

GOLF COURSE NEWS

THE NEWSPAPER FOR THE GOLF COURSE INDUSTRY

A UNITED PUBLICATION
VOLUME 8, NUMBER 9
SEPTEMBER 1996 • \$4.50

INSIDE

Us vs. Us

Supers from "The Americas" tee it up against their counterparts from the "Rest of the World" 3

Bug-Eating Gambusias

Problems with mosquitos? Kill 'em at their source with surface-feeding mosquitofish 15

Winter Prep Report

Can compost fight snow mold? Can a fertilizer applicator overseed? Get answers before snowfall 38



INTO THE BREACH
When fire ravaged the maintenance facility at South Hills Country Club in Franksville, Wis., superintendent John Syty received a huge helping hand. See page 49.

COURSE MAINTENANCE

New zoysia varieties meet high expectations 15
Focus on Black Diamond's Laurie Frutchey 22
On the Green: Cart path alternatives 26

COURSE DEVELOPMENT

A cautionary tale of development in Jamaica 11
Brit Clark leads Maine back into boom 31
Matthews carves Hawk Hollow from quarry 34

COURSE MANAGEMENT

State bags owner who bagged permits 7
Family Golf Centers dominates range market 41
Managers contemplate industry in year 2016 42

SUPPLIER BUSINESS

EPA alters worker-protection standards 47
GCSAA Report: Platinum Tee Club expands 48
What's new in the marketplace? 50

New USGA service targets construction

By PETER BLAIS

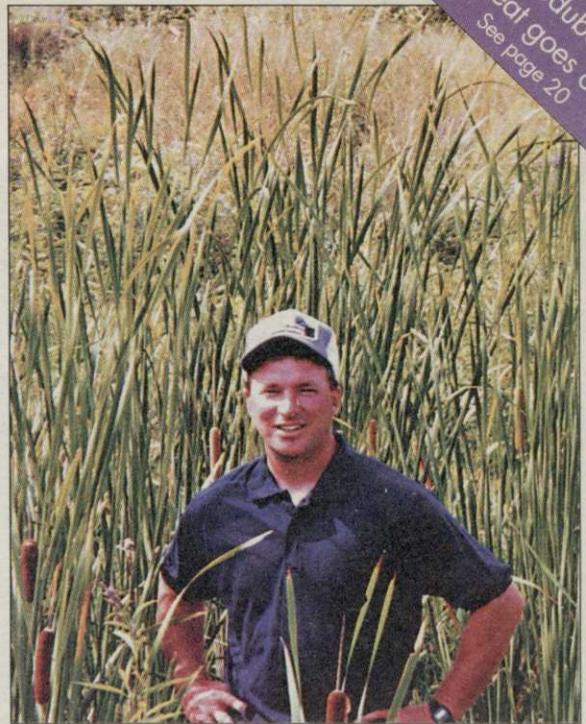
FAR HILLS, N.J. — The U.S. Golf Association (USGA) Green Section will launch its new Construction Education Program next month with Mid-Continent Regional Director Jim Moore as director. Moore is developing materials, web site and seminar programs that will be available at minimal charge to developers, superintendents, course owners, club managers, golf professionals and others involved in building golf projects.



Jim Moore

"We know that many of the physical problems golf courses experience after opening occur because of things that were or weren't done when the course was originally built," Moore explained. "We want to be involved up front providing good information for

Continued on page 28



Super Casey Crittenden at newly certified Beatrice (Neb.) CC.

Audubon
beat goes on
See page 20

NTEP funding survives; Morris credits lobbying

By MARK LESLIE

WASHINGTON, D.C. — The embattled National Turfgrass Evaluation Program (NTEP) received good news from Congress in August when the U.S. House of Representatives and Senate passed an agri-

cultural appropriations bill that included — even added to — NTEP funding.

NTEP operates as an independent agent under the U.S. Department of Agriculture, but the USDA had proposed redirecting its entire NTEP funding to other research.

Citing effective lobbying from the \$30-billion turfgrass industry, NTEP National Director Kevin Morris said lawmakers actually increased the funding \$5,000 to \$55,000.

"We got a tremendous response from the letter I sent out [asking for industry support]," Morris said. "The Turfgrass Producers International and Golf Course Superintendents Association of America lobbied on our behalf at the Congressional level. It pushed the key congressmen. And that was really helpful."

Happy at the turn of events, Morris is nonetheless

Continued on page 53



WATERWORLD EAST

Man-made water features rival their natural counterparts at the Clyde Johnston-designed River Landing Country Club, a newly-opened club north of Wilmington, N.C. For story, see page 34.

Pebble Beach courses seek solutions to salty effluent

By J. BARRY MOTHES

MONTEREY, Calif. — Relief may be on the way for anxious superintendents at seven Monterey Peninsula golf courses.

Since last fall, the group has struggled with discoloration, wilting and disease

on their greens caused by a higher concentration of salt in the reclaimed water now being used as part of a highly publicized recycled-water project. Putting surfaces at the seven, high-profile sites are annual bluegrass (*poa annua*), which has proved to be the best turf to cope with the peninsula's cool, foggy climate. But *poa annua* is also very sensitive to salt.

A definitive course of action is expected to be taken by the end of this month, after an engineer-

Continued on page 35



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FORUM PREVIEW

- DEVELOPMENT PROGRAM GROUNDED IN REALISM ... 54
- LOHMANN RENOVATIONS PLAY IN PEORIA 54

Nowhere is this impact more evident than in customer service where upscale, daily-fee facilities operated by hospitality-trained professionals have upped the ante on their privately run, public-access competitors.

"What golf management companies have recognized is that we're in the hospitality business — like hotels are in the hospitality business," said Gregg Gagliardi, general manager and PGA pro at Lansbrook Golf Club in Palm Harbor, Fla. "The golf industry has never been known as a very high-service business,

Continued on page 44

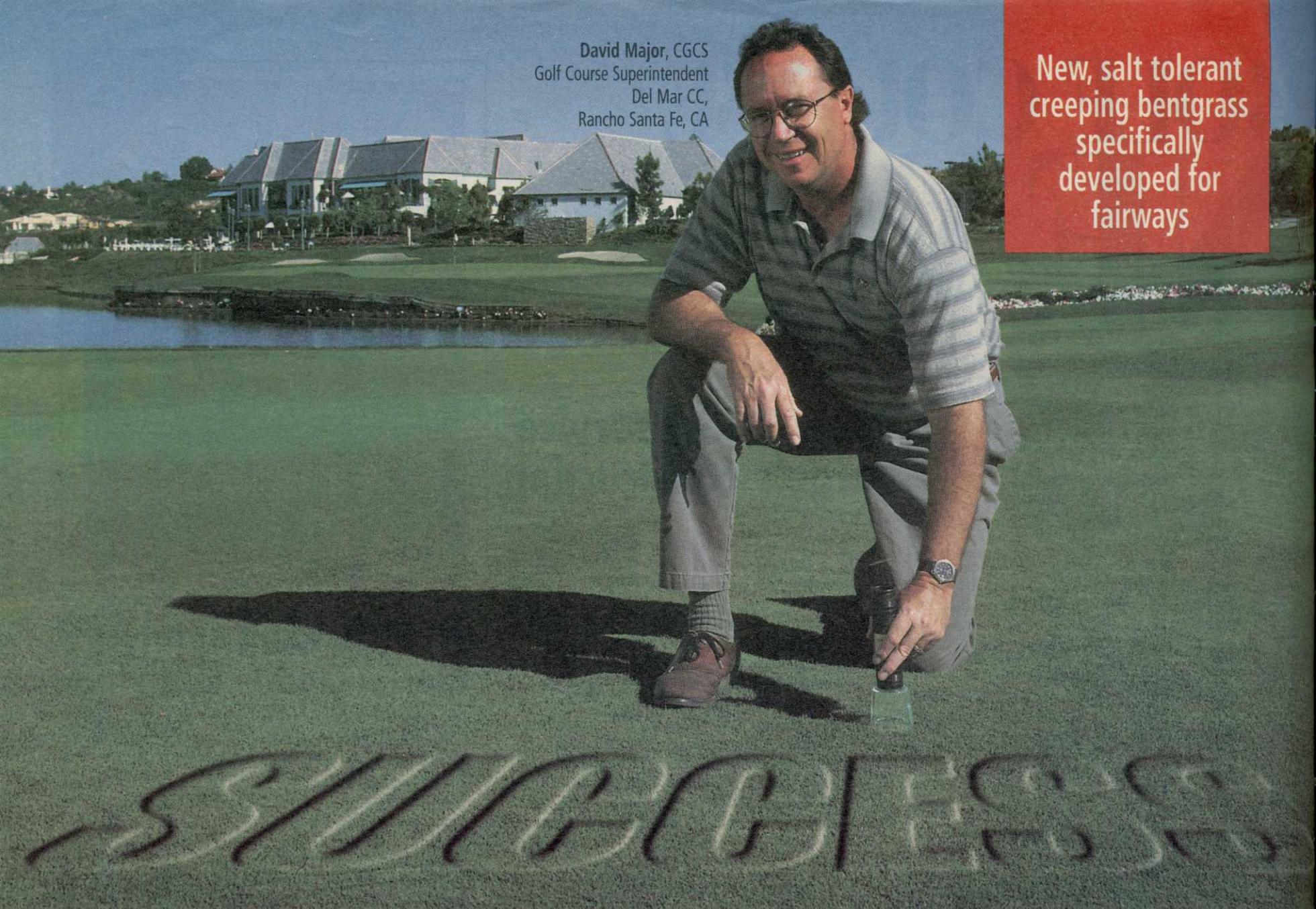
Priority One: Putting the customer first

By HAL PHILLIPS

CHICAGO — While management companies own or operate only 5 percent of the nation's golf course stock, their impact is felt throughout the industry.

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Golf Course Superintendent
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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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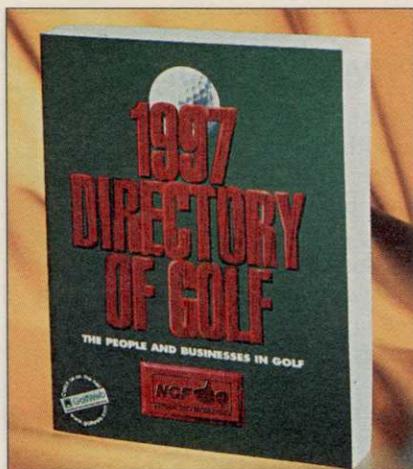
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IN BRIEF

CINCINNATI — The notoriously soggy Reeves Golf Course got a late start this summer after a 9-week shutdown that lasted into late June. An estimated 19,000 fewer rounds had been played as of mid-July compared with 1995, as parts of the popular muni track were underwater most of the spring. Heavy rains and a rising river caused water tables to seep upward.

MARNE, Mich. — There's nothing like a name change to lend an air of seriousness to a golf course. Once known by the cozy name of Li'l Acres, the nine-hole course in this small town near Grand Rapids is now known as Sand Creek Golf Course & Driving Range. Owner-operator Linda Zahn said she changed the name in keeping with many improvements made at the course recently. Sand Creek now offers a lighted chip and putt practice area. On the 1,965-yard course, new trees were planted and bunkers installed.

WILLIAMSBURG, Va. — The newly-opened Stonehouse Golf Club here took a beating from Hurricane Bertha, which shut the course down for more than a month. Stonehouse, which opened for play June 20, was drenched with rain — 3-1/2 inches overnight in mid-July. About one-third of the 13th green was washed out, according to Forrest Fezler, director of golf. The 13th green was resodded and rebuilt.



NGF directory hits streets & the web

JUPITER, Fla. — The National Golf Foundation (NGF) has released the first-ever, industry-wide reference guide called the *1997 Directory of Golf*. This 500-page publication covers the entire golf industry and lists more than 6,000 golf-related businesses and 10,000 executives. It is also indexed by industry segment for easy reference.

Annual print updates are planned. Monthly updates will be available to those with access to the Internet. NGF has entered into an agreement with GolfWeb the on-line golf information network, to publish on-line NGF's *1997 Directory of Golf*. The directory can be viewed through GolfWeb at: <http://www.golfweb.com>

The book may be purchased by calling NGF at 800-733-6006.

Supers stage their own Ryder Cup this month

Hayter Cup matches set for Sept. 16, in Britain

By TREVOR LEDGER

LIVERPOOL, England — Education, camaraderie and keen competition will converge at West Lancashire Golf Club Sept. 16, when the superintendents of "the Americas" take on the greenkeepers of the "Rest of the World" here in a Ryder Cup-style showdown.

The inaugural Hayter International Cup will bring together 24 superintendents from the Americas, Europe and Australasia, and deposit them at the West Lancs GC near Liverpool to slug it out. The format is reminiscent of the now, very high-profile and nerve-searing Ryder Cup. The one-day event will feature six four-ball matches in the morning and twelve singles matches in the afternoon.

For some years now, Hayter Limited has sponsored the Hayter Challenge, a respected annual golf tournament on the U.K. domestic greenkeeping scene. Yet the international challenge is a more recent brainchild of Hayter's Kim Macfie

Continued on page 40

Trevor Ledger is Golf Course News' European correspondent.



THE ROSTERS

The players participating in the first-ever Hayter International Cup, a Ryder Cup-style team match between superintendents from The Americas (North, Central and South) and the Rest of the World (Britain, Europe, Australasia) to be held Sept. 16, at the West Lancashire Golf Club near Liverpool, England:

Americas: Samuel T. Williamson, Jim Dusch, Robert Heron, Douglas Meyer, Ricardo de Udaeta, George Renault, Dean Morrison, Paul McGinnis, Alejandro Young, Randy Nichols, Thom Charters, Gary Grigg.

Rest of the World: Cosme Bergareche, Fredrik Goa, Andreas Kauler, Derek McJannet, Ignacio Soto Alarcon, Peter Schumacher, Peter Frewin, Michael Dohlon, Ian Buckley, Matthias Ehser, Alexander Reid, Brian Mulholland.

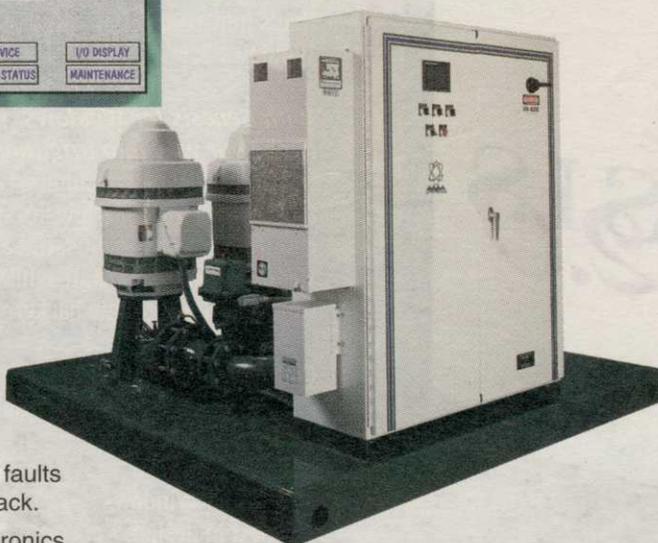
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Floods push back Quad City opening

EAST MOLINE, Iowa — The opening of the new nine-hole, Red Dog Run golf course in the Quad Cities area has been set back due to flooding caused by a creek that winds through the course.

Red Dog Run was designed, built and owned by Gary Lockie, a PGA club professional. The 3,200-yard course's name is a reference to a common nickname of the red-headed Lockie, not the beer.

Lockie, who has worked on design and course construction for other clients over the years, was all set to open the course in early June until the creek rose and flooded the course. Fortunately for Lockie, the receding water has left no silt on the course.

N.Y. course workers survive live burial

SPRING VALLEY, N.Y. — Two workers were buried under mounds of earth and seriously injured earlier this summer when the sides of a drainage ditch they were digging on the New York Country Club collapsed.

Joseph Oakes, 41, was completely buried and had to be airlifted by helicopter to Westchester County Medical Center. Oakes was semi-conscious when he was lifted from the trench and had lost the feeling on his right side below his waist, which was likely to be related to a spinal injury.

The other worker, Rafael Gutierrez, 35, was partially buried in the incident.

He was taken to Good Samaritan Hospital with leg and shoulder injuries.

Oakes and Gutierrez, who were employed by a private company, were digging a drainage trench on July 5 when the accident occurred. They had dug down about 6 feet when the earth caved in.

Heavy rains may have made the soil soft, according to officials.

The rough terrain at the New York Country Club made it difficult for the helicopter to land near the trench. Oakes had to be carried by eight emergency workers about 250 feet uphill to a level landing site.

Maintenance vehicle claims the life of Colorado 9-year-old

COLORADO SPRINGS, Colo. — A 9-year-old boy died of injuries he suffered when a golf course maintenance cart here at the Woodmoor Country Club ran over him.

Peter McGeorge died from head injuries in an accident while riding his bicycle on a maintenance path at the Woodmoor Country Club, according to the Colorado State Patrol. The path leads off a public road onto the course and is used by maintenance workers and area residents who own golf carts.

The boy, who lived near the course, rounded a curve and encountered a three-wheeled maintenance cart going in the other direction. The boy, apparently startled, fell off his bike in the path of the cart. The cart driver, 19-year-old Jeremy Gray, couldn't avoid the boy and one of the cart's back wheels ran over him. He died at Memorial Hospital.

Indiana muni will handle night play

ENGLISH, Ind. — Night-time golf is coming to southern Indiana.

