desert savanna, it plays into the Sierra Mountains. Native pine and sage define the holes. The finishing holes have mountains in the background and play over and along water.

Miller, Harbottle said, "is very low-key, easy to talk with, has a lot of great input on the design and has a good eye for the artistic sense of architecture.

"I like to think I know a lot about how people play the game. But a Tour pro knows how a truly fine player will play it. I've been surprised when Johnny has said he wouldn't play a hole the way I had thought.

"Peter was the same. He'd play a draw into a hole on which I thought he would play a fade. I made some adjustments to holes because of their input."

His favorite hole in the Sierra Nevada Golf Club design is a short, driveable par-4. "A stronger player with a wind could reach the green, but it's risky," Harbottle said. "It's a slight dogleg left and the green has an open approach right to left, but there is a pot bunker in the middle. A diagonal set of bunkers stretches down the left-hand side of the hole. Although a perfectly played straight shot will roll into the green, the best shot is a draw."

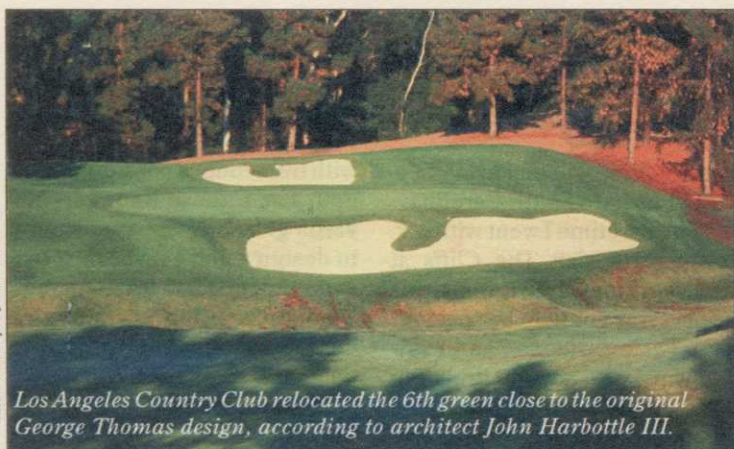
The Zoeller-Harbottle project, which will break ground at the end of June, will be built in association with an Arnold Palmer-designed course. It will be a privately owned public facility, with related real estate.

Harbottle's other projects are:

- The 27-hole Tradition course, the first public track built in San Jose since 1965. It is developed by Lee Brandenburg of San Jose real-estate developer Brandenburg Properties, it will be open to the public. Harbottle hopes to grass it by November and have it ready to open by late spring or fall 1998.

- A new privately owned public resort course to accompany the existing Izatys Golf & Yacht Club in Onamia, Minn., 1-1/2 hours north of Minneapolis.

Ground has been broken on the layout. Chip Glaser of The K. Charles Development Corp. is developing the course.



Los Angeles Country Club relocated the 6th green close to the original George Thomas design, according to architect John Harbottle III.

Photo courtesy of John Harbottle III

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CUPP DESIGN ONE YEAR AWAY

SYCMAR, Calif. — MCG Architects is designing the 10,000-square-foot clubhouse for Cascades Golf Course, a new 18-hole championship layout here. The Robert Cupp-designed course, which will be open to the public, will celebrate its grand opening in the summer of 1998.

The golf club also will include a lighted driving range and an 18-hole putting course. Cascades Golf Course is being developed by Beverly Hills-based Royal Clark Development Co.

Johnston's Sis helps break in course with LPGA pals

MURRELL'S INLET, S.C. — Most golf course architects don't ask their kid sister to help them grand open one of their courses. But for Clyde Johnston and his Wachesaw East design here, it was a grand idea.

Johnston's sister, LPGA professional Cathy Johnston-Forbes, and her fellow Tour players, helped christen Wachesaw East in May by competing in the LPGA's new Susan G. Komen International event. Johnston-Forbes thought it such a spe-

cial occasion that she even led the event after three rounds, only to succumb to a streak of last-round birdies by eventual winner, Australian Karrie Webb.

Johnston-Forbes said the course was extremely well received by the Tour players. "I know Clyde designed the course with the day-to-day play of Wachesaw Plantation members in mind, but ask any of the girls here this week and they'll tell you it plays as a consummate championship course as well," she said. "The four

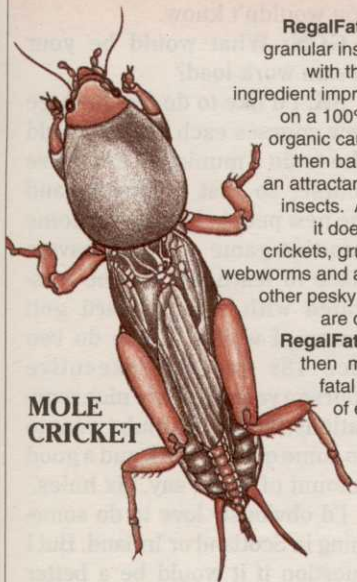
finishing holes are some of the toughest we face all year, and the conditions are remarkable for a course of any age."

Johnston, who walked Wachesaw East with his sister on Monday and played with her in the Wednesday Pro-Am, was proud of her tournament showing. "This is the first course I've designed that has hosted one of the major tours, so it was particularly rewarding that Cathy played so well. I guess I'll have to add a few more bumps to the greens before next year," he said.

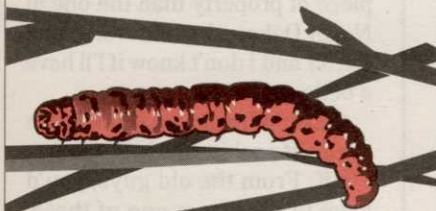
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Q&A: Kay

Continued from page 39

new public course in the country and *Golfweek* ranked it 41 in the top 100 modern courses. I really didn't design the golf course. God did. The topography is perfect for a golf course. The soil is perfect. We did not build greens. We did the old pushup method. In fact, on six

of the greens the contour was so perfect that after I shot grade, I told the contractor, "That's it. Don't touch it." We sprayed Roundup twice, rototilled it and seeded it. We only moved literally 7,000 yards of earth.

GCN: Sandhills [in Nebraska, designed by Ben Crenshaw and Bill Coore] and The Links at North Dakota were both getting a lot of national press when they opened, and they came along

when there was a lot of talk about "minimalism" in design. Do you think the big splash those two courses made an impact on the golf world?

SK: I think it has. Minimalism is just a catchword. But I think it is getting developers to start thinking that these big-budget golf courses perhaps could be built less expensively if they don't move as much dirt.

GCN: You've studied the clas-

sic designers. Ross, at the end of his life when dynamite started to be used, said this was great stuff.

SK: He also became aware of bulldozers.

GCN: Do you think he might not have been the minimalist, as we think of him today?

SK: The last few golf courses he designed, in 1946 and '47, in the construction drawings show that he was moving more earth, cutting hills down more and rais-

ing greens more to get rid of more blind shots than he used to. After World War II, the factories that were building the tanks started building bulldozers en masse and earthmoving became easier.

GCN: So has there perhaps been an overemphasis in trying to keep Donald Ross designs as they originally were, and should there be more emphasis on how he might change them if he were alive today?

SK: I do try to put myself in his shoes and think what he would do.

GCN: If there were a Stephen Kay fingerprint on a course, what would it be?

SK: I don't think there would be. The only thing I do on all my new courses is a Redan par-3. But I do them differently. Sometimes I flash the sand. Sometimes I bring the grass down. Sometimes I do a Redan just like at North Berwick. Other times I do a reverse Redan and have it go from left to right rather than from right to left. I just think it's a great par-3. And it's fun to do every time. Maybe I'll get tired of it, but right now I'm still enjoying doing it every time.

I try to change and be different from course to course so that you wouldn't know.

GCN: What would be your dream work load?

SK: I'd like to do two to three new courses each year. I would like to do a municipal executive course, so that beginners and the new people I think will come into this game ... would have a place to learn and not be frustrated with a long, hard golf course. I would like to do two nice 18s and one executive course a year, plus five nice renovations, where the clubs want to do some quality work and a good amount of work, say, six holes.

I'd obviously love to do something in Scotland or Ireland. But I question if it would be a better piece of property than the one in North Dakota. I could work until I'm 95 and I don't know if I'll have a better piece of property.

GCN: Who do you think is the greatest architect of all time?

SK: From the old guys, you'd have to pick from one of three: Tillinghast, Ross or Mackenzie. Ross might have had the best putting surfaces; Oyster Harbor in Cape Cod has the best putting surfaces I've seen anywhere — better than Pinehurst #2. The best bunkers are Mackenzie's and Tillinghast's. Tillinghast also set up some great strategic, risk-and-reward holes. Ross did some very good routing. Lots of times you see the quality of an architect with the routing. A lot of times you'll go to a golf course and there are 15 nice holes and three or four that are just horrible. They are squeezed in to try to make it 18. All the archi-

Continued on next page

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Kay team busy on Indian course

By MARK LESLIE

DELHI, India — Public golf in India is about to become a reality. The Delhi Development Authority (DDA), in charge of beautifying this city of 6 million, has started the clearing and large earth-moving for its Public Golf Course Lado Sarai situated in the third city of Delhi called Tuglaqabad.

"They're very excited about this project," said Doug Smith, lead architect with Stephen Kay Golf Course Architects in Bronxville, N.Y. "They want to teach

people to play golf.

"It's the talk of the town because they have three private courses, but no public golf courses. The number of golfers is growing. They have long waiting lists to join Delhi Golf Club and The Army Golf Course."

An extensive 30-tee practice range, with a chipping area and putting greens, has already been completed at Public Golf Course Lado Sarai. It may be lighted at night. A full restaurant will be built for

the facility. Plans are to complete construction of the course by next March and open it late in the year.

The famous Qutub Minar monument, a 72.5-meter-high tower built by Qutub-din-Aibak in 1199, is visible from every hole, and the dominant feature of the course will be an ancient, 18-foot-high wall that borders one side of the property.

...

Kay may be familiar to some Indian golfers. He designed the nine-hole Aravalli Golf Course in Faridabad near here in 1988 and nine-hole Royal Bhutan Golf Club in the Kingdom of Bhutan in 1986.

Kay and Player team on New York project

WEST NYACK, N.Y. — A new 18-hole private facility, Manhattan Woods, is under construction here. Constructed on 220 acres, this course will measure 6,800 yards and play to par 72. Golf course architect Stephen Kay and Gary Player Design Group teamed up on the design.

Construction began in February and the facility is expected to be open for play by July 1998. The construction contractor is Turco Renovations from New York.

Q&A with Kay

Continued from previous page

teets joke about how we had this great 16- or 17-hole golf course on our drafting table. Doing a golf course is like doing a puzzle. It's not always easy.

GCN: Who is your favorite modern architect?

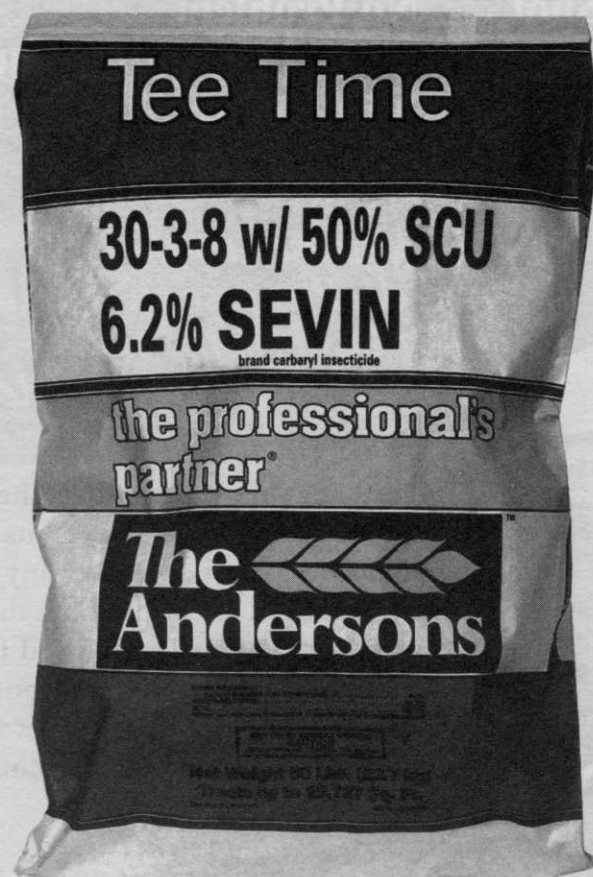
SK: People talk about the Golden Age of architecture in the '20s with the Tillinghasts and Rosses. I think the last 10 to 15 years is maybe even a better Golden Age. The quality of architecture is tremendous. There are architects working today who have been in business a long time, that when you look at their work 20 years ago and their work today it's much better work today — because of competition, because of the desire, because of the media. It all goes to Pete Dye and in the '70s. Slowly, but surely, golf course architecture started to become something very much recognized. Golfers cared about it. Magazines wrote about it. There are all these "best-of" lists. Whether they are good or bad, who's to say, but they've obviously brought a lot of media and public attention to golf course architecture.

GCN: Does anything weigh on your mind about the design business today?

SK: One negative thing: This celebrity label name that clients are wanting. In the '20s there were pros who dabbled in golf course architecture. But if you had a golf course today, who would you rather have had design it — Walter Hagan, or Tillinghast or Ross? I think it would be Tillinghast or Ross. And I think that's what's going to happen 20 or 30 years from now. People won't care that a big-time player who won two majors designed a golf course. They are going to want to know that it was Steve Smyers, or Bob Lohmann, or Stephen Kay. What's sad is, the real architects, the ones who have a real passion for design, are losing out on jobs. And they are paying these celebrities more than they're paying designers and we're working two to three years putting hundreds and thousands of hours in, while they're on site two or three times, get their pictures on it and the owners say it sells memberships. To me, what sells memberships is a good golf course that golfers want to play again and again.