Construction is scheduled to start this year on a lighted, 18-hole municipal course in English in Crawford County. It is believed to be the first lighted full-length, 18-hole course in the country.

The first nine holes are scheduled to open in the spring of 1998. The back nine, to be finished in 1999, will be built on the flood plain where the town of English once stood.

Because of the periodic flooding at the site, the town is being moved to higher ground. The valley where the old town used to sit, near the intersection of State Roads 37 and 64, was given back to the town with the requirement that it not be abandoned and that it be maintained in a "manicured" state. The Sterling Development Corp. came up with a plan to build and operate a municipal course.

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Periodicals postage paid at Yarmouth, Maine, and additional mailing office. *Golf Course News* (ISSN 1054-0644) is published monthly by United Publications, Inc., 38 Lafayette St., P.O. Box 997, Yarmouth, ME 04096. Phone number is 207-846-0600.

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Reprints and permission to reprint may be obtained from Managing Editor, *Golf Course News*, P.O. Box 997, Yarmouth, ME 04096. Back issues, when available, cost \$5 each within the past 12 months, \$10 each prior to the past 12 months. Back issue orders must be paid in advance either by check or charged to American Express, Visa or MasterCard.

Golf Course News is distributed in the U.S. without charge to qualified personnel of golf course facilities and to golf course builders, developers and architects. Subscriptions to Canadian golf facilities cost \$35 annually; other paid subscriptions to the U.S. and Canada cost \$45. All foreign subscriptions cost \$125 annually to cover air delivery. All payments must be made in U.S. funds drawn on a U.S. bank. **For subscriber services, please call 215-788-7112.** Send address changes to *Golf Course News*, P.O. Box 3047, Langhorne, Pa. 19047-3047.



Much-anticipated Tennessee muni opens front nine

JACKSON, Tenn. — The front nine holes at the new, long-awaited city-owned Bent Tree Golf Course have opened for play. The back nine is expected to open either late this fall or early next year.

The upscale course, located at Kate Campbell Robertson Park, will measure 7,132 yards from the back tees and feature the longest par-5 hole (591 yards) in Jackson. Jackson Mayor Charles Farmer was one of a dozen golfers who got a sneak playing preview of the course before it officially opened.

Kentucky links fill out to 18

CANNONSBURG, Ky. — Diamond Links Golf Club recently opened its new back nine which makes the public course a regulation, par-71 layout.

Diamond Links opened three years ago as a nine-hole track with plans for expansion. Those plans stalled because the former owner ran into financial problems. The new owners, Huntington attorney Stan James, Mike Steinbracher and Bob Rufus, have followed through.

James and his associates bought Diamond Links in late 1994 and started working on the back nine in March 1995. Early spring and summer rains slowed some of the work on the new back nine but James said the new holes are coming into their own as fall approaches.

Spanish Wells now operating 27 holes

BONITA SPRINGS, Fla. — The new nine holes added to the original 18-hole course at Spanish Wells have been completed and are in play.

The new nine was designed by Bruce Howard of the Corral Howard Collaborative. It features a variety of natural areas and the layout winds through native pine, oak and cypress trees with boardwalks along stands of cypress and wetlands areas.

The original 18-hole course at Spanish Wells opened in 1979. With the new nine, the club now offers three sets of interchangeable nines.

CORRECTION

Because of a reporting error in last month's story, "Jacobsen to keynote Public Golf Forum," the name of architect Jim Hardy was spelled incorrectly. In the same story, design credit for Eagle Point Golf Club in Medford, Ore., was mislaid. Robert Trent Jones II is the architect of Eagle Point.

Club opens on Outer Banks, finally

COROLLA, N.C. — The Currituck Club took seven years to complete, but the newly-opened course designed by Rees Jones has brought a fresh sense of excitement in golf circles on the Outer Banks. The course, which winds through maritime forests and over sand dunes along Currituck Sound, took 14 months to build after more than five years of planning.

The land where the

Currituck Club course now sits has long been treasured real estate. The Currituck Shooting Club had headquarters there going back to the mid-1800s. The hunt club was a stomping ground for steel and railroad magnates who liked to entertain clients on duck hunting excursions. The hunt club's cedar-shaked clubhouse is visible from the seventh tee, as are a dozen or so duck blinds on Currituck Sound.

New life for Ross bunkers in N.C.

WILMINGTON, N.C. — The city is renovating bunkers at the popular Wilmington Municipal Golf Course, restoring them to the way they looked in the 1920s, when Donald Ross designed the course. The municipal layout has survived mostly intact. But, as has happened at hundreds of courses, bunkers have shrunk, been altered and, in some cases, moved.

The Donald Ross Society of Bloomfield, Conn., is supplying an architect who is planning the restoration project.

The city will provide the equip-

ment and manpower to dig and reshape the bunkers. The work started in August.

Copies of course drawings done by Ross showing bunker placements were obtained through the Tufts Archives at Given Memorial Library in Pinehurst, N.C.

One aspect of the course's early days that won't be restored are sand greens. Sand greens, which were sprayed with oil to keep them firm, were a common surface on golf courses in the 1920s, especially in the south.

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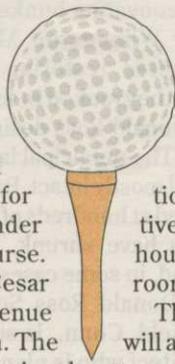
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Panks to design 5th municipal track for city of Phoenix

PHOENIX, Ariz. — For years the Phoenix Parks, Recreation and Library Department has realized its four municipal courses weren't enough to meet the demand of local golfers.

To help solve the problem — and reduce things like overnight campouts for early-morning tee times — plans are under way to build a fifth municipal, 18-hole course.

The new course will be south of Cesar Chavez Park on the corner of 35th Avenue and Baseline Road near South Mountain. The course is being designed by DEI Professional Services and Gary Panks & Associates.



When the new \$5.4 million course is finished, Phoenix will have municipal courses in every region of the city. Other municipal courses are Cave Creek, Encanto, Maryvale and Papago.

The new course will feature a regulation, 18-hole course and a nine-hole, executive layout. The facility will also have a clubhouse, pro shop, public meeting room, locker rooms, restaurant and 200-space parking lot.

The course, which has yet to be named, will also feature a larger learning center aimed at young golfers. The facility is expected to be open by late 1997 or early 1998.

Deer get their due at Illinois track

VERNON HILLS, Ill. — The first few shovelfuls of dirt have barely been turned for a new, 18-hole course on the Cuneo Estate and already the name has been changed.

Originally planned to be called The Moors, the new course that will be the centerpiece of the Gregg's Landing community will be called White Deer Run. The name is a nod to the history of the Cuneo property. Damuel Insul first brought White Fallow Deer from India to his grounds on Route 21 in 1919. A herd of

descendants from those first deer are still kept on what is now known as the Cuneo Museum and Gardens in Vernon Hills.

Leon Joffe, executive vice president of developer Zale Homes, said the old name didn't properly evoke the natural woods and sanctuary-like feel of the property.

The village of Vernon Hills will own the land and Par Development, which is building the 230-acre course, will operate it. An opening of spring 1998 is planned. After 25 years, the village will take full ownership of the course.

Red Hook gets new look with a baker's dozen

RED HOOK, N.Y. — Thirteen new holes recently opened at semi-private Red Hook Golf Course to mark its transformation to a full 18-hole layout.

The \$1.6 million expansion was launched in October 1993. A gang of volunteers who called themselves the "Apple Tree Gang" — a reference to the group credited with organizing one of the first golf clubs in the United States at St. Andrews (N.Y.) in the late 1880s — took on the task of developing the back nine.

The club reportedly saved \$90,000 when volunteers removed more than 4,000 trees at the site. The club also recruited 150 new members to bring the total to 399.

The addition was designed by Dave Horn of Architerra P.C. Horn's design combined five of the old holes with 13 new holes to create some of the more challenging holes in the Hudson Valley. Only one hole remained unchanged, the old 7th now known as the 11th.

No secret: New 18 at Lake Arrowhead

ROME, Wis. — Lake Arrowhead Golf Course, often called "Wisconsin's Best-Kept Secret" when it comes to golf, is planning to add another 18-hole layout just north of its original daily-fee facility. Killian Golf Design is in charge of the project, which will cost between \$2.5 and \$3 million. Part of the cost is expected to be paid for by sales of 165 to 170 adjoining house lots.

Lake Arrowhead General Manager Carl Landino said construction could start in September with site clearing and grading. Landino said the goal is for seeding to start in August 1997 with the course ready for play by July or August 1998. There will also be a second clubhouse built.

The original 18-hole course at Lake Arrowhead opened in two stages with the front nine in 1980 and the back nine in 1993. The layout is currently getting 27,000 to 30,000 rounds a year.



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Santa Fe project close to approval?

SANTA FE, N.M. — The city of Santa Fe is inching closer to approving a massive new public recreational complex that would include a nine-hole and an 18-hole course.

The courses would be part of a proposed \$17 million recreational complex to be built on a 1,200-acre site off Caja del Rio Road southwest of the city. The complex would also include baseball/softball fields and a soccer field, with

tennis and basketball courts and bicycling trails planned for the future.

The city has already put \$2 million into the project for design and construction of an irrigation pipeline to the site. Both courses would be irrigated with treated effluent. Yates Horgan Architects, a local architectural firm which also specializes in course design, has worked on the project.

Del. officials shut down renegade course owner

BEAR, Del. — Authorities here have moved in on Emile "Sonny" Walther and shut down his backyard, homemade 9-hole Cedar Run Golf Course for failure to follow county building codes.

In late July, a magistrate ruled that Walther violated New Castle County Code last year by converting his 60-acre Porter Road cow pasture into a nine-hole course without obtaining the necessary permits. The magistrate ordered the course closed until various improvements are made to its buildings and its per-

mits are in order. He also fined Walther \$1,624.

The shutdown was prompted by a complaint from another golf course developer in the area, Vandegrift Golf Course owner Bruce Standley, who was upset that Walther had not followed the procedures nor paid the costs associated with getting all the necessary permits. Walther and his supporters are upset with the decision and said it could lead to development of the property, which is an oasis of green space in an area many fear is being

overrun by developers.

Walther said he will try to salvage the course, which started as a simple one-hole hobby on land his family has owned since 1917. Over time he added another hole and then another. Neighbors began playing the course, and eventually he had nine holes and started charging modest greens fees.

As well as never getting the proper permits, Walther illegally converted a barn to a golf course office and cart garage. The course doesn't have a bathroom for the disabled, as law requires, or a paved parking lot.

Walther, a retired iron worker, did spend \$30,000 on legal fees and improvements last year and was granted a zoning exemption on the condition he would satisfy other requirements. He was not supposed to open the course this spring without county approval, but did so anyway.

Restored Sooner course reopens

OKLAHOMA CITY — Seminole businessman and golf enthusiast Jimmie Austin has helped give the University of Oklahoma (OU) the golf course it has long dreamed about.

Austin recently made a \$1 million contribution that put the university over the top in its effort to raise \$2.5 million for renovations on its 45-year-old layout, which was designed by Perry Maxwell. University regents voted to rename the course for Austin.

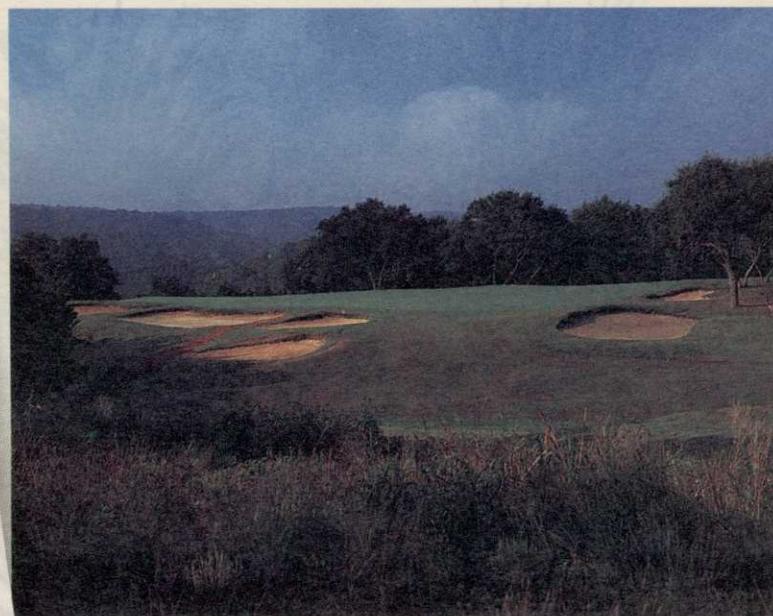
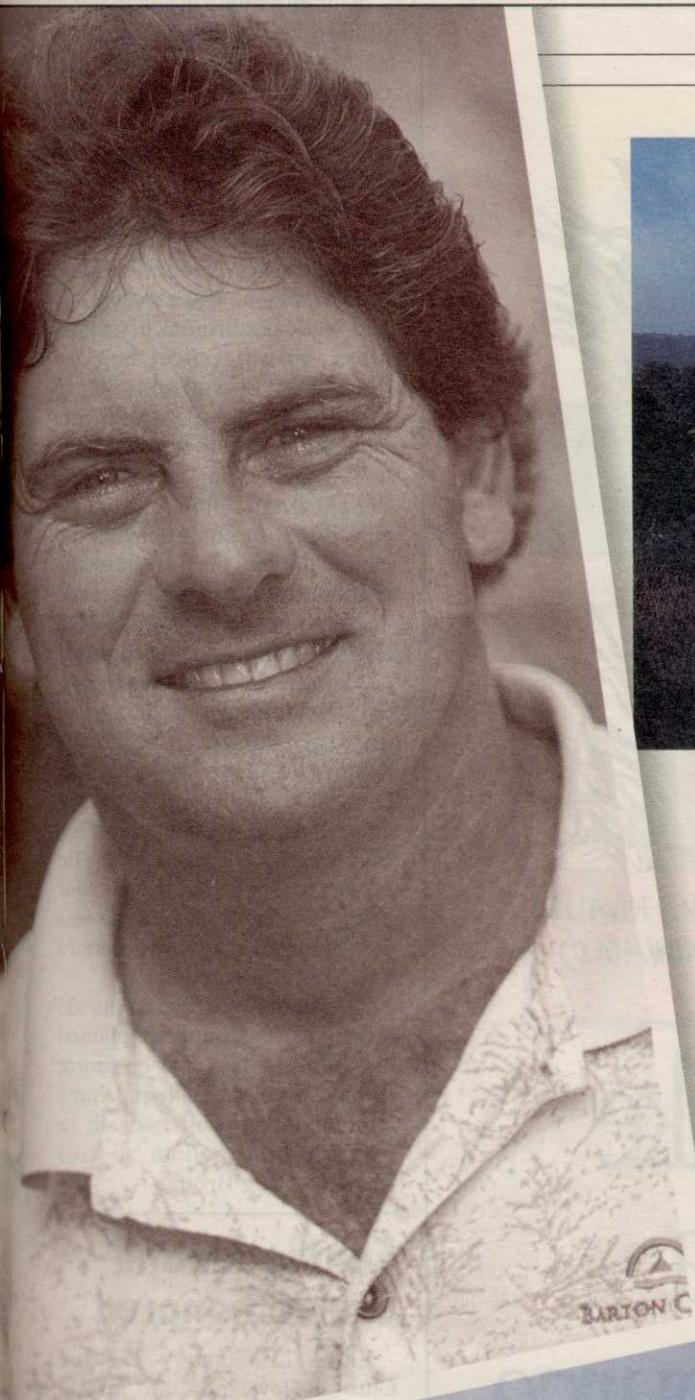
The renovated OU course opened in August with a 22-acre practice range, \$400,000 maintenance building and new soddings of Bermuda and Cato-Crenshaw bentgrasses. A varsity practice facility, named for former OU golfer Charlie Coe, is still on the drawing board.

Course architect Bob Cupp has handled the renovations and redesign. Because of the renovations, Oklahoma has already landed next year's NCAA men's regional golf championship.

Another spur for renovations was the recent completion of the Karsten Creek course, a show-piece facility near rival Oklahoma State University.

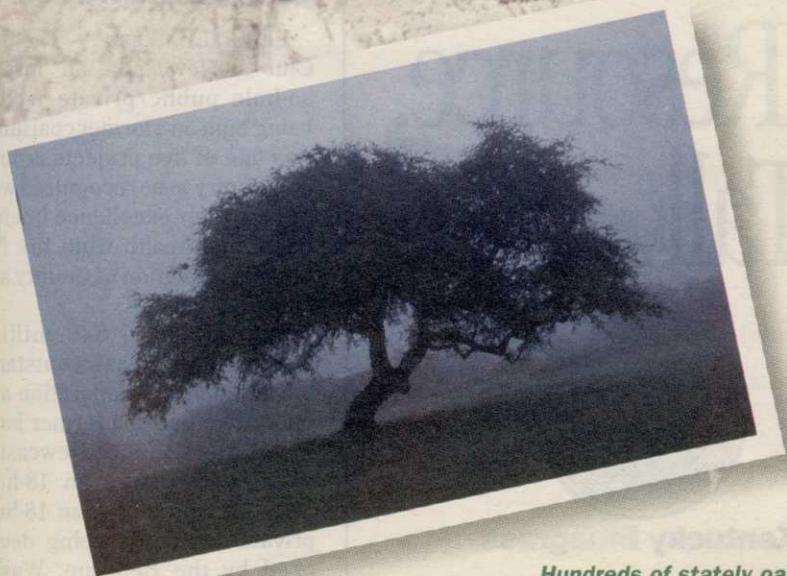
BOOTH LANDS N.H. PROJECT

SOMERSWORTH, N.H. — Architect William Bradley Booth has been chosen to design an 18-hole public course for the city of Somersworth. The proposed course will be built in the area of Lily Pond on a city-owned parcel of about 289 acres. The course is expected to take up between 125 and 150 acres. The city, with a population of about 11,500, has not announced what role it plans to play in building or operating the course. Construction is scheduled to start in 1997.



The Barton Creek Country Club includes three unique 18-hole experiences with courses designed by Tom Fazio, Arnold Palmer, and Ben Crenshaw/Bill Coore.

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Hundreds of stately oaks and wild deer are part of the natural beauty of the Barton Creek Country Club.



Survey says: We want bentgrass!

MIDDLETOWN, Ohio — The People have spoken.

Golfers at the 36-hole Weatherwax Golf Course have voted overwhelmingly to replace the city-owned course's bluegrass fairways with bentgrass, and they'll soon be getting their way.

About 75 percent of roughly 600 golfers surveyed said they preferred bentgrass, according to David Tieman. Tieman said the seeding of new bentgrass will be done during scheduled golf course renovations this fall and in the fall of 1997.

Wadsworth Golf Construction Company is scheduled to begin a \$2.1 million renovation project on the course after Labor Day. Plans call for renovations to tees, bunkers, fairways and cart paths on 18 holes this fall and the remaining 18 holes next fall.

Renovations are scheduled to begin on the Woodside course after Labor Day and on the Meadows course in late September or early October.

The courses will be closed during renovations and are expected to open next spring.

Golf may develop on Canadian base

TORONTO — Forty-six companies and other groups have submitted proposals for redeveloping the former Downsview military base, and golf courses have been the most popular proposed use for the 600-acre property.

Canada Lands Co., the federal crown corporation managing the base assets, said that as many as six of the proposals involve golf courses. Most of the base's big build-

ings, such as a couple of mammoth aircraft hangars and a gigantic bomb-proof warehouse [the world's largest cart barns, eh?] are included.

According to Canada Lands, redevelopment of the base site will also include residential, business, commercial and other recreational space. The project is supposed to replace some of the 1,000 military jobs lost with the closing of the base.

Developers fined for wading in without permits

DANBURY, N.H. — In one of the costlier environmental suits brought by the state in many years, the owners of Ragged Mountain Ski Area have been ordered to pay \$85,000 in penalties and transfer \$125,000 worth of property to the state for violating environmental laws while expanding ski trails and building a golf course it never had permits to build.

A judge's ruling in late July concluded a 7-week-old lawsuit against the ski area, which, according to a 6-month investigation, broke five wetlands violations and water pollution control laws during construction last summer of new ski trails and a golf course.

According to the New Hampshire Attorney General's office, the owners of the ski area, Al and Walter Endriunas of Easton, Mass., did not contest the violations in the lawsuit and will pay the fine in three installments over the next three years.

The court ruling also required the ski area to stop all work involved in the construction of the course until it gets the necessary permits from the state Department of Environmental Services, which also took part in the investigation.

Al Endriunas, who has repeatedly denied any wrongdoing, told the *Concord Monitor* he intends to move forward with the ski area expansion project and an 18-hole course, which will be put off until at least spring 1997. The project had been in the works for nearly two years when a suit was filed in June and a judge ordered a halt to all construction.

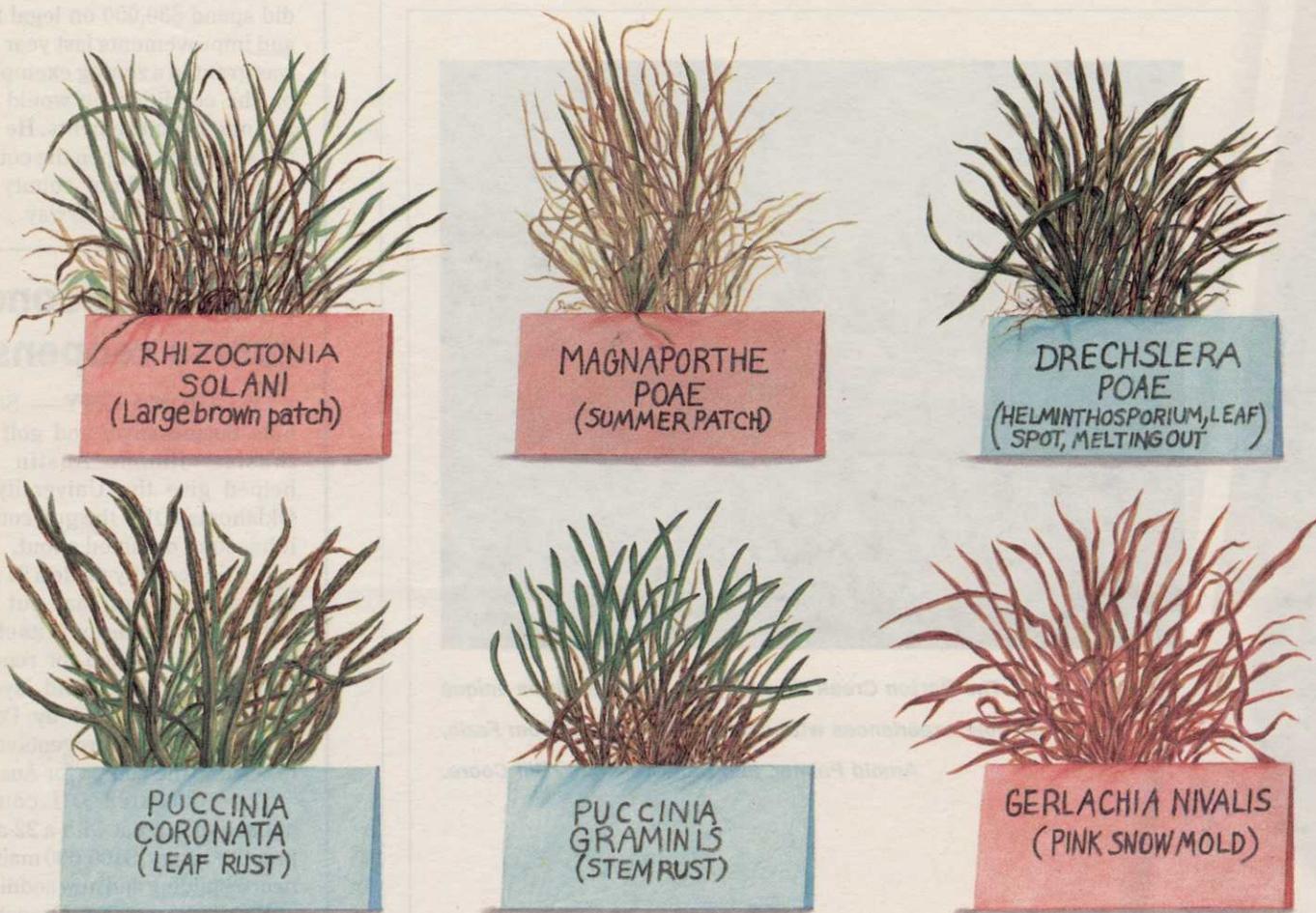
The state investigated the ski area after residents complained last summer that clear-cutting at the ski area was causing huge amounts of topsoil and silt to flow into and pollute an area known as Bog Brook.

Seattle landfill course honored

SEATTLE, Wash. — The Golf Club at Newcastle, an upscale 36-hole public/private facility being built on a former coal mine, was one of five projects around the country to be recognized with an award for excellence in environmental health from the National Association of County and Health Officials.

The 350-acre, \$40 million project was cited as an outstanding example of cooperation and innovative use of a former landfill. The Golf Club at Newcastle, which will feature an 18-hole daily-fee course and an 18-hole private course, is being developed by the Bellevue, Wash.-based Oki developments.

The first of the two courses, both designed by course architect Robert Cupp, will open in 1997.



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Following Alabama's example, Mississippi courts development

JACKSON, Miss. — Big-name golf course designers are setting up shop these days in the Magnolia State.

From the marshlands of Bay St. Louis to the hills shading Sardis Lake in north Mississippi, some of the world's top course architects are currently working on signature projects around the state. At least five big-name designers have courses under construction, two funded by tax dollars and three by casinos.

In 1994, the Mississippi Legislature designated \$10 million to build public courses at John Kyle State Park in Sardis and Percy Quin State Park in McComb. The state hired architects Bob Cupp in Sardis and Arthur Hills in McComb. Both courses are expected to open in October.

Meanwhile, in Bay St. Louis, Arnold Palmer's company designed the Bridges Golf Resort at Casino Magic [see photos page 47]. An Arnold Palmer Golf Academy is already open and the \$9 million course is scheduled to open in October.

PGA Senior Tour star Hale Irwin has designed a public course at the Grand Casino in Tunica. And, in Philadelphia, the Mississippi band of Choctaw Indians, which owns Silver Star Resort and Casino, is building

Choctaw Trails Golf Club as part of a \$100 million project that includes an addition to the casino and its adjoining hotel. The Choctaw course was co-designed by Tom Fazio and Jerry Pate.

Jeff Morton, executive director of the Mississippi Golf Association, said the new courses are needed because of increased play in the state and will boost the state's reputation as a golfing locale, which will hopefully lure more golfing tourists.

Another goose dilemma solved by four-legged strategy

ST. CLOUD, Minn. — Members of St. Cloud Country Club raised \$2,600 to pay for the newest member of the golf course maintenance crew.

And Fran, an 18-month-old, smooth-coated border collie, has been a minor hero in the club's fight against invading flocks of geese that were leaving piles of surprises all over the course and munching on greens aprons. St. Cloud course superintendent Rob Barr estimates that there were 700 geese on the course last season. Chemical treatment was too costly. The birds couldn't be shot. A snow fence had been tried but didn't work very well once the birds were old enough to fly.

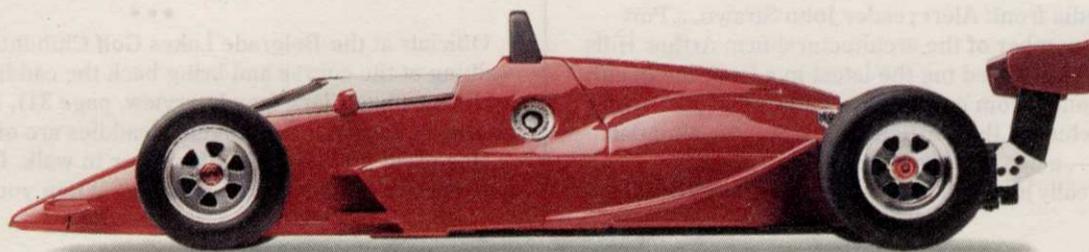
St. Cloud club member Paul Sullivan first heard about the idea of using a dog to combat geese in

a magazine article. About 45 members voluntarily contributed money that would be used to buy Fran. No dogs were available in Minnesota, but Sullivan found a farm in Virginia that trained dogs for such work. Barb Ligon, who trained Fran at Seclusival Farms in Shipman, Va., said she has sold 100 dogs to golf courses — mostly in the Northeast — to battle the geese.

Fran takes several trips around the course each morning alongside Barr in a cart. Fran quietly runs around the course looking for geese. Using her instinctual herding ability, she'll chase the geese into the water until called off by Barr or Sullivan, who also works with Fran. They generally don't allow Fran to go into the Mississippi River, where the current is strong.



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Watson develops KC youth facility

KANSAS CITY — Tom Watson and the Kansas City Golf Foundation are providing a model for cities and towns looking to promote junior golf.

Watson, a vocal supporter of golf as a character-building game for children, is designing the second small-scale junior golf facility in the city at the Blue River Golf Course. Watson's design — budgeted at \$316,000 — calls for three, par-3 holes and a total of five greens. There will also be a pitch-and-chip area and a practice putting green. The Blue River facility is scheduled to open next June. It will be open to all ages, but the goal is to get juniors to play.

Kansas City's other junior-oriented facility is the Learning Center at Ironhorse Golf Club, which has a three-hole practice course, practice tee and short-game center [see story page 36].

KILLIAN COURSE OPENS IN MICH.

NEW BUFFALO, Mich. — Whittaker Woods, the new upscale, 18-hole daily-fee layout just southeast of New Buffalo, has opened. The course was designed by Ken Killian, who designed Kemper Lakes near Chicago. The clubhouse will not be completed until next year and the official grand opening will be in May 1997, according to developer Peter O'Brien of Chicago.

Why golf isn't price sensitive

Before you read any further, check out our new feature — "Manager on the Street" — which can be found on page 42. Go ahead; I'll wait.

Well, several managers indicated they felt that, 20 years down the road, the golf industry would most resemble the hotel industry. This is interesting because these sentiments echoed several I heard during my research for the customer service story that starts on page 1. What's even more interesting? Everyone uses the Westin, Hyatt, Doubletree example.

However, the hotel business has learned that money can be made and needs served by developing modest chains like Motel 6, Hampton Inn and Super 8. Here's hoping golf developers and managers will see the same opportunities and build some truly affordable golf courses, where service is still king but golfers don't necessarily need to plunk down 100 bucks for a round.

Problem is, of course, developers are often forced to develop the big-budget courses and charge the giganto green fees because their debts services dictate it. Though we've dissected this issue time and again in *Golf Course News*, it took a story in *Forbes* (August '96) to focus the golf industry's attention on this serious matter.

As Neil Miller, associate general counsel at National Golf Properties, explained to *Forbes*: "It costs at least \$6 million to build a modest golf course. Operating margins are typically 30 percent; so to earn even 15 percent on the \$6 million investment, the course would need to gross \$3 million. Assuming an optimistic 50,000 rounds are played each year, the course would have to charge \$60 a round to make its nut."

Now, we can quibble with things like the \$6 million figure, but that assessment is basically right on the money. It further illustrates two points: First, the reason a majority of new developments falls into the "upscale daily-fee" category is necessity; they must charge \$90 to make back their investment. And second, the National Golf Properties/American Golf Corp. strategy of buying what are essentially "used" courses for approximately one-third the construction price makes a whole lot of sense.

I'm not as worried as *Forbes* about the glut of new golf course developments. After a few years of willy-nilly development in already overpopulated golf markets, entrepreneurs are beginning to understand the biggest test a drawing-board project must pass is geographical. Why else would Wisconsin and Minnesota lead the nation in new openings?

Further, Baby Boomers are just now turning 50 and rounds should steadily rise over the next decade. If they don't and development continues apace, THEN we have a problem.

...

Also on the media front: Alert reader John Strawn, a Portland, Ore.-based member of the architectural firm Arthur Hills & Associates, recently faxed me the latest in a long line of anti-golf polemics gleaned from our nation's editorial pages. While Strawn capably rebutted this particular column, the situation got me thinking — a dangerous notion, as you know.

To me, what's really interesting about these anti-golf tirades —

Continued on page 12



Hal Phillips, editor

Better prep helps developers put up hall-of-fame numbers

Remember your Mom hammering at you: "Do your home work!" ... "Have you done your homework?" ... "Where are you going without doing your homework?"

Henry Ford once said: "Before everything else, getting ready is the secret of success." And we all know where he ended up.

Yes, preparation is a key to success and, in the golf industry, to successful developments. We reported in August that a golf project in Maine got all its approvals in seven weeks. Seven weeks! Sounds something like Lou Gehrig's 2,130 consecutive games played — a record that would never be broken, right? Wrong. Just as Gehrig's record fell to Cal Ripken, so did The Meadows' record fall. And quickly... In July, Belgrade Lakes (Maine) Golf Club, Inc. (BLGC) was granted approval, in five weeks, to build an 18-hole golf course; it would have been three weeks if a second traffic study were not ordered.

Without advance preparation and compromise, permitting might have taken two years, said BLGC President Kyle Evans. The 240-acre property contains 35 acres of wetlands and construction is only impacting 5,000 square feet: "virtually puddles," he said.

"We had to make a number of changes in routing, but it was worth it," Evans said. He credited the environmental consulting firm Maine Land Development.

Likewise, Maine Department of Environmental Protection regional project director Chuck Kellogg said today's developers are far better prepared than in the past. The result is, they save time and money — sometimes a lot of both.

"No question, their investigation and pre-construction work, and the quality of consultants have improved tremendously," Kellogg said. "Ten years ago, people were trying to do a lot themselves. But now they're finding out it doesn't cost them any more to hire a good consultant. A consultant puts the project together in half, or one-third the time, and a few months makes a big difference in the cost."

Meanwhile, consultants are working more closely with the DEP, he said.

"We try our best not to require unnecessary things, to be up front and honest, and interpret the law in a fair manner," Kellogg added. "In the past, people would dig their feet in and argue."

Kellogg's Southern Maine counterpart, Linda Kokemuller, concurred, saying, "Everybody is better prepared."

"A lot of golf courses have a lot of wetlands on them," she said. "We do a lot of pre-app work with them now. They didn't do that seven or eight years ago. We meet before they even apply. So, when the application comes in the door it's more apt to have met our requirements."

So, all you would-be developers, hit the books.

...

Officials at the Belgrade Lakes Golf Club intend to push walking at the course and bring back the caddie program. British architect Clive Clark (see interview, page 31), said that at his course in England, Sunningdale, caddies are often used.

"It's great fun," he said. "It's nicer to walk. It's almost easier to concentrate on your game walking. When you're hopping out of

Continued on page 12



Mark Leslie, managing editor

Letters

LENDERS CAST WARY EYE

To the editor:

Contrary to popular belief, bank presidents who make loans for golf course development are not completely enamored with golf — the business. Or so it would seem from the findings of a recent survey completed by our firm.