It's getting ludicrous. I think it hurts us. These clients, if they would just think. You would be proud today to have a Pete Dye, or Tom Fazio or Rees Jones golf course. None of those guys are on the PGA Tour and they are designer-label names in a way. They are legitimate, qualified golf course architects. They have deserved what they have gotten. But today you have to have a Tour name. It's sad.

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Ford's Colony, Maples begin 3rd 18

WILLIAMSBURG, Va. — Construction of the final 18 holes of golf at Ford's Colony has begun, according to Realtec Inc. CEO Rick Ford.

Although 54 holes of golf have always been a part of Ford's Colony's master golf plan, the decision to finish the final holes was reached late last year based on real demand. With Ford's Colony averaging more than 70,000 rounds a year, and the increasing demand for golf in the Williamsburg area, Ford decided it was time to make a move.

Early last December, Ford set out to find the necessary financing for his new project, then finalized the arrangements that would allow the next phase to become a reality. Imperial Golf Finance Group, a division of FMAC, agreed to provide the financing. Then Dan Maples was signed to design the remaining holes.

Those holes "wind through some of the most beautiful rolling property that I have had to work with here," said Maples.

Foster begins renovations in Ariz., Ill.

TUCSON, Ariz. — Renovation work has begun at Tucson Country Club here and Sunset Hills Country Club in southern Illinois. Both courses retained Keith Foster last year to study and provide assistance in enhancing both courses for their respective memberships.

At Tucson CC, the enhancement program focuses on im-

provements at tees, bunker reconstruction, regrassing green surfaces, and an irrigation upgrade. Work will be completed in September and Tucson CC will reopen in December.

Sunset Hills will undergo an extensive renovation and reworking of its back nine. Many of the previous holes were routed on top of rough ground. The redesign cuts the holes into the ground for a better fit. Construction will be completed in early October and Sunset Hills will reopen the back nine holes in June 1998.

Nelson, Haworth excited about Singapore project

KRANJI, Singapore — "It's such an impressive site. I'm really excited by the possibilities here," said Robin Nelson, president of Nelson & Haworth, after having spent two days at the Kranji site of the new 18-hole Warren Golf and Country Club course.

It was Nelson's first visit to the site, and accompanied by Singapore-based partner Neil Haworth, both were enthusiastic about the project. "We've been working on the design for some time, but it's great for Robin to see the opportunities here," said Haworth. "There's lots of large mature trees which we will be preserving and working around, to give the course an instant 'well-established' look.

"In that respect, it resembles our course at Mimosa. And, unlike many Singapore courses, the location is rolling and undulating, not flat. It's such a natural site that the course will require very little earth-moving. The area for the clubhouse, in particular, has great panoramic views of the golf course and Kranji reservoir."

Nelson is no stranger to Singapore, having been involved with the designs of the original Tanah Merah Garden course and the Sentosa Serapong courses. "Both Warren and ourselves are committed to making this course a top-quality championship venue," he said.

"We want each hole to make every golfer think, to have to consider all the options, before they play their shot," said Haworth. "In addition, we are supplying the shapers and key construction people. That is very important to ensure our design is accurately translated into reality."

It is expected that construction work for the 6,800-yard course will begin late this year, and the course will be ready for play in the middle of 1999.

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TROON DEVELOPS SAVANNAH LINKS

SAVANNAH, Ga. — Official groundbreaking took place recently for the Westin Savannah Harbor Resort, which includes an 18-hole Robert Cupp-designed course. Located on Hutchinson Island, the resort is being developed by CSX Realty Development LLC of Jacksonville, Fla., and Merritt W. Dixon III, a Savannah real-estate investor. Troon Golf of Scottsdale, Ariz., will help develop and eventually manage the golf property. Funding for the \$100 million project is being provided by Nomura Capital, a leading commercial real-estate financier. The city and county are building the 345,000-square-foot Georgia International Maritime & Trade Center immediately adjacent to the resort. Both projects are scheduled to be completed in early 1999.

NGP SELLS NEW ORLEANS TRACK

SANTA MONICA, Calif.— National Golf Properties Inc. announced that it has sold Stonebridge Country Club in New Orleans for approximately \$1 million. National Golf Properties acquired Stonebridge in July 1996 as part of its purchase of 20 golf courses from Golf Enterprises Inc. National Golf Properties will recognize a gain on the sale.

PALMER NAMES TIERNEY VP

ORLANDO, Fla. — Arnold Palmer Golf Management has named Tim Tierney vice president of operations, a position responsible for managing company-owned, managed and franchised courses. Tierney was formerly executive vice president and chief operating officer of Kona Ranch Restaurant Group. Tierney's recruitment from the restaurant industry supports Palmer Management's ongoing effort to integrate golf industry experts with professionals from other customer-driven, branded chains, according to a Palmer spokesman.

CJH READIES OLDE SCOTLAND LINKS

BRIDGEWATER, Mass. — Olde Scotland Links Golf Course is on schedule to open here in early August. The town-owned, 18-hole layout was designed by Cornish, Silva and Mungeam and will be managed by Corcoran Jennison Hospitality Inc. The course site was formerly full of drainage ditches and served as a stump dump, filled in some areas over 40 feet high.

MOVIN' ON UP

Eger ascends Golf Services Group's career ladder

By PETER BLAIS

Remaining flexible enough to seize opportunities and travel where those opportunities took her has been the key to Paula Eger's success.

Golf Services Group's director of golf course maintenance and agronomy has traveled the world and worked with numerous companies during her 20-plus-year golf industry career.



Paula Eger

"You have to stay flexible and find quality people to work with," said the 44-year-old executive with the Houston-based development/management firm. [President] Jim Hardy has always given me the support I needed, but also given me the freedom to make my own decisions."

Golf has always been a part of Eger's life. Her childhood home bordered the second fairway at Greenbriar Hills near St. Louis. With her family's encouragement, she became a successful junior golfer and rode that skill to the University of Arizona, where she played on the school's golf team.

Eger wanted to design golf courses.

Continued on page 55



Rio Colorado GC in Bay City, Texas, is one of Golf Services Group's courses.

Houston management company prepares to open Tennessee tracks

By PETER BLAIS

HOUSTON — This summer's anticipated resumption of construction on the long-delayed Jack Nicklaus-designed Chickasaw State Park golf course near Jackson, Tenn. (see June *GCN*, page 6), will come as welcome news at the offices of Golf Services Group.

The Houston-based firm is developing and will eventually manage Chickasaw and the other three Nicklaus-designed, government-financed state park courses scheduled to open over the next two years in the Volunteer State. Building and running the so-called Bear Track courses — which could eventually number seven or

eight facilities and should compete with Alabama's Robert Trent Jones Trail network — will increase GSG's visibility in the golf course management industry.

"There's a tremendous need for golf courses with green fees in the \$20-to-\$30 range," said GSG President James Hardy. "The Tennessee courses will cost \$28 to \$30 and host about 36,000 rounds a year apiece."

That mid-priced, daily-fee market is GSG's target as the company grows nationwide. "There are too many courses being built for the upscale market, which I see as anything over \$60," Hardy said.

Continued on page 54

PERSONNEL CORNER

Everybody needs a Paul O'Brien

By VINCE ALFONSO

Every business needs a good product at a good price. Golf is no different. In order to succeed, we would all agree, we need good greens, good golf cars, good food, good merchandise, and all at good prices.

But, some golf organizations that have all this still don't make it. Why? Maybe it has to do with something as fundamental as sayin' "Hi, glad to see you" and meaning it.

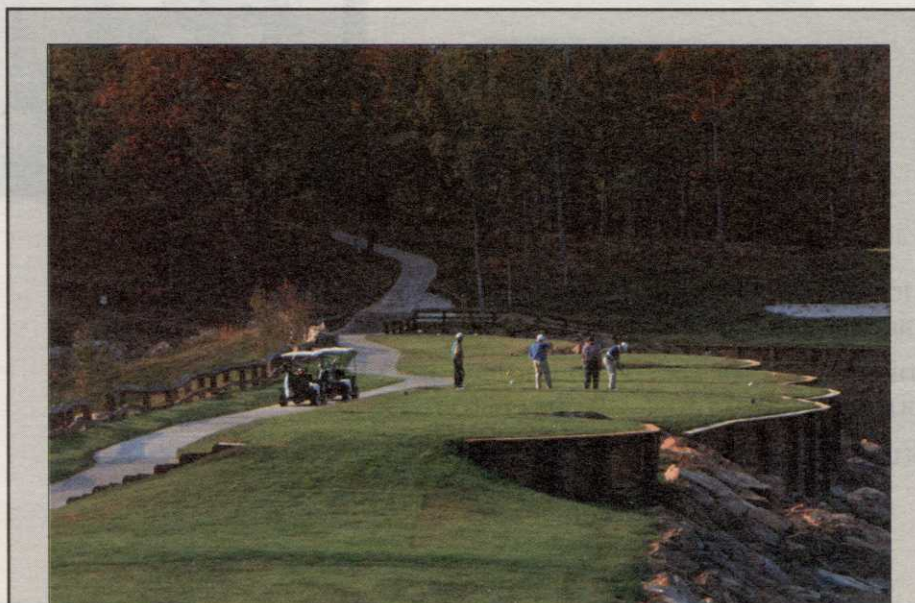
I have to admit, I have never read Sam

Walton's book. But, I'm sure that somewhere in that book, Sam talked about why he wanted a greeter at the front door of every WalMart store. He or someone on the WalMart team decided it would be good for business. In other words, they believed it would be good for the bottom line to have somebody say, "Good Morning" or "Good Afternoon" or "Good Evening", and shake the hand of every single customer, every single time they came through the door of a WalMart store.

I can't claim some revelation from studying the masters of marketing and sales, but as ya'll are keenly aware (if you read my column monthly), I did study under my dad, who I believe to be an unpublished master. So I guess I knew how important greeting your customer was, because I saw my Dad do it. He taught me by his example just how important sayin' "Hi, glad to see you" really was. I have always encouraged my employees to follow my lead in this area, but I prayed I would someday find someone who truly understood its importance the way my Dad did.

In late spring 1983, my prayers were answered when a gentleman named Paul O'Brien made an appointment to see me.

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MARTTY EXPANDS INTO 'BAMA

Martty Golf Management (MGM) has signed a management contract with Cherokee Ridge Country Club in Union Grove, Ala., a private club and residential community near Huntsville. The 7,000-yard championship layout hosts the Nike Tour's Alabama Classic. MGM will manage and market the club.

Vince Alfonso Jr. is a 40-year golf-industry veteran, president of Alfonso Creative Enterprises Inc., and owner of Kimberling Golf Course near Branson, Mo. He can be reached at 417-739-4370.

Firms team up to sell Asian-owned U.S. properties

BOSTON — Landauer Associates, Inc. and Horwath Asia-Pacific have partnered to broker the sale of U.S. golf properties owned by Asian concerns. The two hospitality consulting firms have agreed to split proceeds from any pending sales.

"There's not a lot of course product on the market right now,

and it's hard to reach ownership of these foreign-owned golf courses because all the major decisions regarding the property are made in Asia," explained Michael Zmetrovich, director of Landauer's Boston-based Golf Services Group. "We have experienced brokerage people in Tokyo, Hong Kong and Singapore

who can cultivate transactions for U.S.-based companies looking to expand their course portfolios.

"Landauer's approach to transactions is significantly different than a traditional broker," Zmetrovich continued. "Our approach is to present the opportunity, as an analyst, to a select

group of buyers whom we know would be interested in the property. This approach benefits both the buyer and the seller. For the seller, our credibility in the market allows us access to decision-makers quickly and effectively. Further, buyers can rely on our analysis as a 'real' starting point for their due diligence, which saves time and facilitates the transaction."

Due to the location of each

company, Tokyo-based Horwath Asia-Pacific will be primarily responsible for obtaining course listings, while Landauer will be primarily responsible for securing buyers.

The Horwath-Landauer partnership has targeted the golf/real estate investments for which many Asian property speculators — mostly Japanese — overspent in the late 1980s, at the height of the market. Now carrying bad debt estimated at more than US\$5 trillion worldwide, many Japanese firms are looking to unload their real estate and golf-related holdings. At the same time, ambitious multiple-course operators here in the United States have capitalized, eager to grow their existing course portfolios.

"Finding buyers for these Asian-owned golf properties is an expansion in property type, but it's not a new activity for us," said Zmetrovich, whose firm brokered the recent sale of the Holiday Inn City Center in Chicago as the exclusive representative of Jupiter Industries, Inc. "Both Horwath and Landauer have been in the transaction market for hotels and other commercial real estate for some time. Through this effort we have simply added golf as a property type. We're already in Asia, and we have a proven track record."

Other recent Landauer-brokered deals include the sale of the Hanalei Hotel in San Diego for a consortium of Japanese and U.S. banks, the sale of the Palm Springs (Calif.) Mall for Asia Pacific-based Benequity, and the sale of the Crescent Office Complex in Atlanta for Capital and Counties U.S.A., Inc.

Landauer's Golf Services Group, which can be reached at 617-720-0515, provides consulting, asset management and transaction services to owners, investors, lenders, managers, membership groups, public agencies and developers of all types of golf courses, clubs and recreational real estate.

Landauer's Hospitality Group is the U.S. affiliate of Horwath International. Landauer Associates, Inc. is a full service real estate consulting firm that has been in business since 1946.