We surveyed several golf course lenders and found that golf courses are being charged higher interest rates than other real-estate projects. Interest rates for golf course development averaged 250 to 500 basis points above the LIBOR rate, or up to 3 percent above the prime rate.

In other cases, lenders assess a rate at 250 to 500 basis points above corresponding treasury bills. And for institutional quality properties (malls, prime of-

ice buildings, apartments, etc.) this rate may be as low as 125 to 200 basis points above corresponding treasuries.

The biggest reason for this rate increase is that banks view golf courses as a management-intensive business (as opposed to a pure real-estate investment). While charging higher interest for golf course developments, most lenders will also place developers under a high level of scrutiny and require previous golf course operating experience.

Despite the recent report that 1995 was a record-breaking year for golf course construction and the fifth year in a row of increased course construction and the large expansion in golf course development, the interest rates have not come down. Why is this? Many lenders feel that the fail-

ures of the past will be repeated. The elevated level of sophistication in the golf course industry has not yet been recognized fully by the lending community. Shrewd investors are taking advantage of this by offering equity and debt funding at increased rates, often with participation.

Only time will tell if this means that the financial community is beginning to take a more friendly look at golf and if these investors have already recognized this and are taking advantage of a favorable market for the time being. Conversely, it could mean that these expensive means of financing will continue to make golf deals more difficult to do and less profitable for the developers.

I believe that we in the golf industry need to keep elevating our level of sophistication in or-

der to enjoy the benefits of other more traditional real estate and business opportunities. Interest rates are simply a reflection of perceived risk. It is our job to show the financial community that we have the ability to accurately and objectively identify the good deals from the bad and that good golf deals should be judged individually and not based on the failures of others in the past.

Furthermore, we need to be able to tell the financial community when and why a particular golf deal is a bad one. When the financial community is confident in our abilities to do this, then and only then will golf courses be treated as other types of investments.

Laurence A. Hirsh, president
Golf Property Analysts
Harrisburg, Pa.

GOLF COURSE NEWS

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Circulation Manager
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Editorial Office
Golf Course News
Box 997, 38 Lafayette Street
Yarmouth, ME 04096
207-846-0600; Fax: 207-846-0657
hphillip@biddeford.com

Advertising Office
National Sales:
Charles E. von Brecht
Box 997, 38 Lafayette Street
Yarmouth, ME 04096
207-846-0600; Fax: 207-846-0657

Western Sales:
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Lawrence, KS 66046
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Subscription Information
Golf Course News
P.O. Box 3047
Langhorne, PA 19047
215-788-7112

United Publications, Inc.
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By FRANK J. DiNENNA

Jamaican Postcard

Paradise? Yes. Construction cakewalk? No, no, no!

One may think that golf course construction has a basic concept: Read the specifications, do a materials take-off of the plans, walk over the site, bring in key personnel and equipment, purchase materials, hire and train local labor. Anticipating any problems, in one to two years — depending on the geographic location — you should have built another championship golf course. This concept seems to work in most countries around the world, but not in Jamaica. Jamaicans build golf courses the old-fashioned way: by hand and with very little money.

I took on a project in Port Antonio, Jamaica, called San San Golf Club. A very easy project — building 12 U.S. Golf Association-spec greens and 18 sets of tees with a basic manual irrigation system. Construction began in October 1994, after waiting six months for equipment and materials to come on site. Once the equipment arrived, we had to replace all of the hydraulic hoses, tubes and water lines due to rot and corrosion because of the long stay on the docks.

Construction went slowly until January 1995, when the owner finally hired a full crew. But in April 1995, we had a strike due to low wages. Two months later, the owner hired a new

crew from another part of the island. This crew was very slow. The first crew, which I had trained, could finish a 10,000-square-foot drain tile installation in a green in less than a week. (Yes, I know your team could do it in a day). The new crew took more than a month. To add insult to injury, this crew was stealing everything they could: tools, parts, gas, oil, batteries. If it could be picked up, it was gone.

Eighteen months later, I sit in my clubhouse chair, looking down on half-completed greens (drain tile and gravel only), roughed-in tees, no irrigation materials, and no tools or parts to fix broken-down equipment. This project should have been completed within four to six months. Besides the problems with the crew, equipment, parts and materials containers sitting on the docks in Kingston, I was dealing with an owner who was in no hurry whatsoever to file the proper papers to clear goods through customs or replace the crew. Although he paid my monthly invoices, he was content with the progress: building and maintaining by

Starting construction is the easy part. Finishing the project is another story in itself. First, take your construction calendar, have it framed and placed on your office wall. It will make a nice conversation piece.'

hand and spending little to no money.

Readers may wonder what I am complaining about, sitting here and getting paid. It's an American dream come true!

In reality, one's mind may turn to mush playing the waiting game. I found myself lost in fantasy looking at

pictures of beautifully manicured greens in golf magazines.

Since I came to Jamaica to build San San, I've found other things to fill my idle time. In July 1995, I was hired as building consultant to oversee construction of a nine-hole executive golf course at Braco Village Resort, a hotel on the north coast, east of Montego Bay. Construction was completed by June 1996 (take note, 11 months). I also consult for two other courses — Caymanas in Kingston and Negril Hills (Negril Hills took more than 2-1/2 years to open its 18 holes), and I've joined the Jamaican Greens Superintendents Association.

My advice to any builder planning to venture into Jamaica hoping to find gold is: Do your homework. To build in

Jamaica takes a lot of planning, research and patience. There is an element of surprise that could cost your company a lot of money in the long run. To begin with, the contractor should send their project manager to the site two months before start of construction.

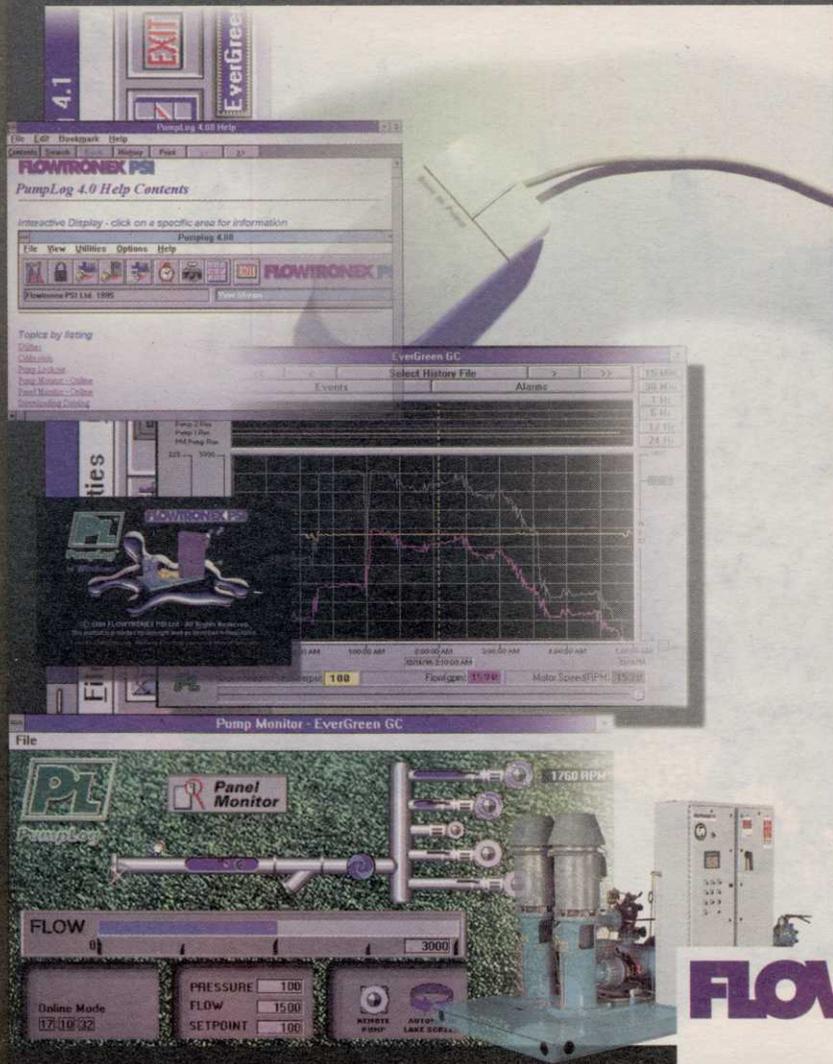
This person will need a work permit, an enclosed four-wheel-drive vehicle (a good used one can be obtained in Jamaica), and a 3-watt cellular phone. He should get familiar with the bureaucratic system, find a good lawyer and customs broker, locate vendors and subcontractors, get acquainted with the locals, find housing, hire a good security service (a must) and learn how to drive Jamaican style (on the left).

Next he will import about 90 percent of the materials needed to build the course; tools, irrigation components, used construction equipment, four-wheel drive field trucks, a good service truck, fertilizer, turf, and a lot of spare parts. He may even have to import sand for greens and traps. I want to emphasize the spare parts, especially the hard-to-find items. When a piece of equipment breaks down and you don't have a spare part, do not depend on any express couriers to deliver to your doorstep the next day. Federal Express will get your package to Jamaica the next day, but then it will be held at customs until you can get it cleared, and that may take up to two weeks. If you are in a hurry, have one of your personnel fly in carrying the item needed in his bag.

Continued on page 13

Frank DiNenna runs a project management service called Golf Management. He has lived and worked in Jamaica for the past two years, consulting and managing golf course construction.

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Phillips comment

Continued from page 10

whether issued from Sierra Club members or thoughtless columnists who regurgitate the same fatuous arguments and trot out the same passel of tired, old golf-oriented catch phrases—is their frequent degeneration into schoolyard-level name calling. It seems every anti-golf harangue (and one surfaces nearly every week) eventually falls back on pegging golf as a game played by fat guys in bad clothes. This ironclad argumentative device is akin to dismissing legitimate environmental concerns because they might be issued by pony-tailed '60s relics in tie-dyes and Birkenstocks.

The latest example comes from a guy named Doug Adrianson, an editor at the *Los Angeles Times*, whose column was syndicated in *The Portland Oregonian* (and probably other Sunday papers across the country) on July 28.

The headline is a perfect example of what I'm talking about. It read, "The devil is a duffer in Dockers—Golf is an evil mix of pollution and bigotry and ought to be whacked out of bounds."

Here we have the obligatory dig at golfing apparel comple-

mented by yet another hackneyed golf metaphor. Typical.

In his opening paragraph, a determinedly hyperbolic Adrianson calls golf "a tool of Satan," before returning to things more puerile in paragraph two by posing the question: "What gets me so teed off about a bunch of weirdly dressed guys with tassels on their shoes and dimples in their balls?"

Hey, Doug: I have a few questions for *you*. First, are you capable of original thought? Do you have any idea how many times, for example, folks have used the incredibly lame and obvious

metaphor "teed off" in print? Further, are you so deluded as to think you're the first to deride golfers for their admittedly questionable fashion sense? As a journalist, you should be more sensitive to fashion stereotypes relating to vocation/avocation—newspaper guys don't shop at Barney's, I'm sure you'd agree.

In short, Doug, I'm disappointed that you failed to dream up a new and different way to demean golf and golfers. And if you think about it, Doug, how strong can your argument possibly be when its most strident language is reserved for stan-

dards of dress?

•••

Old friend Pat Jones, a veteran member of the management staff at the Golf Course Superintendents Association of America, has joined Selz/Seabolt Communications of Chicago as senior account supervisor.

Selz, of course, is the firm which handles association management duties for the American Society of Golf Course Architects (ASGCA). Indeed, Paul Fullmer, president of Selz/Seabolt, also serves as the ASGCA's executive director.

Jones said he will combine

work on existing agency accounts with development of programs for companies in the golf/turf industries.

"We have some really innovative ideas on ways that green industry companies can establish and maintain a 'green' image," Jones explained. "With our capabilities here in Chicago and our offices in Washington, D.C., we can bring a broad public-affairs approach to environmental challenges. We can also help companies develop an effective strategic marketing plan for breaking into the industry, or expanding their current business."

Leslie comment

Continued from page 10

your cart to your ball and hitting it, you're often not quite ready.

"And the cart doesn't give you much advice, either."

Clark paid high compliments to modern superintendents. Speaking of changes to the game brought on by advances in equipment, he said: "The big difference is the greenkeeping. It has improved tremendously. Watch these 30-year-old shows and see how slow the greens are. The ball rolls beautifully today. The greens are almost perfect. That even changed the way people putt. The older pros are hitting the ball almost with their right hand. There were not too many Ben Crenshaws and Phil Mickelsons 40 years ago. That kind of stroke is hard to make work on a slow green."

•••

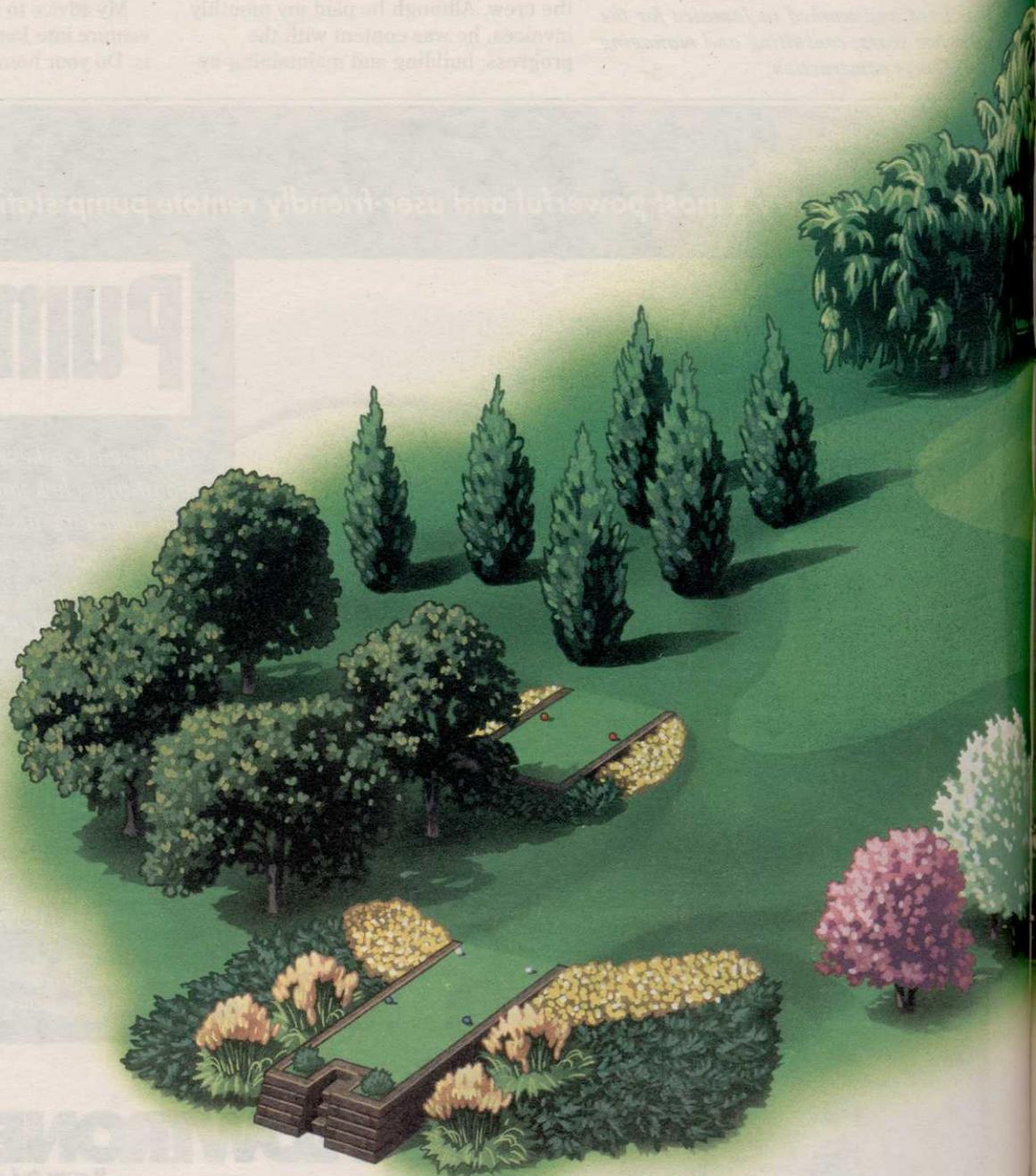
"I've never seen bentgrass grow in as fast as it did there," said Dan Proctor about Sand Hills Golf Club in Mullen, Neb.

The golf course builder and shaper (see story, page 31) said working on Sand Hills with architects Ben Crenshaw and Bill Coore "wasn't like a job. It was almost like a holiday in which you get to build golf holes. It's probably the greatest setting for golf holes in America."

His partner, Dave Axland, added: "We really felt we were privileged to be part of something special. We had no input on the design, just construction of the bunkers. It's one giant USGA green. It's fantastic."

HERE. THERE. EVERYWHERE.

HOW'S THAT FOR APPLICATION GUIDELINES?



DiNenna comment

Continued from page 11

Once your manager is in place, start shipping. It will take six to eight weeks to clear shipments off the dock, providing all paperwork is in order. Once materials and equipment are in place, send your key personnel (supervisors, shapers, etc.). Be very selective with your personnel. Do not send people with bad habits or no patience. They will lose it very quickly, and may even start a worker's strike.