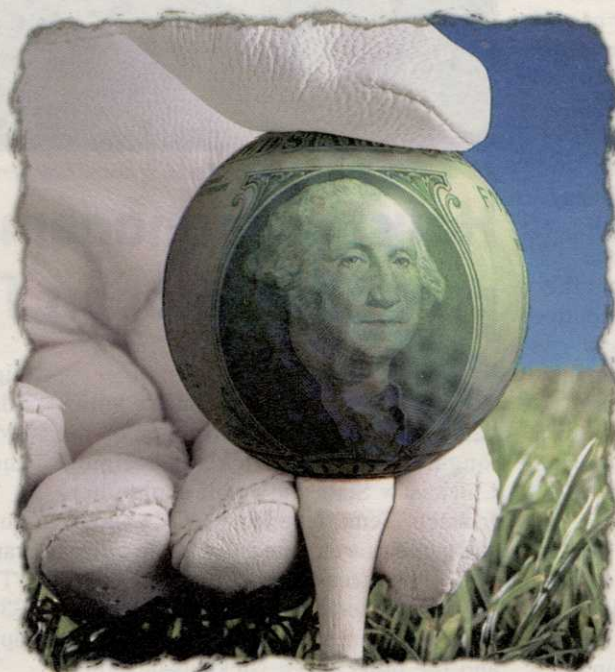
Golf Trust

Continued from page 1

ally owned condominiums, Golf Trust said.

The initial loan of \$69.9 million will be followed by the \$9.0 million loan, which will be used for a nine-hole expansion and other improvements to the Innisbrook Resort facilities.

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IGM opens Atlanta office to facilitate Southeastern expansion

LAKELAND, Fla. — International Golf Management Inc. (IGM) has opened a regional office in Atlanta to serve as headquarters of its newly-established Southeast Atlantic region.

Located at 1895 Phoenix Boulevard, Suite 127, in College Park, the office services IGM-client golf courses in Georgia and other Southeast states.

IGM provides turnkey golf course maintenance services on a contractual basis for private, semi-private, public and municipal golf courses in Florida, Georgia and other states in the Southeast.

General Manager Scott Zakany said Atlanta was chosen as headquarters for the regional office because of its central location within the group of states falling under the umbrella of IGM's Southeast Atlantic region — Georgia, Alabama, Mississippi, Tennessee, North Carolina, South Carolina and Virginia.

He added that IGM established the new division because of the unlimited potential it offers for future growth.

These states offer a combined total of 1,800 courses, Zakany said. By comparison, he noted that Florida, where IGM has already enjoyed considerable success, has about 1,300 golf courses.

Heading up IGM's Atlanta

regional office will be veteran golf course superintendent and staff consultant Greg Plotner, who was recently chosen by IGM to oversee its expansion into Georgia and other Southeast states in the newly-created position of business development

manager for the Southeast Atlantic region.

Golf course owners and developers in Georgia and other Southeast states, can obtain more information on IGM and the wide range of services it provides by contacting Plotner in the Atlanta office at 770-907-0001 or 800-991-8908.

In other news, IGM has named Trae Sellers its chief financial

officer. Sellers is responsible for all accounting functions, including the preparation of detailed financial statements and long-range growth plans. He also is in charge of developing a computer network linking corporate headquarters with a newly established Southeast Atlantic regional office in Atlanta. Immediately before joining



IGM, Sellers was senior planning analyst with Florida Progress Corporation. Prior to that, he served six years as an audit manager/professional development director with the accounting firm of Deloitte & Touche LLP. Sellers earned his bachelor's and master's degrees in accounting from Florida State University.



ONE CRAB WE CONTROL.
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AGC names Sause exec VP

SANTA MONICA, Calif. (Reuter) - National Golf Properties Inc. has announced that Chief Financial Officer Edward Sause has resigned to assume the position of executive vice president of finance and corporate strategy for American Golf Corp.

Sause is to retain his seat on National Golf's board of directors and chair the board's newly created finance committee.

In related actions, Neil Miller has been named NGF's vice president of finance and William Regan has been named vice president, controller and treasurer, the company said.

National Golf Properties, a real-estate investment trust, specializes in the acquisition and ownership of golf course properties.

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Catellus, Starwood to develop Calif. golf community

SAN FRANCISCO — Catellus Development Corp.'s Catellus Residential Group, in joint venture with Connecticut-based Starwood Capital and Southern California homebuilder Standard Pacific Corporation, acquired a 3,470-acre property known as the Talega Valley master-planned community located in San Clemente, Calif.

The project will be a fully-integrated, large-scale master-planned community incorporating a variety of residential, recreational and business uses. Plans include two golf courses, up to 4,965 attached and detached homes, an elementary school, community parks, as well as a retail and industrial component. A significant amount of grading and infrastructure work, as well as extensive engineering and design tasks, were completed by the previous owners, Arvida/JMB Partners, which acquired the property in 1989. As a result, lot sales could begin as early as late 1998.

"We are pleased to have entered into this joint venture partnership with Starwood Capital and Standard Pacific," said Nelson C. Rising, president and chief executive officer of Catellus. "The formation of this partnership by Catellus Residen-

tial Group to acquire and develop the Talega Valley master-planned residential community is in line with Catellus' growth strategy and allows us to take advantage of the increasingly active housing market in Orange County."

"As real estate investors, we saw significant upside potential

as the Orange County housing industry continues to improve and we wanted partners with local experience who know the market," said Sam Robinson, a partner of Starwood Capital Group. "We are very pleased with the team that has been established."

The joint venture will proceed

immediately to finalize entitlement and develop the project. Catellus Residential Group and Standard Pacific will develop a large majority of the homes in the community and the project will also include lot sales to other homebuilders. The community is planned to include a broad spectrum of housing priced from the mid-\$100,000s to the mid-\$400,000s.

Catellus Development Corporation is a diversified real estate operating company that develops and manages real estate for its own account and others. The company's portfolio includes 16.6 million square feet of income-producing properties, 5,300 acres of land leases, interests in nine joint ventures and three residential joint ventures, as well as 837,000 acres of land.

American Golf to operate Texas facility

DALLAS — American Golf Corp. has signed a long-term lease and management agreement with Buffalo Creek Golf Club in Rockwall, Texas.

Buffalo Creek is owned by Charles E. Perry, former president and chief executive officer of Golden Bear International.

Buffalo Creek Golf Club is the only four star rated golf course in the Dallas/Ft. Worth metroplex (by *Golf Digest Places to Play*) and is operated by American Golf's Premium Daily-Fee Management Group.

Buffalo Creek hosted the 1993 U.S. Open Sectional Qualifying, the 1993 Northern Texas PGA Sectional Championship, the 1995 Club Professional Championship, the 1995 U.S. Amateur Regional Qualifying, the 1995 Texas Cup, and the 1996 Nelson Qualifying.

The Tom Weiskopf and Jay Morrish design features Tifway 419 fairways and Penncross greens.



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OSHA

Continued from page 1

and industry communities got concerned when, in 1992, an "Advance Notice of Proposed Rulemaking" targeted such items as:

- Lifting or carrying anything weighing 25 pounds without assistance more than once during a workshift.

- Using vibrating tools, which

would include weed-eaters, for more than two hours.

- Working in awkward positions (such as kneeling, stooping or squatting) for more than two hours.

- Performing the same motions every few seconds.

"That's called labor," quipped one superintendent regarding the 25-pound limit. "The standard weight [for bags for vari-

ous products] is 50 and 80 pounds."

Various other chores on a golf course maintenance crew could be affected by proposed new regulations. But Adams said, "Old draft proposals are not relevant.

"Clearly the information we collected, in terms of baseline data for exposures and that sort of thing ... will all be used as we move forward to try to figure out

how to address the issue from a regulatory perspective. But the approach we will take hasn't been determined yet."

Adams said OSHA will conduct a series of conferences with "stakeholders" around the country to gather their input and concerns on effective practices of ergonomics. The next will be held Sept. 23 outside Buffalo, N.Y. The specifics will be an-

nounced from OSHA's 10 regional headquarters and through its site on the OSHA web page: <http://www.osha.gov>.

The first session, in January, drew more than 1,000 people.

"The clear running thread of everything presented," Adams recalled, "was that OSHA should proceed with a programmatic approach."

Adams defined "programmatic" as having a program that contains "top-management commitment to deal with the issue; employee involvement in the cost-effective solutions to problems they have; training and education; job analysis; and some type of intervention, whether it's engineering controls, rotation, job modification, tools, etc., and medical management.

"If they have a process in which all these things are dealt with, they're addressing ergonomics from a programmatic standpoint. It's not any one thing, but a process."

Asked whether new regulations might include such parameters as the 25-pound limit of 1992, Adams said: "I don't know that in the foreseeable short term we will have enough information to pick specific triggers like that. We may be able to say that there is a range of triggers.

"The issue can get so skewed when people get down to an individual's capacities to do a specific job. Maybe in our lifetime there will be science or technologies to allow us to say you can do this amount or that amount, but we're not there. Until then, there need to be boundaries. Those boundaries need to be flexible enough, in terms of industries and operations, to allow the process to continue. But they also need to be defined enough so that we try to limit the number of people who get hurt."

Adams thought those in the golf industry should look upon ergonomics as a cost- and man-hour-saving issue.

"Folks who have successfully dealt with this," she said, "lowered their compensation rates, lowered their injury and illness rates, and lowered the severity of the injuries when they indeed still had some injuries."

Most important, she said, is that "this is not a one-time process. Dealing with ergonomics is never-ending. The easily recognizable things you fix quickly. Other things you don't see right away. With others, you might fix one thing and unwittingly create another; or you trade one stress for another one.

"Some liken it to the song *Hotel California*. You can check out but you can never leave. But it's clear the investment up front, while it seems cost-intensive, in the long term pays and pays and pays for itself."



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NOVARTIS

Golf Services

Continued from page 49

GSG provides course owners and developers with five related services: project and construction management, golf course operations and maintenance, advisory, design and renovation services.

The company currently manages or will build/manage nine projects — five under develop-

ment and four that have already opened. In addition to the 40-year leases on Tennessee state park facilities at Cumberland Mountain (Crossville, opening October), Harrison Bay (Chattanooga, opening 1998), Tim's Ford (Winchester, opening 1998 or 1999) and Chickasaw (opening 1999), GSG projects include:

- Managing Rio Colorado GC, Bay City, Texas, for developer

Charles Hurwitz.

- Managing Waterwood National CC, Huntsville, Texas, for developer Allstate Insurance Co.

- Building an exclusive, 36-hole Rees Jones-designed private club for the Houstonian Hotel and Athletic Club in Houston.

- Starting construction this summer on a GSG-developed, 18-hole, Peter Jacobsen/Jim Hardy-designed course in Houston.

The company currently manages or will build/manage nine projects — five under development and four that have already opened.

- Completing the first nine this summer and starting construction soon on another 18 GSG-designed holes at Green Hills GC in Chowchilla, Calif.
- Project managing an 18-hole,

Jacobsen/Hardy-designed private club called The Oaks in Nicolus, Calif., that should open in early 1998.

Hardy, an Oklahoma State University graduate with more than 30 years of golf industry experience, founded Golf Services in 1987 as a consulting company that offered, at that time, an unusual product — short-term, project-management contracts.

"Most real-estate developers," Hardy recalled, "wanted professional help, but could only get it through long-term management contracts. We offered short-term arrangements, as little as 60 to 90 days, if that was what was needed."

The consulting part of the business grew, with organizations like Levanthol & Horwath and the U.S. Army and Air Force contracting Golf Services to conduct feasibility, market and other financial studies. Eventually GSG evolved into a more traditional management firm specializing in the development of new projects rather than acquisitions.

"We're very experienced in taking a course from the initial development stages through opening and into daily operation," Hardy said. "We're not a turnaround company or mass marketer. We are very entrepreneurial and very hands-on."

Hardy relies heavily on a professional staff that includes partner Bill Wallace, a Certified Public Accountant, who directs the company's financial reporting and accounting functions. GSG and Jacobsen/Hardy Design Group, a sister firm, also benefit from the input of Jacobsen, LPGA golfer Carol Mann, Director of Golf Course Maintenance and Agronomy Paula Eger, design associate Shari Doiron, General Manager Nancy Bunton and Vice President of Project Development Carl Brown.

As for the future, Hardy sees the golf course management industry continuing to grow and consolidate, although he predicts Golf Services will neither be acquired by a larger firm nor acquire other management firms.

"We don't have any ambition to become the next ClubCorp," the company president said. "We'd like to have 10 to 20 courses eventually, with an equity position in each. And we'll likely develop them ourselves. Although we're open to acquiring an existing course, finding the right one at a good price is tough to do. When you know what you're doing, development is a wise thing. Why buy someone else's mistakes?"

GOLF COURSE NEWS



8 AM • TEMP 90° • HUMIDITY 95%
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WHEN YOU HAVE TO SUIT UP AND SPRAY, 'INFERNO' WOULD BE THE NICEST WORD FOR A DAY LIKE THIS.



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Paula Eger

Continued from page 49

The university didn't offer a formal training program, so she took all the agronomy and landscape architecture offerings available as well as a summer internship at Tucson Country Club with superintendent Art Snyder.

She worked briefly for architect Joe Finger after graduation, but the mid-1970s economic downturn ended that association after six months. Eger contacted numerous architects before Robert von Hagge met her while building Walden on Lake Conroe near Houston.

"He was in the process of moving his office and convinced the superintendent to take me on as a laborer until he got settled in his new office," Eger recalled. "They were putting the final touches on shaping the course and were just starting the grow-in. When the course opened, they offered to make me assistant superintendent. I loved working outdoors so I accepted.

"I didn't think I'd be there very long, but 7 1/2 years later I was still with the same company and developers. I eventually became the construction superintendent when they started Walden on Lake Houston and stayed there until just before it opened."

Eger enjoyed her work as a superintendent, but found her talents best suited to construction and grow in. She accepted a six-month position overseeing the grow-in of an Australian golf course before returning to the United States, where she met up with Jim Hardy (her boss at Golf Services Group) and Gary Grigg (past GCSAA president).

She joined them at Kindred & Co., a Houston-based development and management firm, in 1985. Hardy was Kindred's vice president of development and Grigg the turf specialist. Eger traveled extensively, helping build and grow in a half dozen courses, including The Resort at Gold Canyon in Apache Junction, Ariz.; Tampa Palms G&CC in Tampa, Fla.; Hallbrook CC in Leawood, Kan.; and Bay Oaks CC in Houston.