How you deal with the local labor is a key element to your

success in Jamaica. The best way is to hire a local foreman with good references. Let this person give the instructions and hand out the disciplinary action to the locals. Never discipline a local. Most of all, never discipline your foreman in front of the crew.

Starting construction is the easy part. Finishing the project is another story in itself. First, take your construction calendar, have it framed and placed on your office wall. It will make a nice conversation piece.

When hiring local subcontractors to move your fill, haul material, rent their equipment,

etc., thoroughly check the references. You will find the contractor will show up with his fleet of trucks, loaders and labor the first day, raring to go. This will give your project manager a false feeling that he will finish this course in record time. But, as time moves on, these subcontractors will start to pull equipment and laborers off the site to work on new contracts. This will be done over a period of time. At first the contractor will say he needs a truck or two to do a little job down the road. Within weeks to a month, your fleet of, say, 10 dumptrucks is down

to two, and the loader is moving back and forth every other day to every other week.

The key here is to offer bid contracts only. The contractors will insist on weekly payments based on a daily invoice. This is where you will need a reliable man to check their progress and materials in place. In Jamaica, there are no scales to weigh loads. You're going to have to measure every truck's bed and insist on a truck number for identification. Never give a contractor money up front. Hold back more than 10 percent — perhaps 20 to 25 percent. In

the end you will need this money to hire another subcontractor to finish the job.

By the way, the contractor will use this tactic of moving equipment around to try to confuse the manager. The manager should appoint one of his key personnel (not a local) to count loads and the movement of trucks in and out. This should be done first thing in the morning, then at 10 a.m., again at 1 and 3 p.m., and at quitting time. If you think this is being obsessive, wait until you get your invoice.

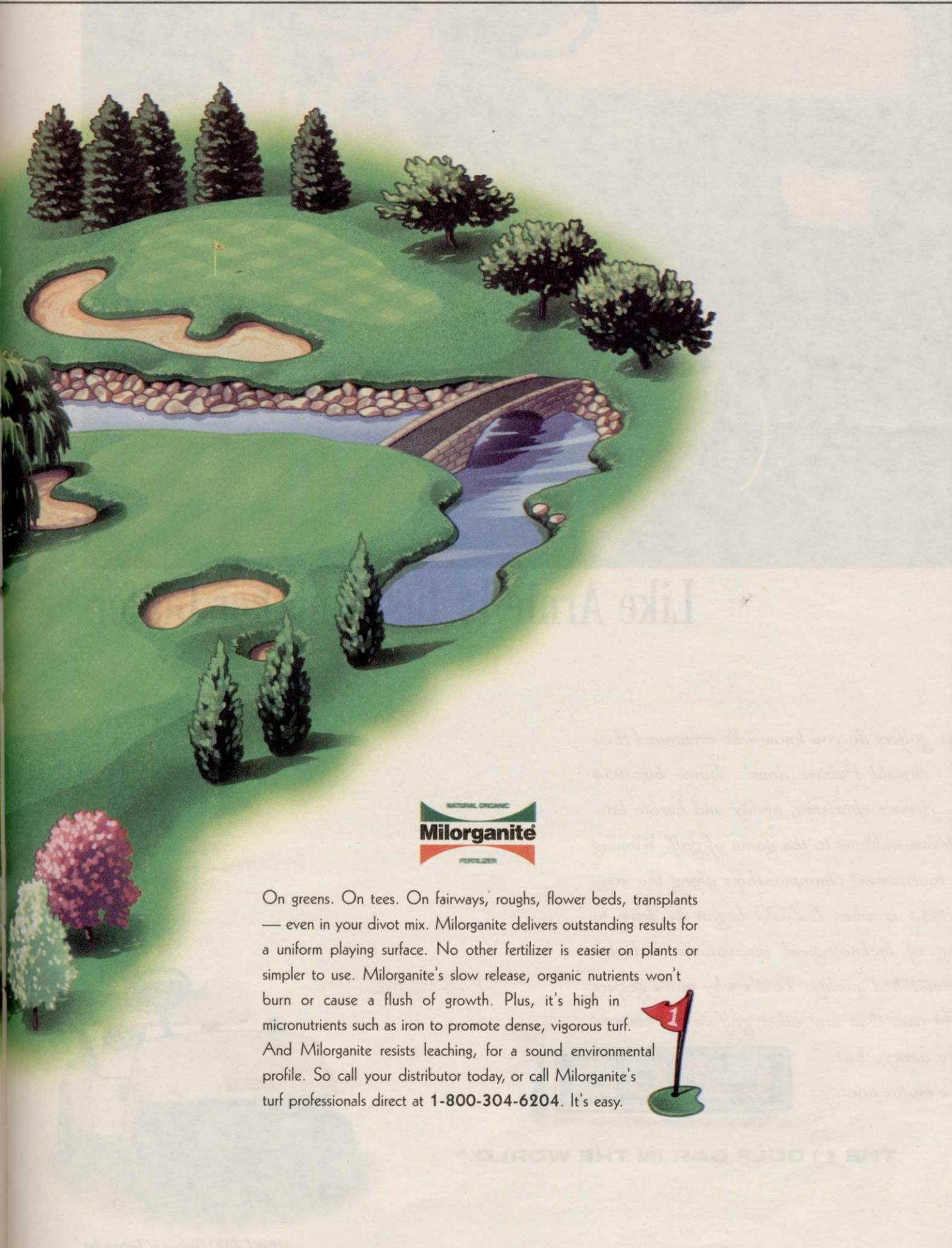
When I said, "Do not use a local to count loads and trucks," it's because the contractor will make a deal with the local to write down false numbers. Later, the contractor will give this man his cut of the action. You will find the same thing will happen with local laborers. They will work hard at first, then as the project comes close to being finished, they will start to taper off, prolonging the ending. They feel once the project is completed, their job will end, so they will drag it out.

Stealing is a major problem in Jamaica. Even with the best security system in place, items disappear right from under your nose. If the people like you, they will respect your personal things. Since I've been in Jamaica, I have not lost any of my personal items or money. I once dropped a \$500 Jamaican (\$12.50 US) in the field, and one of the men found it and returned to me. This assured me of never having any problems.

On the other hand, stealing at San San is like another job. If it is not welded down or concreted into the ground, it will disappear. It's easy to understand why there is rampant theft on the island. The standard weekly paycheck for a laborer with few skills is \$1,000 to \$1,200 Jamaican dollars per week (\$25 to \$30 US). I find it very hard to live on \$100 US per week, and my overhead is very small. On most projects, the crew is housed in camps, and fed twice a day. A contractor can find a good labor crew for \$1,500 Jamaican dollars per week (\$40 US), operators and foremen for \$4,000 Jamaican dollars per week (\$100 US). Keep in mind, when it comes to your Jamaican crew, be fair and treat them with respect. They will respect you and work hard on your project.

In the end, you will toast to a job well done. And as you look out your office window at the finished project, you will remember your construction calendar framed on the wall. It will seem like another lifetime.

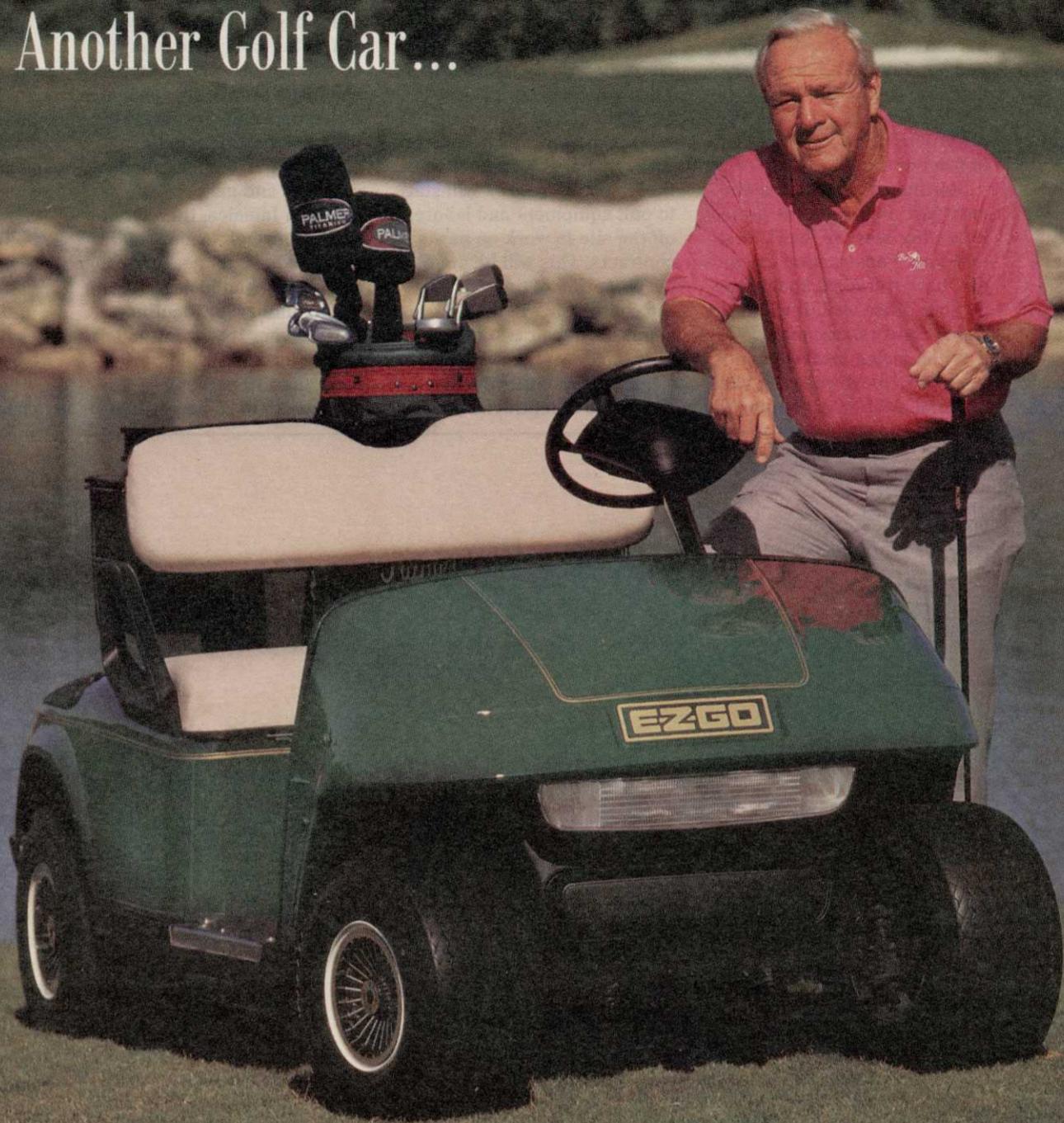
The island of Jamaica is a beautiful country and the people are very friendly. One could live a blissful life in this tranquil paradise, provided he does not build golf courses.



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BRIEFS



LUIKENS BUSY IN THE SOUTHLAND

CONROE, Texas — Richard Luikens Golf Services here is consulting on several construction projects scheduled to open this fall in Texas, Arkansas and Louisiana. Luikens, former director of golf course maintenance for The Woodlands Resort & Country Club in Houston, assisted in the growth with Beacon Lakes Golf Club and Green River Golf Course in Houston, RidgePointe Country Club in Jonesboro, Ark., and Cypress Bend Golf Course in Many, La. For more information contact Luikens at 409-441-5100.

NY TURF SHOW NOV. 12-15

ROCHESTER, N.Y. — The annual New York State Turfgrass Association Turf and Grounds Exposition will be held Nov. 12-15 at the Rochester Riverside Convention Center. This year's event will feature educational seminars, trade show and keynote speaker Paul Maguire, a former Buffalo Bill and commentator for NBC Sports football coverage. For more information contact 800-873-TURF.



GA. TURFGRASS REPORT POSITIVE

DULUTH, Ga. — The Georgia Turfgrass Foundation Trust's Turfgrass Research Report demonstrates that many new bentgrass cultivars are performing better than traditional golf course bentgrasses. Results were gathered in the eight Southern states participating in the 1993 National Turfgrass Evaluation Program trials. For more information contact the Trust at 770-975-4123.

PSU BESTOWS AWARDS OF MERIT

STATE COLLEGE, Pa. — Three Pennsylvania State University graduate students have received Awards of Merit from the Pennsylvania Turfgrass Council. Quebec native Andrea-Anne Couillard received her bachelor's and master's degrees from Laval University in Quebec, her doctorate from Penn State and has accepted a post-doctoral position at Guam University. Kathy Kallenbach of Erie, Pa., received her bachelor's and master's degrees at Penn State and has been accepted for the doctoral program there. Douglas Linde of Coopersburg, Pa., completed his doctoral work this summer and hopes to become a professor.



ONE IF BY AIR, TWO IF BY SEA

Gambusias worth their weight in mosquitoes

By MARK LESLIE

CHESTERTON, Ind. — So, you've tried the "air" approach — the bat, purple martin and tree swallow houses are all installed — but the mosquitoes are still bugging golfers and the grounds crew alike. How about trying the "water" approach, getting the little pests before they take to flight?

That's what senior ecologist Robert Wolfe of Walkerton-based J.F. New & Associates here recommended to superintendent Don Ewoldt of Sand Creek Country Club in Chesterton. The water approach entails transplanting the little-known *Gambusia affinis*, commonly known as mosquitofish, to Sand Creek's ponds and wetlands. *Gambusia* could become the superintendent's best friend at golf courses with still, or slowly moving water — the best breeding ground for mosquitoes.

Since their mouths are located on top of their heads, the *Gambusia* eat mosquito larvae off the water surface before they hatch. And since they grow to a full size of 1 to 2 inches, they can reach very shallow water that larger fish can not.



Also, they are tolerant of poor water-quality conditions and don't need much oxygen.

"When we deal with golf courses, they are always concerned with mosquitoes and want to drain the wetlands," Wolfe said. "But you can't do that."

"Mosquitofish are one piece in the control puzzle. I recommend purple martin, tree swallows, bats and

Continued on page 24

MSU's Vargas on the cusp of pioneering research

Dr. Joe Vargas has been a professor of botany and plant pathology for 28 years at Michigan State University, where he has been involved in teaching, research and extension. His has helped develop



Dr. Joe Vargas

the *Pseudomonas aureofaciens* (TX-1) biological-control microorganism that is proving useful in treating warm-weather diseases when applied through *EcoSoils*' Bioject system (see August '96 Golf Course News); discovered the first bacterial disease in turf on Toronto creeping bentgrass; reported the first resistance by a turfgrass pathogen to a systemic fungicide and later reported the first resistance to DMI fungicide by the dollar spot organism; developed the

first mathematical prediction model for a turfgrass disease; and developed a fungicide timing model for summer patch that is used worldwide.

Golf Course News: Can you tell us about your work on injecting disease-resistant genes into bentgrass?

Joe Vargas: The USGA funded a project for this at MSU. Dr. Miriam Sticklen isolated a chitinase gene from an elm tree and is trying to incorporate it into creeping bentgrass. Since most fungi have chitin in their cell walls, theoretically, a chitinase gene in the turf plant should produce chitinase that could attack the cell wall or the fungus and destroy it. A year from now, we should know how successful we have been.

GCN: What is the nature of MSU's



work on sand green construction?

JV: The USGA has funded a project to look at mixes for USGA-spec greens conducted by Drs. Crum, Paul Rieke and John Rogers. USGA greens are still the most popular. Hopefully this

will lead to some minor refinements to make them even better.

GCN: What are you discovering about using peat moss to minimize damage from hydraulic oil leaks?

JV: Most researchers believed, for many years, that the heat of the hydraulic oil killed the turf when a mower hose ruptured. Attempts to remove the oil with soap or wetting agent failed. Zorbit Technologies approached us with a product called Peat Sorb, a super dry peat moss.

Continued on page 27

New zoysiagrasses fulfilling prophecies of the past

By MARK LESLIE

BELTSVILLE, Md. — You could call it The Zoysiastine Prophecy. And in this case, it came true.

"Two years from now," Dr. Milt Engelke of Texas A&M University told Golf Course News in 1994, "more vegetative types will come on line, and they will use 20 to 30 percent of the water required by Meyer, which translates to 50- to 70-percent less water than used for hybrid Bermudagrass. These also will have excellent cold hardiness and very low fertility requirements."

In the late-summer of 1996, Engelke has proven prophetic.

"It's all true," he said. "Actually, I've known this for five years. We've just been taking a long time getting them [zoysiagrasses] out."

A more moderate Susan Samudio, head of Jacklin Golf's zoysiagrass breeding program since 1990, concurred: "We've made tremendous advances in seed production. But if you compare them to cool-season grasses, it's still extremely low. We're almost to the point where we're satisfied



with the yield and we're starting to work more on the qualitative traits — texture, color and density."

Some golf course superintendents are sold on zoysiagrasses for their areas, but many are waiting to see how the new varieties perform before

taking the plunge.

Zoysias win golfers' favor for their upright growth that gives a consistently good lie. Superintendents like them for many reasons.

"After a lot of investigating, zoysia was picked as the best for our transition area — not only from a playability standpoint, but for its financial advantages as well," said Wayne Van Arendonk, superintendent at Rolling Hills Country Club in Wichita, Kan., which solid-sodded its fairways, green surrounds and tees — 34 acres worth. "We figure the annual savings between \$45,000 to \$60,000."

Rolling Hills had a mix of ryegrass and common Bermudagrass, a cool- and warm-season mix that proved hard to maintain.

Continued on page 17

Cheaper product forecast for zoysias

COLLEGE STATION, Texas — Faster production cycles for the newer zoysiagrass varieties should translate to better — and cheaper — availability. Good news because availability has been a problem.

Concerning his grasses, Dr. Milt Engelke of Texas A&M University said in early August: "We're just now going into production this year. We still have not cut sod for the first production, so it probably won't go into production until next year and it may not be available until 1998."

Future availability should be improved — at least for some varieties.

"The production cycles are much faster on the newer varieties," Engelke said. "With Palisades and Crowne, which are El Toro types,

Continued on page 17

Final-year report on national 1991 zoysiagrass tests

Turfgrass Name	AL1	AR1	AZ1	CA2	CA3	GA1	GA2	ID2	IL1	IL2	KS2	MD1	MO1	MS1	OK1	TX1	TX2	UB1	UB2	VA1	Mean	Rating in '95
*m Cavalier (DALZ 8507)	4.9	6.9	6.8	4.4	5.6	7.3	4.4	1.7	3.9	7.1	7.4	7.8	5.3	7.1	7.3	7.1	5.4	7.8	6.1	5.4	6.0	1st
m Marquis (TC 2033)	4.9	6.8	6.5	4.9	6.0	7.3	4.3	1.0	3.7	7.6	8.3	7.7	5.3	7.1	8.0	7.3	5.6	6.2	5.6	4.9	6.0	4th
j Sunburst	4.7	6.0	6.3	5.0	5.6	6.9	4.6	8.0	4.1	5.6	7.3	6.9	5.5	5.9	5.7	6.9	3.5	7.0	5.8	6.2	5.9	8th
*m Emerald	4.8	7.5	6.1	3.9	6.0	7.1	4.8	1.0	3.6	5.3	7.9	7.8	4.9	7.2	7.5	6.2	4.6	6.8	5.7	5.7	5.7	2nd
j TC 5018	4.9	5.8	6.1	4.9	5.4	6.4	4.4	5.3	4.9	5.3	8.0	6.6	5.4	6.0	6.3	6.3	4.0	6.0	5.4	6.4	5.7	10th
*m Omni (CD 2013)	4.8	6.7	6.3	5.0	5.7	7.4	3.4	1.3	4.6	7.1	7.6	6.9	5.7	6.0	7.5	6.2	3.8	6.3	5.8	5.7	5.7	3rd
m DALZ 8508	4.9	6.7	5.9	4.3	5.8	6.9	3.7	1.3	3.5	6.7	7.8	7.5	5.1	7.3	7.6	6.5	4.8	6.6	5.4	3.9	5.6	5th
m QT 2004	4.9	6.4	6.2	4.7	5.7	7.3	3.9	1.0	4.2	6.9	7.5	6.9	5.2	5.0	7.5	6.7	2.5	6.7	6.2	5.9	5.6	7th
*m Royal (DALZ 9006)	4.7	6.7	5.9	4.4	5.6	6.9	3.7	1.3	2.9	6.7	7.8	7.1	4.9	6.5	7.6	7.3	5.0	6.7	5.8	3.4	5.5	6th
j CD 259-13	4.8	5.9	5.3	5.0	5.4	6.5	4.0	6.0	4.2	5.5	7.7	6.2	5.6	5.8	5.5	6.1	2.0	6.2	5.3	6.8	5.5	15th
*j Meyer	4.7	6.3	6.2	4.7	5.8	6.7	3.1	1.7	3.9	6.7	8.0	6.9	5.9	6.3	7.5	6.3	1.9	5.4	6.2	5.1	5.5	12th
*j Crowne (DALZ 8512)	4.8	5.7	6.6	5.3	5.8	6.6	4.8	1.0	4.6	4.9	7.1	6.6	4.9	6.1	5.4	6.7	4.4	6.6	4.3	6.9	5.5	13th
*j Palisades (DALZ 8514)	4.8	5.3	6.9	4.8	5.9	6.5	4.7	1.3	3.9	5.7	7.9	7.0	5.1	6.0	6.0	6.5	4.1	5.7	4.3	6.3	5.4	9th
*j El Toro	4.8	5.5	6.5	5.3	6.0	6.3	4.4	1.0	3.9	5.0	7.8	7.0	5.1	6.1	5.3	6.4	4.2	6.4	4.2	7.1	5.4	16th
j QT 2047	4.9	6.0	4.9	4.5	4.7	6.2	3.1	7.0	4.4	5.0	6.8	5.5	5.0	6.0	5.5	6.3	2.2	5.3	4.5	5.4	5.2	18th
#*j TGS-W10	4.7	5.9	5.9	4.3	5.3	6.4	3.8	3.0	4.3	3.3	6.0	6.1	5.7	5.0	6.1	6.1	3.3	5.0	5.5	5.5	5.1	15th
j DALZ 8516	4.9	6.7	6.6	4.3	6.1	7.0	4.2	1.7	2.9	2.1	7.3	6.2	5.4	5.4	7.2	6.0	5.7	4.7	5.6	1.0	5.1	21st
*j Belair	4.8	6.7	5.4	3.4	5.2	6.7	3.7	2.3	4.5	3.7	7.2	5.9	6.0	4.7	6.2	6.5	2.9	4.8	5.4	4.3	5.0	14th
#j TGS-B10	4.8	5.3	5.6	5.0	5.4	6.2	3.5	2.7	4.5	3.7	7.3	6.0	5.5	4.5	5.5	5.7	2.9	5.3	4.7	5.7	5.0	17th
#j JZ-1	4.9	5.0	5.1	4.7	4.9	6.5	4.2	3.3	4.1	3.9	5.6	5.5	5.1	4.6	5.0	6.0	2.1	5.4	3.9	5.3	4.8	20th
#*j Korean Common	4.8	4.7	5.1	4.4	4.8	6.2	3.5	3.3	4.0	2.4	5.8	5.3	5.1	4.8	4.8	6.2	2.3	5.3	4.0	5.2	4.6	19th
*m Diamond (DALZ 8502)	4.7	6.5	5.9	3.9	5.8	6.0	3.7	1.3	2.7	4.5	7.1	1.0	2.5	5.6	6.9	6.6	5.7	3.6	2.3	1.0	4.4	22nd
m DALZ 8501	4.8	5.7	5.3	3.8	4.7	6.3	2.8	1.3	3.7	4.7	6.8	1.0	1.3	4.8	5.9	7.2	3.6	3.6	2.8	1.0	4.1	23rd
m DALZ 8701	4.7	5.8	5.7	4.4	5.2	6.5	3.6	1.0	2.9	1.0	5.1	1.2	1.7	5.0	5.5	5.4	3.7	1.2	1.0	1.0	3.6	24th
LSD Value	0.3	0.6	0.4	0.6	0.5	0.5	1.0	1.3	0.9	2.3	1.2	0.6	0.7	1.0	0.9	0.6	1.4	0.8	1.0	1.8	0.2	

* — Commercially available in the U.S. in 1996.
 # — Seeded varieties.
 m — Zoysia matrella, fine-bladed grasses.
 j — Zoysia japonica, a coarser grass for roughs and home lawns.

The following are conditions at the sites of the zoysiagrass 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:

- AL1 — Auburn University, Ala., N/A.
- AR1 — Fayetteville, Ark., silt loam and silt, 5.6-6.0, 3.1-4.0, 3.1-3.5, no irrigation.
- AZ1 — Tucson, Ariz., sandy loam, 7.6-8.5, 2.1-3.0, 1.1-1.5, to prevent stress.
- CA2 — Santa Ana, Calif., N/A.
- CA3 — Riverside, Calif., N/A.
- GA1 — Griffin, Ga. (high soil pH), sandy loam, 4.6-5.5, 2.1-3.0, 1.1-1.5, to prevent stress.
- GA2 — Griffin, Ga. (low soil pH), sandy loam, 3.6-4.5, 2.1-3.0, 1.1-1.5, no irrigation.
- ID2 — Post Falls, Idaho, silt loam and silt, 6.1-6.5, 3.1-4.0, 1.1-1.5, to prevent stress.
- IL1 — Urbana, Ill., N/A, N/A, N/A, 1.6-2.0, no irrigation.
- IL2 — Carbondale, Ill., silty clay loam, 6.1-6.5, 3.1-4.0, 1.1-1.5, no irrigation.
- KS2 — Wichita, Kan., sandy loam, 5.6-6.0, 1.1-2.0, 0.6-1.0, to prevent dormancy.
- MD1 — Silver Spring, Md., sandy loam, 5.6-6.0, 3.1-4.0, 0.6-1.0, to prevent dormancy.
- MS1 — Mississippi State, Miss., sandy clay loam, 7.1-7.5, 3.1-4.0, 1.6-2.0, only during

- MO1 — New Franklin, Mo., silty clay loam, 6.1-6.5, 2.1-3.0, 1.6-2.0, to prevent stress.
- OK1 — Stillwater, Okla., silty clay loam, 6.6-7.0, 2.1-3.0, 0.6-1.0, to prevent stress.
- TX1 — Dallas, Texas (full sun), silty clay and clay, 0.0-3.5, 3.1-4.0, 1.6-2.0, to prevent stress.
- TX2 — Dallas, Texas (partial shade), silty clay and clay, 0.0-3.5, 3.1-4.0, 1.6-2.0, to prevent stress.

- UB1 — Beltsville, Md. (high maintenance), sandy loam, 5.6-6.0, 2.1-3.0, 0.6-1.0, to prevent dormancy.
- UB2 — Beltsville, Md. (low maintenance), silt loam and silt, 4.6-5.5, 0.0-1.0, 1.6-2.0, no irrigation.
- VA1 — Blacksburg, Va., silty loam and silt, 6.1-6.5, 3.1-4.0, 0.6-1.0, to prevent dormancy.

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- 05. Golf Course Architect
- 06. Golf Course Developer
- 07. Golf Course Builder
- 09. Supplier/Sales Rep
- 08. Other

(please specify)

3 Number of holes:

- A. 9 holes
- B. 18 holes
- C. 27 holes
- D. 36 holes
- E. Other (please specify)

4 Total annual maintenance budget:

- 1. Under \$50,000
- 2. \$50,000-99,999
- 3. \$100,000-249,999
- 4. \$250,000-499,999
- 5. \$500,000-749,999
- 6. \$750,000-1,000,000
- 7. Over \$1,000,000

5 Annual capital expenditure:

- A. Under \$100,000
- B. \$100,000 - 249,999
- C. \$250,000 - 500,000
- D. Over \$500,000

6 Purchasing involvement:

- 1. Recommend equip. for purchase
- 2. Specify equipment for purchase
- 3. Approve equipment for purchase

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NTEP lists leading zoysiagrasses in test categories

The latest data in the National Turfgrass Evaluation Program trials reveals not only where each zoysiagrass cultivar stands in "mean quality ratings," but in a number of other categories as well. And the leading varieties in the overall tests are sometimes overshadowed by others when it comes to such judgments as spring greenup, drought tolerance and fall density.

The leaders in each rating are:

- **Genetic color:** DALZ 8516, 6.6; Emerald, 6.5; DALZ 8508, 6.3; Belair, Royal and Cavalier, 6.2.
- **Spring greenup:** Sunburst and TC 5018, 6.2; CD 259-13 and Korean Common, 6.0; and JZ-1, 5.9.
- **Leaf texture:** Cavalier, 7.6; DALZ 8508 and Diamond, 7.5; Emerald and Royal, 7.4; Omni and QT 2004, 7.1.
- **Spring density:** Emerald, 7.3; Cavalier, 7.0; Marquis, DALZ 8508 and Royal, 6.9.
- **Summer density:** Cavalier, Royal and Diamond, 7.5; Emerald and DALZ 8508, 7.4; DALZ 8516, 7.3.
- **Fall density:** Diamond, 7.2; Marquis, 7.1; Cavalier and Emerald, 7.0; DALZ

RELATED STORIES PAGE 18

8516, 6.9; Royal, 6.8; DALZ 8501 and DALZ 8508, 6.7.

- **Percent living ground cover (spring):** CD 259-13, 82.0; Crowne, 81.6; DALZ 8516, 10.6; Meyer and QT 2004, 80.5; Sunburst, 79.8; Korean Common, 79.7; JZ-1, 78.9; TC 5018, Marquis and TGS-W10, 78.2.

- **Percent living ground cover (summer):** Sunburst, 91.2; CD 259-13, 90.0; QT 2047 and TC 5018, 87.6.

- **Percent living ground cover (fall):** All were within range except lowest three — DALZ 8501, Diamond and DALZ 8701.

- **Frost tolerance:** Crowne, DALZ 8516, El Toro, Omni, QT 2004 and Marquis, 9.0; Cavalier and Palisades, 8.7; DALZ 8701 and Emerald, 8.3; DALZ 8508, Royal, Diamond and Sunburst, 8.0; CD 259-13 and JZ-1, 7.7.

- **Winter color:** Diamond, 6.8; DALZ 8501, 5.8.

- **Drought tolerance (wilting):** Crowne, 8.3; Palisades, 7.3; DALZ 8701

and El Toro, 7.0; JZ-1, 6.7.

- **Drought tolerance (dormancy):** Emerald, 5.8; Cavalier, 5.4; DALZ 8508, 5.1; DALZ 8516 and Diamond, 5.0; DALZ 8501 and Royal, 4.9.

- **Fall color (September):** DALZ 8516, 7.7; Belair, DALZ 8701 and Palisades, 7.3; Meyer, 7.0; JZ-1, Omni, QT 2004, Marquis and TGS-W10, 6.7.

- **Fall color (Dec.):** DALZ 8516, 6.8; Diamond, 6.6; Cavalier, 6.2; Palisades, 5.9.

- **White patch:** DALZ 8501 and Crowne, 8.7; Belair, 8.0; DALZ 8516 and Marquis, 7.3; CD 259-13, Cavalier, DALZ 8508, Diamond, JZ-1, Korean Common, Meyer, Omni, QT 2004, Sunburst and TC 5018, 7.0; DALZ 8701, Palisades, TGS-B10 and TGS-W10, 6.7.

Quicker is cheaper

Continued from page 15

we will see two crops in a year, or three crops in two years, even here in the Dallas area."

Yet, quicker production is not universal. Jacklin Golf, whose fields are in Georgia, has found difficulty speeding up seedhead production.

"We thought it [three crops in two years] was possible the first year or two because they [zoysias] do put out good seedheads," Jacklin Golf associate plant breeder Susan Samudio said. "But if your location gets a freeze, that fall crop is not worth the harvest because the germination is so low and you still have the expenses. We just keep the fall crop mowed. Further south you might be able to do it."

Zoysia prophecies hit gold

Continued from page 15

Using the zoysiagrass standard-bearer, Meyer, Van Arendonk figured annual savings of:

- 20 to 50 percent in water use;
- \$21,000 for fungicides, not having to spray ryegrass fairways;
- \$6,000 in herbicide savings in the future by not needing to eliminate poa annua, which can't compete with zoysia;
- \$5,000 to \$10,000 for mowing because zoysia is a slower grower and in Wichita they will start mowing six weeks later and stop six weeks earlier than with ryegrass;
- \$7,000 to \$8,000 for overseeding fairways because they will not need to buy 300 pounds per acre;
- \$2,500 for fertilizer since zoysia requires only about 1-1/2 pounds a year compared to ryegrass's need of 3-1/2 pounds.

"The only disadvantage we see is from an aesthetic point of view — off-season color," Van Arendonk said. "But we're also killing off 20 to 25 acres of rough around all the fairways and reseeding to fescue. That will give us good definition."

"We have a mind set we have to shift," Engelke said. "We have the genetics now to move these grasses into different environments than where they were before. It's an awareness and education issue. As we start working with architects and superintendents, we will see how far we can stretch these [new varieties]."

Zoysiagrass is an option from Kansas City-St. Louis south.

"Alabama and Georgia are all very adaptable to it, and we've had wonderful results in Texas," Engelke said. "We can take them into Florida, where we're doing more testing because the national trials have never been there before."

A lot of superintendents in the Maryland area are investigating zoysias because of difficulty in growing perennial ryegrass in the area, said Kevin Morris, national director of the U.S. Department of Agriculture's National Turfgrass Evaluation Program.

"My guess is, down the road we will find more problems with the bentgrasses, too," he said. "With them, you have to have good irrigation and cultivation. If you can do that, you can grow good-quality bent fairways here. But there is more interest in zoysias because of the pest issue and because they survive summer and have an advantage in winter over hybrid Bermudagrasses."

Meanwhile, whereas the standard-bearer, Meyer, was "never used outside the Midwest," Morris said, that has changed. The reason: a faster production cycle. "It has always had plenty of winter-hardiness ... but it never was used further south because Bermudagrasses, with their better production cycle, were a better choice."

Some of the newer varieties of zoysia produce two crops in a year, or sometimes three crops in two years, "even here in the Dallas area," Engelke said.

Zoysia's best fit is from the Mississippi eastward, said Morris. "It doesn't dry out as quickly in that region. Also, zoysia will tolerate low pH soil well, and that is more common in the Eastern states. Most zoysias have a problem in West, where the pH is often 8 and above."

Most everywhere superintendents are using zoysia, they are solid-sodding it.

"We have our limits," Engelke said, "but we've [zoysia breeders] come a long way collectively in attaining the goals set down for us 12 years ago in our USGA [U.S. Golf Association] proposals: that we develop grass with a lower water requirement, lower fertility, easier maintenance, more competitiveness against weeds, and generally easier to manage... We also can work with poor-quality water because salt tolerance is very good in these grasses."