Hardy founded Golf Services in the late 1980s and recruited Eger while building the Hardy/Peter Jacobsen-designed Creekside in Salem, Ore., in 1992. Her position allows her to bring her assorted talents into play as a landscape architect, course superintendent, construction superintendent and course designer. She also serves as a design associate with Jacobsen/Hardy Design Co.,

GOLF COURSE NEWS

Golf Services' sister firm.

"I help select the superintendents at our courses and work with them on a regular basis," she said. "My job is to encourage and support them, help them advance their professional education, provide advice on how to deal with guests, members, the pro shop staff, budgets, etc."

And she remains very

involved in the design area, her original passion. Among the various projects in the Golf Services' portfolio are the four, Jack Nicklaus-designed Tennessee state park courses, which will open over the next two years.

"I've been very involved with that and will stay with them through grassing, opening and daily maintenance," she said.

GOLFTRUST SECURES \$100M REVOLVING CREDIT TO EXPAND

CHARLESTON, S.C. — Golf Trust of America Inc. said its operating partnership has obtained a commitment for a two-year, \$100 million secured revolving bank credit facility, which it will use to pursue additional golf courses and for working capital. Borrowings under the facility will carry a floating interest rate plus 1.75 to 2.00 percentage points, with provisions for the rate to be reduced upon the attainment of a senior debt rating. NationsBank Corp. will serve as the administrative agent of the facility.

Here's One Birdie You Don't Want To See On Your Course.



Golf was never meant to be a water sport.

But standing water, poor drainage and water waste are all symptoms of a larger problem—compacted soil. Water can't move through it. Roots can't grow in it. And surface moisture evaporates too quickly to do your turf any good.

Wetting agents can help water squeeze through the cracks, but they do little to improve the soil condition. Healthy turf needs healthy soil.

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Fripp Company assumes management of S.C.'s University Club

BLYTHEWOOD, S.C. — The Fripp Co., owner and managing company for Fripp Island Resort and other properties along the South Carolina coast, has assumed control of The University Club here for an undisclosed price.

The Fripp Co. assumed management of the 27-hole property, located near the University of South Carolina, on June 1, adding to the company's portfolio in South Carolina.

Founded in 1993, The University Club has approximately 1,600 members. Recent additions and improvements include a new nine-hole course, opening this summer, a 14,000-square-foot putting green, continuous golf cart paths, clubhouse and pro shop. In addition, the club has a 30-acre, golf practice facility where the men's and women's teams practice.

"We're excited about the purchase of The University Club," said Ken Willis, president

of The Fripp Co., who attended USC and is a longtime Gamecock Club member and supporter. "This course is one of the finest in South Carolina and gives us an opportunity to expand into the growing North Columbia area. Through The Fripp Co.'s golf and property management expertise, we plan to make further improvements to the club while enhancing services for new and existing members."

Alfonso

Continued from page 47

Once our meeting began, it became very clear to me that Paul wanted to work for me. After a very brief exchange of ideals and ideas, I made it very clear to Paul that I wanted him to work for me too.

You see, Paul O'Brien impressed me as a man who never met a stranger, who counted all human beings as special and believed they should be treated accordingly. He respected women and their obvious right to be golfers and therefore believed in treating them equally. Paul impressed me as the most honest, dependable and hardworking guy I had ever met. Remember, I came to all these conclusions in one meeting. This should tell you something about just what a special human being Paul O'Brien is.

Paul was hired and became "Mr. Morning" at The Rail [a Springfield, Ill., course Alfonso co-owned for many years]. Paul was there every morning, five days a week, for 13 years, to greet my early customers. I never once doubted whether each customer greeted and then waited on by Paul O'Brien felt welcome, special and appreciated. Why, to put it in simple terms, having Paul O'Brien work with me was the next best thing to having Uncle Mario or my Dad working with me. I knew without question, Paul represented our values to a tee.

Customers would come back year after year, especially the women, and if Paul wasn't there, they were disappointed. You see, they wanted to see Paul. They wanted to feel his warmth. They wanted to see him flash that Paul O'Brien smile.

In 1995, The Rail was voted the 4th Friendliest Golf Course to Women in the United States of America by the readers of *Golf For Women* magazine. As hard as my wife, Sally, and I, and the rest of our staff, worked on this women in golf issue through the years, I would have to credit Paul O'Brien with making the greatest impression on our women customers.

We were very fortunate to have Paul O'Brien on board. He was good for our customers, good for our employees, and good for our bottom line.

My question to you is quite fundamental. Do you have a Paul O'Brien in your golf organization? Have you felt it would be a waste of labor dollars to have a hand shaker and greeter on the payroll? Take it from me or take it from Sam, find yourself a Paul O'Brien and put him on the payroll, today. It will be money well spent. Remember, sayin' "Hi, glad to see you," and meaning it, just might make the difference.

Turn your cart fleet into a divot repair armada.

While our new Seed & Soil Caddie for Powered Golf Carts is not the first system ever invented for carrying seed and soil to the fairway, it certainly is the best. Compare the advantages for yourself.

Naturally, it's easy to use. Players simply grab it by its

integral handle-spout and pour the mixture into the divot. It's easy to fill, too, since the entire bottom is a screw-on cap. To keep the rain out, we curved the spout. And we built it to last for years!

It's ideal for use on all brands of golf carts, and all necessary

hardware is

Our new Seed & Soil Caddie for Golf Carts makes it easy for your golfers to pour on the medicine wherever they make a divot!

included for quickly and easily mounting the Holder to each side of the cart's framework or basket.

So why not make it easier for your golfers to repair divots? Contact your nearby Standard Golf distributor and ask about our new Seed & Soil Caddie for Golf Carts. It's the best way to turn your cart fleet into a divot repair armada!

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BRIEFS



BAYER SHUFFLES PERSONNEL

KANSAS CITY, Mo. — Bayer Corp. has made a few personnel moves in its new Garden & Professional Care (GPC) business unit.



Neil Cleveland

Trevor Thorley, former director of Bayer Specialty Products, has been promoted to vice president of GPC. In addition, two new managers have been named in the GPC marketing department. Neil Cleveland has been named turf and ornamental market manager, while Steve Chaney has been appointed manager of technicals and concentrates.

ROHMID NAMES TWO TO BOARD

PARSIPPANY, N.J. — RohMid L.L.C., the joint venture between Philadelphia-based Rohm and Haas Co. and American Cyanamid Co. to develop and market Mach 2 (see related story to right), a turf insecticide, has named Fred Belledin and Chris Shadday to its board of directors. Belledin currently serves as sales manager for Rohm and Haas agricultural chemical products in North America, while Shadday was recently named turf and ornamental product manager for North America.

CYANAMID MOVES GAJEWSKI UP

PARSIPPANY, N.J. — American Cyanamid Co. has named Ed Gajewski business director of marketing services for its Specialty Products Department. Gajewski will handle advertising, marketing database initiatives, sales operations and sales recruitment, hiring and training for the department. Specialty Products includes the herbicide and insecticide manufacturer's Forestry, Industrial Vegetation Products, Consumer, Pest Control, Turf and Ornamental groups.

CHR. HANSEN EXPANDS TECH. SERVICES

MILWAUKEE — Microbial manufacturer Chr. Hansen Biosystems has appointed William Kautz, DVM, as director of technical services and product development and James Nocek, Ph.D., as research and technical services manager. Kautz will oversee university research and field trials, product development and technical staff, while Nocek will work closely with personnel at Hansen's Milwaukee headquarters.

Monitoring at night

DACS: A home-grown solution for pump station monitoring without the cost of a PLC

BY MICHAEL LEVANS

SAN FRANCISCO — During his 15 years in the pump-station business, Pump Repair Service's John Dexter never had a clue as to the status of a station while it hummed away unattended at night.

"Electricity is expensive and water costs money," said Dexter. "If you can find out what a pump station is doing you can tailor your irrigation system to be more efficient."

If a station's vital information — flow, upstream and downstream pressure, etc. — can be harnessed using existing equipment to monitor status and alert a superintendent to a problem without buying a PLC, thought Dexter, then maybe pumping efficiency and cost savings could be achieved.

Enter the Data Acquisition and Control System (DACs), a home-grown project

Continued on page 62



RAINBIRD UPGRADE FINISHED AT BALTUSROL

A combination of Rain Bird's full-and part-circle Eagle 700,750 and 900-series rotors were recently added during an upgrade of Baltusrol's irrigation system. One of the goals of the upgrade was to allow the roughs to be watered separately from the rest of the course. Operated by a Nimbus central control, Baltusrol's system includes a network of 137 MSC satellites, the Freedom System, a StormWatch System and a Rain Bird weather station.

RohMid, Rohm & Haas get the nod

PARSIPPANY, N.J. — It's been nearly two years of waiting, but RohMid, the much ballyhooed joint venture between Rohm & Haas Co. and American Cyanamid Co., has found that patients pays.

On May 20, RohMid received word that its Mach 2 turf insecticide — the venture's initial product offering — was registered by the U.S. Environmental Protection Agency (EPA) for

use in controlling grubs and other soil-borne pests.

Approved formulations include a liquid (2SC), which may be used on golf courses and commercial landscapes, and 1.5 percent granular,

which may be used on all turf sites.

The products will be available for the 1998 application season.

According to John Thomas, Ph.D.,

Continued on page 61

EPA Roundup



NEW PRODUCT OF THE MONTH

Dakota Peat & Equipment's new Turf Tender 440 material handling unit features 4.2 cu. yd. capacity, a hydraulic swing-away conveyor, electric vibrator and remote hydraulic drive system. The 440 allows one operator to load, fill, move, spread and level materials with one machine. For more information see New Products, page 64.

Toro/Hardie: Just a little bit closer

BLOOMINGTON, Minn. — Taking another step in its integration with the James Hardie Irrigation Group, The Toro Company has announced a new facility strategy for its irrigation operations.

Administrative and distribution functions currently at the Toro Hardie Irrigation facility in Laguna Niguel, Calif. — Hardie's headquarters — will move to Toro's Riverside, Calif., irrigation headquarters. The company currently has 99 employees at Laguna Niguel — all but 15 were offered positions in Riverside. The company said the move to Riverside should be complete by the end of November.

In related news, Toro said it will "exchange manufacturing expertise" between the Riverside site and its Toro Hardie El Paso, Texas, manufacturing plant. All Toro irrigation valves that are now produced in El Paso, as well as all Toro irrigation spray production, will take place at Riverside. The company said the shift is not expected to affect the number of jobs at each location.

"These moves...will let each facility specialize in the production technology that they do best," said Rick Parod, vice president and general manager of Toro's U.S. irrigation business. "We're pleased that the integration is progressing smoothly and that we can achieve synergies with a minimum of disruption and job loss."

In other Toro news, the company has

Continued on page 58

Scotts breaks new ground

MARYSVILLE, Ohio — The Scotts Company has started construction of its \$9.1 million, 450,000-square-foot warehouse project designed to hold an average monthly inventory equaling \$15 million.

The company said the new warehouse, which will be adjacent to the company's headquarters, will be devoted to storing its "quicker moving" consumer products, allowing Scotts to dedicate its Marion, Ohio, warehouse to professional products.

Opening is slated for early fall.

According to Robert Inman, Scotts vice president of distribution, "This new warehouse will consolidate much of our central Ohio inventories in one location, which will allow us to be more efficient. This will, in turn, improve our ability to service our customers."

Features include storage capacity in excess of 60 million pounds of finished product, loading dock doors for 45 trucks as well as parking for more than 200 trailers. It will be connected to an existing 250,000-square-foot warehouse — the same site where the company houses its primary manufacturing facilities.

Toro

Continued from page 57

signed a letter of intent to acquire Beatrice, Neb.-based Exmark Manufacturing Company Inc., a manufacturer of equipment for the professional landscape contractor industry and some golf course application.

Exmark, which produces mid-sized walk-behind mowers and zero-turning-radius riding mowers, employs approximately 190 people in a 164,000 square-foot facility and anticipates 1997 sales of approximately \$50 million.

Toro said the acquisition would expand its product line at a time when the landscape contractor market is growing and demanding a wider array of products and services.



The company also announced that it has named Stephen Wolfe as new vice president of finance, treasurer, and chief financial officer.

Wolfe previously served as vice president and treasurer of Toro and president of Toro Credit Company, a subsidiary providing floor plan and inventory financing to Toro distributors and large volume dealers.

He replaces Gerald Knight, who recently resigned to become senior vice president and chief financial officer of Fingerhut Companies Inc.

Inman added that the new project illustrates Scotts' commitment to Marysville and the Central Ohio community. Union County granted Scotts a 50 percent tax abatement on real and personal property taxes for a five year term. During that time the county expects to receive \$1 million in new taxes.

AgriBioTech buys Burlingham

LASVEGAS—AgriBioTech has completed the acquisition of Forest Grove, Ore.-based E.F. Burlingham & Sons, an 85-year-old turfgrass seed company.

According to Dr. John Thomas, AgriBioTech's chief executive officer, the move

helps the company in its vertical integration by adding additional research, production and distribution capabilities, and supplements AgriBioTech's international sales.

The move gives the company access to proprietary turf varieties from Burlingham; however, Burlingham will continue to

market its proprietary turf products through its traditional channels.

For Burlingham, the deal should grease its established research wheel.

"Even though we have good research established, this should help us expand a good deal," said Zenon Lis, Burlingham's spokesperson.

Changing the Course.

New HERITAGE™ Fungicide. Changing the Course of Disease Control.

Now, golf course superintendents can change the course of turfgrass disease control with HERITAGE, a completely new fungicide with a novel mode of action.

HERITAGE will give your golf course round-the-clock protection against devastating diseases. With its powerful combination of preventative and curative activity and its high level of effectiveness against 18 of the toughest turf diseases, HERITAGE will make an outstanding difference in the quality and health of your turfgrass.