And while zoysias have problems in compacted soils, "a different aeration program will fix that," Engelke said, suggesting shatter-tine aeration and Verti-draining. "You just need to fracture the soil profile so that you keep the bulk density down."

Although admitting the choices for greens are still predominantly bentgrass and Bermudagrass, Engelke added: "but I predicted in 1986 we could go tee to green in zoysiagrass and today, finally, we have the data to support that. Maybe someday we'll find someone who can afford it."

"We have the green types, the tee types, the fairway and rough types, and certain parts of the country in which they will work."

Changing the Course.

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Potassium solution hastens zoysiagrass germination dramatically

By MARK LESLIE

BELTSVILLE, Md. — Zoysiagrass seed is notorious for slow germination and growth, so scientists have devised a method to speed up the process and make seeding a more viable option for this turfgrass which is normally sodded.

The work by former National Turfgrass Evaluation Program (NTEP) National Director Jack Murray and South Korean scientists has enabled the zoysiagrass seed to germinate 70 to 80 percent more quickly, according to

Murray's successor, Kevin Morris.

While some zoysiagrass seed is treated before being sold to superintendents, other seed is not — and it is crucial that it is treated, Morris said.

"Right now, the best treatment is a strong base solution of potassium or sodium hydroxide," he said. "Soak the seed in this 30-percent solution for 20-25 minutes. Wash the seed and you can dry the seed and it will germinate much better."

"Ungerminated seed will germinate at 10- to 20-percent in 30 days. Treated seed will germinate in about 14 to 21 days."

Saying that other substances are being tested, Morris added: "My guess is that people will be working on other treatments that are less costly and that won't leave a waste product to dispose of. Over time, it [treatment] will be tweaked."

Unlike other seed, zoysia needs light to germinate.

"After soaking the seed, lay it out and keep it moist under light for 24 to 48 hours and you satisfy the light requirement," Morris said.

If zoysia seed has not been light-treated, he recommended seeding it on

top of the ground uncovered, then rolling it to establish contact with the soil.

"You can use a clear plastic to enhance germination," he said.

Other rules of thumb:

- Seed after the last frost in the spring but no later than mid-July.

- At time of planting, apply siduron to control weeds, followed immediately with a quick-release fertilizer and in two weeks with oxadiazon.

- During the first four weeks, shallow-irrigate frequently, then irrigate fewer times but more deeply.

Bright future in tests being seeded

BELTSVILLE, Md. — Expectations are high as the next generation of zoysiagrass seed has been planted for the National Turfgrass Evaluation Program trials.

"We've got some finer, denser vegetative types in the new trials," said NTEP National Director Kevin Morris from his headquarters here. "Whether they will be faster-spreading or have better cold-hardiness, we don't know yet. Among the seeded types, most are improvements over Korean common. But they are not going to be the fineleaf dense types" breeders are striving to perfect.

"The experimentals are getting better each year, said Susan Samudio, head of JacklinGolf's zoysia breeding program.

Par for the Course, school plan cited

The American Society of Association Executives has named two Golf Course Superintendents Association of America (GCSAA) programs to the Associations Advance America Awards honor roll.

GCSAA's weekly television show, "Par for the Course," and the Wakarusa Elementary School Business and Education Partnership were spotlighted in the national competition. The award recognizes significant contributions to society by associations in areas such as education, product and safety standards, professional standards and codes of ethics, research and statistics, international activities and community service.

"Par for the Course" was created in 1994 to increase public knowledge of the golf industry, specifically superintendents. The 30-minute production, is televised nationally on ESPN.

The Wakarusa Partnership is part of a school district-wide program that pairs local organizations and schools. Activities included enrollment in the Audubon International Cooperative Sanctuary Program for Schools, classroom mentoring in math, reading and computer skills and assistance with the annual Field Day sports activity.



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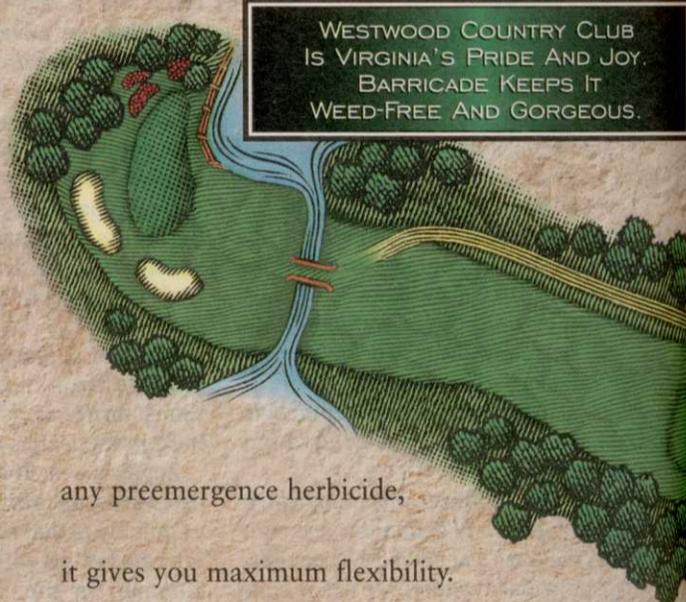
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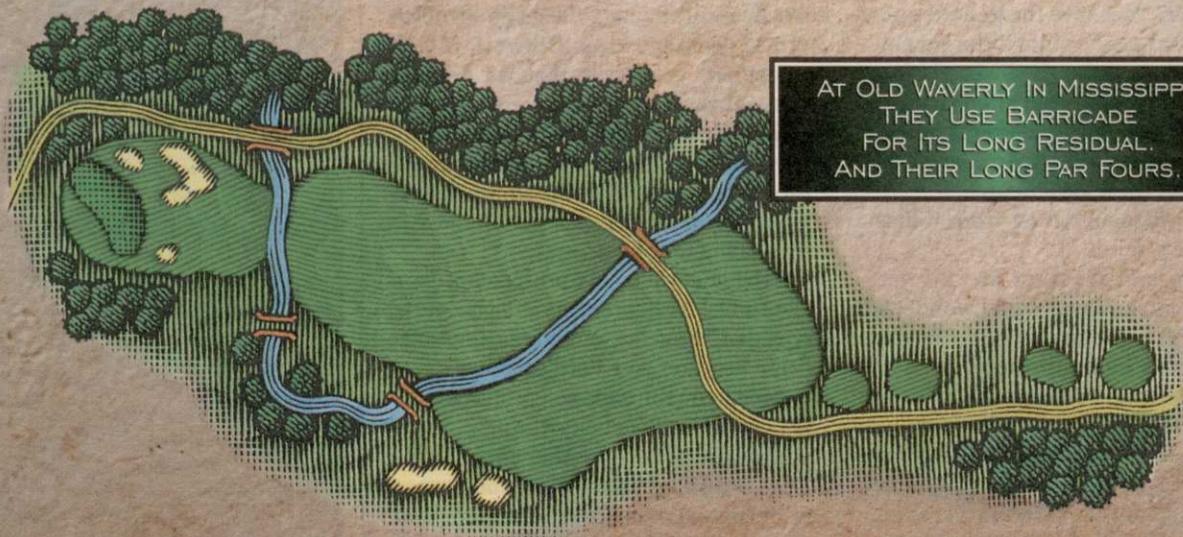


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Multi-faceted age of information links superintendents to the latest

By TERRY BUCHEN

Some very good information services are available that can make superintendents' jobs easier and much more efficient. With the click of a mouse, or skimming over a newsletter, an endless source of information is at instant disposal.

Some noteworthy services include:

- **Golf Course Superintendents Association of America (GCSAA) Informa-**

tion Service: The GCSAA is providing an excellent in-house information services department, with David Bishop as senior manager, along with an assistant, two coordinators and a librarian.

They provide source operational information and can answer association questions with a telephone call or using e-mail and Internet. If a superintendent wants a reprint of a magazine article, to get everything they have on a

turf disease or management situation, to hook up with the Turf Grass Information File (TGIF) at Michigan State University, or to be referred to experts in a specific field of study, all they need to do is ask.

They will next-day air any request as long as the superintendent pays the freight, and they are extremely timely in

SAVVY SUPERINTENDENT



the GCSAA's home page at <http://www.gcsaa.org>; by e-mail to dbishop@gcsaa.org; or by fax at 913-832-4449.

- **USGA Newsletter —**

faxing information. Their office hours are 7:30 a.m. to 5 p.m. Central Standard Time, and they can be reached at 800-472-7878, or 913-832-4491; on

"Clippings" is a hidden gem of a newsletter published quarterly by Patrick M. O'Brien, director of the USGA Green Section's Southeastern Region. "Clippings" features first-rate information, has an award-winning presentation and is printed on colored, thick paper stock.

O'Brien and USGA agronomist Christopher Hartwiger write most of the articles and they have in-depth interviews with industry leaders as well.

For more information, contact O'Brien at 800-296-9398, or 770-229-8125; by fax at 770-229-5974; or on the Internet at 71524.1227@compuserve.com.

- **Jim and Harriet —** Dr. James Beard, professor emeritus of turfgrass science at Texas A&M University and president and chief scientist at the International Sports Turf Institute, has a very good newsletter titled *Turfax*, published bi-monthly.

Beard's wife, Harriet, is the production editor and it is faxed and mailed all over the world to turfgrass professionals. For more information, call 409-693-4066; or fax 409-693-4878.

- **Turfcomms —** Dr. Douglas T. Hawes, certified professional agronomist, has another interesting newsletter that is published at unpredictable intervals and aims to "pass on what we learn willingly and happily to others in the profession so as to improve turf conditions around the country."

Hawes likes to "tell it like it is" and does a good job expounding on any turf-related subject in all of his travels teaching and performing agronomy consulting, as well as attending and reporting on the many turf conferences that he annually attends. For more information, contact Hawes at 214-867-0176.

- **Private Club Advisor —** Another timely newsletter is "The Private Club Advisor," a letter to the directors, officers, owners and managers of private clubs published and edited by Eldon Miller. This thorough newsletter quotes many different situations at clubs throughout the country on real-world situations about the ethical, safe and legal way to run a club.

It even gives the names and addresses of the officials involved so readers can contact them.

One key feature of the newsletter is interviews with golf course superintendents as well as lots of provocative and timely information.

For more information, call Miller at 214-756-9200; fax at 214-756-9010; or e-mail to xzun38c@prodigy.com.



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Environmental Steward applications available

BURNSVILLE, Minn. — Application forms are available for the 1996-97 Environmental Steward Award program. Ciba Turf & Ornamental Products, Rain Bird, Jacobsen Division of Textron Inc., and new sponsor Pursell Industries, Inc. encourage golf course superintendents to enter the program and be recognized for their environmental achievements. The application deadline is Oct. 31.

Environmental Steward Award program winners will be recognized at an award ceremony during the Government and Environmental General Session at the Golf Course Superintendents Association of America (GCSAA) International Golf Course Conference & Show next February in Las Vegas.

In the previous four years of the competition, the Environmental Steward Award sponsors have donated more than \$70,000 to The GCSAA Foundation.

"The Environmental Steward Award sponsors are the driving force behind this very important recognition program," said Bruce R. Williams, president of GCSAA. "We salute Ciba, Rain Bird, Jacobsen and Pursell for their vision, and we look forward to carrying on this tradition of recognizing environmental excellence into the next century."

Entry forms are available from any of the sponsors, program coordinator Ceres Communications, in the August issue of *Golf Course Management*, or on two sponsor web sites. The web site addresses that contain the entry form are the GCSAA site at <http://www.gcsaa.org/gcsaa> and Rain Bird's site at <http://www.rainbird.com/rbgolf>.

An independent panel of judges, selected for their expertise on environmental issues and turfgrass management, reviews the entries. Awards are given in three categories: public, private and resort courses. One national winner is selected in each.

In addition, there may be as many as 21 U.S. regional winners: one public, private and resort winner in each of the seven U.S. Golf Association regions. There also may be three winners each in Canada and internationally. Merit winners may be selected at the discretion of the judges.

In 1995-96, 39 golf course superintendents received Environmental Steward Awards, which were created to recognize golf course superintendents and golf courses for their work to protect and enhance their local environments. Past winners have been recognized for overall course management excellence; outstanding programs to maximize pesticide and fertilizer efficacy; irrigation and equipment efficiency; and wildlife preservation and enhancement.

Benefits for national winners include a \$500 donation to The GCSAA Foundation in their name, a personalized plaque, a specially designed seal for display purposes, a traveling trophy, the opportunity to be highlighted in *Golf Course Management* and introduced during the Government and Environmental General Session at GCSAA's International Golf Course Conference & Show.

Audubon certifies The Club at Seabrook Island

SEABROOK ISLAND, S.C. — The Club at Seabrook Island has achieved designation as a Certified Audubon Cooperative Sanctuary by the Audubon Cooperative Sanctuary System. The Club at Seabrook Island is the first in South Carolina and the 75th course in the nation to receive the honor.

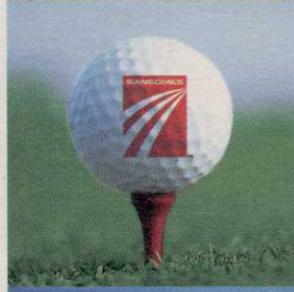
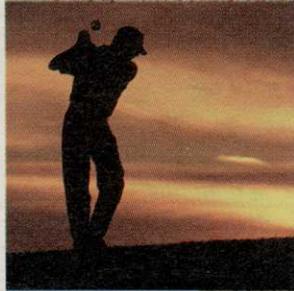
Allan Pulaski, superintendent of The Club at Seabrook Island, said achieving full certification "is a great achievement for The Club at Seabrook Island."

Becoming certified is an example of the dedication that is provided by the golf maintenance staff and the club's membership to

maintain its golf courses with an emphasis to protect and enhance its surrounding environment."

Golf courses "provide recreation for golfers and greenspace for the environment," said Pulaski.

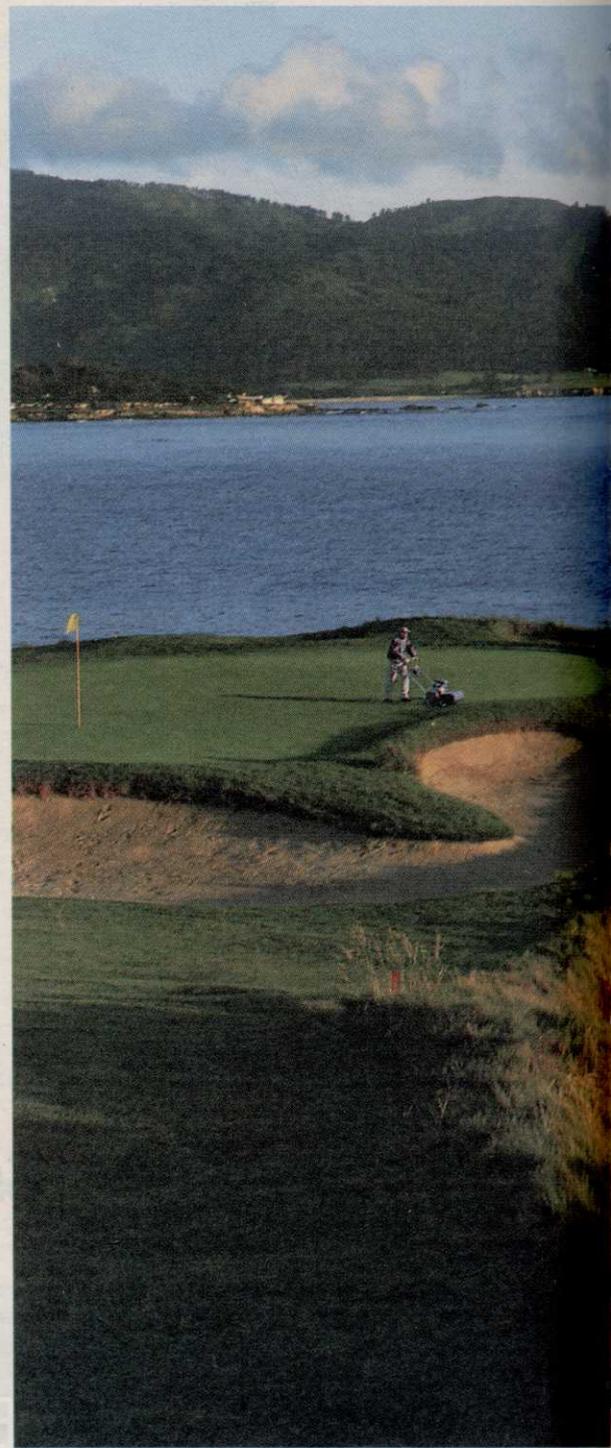
"As a superintendent," he added, "I need to present a golf facility that provides quality playing conditions to the golfer. Simultaneously, environmental programs need to be implemented that will allow for the continued protection and enhancement for the golf courses' sensitive environment and its ecological system."



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By TERRY BUCHEN

Evacuation plan 'a must' for some

NEW ALBANY, Ohio — New Albany Country Club's Emergency Evacuation Plan is indicative of a turf-care facility that is a state-of-the-art maintenance facility, setting standards for function, aesthetics and a clean, safe workplace for its employees.

Similar to those used on the inside of hotel-room doors, the plan complies with federal and local government agencies as well as providing a safe situation for employees and guests, the facility has implemented an Emergency

Evacuation Plan.