The active ingredient in HERITAGE is based on naturally occurring fungicides, called strobilurins, which are found in certain mushrooms.

HERITAGE has a novel mode of action which is different than any other fungicide now on the market.

It has both preventative and curative activity and is absorbed into the leaf blades and stems

as well as taken up by the roots. This ensures that your golf course is protected from the devastating effects of turfgrass diseases.

HERITAGE is the only fungicide available that controls both brown patch and Pythium, as well as take-all patch, summer patch, anthracnose and snow mold—an unprecedented advantage for the turf professional's disease program. HERITAGE is also effective against certain fungicide-resistant pathogens, making it an extremely useful tool in resistance management strategies.



Novartis: Avid about Merck

GREENSBORO, N.C. — Novartis Turf & Ornamental Products will expand its product line into new insecticide markets as a result of its May 21 acquisition of Merck & Co.'s global crop protection business by Novartis Crop Protection Inc.

The key to this agreement, according to Novartis, is that its

T&O division will now sell Avid, a popular miticide/insecticide that the company plans to work into superintendents' integrated pest management (IPM) programs.

Avid, an abamectin, has been used primarily by ornamental growers to protect flowers, foliage and landscape plants from spider mites and leafminers. It is

naturally derived — produced by fermentation — and is applied at low use rates.

"We are looking to round out our product portfolio," said Sean Lynch, a Novartis communications specialist, of the acquisition. "Whether that be by chemistry we have in development or chemistry that's available through another major chemical manufacturer."

AgrEvo realigns pro. products

MONTVALE, N.J. — AgrEvo North America has realigned its Professional Products Group to include its Green Industry Group. Now based in Montvale as part of the AgrEvo Environmental Health business team, the Green Industry Group includes a full line of turf and ornamental products serving golf course,

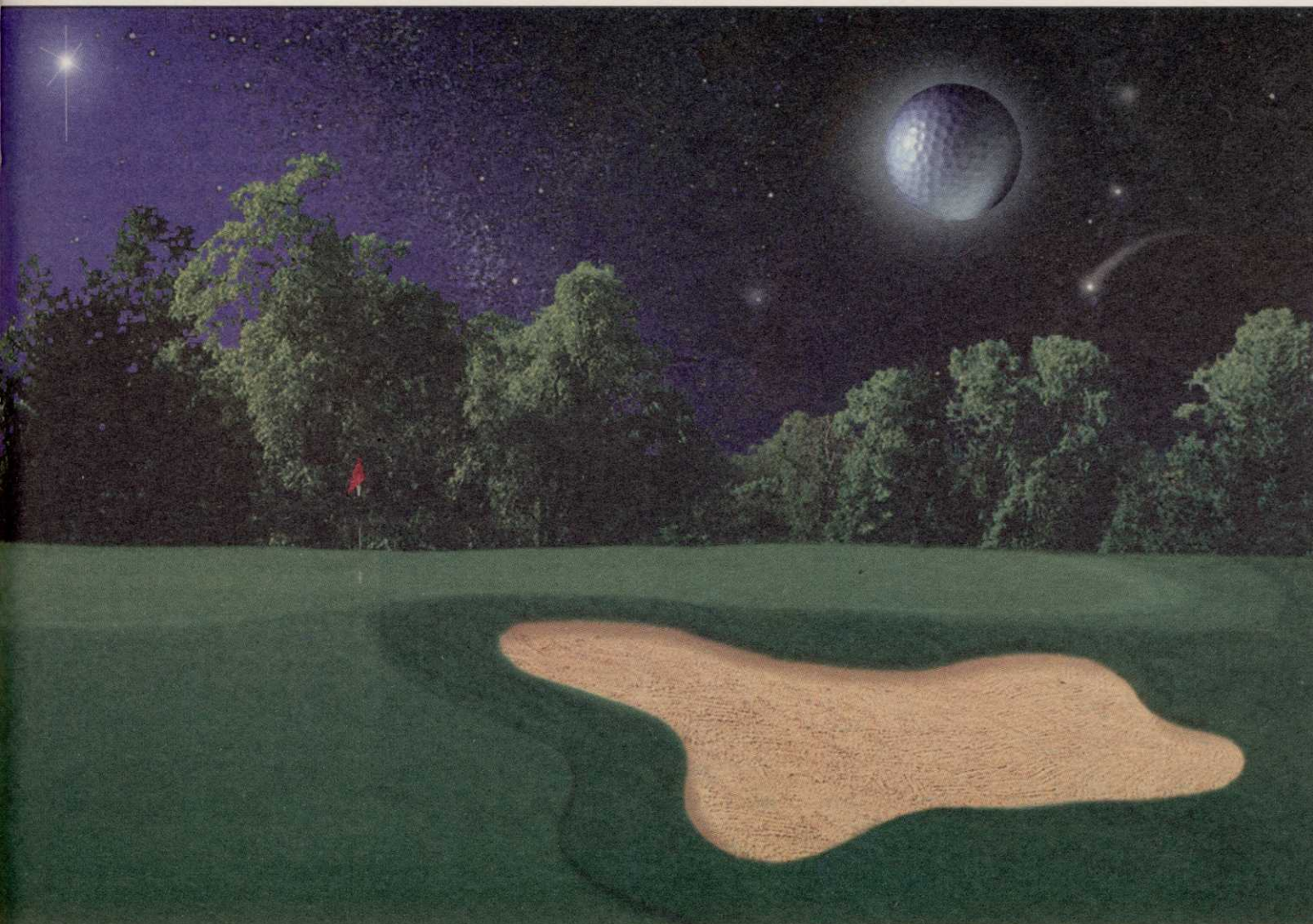
lawn-care, grounds maintenance, and industrial vegetation professionals. The Professional Products Group also includes a range of products for the structural pest-control industry and the mosquito vector industry.

"This move incorporates the Green Industry Group into our Environmental Health business team," said Mike McDermott, director of the Professional Products Group. "The realignment and new management structure will allow us to become more customer-focused."

The new management team includes:

- Curtis Orrben, named national sales manager for the Green Industry.
- Jim Widman, named national accounts manager for the Professional Products Group.
- George Raymond, who continues as marketing manager for the Green Industry Group.
- Bill German, who continues as marketing manager for the Green Industry Group.
- Dave Buzzelli, who continues as sales manager for the Structural Pest Control and Vector markets.
- Dr. Mark Coeffelt, who continues as business support manager for the Professional Products Group.
- Cindy Mannes, who continues as communications manager for the Professional Products Group.

In addition, sales territories within the Green Industry and Structural Pest Control groups have been realigned.



Superintendents will find that HERITAGE is exceptionally compatible with the environmental balance of their courses. HERITAGE poses minimal risk to birds, mammals and fish, and its low use rates and extended application intervals mean less active ingredient is released into the surroundings.

For more information on HERITAGE Fungicide and how it's changing the course of disease control, contact your Zeneca Sales Representative or call Zeneca Professional Products Toll Free at 1-888-617-7690.

Once you learn about the powerful, round-the-clock protection this new fungicide offers, you'll agree that it's time to change the course of your turfgrass disease management program, with HERITAGE.

Heritage™
FUNGICIDE

Hancor to open Miss. facility

FINDLAY, Ohio — Hancor Inc., a manufacturer of corrugated polyethylene drainage pipe, chose Vicksburg, Miss., for its new 48,000 square-foot manufacturing facility.

According to Bill Altermatt, Hancor's vice president of marketing, the Vicksburg location — in west-central Mississippi — was ideal due to its access to the expanding polyethylene market in Mississippi, Louisiana, Tennessee and Arkansas.

"The emerging growth opportunity for larger diameter storm drains and culverts within the southeast region has created the opportunity for us to expand our production and service capabilities," said Altermatt.

Hancor plans to hire 20 employees from the Vicksburg area.

CETCO consolidates in Fairmount

ARLINGTON HEIGHTS, Ill. — Colloid Environment Technologies Co. (CETCO), a producer of pond and other liners, moved the manufacturing of its Bentomat line from its Villa Rica, Ga., plant to its Fairmount, Ga., facility. "This is the consolidation

of two plants that were running individually within 100 miles of each other," said Rick Roeser, CETCO's director of marketing. Once the move is complete, CETCO said it will integrate new laminating technology, better utilize manpower and tighten inventory.

Oglebay takes Kurtz's Sports Turf

CLEVELAND — The Industrial Sands Group of Oglebay Norton Company has acquired the Sports Turf Division of Kurtz Bros., Inc. of Independence, Ohio. Oglebay Norton said it will continue to operate the division as a separate business unit under the name Kurtz Sports Turf Services,



a supplier of sand and organic blended materials to golf courses in Ohio and neighboring states, for a period of time.

According to R. Thomas Green, Jr., chairman, president and chief executive officer of Oglebay Norton, "This acquisition is important to our con-

tinuing focus on sand-related businesses as sand is a substantial component of many of the blended products sold by Kurtz Sports Turf."

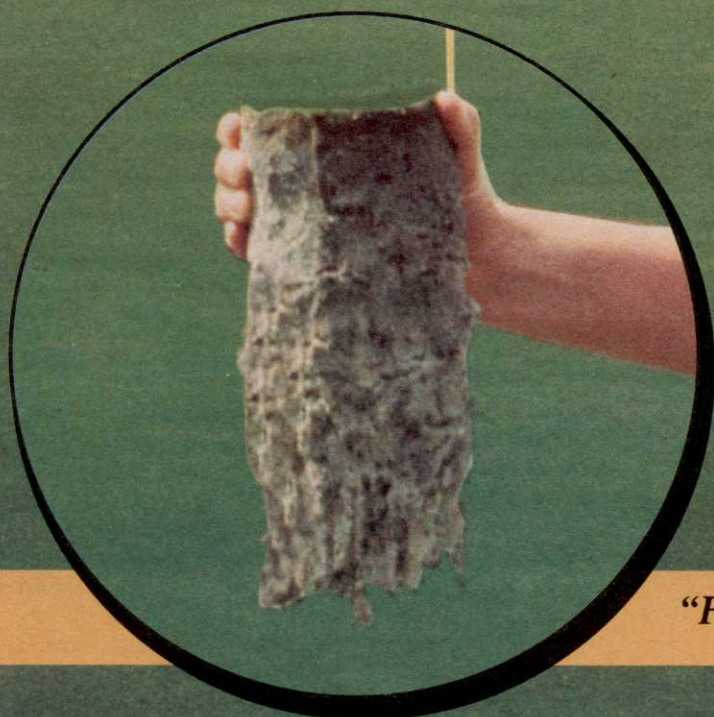
Oglebay Norton's other interests include Great Lakes marine transportation, the mining and marketing of industrial sands, and the manufacture and marketing of metallurgical products and related materials used in steelmaking.

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"The Plant Growth Stimulator"

Develop a turfgrass root system that grows deeper and is more dense for your golf course with RegalCrown®. Healthy growing turfgrass requires a root mass that can endure the stress of hot summer weather and winter desiccation with the added pressure of turf traffic.

RegalCrown® provides excellent root development to minimize turfgrass stress and pressure. The result is healthy, fine quality turfgrass.



"For the lion's share of quality turfgrass"



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CIRCLE #137

Smart Rain/Irri

continued from page 1

"We came upon Smart Rain by accident," said Joe Carter, Irri's vice president of sales and marketing. "I sold a pumping system to the City of London's River Road Course and one of their suppliers introduced us to the technology," said Carter. "We hadn't seen anything like it before."

The Smart Rain system (see GCN Feb, page 19) is a network of 6" and 12" soil probes that sense soil conditions of an entire course in real time. Data collected include soil temp, water content and fertilizer levels at every probe location, allowing a superintendent the ability to manage a course head-by-head and water where necessary through a software module called Smart Watering.

Through Smart Rain's software package, a superintendent can see a 3D layout of every sprinkler head, as well as color-coded turf conditions, on an office-based computer. Head-by-head watering can be controlled from there.

"We have about a dozen distributors lined up but unsigned at this point," said Jim Simonini, vice president at Smart Rain. The company started its distributor training program at the beginning of June.

According to Simonini, distribution locations are on the brink of being confirmed in Denver and Pittsburgh in the U.S. The company already has Australian and South African distributors on line.

Beta-test sites included Mount Bruno Country Club outside Montreal and Michael Hurdzan's Widow's Walk Golf Course in Scituate, Mass.

Smart Rain sensors will be ready to hit the market by July 1.

Carter hopes that Irri's initial marketing investment in the system will pay off. "We've been involved for about a year," said Carter. "We knew it was going to take some time to make some money. But we're committed and we hope to gain more distribution area in time and prove we can handle it," he said.

Monitoring

Continued from page 57

developed by Dexter that allows a superintendent's office-based PC to talk to the pumping station.

"I began searching for equipment that I could buy off the shelf that I could fit in a station," he said. "I found that you can take a constant speed pumping station, or any station, and adapt it to a monitoring system just by using transducer technology and a laptop computer."

DACS' Windows-based soft-

ware package charts trends based on a 24-hour period or historical data collected over 50 days. "The user can scroll in one-hour segments, tracking pressure and flow as well as how many times a pump started in 24 hours," said Dexter. "The user then knows how long the pump ran, allowing benchmarks to be set for efficiency."

Dexter's next step is to give the superintendent remote ac-

cess through a communications package to monitor and control the station from anywhere on the course. When connected, the remote access functionality will page users or dial home at night when a pump fails.

At this point, Dexter has DACS up and running at two test courses in the Bay Area.

"In the old system we had a lot of pressure gauges," said Ken Schwark, superintendent at San

Leandro-based Tony Lema Golf Course, who eliminated 15 pressure gauges in his effort to streamline his station.

According to Schwark, the wire clutter is gone and he'll be able to pare more than \$24,000 off his pumping station's \$100,000 electric bill.

"In the past I just had some idiot lights telling me what pump was on and which one was off," said beta-tester Lou Tonelli, su-

perintendent at Lake Merced Country Club. "But now I know what's happening over night. I can match my field pressure and pump pressure and I can fine tune it."

Dexter will be offering the system through Pump Repair Service for \$7,000-\$10,000. He is currently working on a customer-install system that will be packaged with video instructions that he'll be marketing worldwide.

EPA Roundup

continued from page 57

RohMid's manager, "The completion of the various state registrations will create a patchwork of product availability, limiting our full sales potential in 1997."

Thomas added that RohMid will be conducting a demonstration program with various golf courses using the liquid.

Mach 2 belongs to class of chemical compounds called molt accelerating compounds (MACs), which interfere with the normal molting processes of targeted pests.

...

PHILADELPHIA — Rohm & Haas Co. has received EPA registration for revised labeling on its Eagle turf fungicide.

For turf, the label adds instructions for using higher application rates for certain diseases, with correspondingly longer application intervals, up to 28 days. The new instructions apply to dollar spot, powdery mildew, rusts, necrotic ring spot (spring dead spot) and summer patch.

...

INDIANAPOLIS — DowElanco has announced that its new product Conserve SC turf and ornamental insect control, has received an accelerated registration for sale in the U.S. under the EPA's "Reduced Risk" registration program.

Conserve is derived from a naturally occurring organism and offers control of sod webworms, cutworms, and armyworms.

...

WILMINGTON, Del. — The California EPA has approved AgrEvo's ProStar, a systemic fungicide for control of turf diseases caused by Basidiomycetes including *rhizoctonia* brown patch, for use on California turf.

"ProStar can be applied as a preventative treatment or as a curative treatment after brown patch develops," said George Raymond, AgrEvo's market manager.

It can also be used to control gray snow mold and is known to be effective on fairy ring.

QUELANT™-Ca

Calcium & Amino Acids

CALCIUM DEFICIENCY CORRECTOR

Addition of calcium to the soil by traditional means is not usually efficient or effective in treating the calcium deficiency of turfgrass. Once applied, the common forms of liming materials can rapidly change to compounds that are insoluble in water and not readily available to the plant. Continuous applications over long time periods are necessary to effect even modest improvements in calcium uptake.

Quelant™-Ca is a newly available amino acid chelated calcium product that corrects calcium deficiencies in turfgrass upon application. Quelant™-Ca provides readily available calcium chelated with amino acids so that it is easily absorbed by the leaves and/or the roots of the plant regardless of most soil and water conditions. The unique formulation of amino acids used for chelation was



developed not only to facilitate absorption by the leaves and roots, but to increase mobility of the calcium within the plant as well.

Quelant™-Ca is normally applied as a foliar spray and may also be applied through fertigation. Either way, it is tank-mix compatible with herbicides, soluble fertilizers, insecticides, fungicides and plant growth regulators. It will even help improve the efficiency of most of these treatments by increasing their absorption and translocation within the plant.

Best of all, Quelant™-Ca is economical to use and it protects the environment.

Quelant™-Ca — a true systemic. It's new...it's unique... and nothing else works quite like it!

For more information about Quelant™-Ca call Nutramax Laboratories' at: 800-925-5187



The Nutritional Company
NUTRAMAX
LABORATORIES, INC.
AGRICULTURE DIVISION
Baltimore, Maryland



Sleeping Bear/Ann Arbor join forces

By MARK LESLIE

CHELSEA, Mich. — Sleeping Bear Press and Ann Arbor Press — two prolific publishers in different segments of the golf industry — have merged here, setting in motion a vehicle the two presidents believe will dominate the field.

"We decided to merge because

of our respective strengths in golf and turf," said Ann Arbor President Skip DeWall. "From a market standpoint it was the right decision, and from an internal and human-resource standpoint it made the operation much more cost-effective. It allows us to dominate our markets at the same time."

"It's great to be back," said Sleeping Bear President Brian Lewis, who last year ended a two-year "non-compete" clause with Lewis Publishers, owners of his old firm. "We can go back and make our commitment in the field of turfgrass. We're excited and there will be a lot of exciting projects people will get a benefit

from and enjoy reading."

Under the agreement, Sleeping Bear absorbed Ann Arbor's stock and reissued stocks in the merged company to Ann Arbor shareholders, according to DeWall. Lewis is president and chief executive officer of the firm and DeWall remains as president of Ann Arbor.

Lewis and DeWall have a full plate of book offerings this year as well as what Lewis called a

"stunning" lithograph collection of Iain MacFarlane Lowe photographs of the Old Course at St. Andrews.

Sleeping Bear in April released an original reproduction — dust cover and all — of George C. Thomas Jr.'s *Golf Architecture in America* at the same time Ann Arbor printed the second edition of *The Mathematics of Turfgrass Maintenance* by Dr. Nick Christians of Iowa State University and Michael L. Agnew, PhD of Novartis Corp., done in conjunction with the Golf Course Superintendents Association of America (GCSAA).

The lithographs were also just released, as was the book *Rough Meditations* by course architecture writer Brad Klein.

Also:

- In July, *IPM Handbook for Golf Courses* by Drs. Gail Schumann and Pat Vittum of the University of Massachusetts, Dr. Pat Cobb of Auburn, and Dr. Monica Elliott of the University of Florida.

"It's great to be back. We can go back and make our commitment in the field of turfgrass. We're excited and there will be a lot of exciting projects people will get a benefit from and enjoy reading."

— Brian Lewis, president of Sleeping Bear

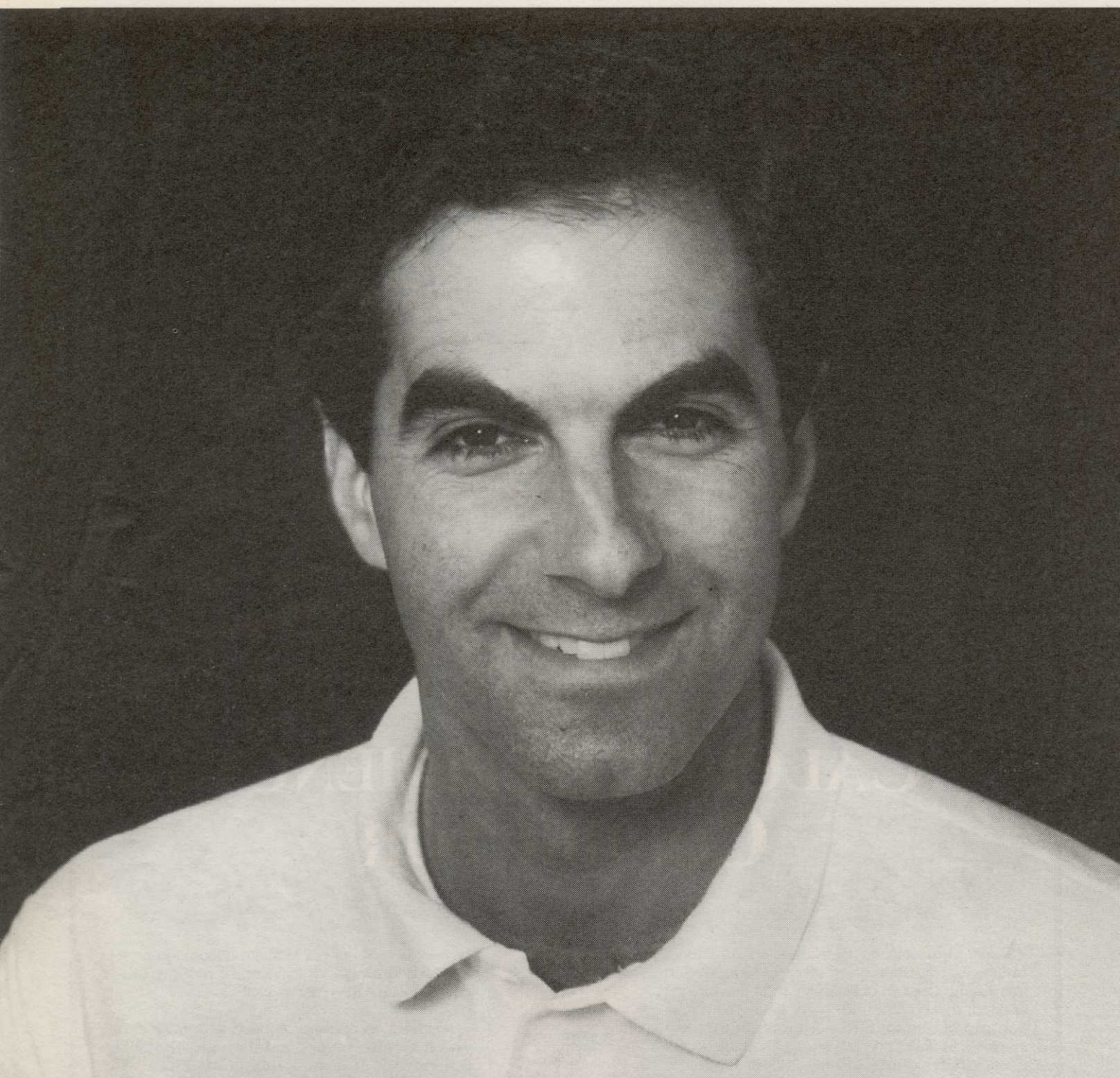
- In August, *Bobby Jones on Golf*.

- In September, *The Fundamentals of Golf Course Maintenance* by Mike Bavier and Gordon Witteveen, former presidents of the GCSAA and Canadian Golf Superintendents Association, respectively. *Mathematics of Turfgrass Maintenance* by Dr. Nick Christians of Iowa State and Michael L. Agnew, PhD of Novartis Corp., which is out now.

- In October, *Destructive Turfgrass Insects* by Dr. Dan Potter of University of Kentucky.

- In the fall, the first post-merger book will be an as-yet-untitled collection of essays on course architecture from old golf publications. Edited by Geoff Shackelford, it will include writings of Alister Mackenzie, C.B. Macdonald, A.W. Tillinghast, William Flynn, Pete Dye, Ben Crenshaw and Tom Doak, among others.

Lewis said the company has signed an agreement with photographer Lowe to what will amount to an official commentary and photography of the Old Course. It is expected to be released in the year 2000 for the 25th anniversary of the British Open being held at St. Andrews.



1-2-3™

I started using the 1-2-3 Premix product when it first came out last year on an informal basis. I was real pleased with it, so this year I used the product every two weeks on my greens, and I am very happy with the results.

This year was really wet on Long Island, and I was able to increase the root mass and depth on my greens with the 1-2-3 Premix product. I had the best roots I've ever had. I am interested to see what the product will do for me in a normal year.

*Frank Donroe, Superintendent
Nissequoque Golf Club
Long Island, New York*

roots inc. A Division of LISA Products Corporation • 3120 Weatherford Road • Independence MO • 800 342-6173

Pesticides online

By MARK LESLIE

WILLOUGHBY, Ohio — Log on and load up, folks. The publishers of one of my all-time favorite "help" books — the annually updated *Farm Chemicals Handbook* — has responded to the world of computer literacy by offering an *Electronic Pesticide Dictionary* (EPD).

Meister Publishing Co. of Willoughby is making the material available on both diskettes and CD-ROM, loading it with pesticide, biocontrol and fertilizer dictionaries, toxicity charts, and Worker Protection Standard summaries for more than 1,000 products and much more.

The EPD includes the most popular sections of the *Farm Chemicals Handbook*, with information presented in a colorful, easy-to-use format and with many preestablished links between related items. Whatever you want to know about pesticides, manufacturers and regulations, it's got to be in here.

Need to check out *Fungizeb*, or *Methyleugenol*, or *Nymph*, or *Quassia*? Or how about *Fenarimol*? Known as Rubigan and available through DowElanco, its common name, code numbers, formulas, trade names, discontinued names, chemistry, use and formulations are all spelled out in its listing, along with environmental and safety guidelines in dealing with it.

The same types of information are given for every other chemical in the marketplace.

Superintendents need to have Windows 3.1 or Windows 95 to operate the EPD. But if that's not possible, the *Farm Chemical Handbook* in softcover, which graces my bookshelf, will do.

Contact Meister Publishing Co., 37733 Euclid Ave., Willoughby, Ohio, 44094-5992; telephone 800-572-7740.

Farm Chemicals Handbook and *Electronic Pesticide Dictionary*, \$89 apiece or \$138.95 combined.

Development for starters

A free booklet, "Golf Course Development Planning Guide," from the American Society of Golf Course Architects is available to help anyone taking the first steps to develop a new course.

The 16-page brochure, with full-color illustrations and color photography, covers all the key components involved in a new course project. It provides data on the growing con-

sumer demand for new golf facilities, the average cost of a new course, proper site selection, a guide to finding assistance, financing and sample operating projections for a daily-fee course.

"This planning guide is an excellent primer for anyone seriously interested in developing a new course project," said Alice Dye, ASGCA president.

Municipal officials, investors, members of review boards, golf professionals, course superintendents, owners and other interested parties will benefit from the

brochure and its complete coverage of the beginning steps in the development process. The section on financing course developments, for example, discusses different plans and options for funding municipal, daily-fee and real-estate courses.

To obtain a free copy of "Golf Course Development Planning Guide," send a self-addressed, stamped business-size envelope to the American Society of Golf Course Architects, 221 N. LaSalle St., Chicago, Ill. 60601.

GOLF COURSE NEWS BOOKSHELF

The Confidential Guide to Golf Courses

By Tom Doak
Written in the inimitable style of *Golf Magazine's* golf course design editor, this book describes, uncovers and rates more than 1,000 courses worldwide that the author has visited and photographed.

With more than 180 four-color photographs, it might be the best collection of worldwide photos ever published. It starts with a "Gourmet's Choice" selection of 31 of Doak's personal favorites, each by a different designer, followed by brief reviews of courses from Pebble Beach, Calif., to Kebo Valley, Maine, and from St. Andrews, Scotland, to Joondalup in Western Australia.
\$45.00, 400 pages, hardcover.

Guide to Golf Course Irrigation System Design and Drainage

By Edward Pira
As a working reference or as a textbook, the *Guide to Golf Course Irrigation System Design and Drainage* covers every important aspect of the subject in an easy-to-understand format. It is perfect for the practicing turfgrass manager, superintendent, consultant, sales representative, and student. Used in numerous academic courses for years, this is the first commercially-available version of a perennial best-seller, and is completely revised with new exercises, practical examples, numerous new figures, and expanded sections covering a wide variety of irrigation system components. A hands-on manual, it guides the reader through every phase of an irrigation program. Turfgrass managers and golf course superintendents will refer to this handy book often to plan effective irrigation systems, ensure appropriate capacity, easy installation, and practical operation and maintenance.
\$59.95, 400 pages, hardcover.

the reader through every phase of an irrigation program. Turfgrass managers and golf course superintendents will refer to this handy book often to plan effective irrigation systems, ensure appropriate capacity, easy installation, and practical operation and maintenance.
\$59.95, 400 pages, hardcover.

Color Atlas of Turfgrass Diseases on Golf Courses

By Dr. Toshikazu Tani
Contributing Author, Dr. James B. Beard
The *Color Atlas of Turfgrass Diseases on Golf Courses* presents more than 540 high-quality color photographs of all the major turfgrass diseases that occur on both warm- and cool-season grasses. It is international in scope. This book will likely become the standard color-guide to disease diagnosis and pathogen identification for golf course superintendents and turfgrass practitioners. No other book contains as many color photographs of this detail and quality. Helpful maps are included to assist in disease identification by providing geographical locations where each disease/pathogen is likely to occur. A unique feature of this easy-to-use field guide is that it also provides color photos of step-by-step guidance on diagnostic techniques for laboratory analysis which can be used by practitioners.
\$79.95, Approx. 250 pages, hardcover.

This is a fascinating collection of original articles and photographs on golf course design by one of the masters. A prolific writer, Tillinghast delves into his philosophies on golf course design and maintenance, and his thoughts on what makes a championship course. It is loaded with vintage photographs and original Tillie sketches of such of his creations as San Francisco, Winged Foot and Baltusrol golf clubs.
\$34.95, 120 pages, hardcover.

The Course Beautiful

By A.W. Tillinghast
The creator of Riviera and Los Angeles country clubs and author of the classic book, "Golf Course Architecture in America, Its Strategy and Construction," George Thomas has deeply affected the golf industry even since his death in 1932. Thomas worked on single projects with Donald Ross and A.W. Tillinghast, learned from friends Hugh Wilson and George Crump, and designed more than two dozen courses on his own. At the same time he was recognized worldwide for his books about and breeding of roses, his first love. Call him brilliant, or enigmatic, but in his last years his work was on a book about Pacific game fish. Shackelford reveals the man behind the work.
\$35.00, 207 pages, hardcover, limited edition of 1,200 copies.

The Captain — George C. Thomas Jr. and His Golf Architecture

By Geoff Shackelford
The creator of Riviera and Los Angeles country clubs and author of the classic book, "Golf Course Architecture in America, Its Strategy and Construction," George Thomas has deeply affected the golf industry even since his death in 1932. Thomas worked on single projects with Donald Ross and A.W. Tillinghast, learned from friends Hugh Wilson and George Crump, and designed more than two dozen courses on his own. At the same time he was recognized worldwide for his books about and breeding of roses, his first love. Call him brilliant, or enigmatic, but in his last years his work was on a book about Pacific game fish. Shackelford reveals the man behind the work.
\$35.00, 207 pages, hardcover, limited edition of 1,200 copies.

Human Resource Management for Golf Course Superintendents

By Robert Milligan and Tom Maloney
This practical guide provides basic management principles and techniques which view people as the most important asset in golf course management. Five basic management functions are detailed throughout the book, using everyday situations to illustrate the key points.

Designed to serve as a quick reference, or as a self-teaching guide, *Human Resource Management for Golf Course Superintendents* features numerous techniques and practical examples. Every aspect of management is covered. Learn how to improve your planning abilities, build leadership and communication skills, maximize employee performance, select and train new employees, avoid the mistakes that cause low morale and poor performance, and conduct employee performance evaluations. Use of the methods and principles presented in this book will ensure the effective management and operation of any golf facility.
\$34.95, 150 pages, hardcover.

Turfgrass Management Information Directory

By Dr. Keith Karnok
A 1,700-entry reference for turfgrass and green industry professionals, the *Turfgrass Management Information Directory* compiles the latest information and gives an at-your-fingertips list, complete with names, addresses and useful material you need every day.

The directory covers academic programs and key contacts, instructional resources including slide sets and videos, software and much more.

The section on related books provides a definitive guide to pertinent titles on diseases, weeds, insects, irrigation, pesticides and general information. Industry services such as diagnostic labs and soil-testing facilities are included. A guide to green industry organizations gives addresses and contact names.
\$19.95, 115 pages, softcover.

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CIRCLE NO. 153

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THREE WAYS TO ORDER FROM THE GOLF COURSE NEWS BOOKSHELF

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Dakota ready with Turf Tender 440

The new Dakota Turf Tender 440 material-handling unit allows one operator to load, fill, move, spread and level materials.

For bunker renovation, users can load old sand and topdress fairways on the way to getting fresh sand to refill bun-

kers using the Swing-away Side Conveyor. Functions can be changed on the fly with finger-touch control.

Standard features include a 4.2-cubic-yard capacity, hydraulic swing-away conveyor, front unloading hopper conveyor, electric vibrator, remote hydrau-

lic drive system, Dakota bucket belting, belly mount box scraper, softac turf tires, dual rear discharge spinners and fender-mount control panel. Options include electric brakes and a single spinner for grass or fertilizer application. Contact Dakota Peat & Equipment at 701-746-4300.

CIRCLE #301

Lebanon introduces multi-use 14-14-14

Lebanon Turf Products has introduced IsoTek 14-14-14, a fertilizer designed for use on turf, annual and perennial flowers, shrubs and trees.

IsoTek 14-14-14 combines isobutylidene diurea and methylene ureas in a clean, homogeneous granule that is consistently sized for dust-free application.

Formulated with 5.0 units of WIN and micro-nutrients, IsoTek 14-14-14 delivers its slow-release nitrogen through hydrolysis and microbial degradation, and is recommended where efficient fertilizer usage is required.

A full 57 percent of its nitrogen is controlled-release.

IsoTek 14-14-14 can be applied anytime during the growing season. Its homogenous, high-density granules are uniformly sized for fast, easy and accurate spreading. Even at lower application rates, it delivers consistent and even distribution of nutrients.

For information contact Lebanon Turf Products at 1-800-233-0628.

CIRCLE #302



IT'S THE ROOTS...REBOUND® patented soil amendment is a blend of crumb rubber and organics that increases root depth and density providing a foundation for resilient, high performance turf.



With **REBOUND®** the roots to healthy turf run deep.



The greatest benefit is the rubber's inherent resiliency which dramatically reduces soil compaction... **turf's #1 enemy.**

"REBOUND® could be the most important safety and agronomic product to be introduced to the turf industry."

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CIRCLE NO. 129

Royal to set Penguin loose this fall

Royal Seeds said it will release what it feels is a revolutionary perennial ryegrass this fall. Penguin Perennial Ryegrass (Experimental #JBPR) is an elite perennial ryegrass that has ranged at the top of trials coast to coast.

Developed from plants selected in such diverse regions as the Mid-Atlantic and California, the company said that Penguin has outperformed many top-rated ryegrasses in these areas.

Penguin is endophyte-enhanced to fight off many surface-feeding insects such as billbugs, sodweb worms, chinchbugs, aphids and armyworms.

Royal said Penguin is ideal in any turf situation, professional or consumer.

The golf course superintendent will find Penguin particularly attractive with its ability to withstand low mowing, maintain its rich texture and recover rapidly to fill in divots.

For more information contact Royal Seeds at 800-753-0990.

CIRCLE #304

Lofts' Repell beats the heat

Lofts Seed Inc. has announced the introduction of Repell III Perennial Ryegrass developed by Lofts' director of research Dr. Virginia Lehman.

Originally named C-7 during the recent national trials, Repell III demonstrates an excellent resistance to heat and tolerates a low height of cut. Repell III will be available in limited supply under experimental designation this calendar year, and will be fully marketed by 1998.

For more information contact Lofts Seed at 800-526-3890.

CIRCLE #303



Ransomes' 951D

Ransomes launches new family

Ransomes America Corp. has introduced a complete family of riding rotary mowers for the golf course, municipal and athletic industries.

Designed as a way for superintendents and grounds managers to match mowers to specific terrain, budget and workload requirements, the family includes: the 951D wing rotary and Front Line 723, 725, 728 and 728 4WD models. All of the mowers feature a variety of engine, cutting deck and attachment choices.

Contact Ransomes America Corp. at 800-228-4444.

CIRCLE NO. 305

FMP offers natural turf feel on the range

FMP has introduced the Flex-Track System and the smaller VT Satellite System that give golfers a chance to experience the same feel as natural turf while on driving platforms at practice ranges or in their own backyard.

The secret comes from Virtual Turf, which was created by FMP in 1994. Virtual Turf replicates the feel of natural turf without the physical stress to golfers or damages to clubs common on mat surfaces.

At the heart of Virtual Turf is the filament-wound composite spring imbedded in the Flex-Track and the VT Satellite. The composite spring is bowed, and is engineered to flex when struck by the club head. This compression of the spring replicates the feel of a club taking a divot.

For more information contact FMP at 616-847-9121.

CIRCLE #307

Summit introduces Establisher

Summit Seed Co. has introduced The Establisher Ev-N-Mulch seed-enhancing mulch spreader. It features 13X5.00 high-flotation wheels, a 3.350 cubic-inch hopper and is designed to apply seed-enhancing mulch at 27.5 pounds per 1,000 square feet in one pass. For more information call 800-457-6748.

CIRCLE #308

DowElanco reintroduces Rubigan

DowElanco has announced the reintroduction of Rubigan A.S. fungicide. The decision to bring back the "classic" Rubigan A.S. was brought on primarily by marketplace demand. Rubigan A.S. is a liquid which provides mixing flexibility and ease of handling. It is packaged in a 2.5-gallon case and is available immediately.

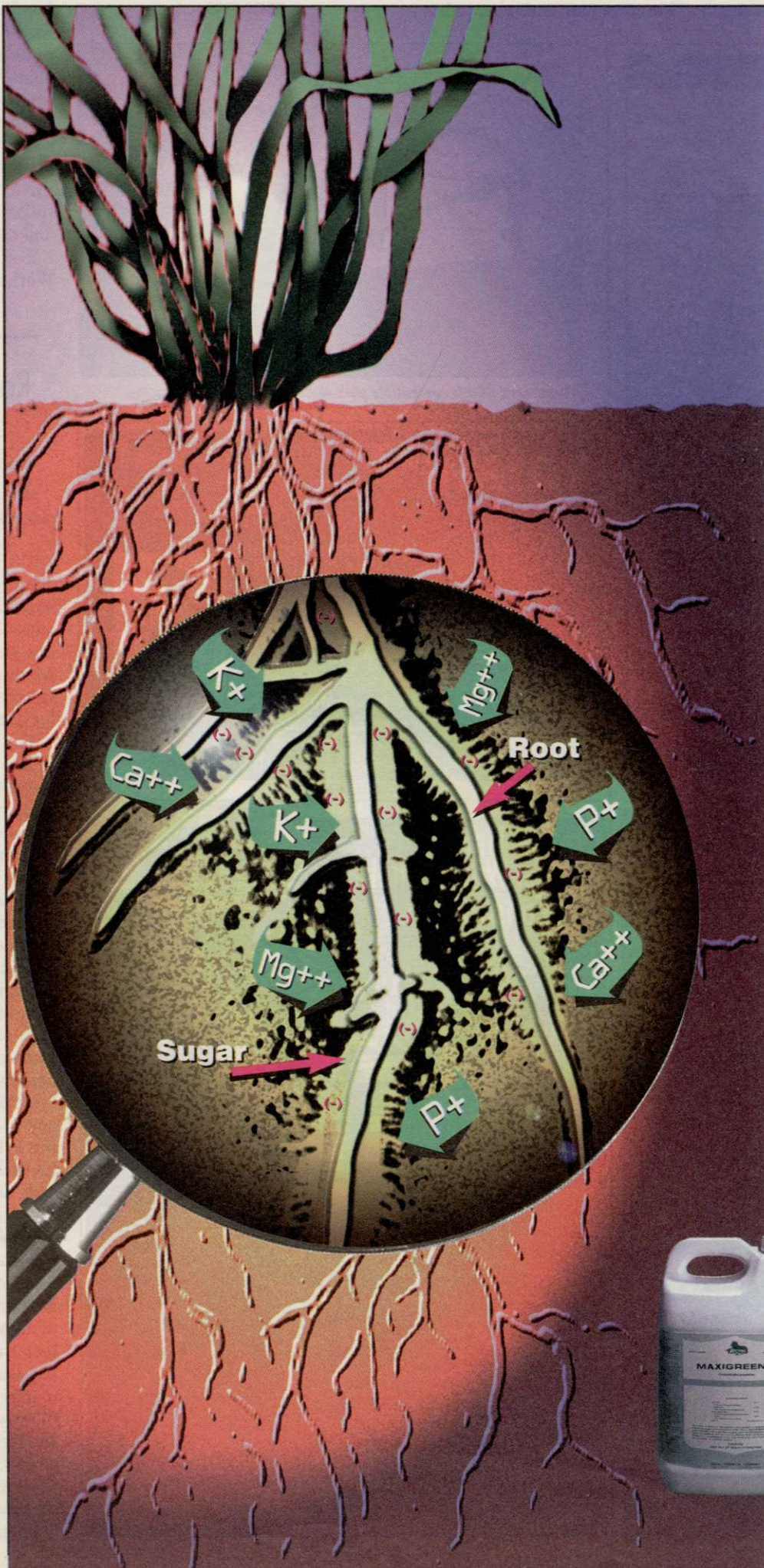
Rubigan A.S. offers broad-spectrum control of turf diseases including dollar spot, brown patch, snow

mold and necrotic ring spot. It's also long-lasting and gentle on turf.

In addition, DowElanco guarantees that Rubigan A.S. will provide at least 80-percent control of summer patch, necrotic ring spot and *Fusarium* blight when used according to the label, or DowElanco will replace it free of charge to re-treat problem areas.

For more information about Rubigan or to receive a specimen label, call the DowElanco Customer Information Center at 1-800-255-3726.

CIRCLE #306



These Are Not Your Run-of-the-mill Chelated Iron Sources.

Glucosheptonates—natural organic chelates—set MultiGreen II® and MaxiGreen II® apart from all the less effective micro-nutrient sources.

These natural sugars prevent the micro-nutrients such as iron, zinc, copper and manganese from reacting with the soil, and keep them available to the plant for maximum root uptake.

Additionally, these sugars affix to the feeder roots. Being negatively charged, they act as additional CEC (Cation Exchange Capacities) and attract the positively charged nutrient cations, including Potassium, Phosphate, Calcium and Magnesium. Then, these nutrients are held for root absorption.

At the same time, the glucosheptonates are consumed by soil microbes as feedstuffs, multiplying the microbe population with added benefits.

Some of our advantages are hidden, but the superior results aren't.



New Standards for Turfgrass Excellence

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CIRCLE NO. 135



LIS' new SGI injection system

LIS announces SGI

LIS Inc. has introduced its new SGI Subsurface Granular Injection System. This new patented technology allows for granular materials to be injected into the soil without surface disruption or environmental hazards. The granular products are injected into the turf by a high-pressure pulse of water from its 14-jet manifold. Liquid turf products can be mixed with water so that both liquid and granular products can be injected simultaneously. This allows for multiple prod-

ucts to be injected. Play can resume on golf greens immediately after service.

This system is ideal for control of mole crickets, nematodes, fire ants, and grubs. Injection depths can be adjusted from .5 to 8 inches.

The injection process insures effective insect population control, instant kill, migration control, product residual longevity, percolation of greens, thatch displacement, compaction relief, aeration, and root growth.

Contact LIS at 352-795-2727.

CIRCLE #309

Worksaver's 300 ready to dig deep

Worksaver Inc. is offering the Model 300 PHD as part of its complete line of PTO-drive post-hole diggers. The Model 300 is compatible with most 14- to 24-horsepower tractors equipped with a category O three-point hitch and 540 rpm PTO.

The 300 is designed to make smooth, deep holes quickly and efficiently. It handles standard-duty 30-inch augers with 6, 9 or 12-inch diameters, and features a lever which allows the operator to adjust the auger's starting angle.

Other features include a three-position boom which allows the unit to fit a variety of tractor models, and a gearbox with 3:1 gear ratio protected by the shear-pin PTO drive. The gearbox also features tapered roller bearings and spring-loaded seals, and carries a five-year limited warranty.

For more information contact Worksaver at 217-324-3356.

CIRCLE #310



Worksaver's 300 is compatible with most compact/utility tractors.



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CIRCLE NO. 169

TRIMS '97 Grounds Management Software is Now Available!

New Setup Wizard makes entering your initial setup data into TRIMS '97 so easy, you'd think it's magic!

See our AD in the Golf Course Marketplace of this issue for more information on TRIMS '97 or call TRIMS Software International, Inc. at (800) 608-7467 for a FREE Demo Disk!



Visit our web site at <http://www.trims.com>

CIRCLE NO. 166

What are Turf pros saying about PennMulch?

Spread It Around.

"Establishing new bentgrass greens is a time consuming and costly process. This spring we put in 10 new greens at River Ridge with play targeted to start in early fall.

We used PennMulch as a mulching cover for the seed. The results were impressive. Not only was germination superior but PennMulch also stabilized the soil surface and was simple to apply. An unexpected benefit from using PennMulch was the retention of the sand base during the first mowing.

The second phase of the construction will be completed later this spring and we have specified the use of PennMulch for the remaining greens. Quite simply, PennMulch provides the insurance I've been looking for."

-Tony King, Superintendent
River Ridge Golf Club
Raleigh, NC

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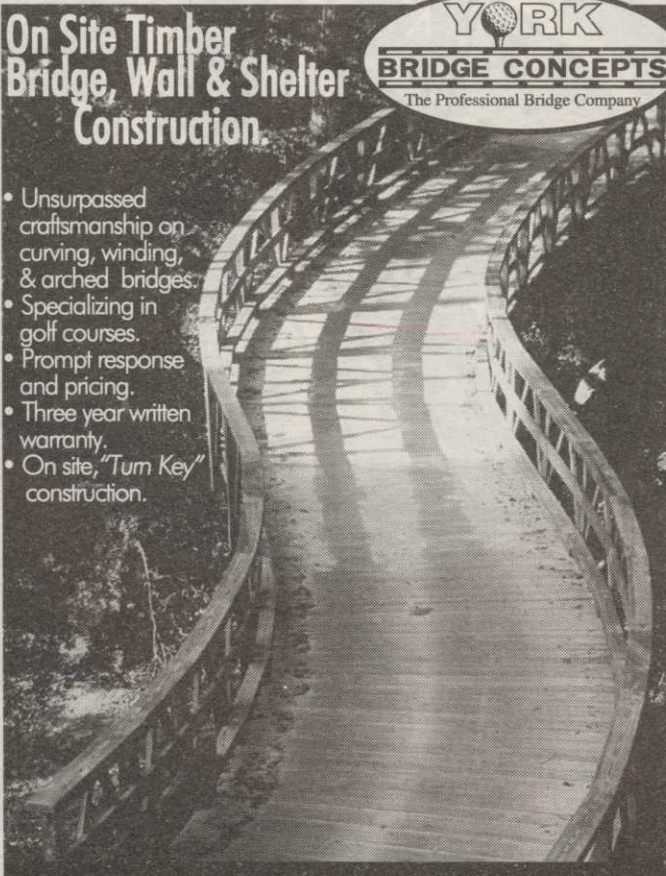
One-step mulch & fertilizer · Easy & inexpensive to apply · Weed free · Safe & Biodegradable

CIRCLE NO. 151

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- Unsurpassed craftsmanship on curving, winding, & arched bridges.
- Specializing in golf courses.
- Prompt response and pricing.
- Three year written warranty.
- On site, "Turn Key" construction.



Southern Region: 800-226-4178 Western Region: 800-474-4990
Northern Region: 800-383-0555 Web Site: www.ybc.com

CIRCLE NO. 152

Rain Bird tackles large-area watering

Rain Bird's new 70, 80E and 85E series of impact sprinklers are designed for large-area watering. Depending on the nozzle type, the 70CWH and 70CSPH "full-circle" models can be adapted for a wide range of golf course irrigation settings. The 80E "full-circle" and 85E "part-circle" models are specially designed for operation in dirty water and windy conditions. The sprinklers are constructed of cast bronze and heavy brass for durability.

The full-circle, one-inch (25mm) 70 series features a modified three-washer bearing assembly. Large nozzles and higher flow rates can be used to help ensure a large watering radius, such as on a driving range or wide fairway.

The 70CSPH has a rear spreader nozzle for consistent close-in watering. A plugged spreader nozzle on the 70CWH creates low precipitation rates, thus enhancing water conservation.

Engineered for high performance in dirty water and windy conditions, the 1.25-inch (3 mm) 80E and 85E series sprinklers can be used for a variety of field applications.

Designed to deliver consistent coverage in highly abrasive water conditions, the 80EHD-LA (full-circle) and 85 EHD-LA (part-circle) "Tough Bird" models feature single-nozzle construction, heavy-duty trip components, locking friction collars and a durable "H" bearing. Stainless steel trip-lever pads, trip stops and a replaceable spoon are manufactured to withstand the damaging characteristics of dirty water. A specially drilled low 17-foot trajectory and non-clog straightening vanes help deliver reliable performance in extremely high winds. The full-circle 80ESHD and part-circle 85ESHD feature a 27-foot trajectory. Utilizing the largest nozzles and highest flow rates available help the sprinklers deliver more water than many competitive models.

For more information call 818-812-3600.

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 5 — *Golf Course seminar at SUNY Delhi, Delhi, N.Y.* Contact Dominic Morales at 607-746-4413.
 13 — *Golf and Fine Turf Tour at Rutgers University/Cook College in New Brunswick, N.J.* Contact Richard Caton at 980-821-7134.
 19 — *Cornell Field Day in Ithaca, N.Y.* Contact Frank Rossi at 607-255-1629.
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 28 — *Michigan Turfgrass Field Day in East Lansing.* Contact Kay Patrick at 517-321-1660.

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4-5 — *Southwest Horticultural Trade Show in Phoenix.* Contact 602-966-1610.
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2-4 — *18th Annual Irrigation Association International Exposition and Technical Conference in Nashville, Tenn.*
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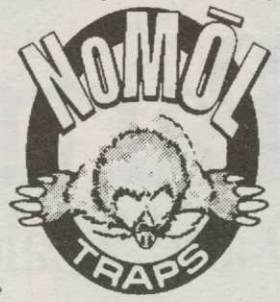
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CIRCLE #164

Wohlleib sees need to stay competitive

By PETER BLAIS

BREWSTER, Mass. — She'll be there when the much-anticipated Widow's Walk Golf Course in Scituate, Mass., opens in early July and again when the first swings are taken at Olde Scotland Links in nearby Bridgewater a month later.

Lisa Wohlleib, vice president of Corcoran Jennison Hospitality (CJH), is

riding herd on the multiple details involved with unveiling the two new municipal courses to the Commonwealth of Massachusetts golfing community. Meanwhile, the 31-year-old Tulane University graduate continues to fulfill her duties as general manager of Glen Ellen Country Club in Millis and vice president of the Massachusetts-based course management firm, which also operates Ocean Edge Resort on Cape Cod.

"The public golf boom is alive in Massachusetts," Wohlleib said. "But we need to stay competitive. With all the new

courses coming on line, competition is stiff. Widow's Walk and Olde Scotland Links are both positioned as high-end, daily-fee facilities. When the clubhouses open next year, they'll provide an experience to rival any private club."

While doubling her management responsibilities from two to four courses in the space of 30 days may seem daunting, Wohlleib said she and CJH are up to the challenge. Her confidence stems from the success she's enjoyed dur-



Lisa Wohlleib

ing her 10 years with CJH.

Starting as the Ocean Edge pool director during summer break between her junior and senior years, her responsibilities have grown along with the growth of CJH. As vice president, Wohlleib has hired the golf directors at each of the firm's four facilities and is accountable

for all aspects of club administration; including staff training, food and beverage operations, financial management and property development.

"Most of what I know about the hospitality business I've learned as I've gone along," said Wohlleib, who holds bachelor's degrees in psychology and sociology. "That inexperience has sometimes been questioned outside the company, but it's never been a problem internally. If anything, it's been an advantage because it's allowed me to look at everything with an open mind rather than coming at a problem with preconceived notions.

"Finding the most efficient way to solve a problem is the key to a manager's success. It always comes back to basic organization, and providing solid employee training."

Glen Ellen is a good example. The lenders repossessed the Millis, Mass., course in the early 1990s and hired CJH to manage the facility. Wohlleib initiated an aggressive renovation program that helped increase sales by 90 percent over three years.

"Glen Ellen was in a state of disrepair when the bank hired us to manage it and rebuild its value," Wohlleib said. "We pumped some capital into it, improved the management and started an aggressive marketing campaign. We hired Cornish, Silva and Mungeam to reroute the course; installed a new irrigation system; moved 72 trees; purchased new maintenance equipment; changed the maintenance practices that had resulted in small, round greens and restored them to their original shape; rebuilt a green; fixed up the practice area; hired a new PGA pro; upgraded customer service; and put together golf packages that met the needs of our outing clients."

Wohlleib considers corporate outings one of her strengths. Ocean Edge, which includes a hotel/conference center, has long been one of the state's premier outing facilities. Building off the success there, Wohlleib has been able to increase outing revenues at CJH's other facilities.

"We try to keep the planning process and information as simple as possible and post deadlines far enough in advance so our clients can work with them," she said. "Communicating with your clients and generating positive word-of-mouth advertising have greatly increased our outing business."

Operating four golf facilities makes for a busy schedule. But it's one that Wohlleib thoroughly enjoys.

"I think in simple, straightforward terms, the foundation of which is being able to reason logically," she explained of her success. "I'm organized and I follow through in a timely fashion. I am able to develop a vision for a property. I can see in my mind exactly how things will be and I'm able to communicate that information, confident that I'll be able to deliver the product."

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INSIDE

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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.

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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 recognized the Golf Course Superintendents Association of America (GCSAA) 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-

Continued on page 30

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SENSITIVE STROKES

Architect Ron Garl 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).

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STUDY SHOWS:

Name designers pull higher dues and green fees

By PETER BLAIS
HARRISBURG, Pa. — Private courses designed by signature architects command higher initiation fees and monthly dues for architect-fee facilities. Preliminary study by Pennsylvania and a study is currently help developers determine the potential benefit of hiring or not hiring a signature architect in specific markets, and perhaps the difference in hiring one signature ar-

Continued on page 3

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Shinn Golf Club in Niagara, Japan, a new design from incoming ASGA president, Denis Griffiths.

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 Brauer of Golfscapes 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

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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. Bill Liles, head of Turf & Ornamentals in a head-to-head fight for identity in a crowded market, says, "Then came Ciba-Geigy, lot

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