"We took our turf-care facility floor plan blueprint, had it reduced to an 8-1/2 by 14-inch size, had it professionally laminated and then mounted a color-coded copy in every room," said New Albany superintendent Anthony S. (Tony) Mancuso.

"Each official exit is color-coded pink, meaning that the door is not locked from the inside. The blue color-coding is for any doors that are



SHOP TALK

locked from the inside that are not an exit.

Each official exit has an exit sign on or above the door, and the blue-colored doors have a conspicuous

sign reading "Not an Exit" on the door above it.

"Our building," Mancuso said, "is designed as such that some of our offices have an exterior door leading outside but it is not accessible as an exit because the interior door leading into the office from within the facility may be locked.

"This procedure takes the guesswork out of whether an employee or visitor should use or not use any door in

the facility.

"We wanted to be in compliance, be morally responsible to our employees and guests, and for liability as well as legal reasons."

Near each exit door are rechargeable emergency lights for safety as per local building codes.

These lights must be checked monthly as the rechargeable batteries will wear out frequently.

Also, signs on every door state what the room is used for and whether it is an exit or leads to an exit, Mancuso said.

A list of checks from Mancuso

New Albany superintendent Anthony S. (Tony) Mancuso offers the following checklist for mechanics and other key employees to use monthly, or more frequently if needed.

1. Drain air compressor of water.
2. Check fire extinguishers and date and initial tag.
3. Check and test emergency lighting.
4. Check and test smoke detectors and change batteries when clocks advance.
5. Check that lock out-tag outs are properly marked and working.
6. Check that exit sign light bulbs are working.
7. Check inventory for employees' safety glasses.

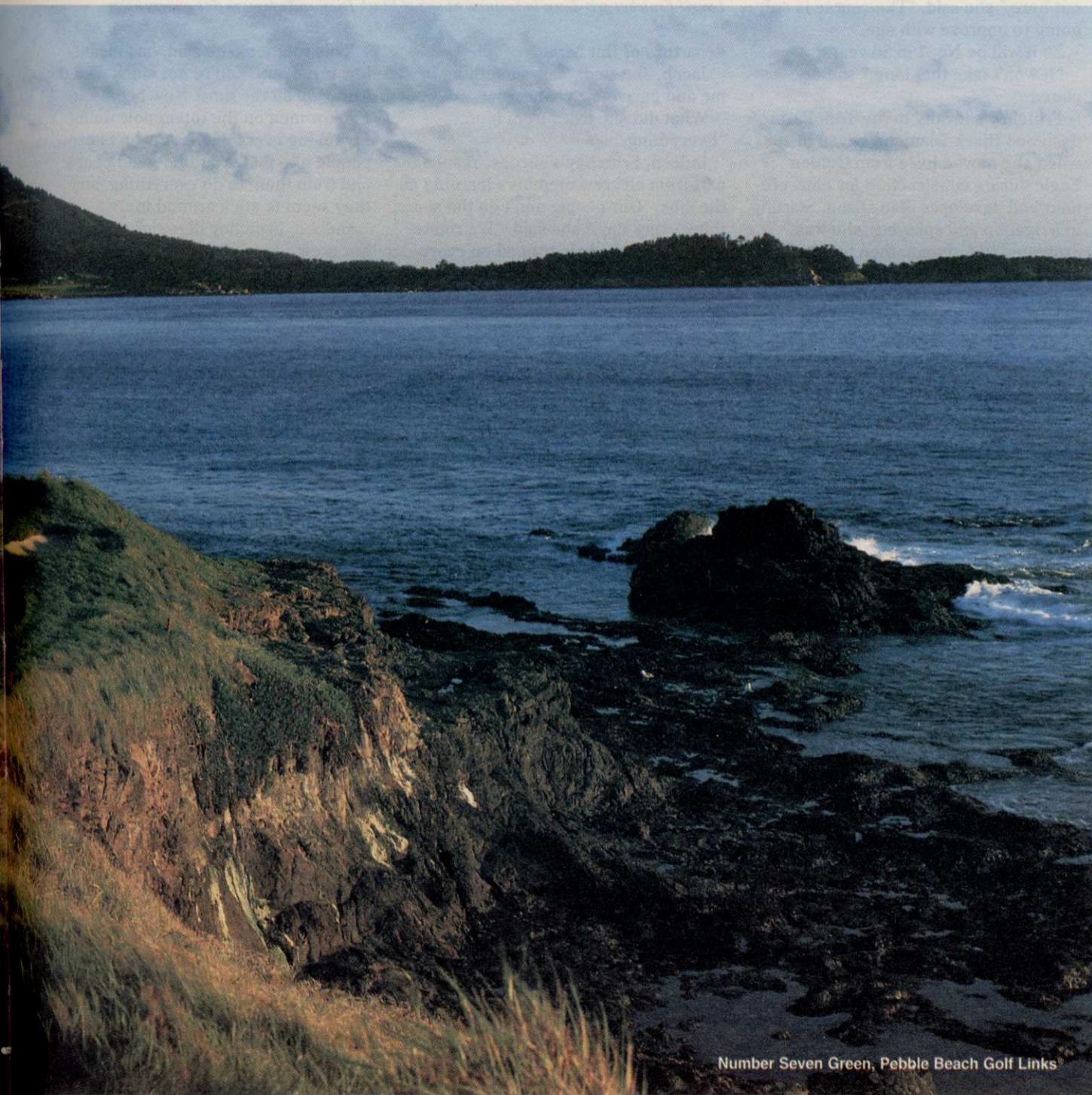
EPA issues regs for state plans

PHOENIX, Ariz. — The Environmental Protection Agency (EPA) has issued its long-awaited regulation on State Management Plans (SMPs). Many states have been working on their plans, which must be submitted and approved by the EPA for users in those states to be able to continue to buy and use certain pesticides identified as probable or possible human carcinogens.

Designed to prevent pesticide contamination of ground water, the rule now covers five pesticides: metolachlor, simazine, atrazine, alachlor and cyanazine. Golf courses use simazine, a pre-emergent broadleaf and grassy weed control, and metachlor, used for woody ornamentals.

According to the EPA notice, the core of an acceptable SMP will be its program of managing pesticide use in order to prevent contamination.

The actual measures employed may range from education of users and adoption of best management practices (e.g., regulation of application rates, methods and timing), to use prohibitions in specific areas.



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For The Best Results

Enticed to Florida, Frutchey finds dream job at Black Diamond

By MARK LESLIE

LECANTO, Fla. — Palm trees. Just palm trees. That's all it took to get Laurie Frutchey to pack her bags and move to Florida.

"I fell in love with them, and just decided to stay down here," said the young superintendent of world-class Black Diamond Golf Club here. The Pennsylvania-raised Frutchey was visiting Florida State University at the time of her first visit, expecting to study science education and play softball.

She studied science and education, all right. But the call on her life was to golf courses. During a summer job at Killlearn Country Club in Tallahassee, Frutchey discovered golf course maintenance and added to her list of "loves." Now it included palm trees and irrigation. When she graduated with her education degree to teach science in 1986, she landed a job as an irrigation technician at Golden Eagle Golf Club in Tallahassee.

"She was the hardest worker I had," said Terry Buchen, who hired her at Golden Eagle. "She set the example for



everyone." Not long afterward, Frutchey had worked her way into one of the prime superintendent positions in the country — here at Black Diamond.

"I am very fortunate. I wouldn't trade places with anybody," Frutchey said. "As long as there is a challenge, I guess I'll always stay here."

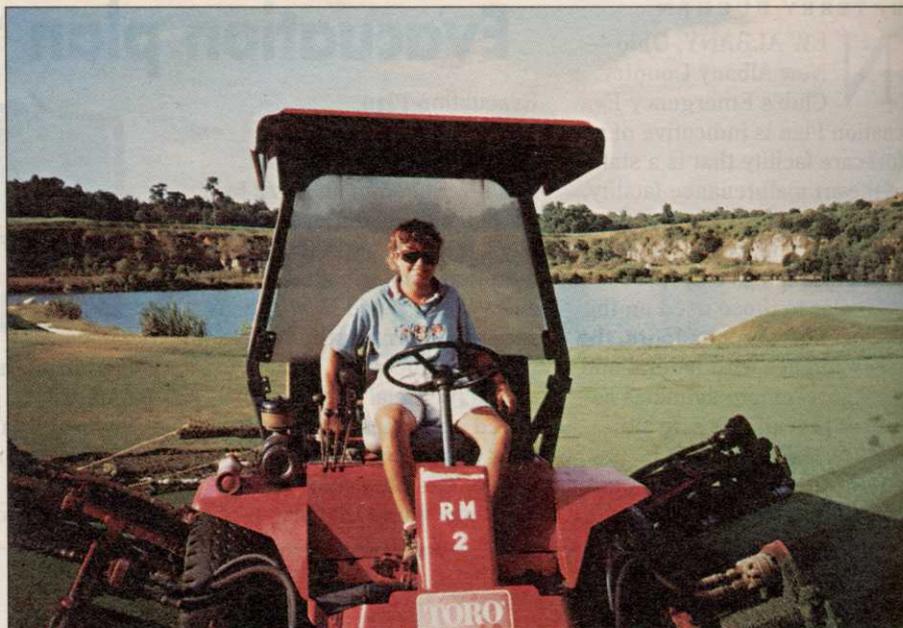
She has set her gaze definitively on pushing Black Diamond up the ladder to America's top-ranked position from its current *Golf Digest* ranking at 55th.

"It's a living, evolving environment out here," she said. "The course is only going to improve with age."

So it will be No. 1 in 50 years?

"It won't take that long," she declared.

Frutchey's loyalty to the Tom Fazio-designed Black Diamond began in 1987 when she moved here from Golden Eagle during construction for entrepreneur and developer Stan Olson. Starting in irrigation and spraying, she was promoted to foreman, then to assistant superintendent in 1992 and then head superintendent in 1994 with the passing of her mentor, Carl Jacob, and the



Laurie Frutchey gets down to business at one of Black Diamond's famous five quarry holes.

departure of Jim Lerner.

Jacob, she said, "saw something in me and gave me a chance."

What did she learn from him? "Everything."

Indeed, Frutchey's success results in part from all crew members learning all the jobs. "Our people don't do the same thing every day," she said. "We rotate so that everybody is trained on everything. We have people who are better at certain things, but we rotate them as much as possible."

This rotation, she said, has meant low turnover. "You're not stuck with the same job all the time. New people are not low men on the totem pole doing Flymo-ing every day. You won't keep people like that. You find good people and train them to do everything, and they seem to stick around more."

Indeed, Frutchey digs right in with her crew.

"I work with them and beside them," she said. "I'll Flymo. I'll weed-eat. I'll

Continued on next page

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Frutchey's irrigation background a plus

Continued from previous page
get down there with the best of them."

And while dealing with personnel is the most difficult part of being a superintendent, she said: "I was lucky. I got a crew that I wouldn't trade anybody for. They're great."

"A lot of people don't get to see the results of their work. But when you're on a golf course, you do," Frutchey said about what she enjoys. "I like to see a project get done, from start to finish. I even enjoy mowing fairways, just so I can look back and see the result when I'm done."

Asked if the former irrigation tech employs her own irrigation tech, Frutchey said, laughing, "Yes, and he doesn't put anything over on me."

Maintenance jobs on this course aren't all for the faint-of-heart, though. Five famous holes winding up and down and over and into an 80-foot-deep rock quarry present challenges in edging, weed-eating and Flymo-ing, as well as more disease problems because of shade, heat and low air circulation.

Trimming the quarry walls, crew members sometimes go up and sometimes go down. "When they go down, they are tied to equipment like a utility truck," Frutchey said. "Certain people really enjoy doing that."

For Frutchey and her 26-man full-time crew, the workload is about to expand dramatically. Now boasting the acclaimed 18-hole course and the first nine of the Ranch Course, Black Diamond plans to add the second Ranch Course nine and a 10-hole executive track.

Fazio will design the new holes and Frutchey is taking the opportunity to employ her first love: irrigation design.

"Irrigation was what really attracted me to it [turfgrass maintenance]," she said. "It is the challenge of firing up a hole and seeing it work."

The toughest problem in maintaining turfgrass in this area, Frutchey said, is the weather. "And you can't do anything about it. You can work on something for three of four days, and 20 minutes of rain will destroy it all."

"Plus, central Florida is the lightning capital of the universe. Lightning storms spring out of nowhere."

•••

Black Diamond's construction, Frutchey said, has brought reclamation of "barren" land.

"Who else would have thought of taking that old abandoned lime rock quarry and making it into the No. 1 golf course?" she asked, referring to Olson. "It was a eyesore."

And now, with the new

construction upcoming, work will revolve around the "natural."

"Everybody is tending to go away from wall-to-wall irrigation and to go natural, like xeriscape," Frutchey said. "You have such a beautiful area here, why not enhance it? Why try to cover it? When you trim them up, palmettos are beautiful. Slash pines, too. You can't find anything more beautiful than the quarry walls — and that's all natural."

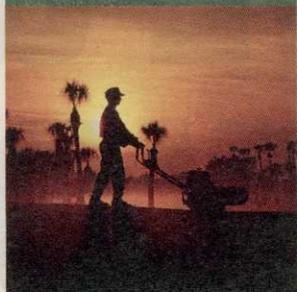
"It's exciting," she added. "It's taking nothing and making it into a golf course."

As for the original 18, Frutchey feels the pressure of maintaining Black Diamond's ranking as one of the nation's top courses. But, she said: "It's a good pressure. It's like a pride pressure. And the maintenance crew feels the same way. When you work for a place that is ranked this high, there is a lot of pride, and it tends to take away that pressure."

GCSAA acts to ease reaffiliation

DEARBORN, Mich. — After determining that a majority of the chapters intend to reaffiliate with the Golf Course Superintendents Association of America by the Dec. 31 deadline, the Chapter Relations Committee has suggested measures to facilitate the process.

The panel scrutinized a survey of individual chapter reaffiliation status. It recommended that Newline, the member newsletter, publish each chapter's reaffiliation status. The group also advised GCSAA staff to increase the frequency of chapter mailings in regard to reaffiliation status and to encourage chapters to submit signed affiliation agreements as soon as possible. The panel also recommended that international chapters meet the same requirements as their domestic counterparts.

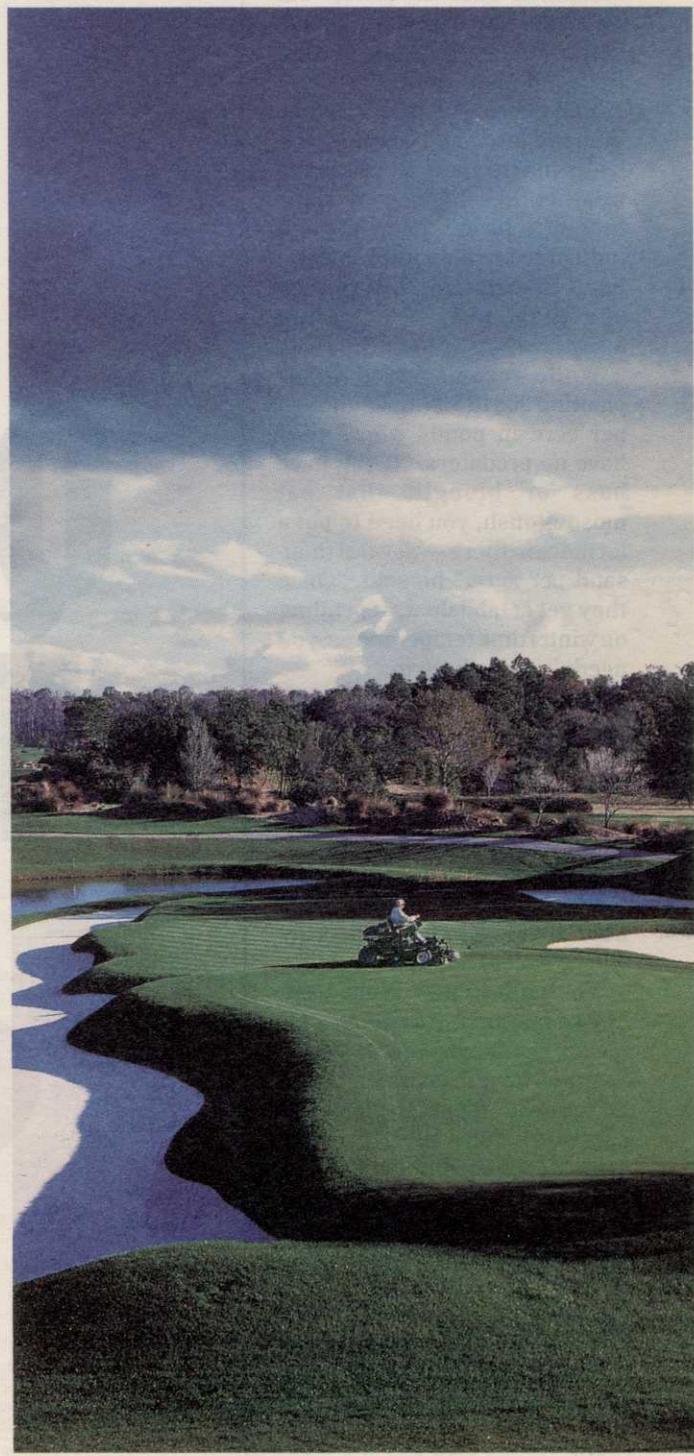


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Mosquitofish an answer to prayer

Continued from page 15

mosquitofish. Those are the easiest ones to get onto your site."

"They are fantastic, unreal," said Ken Holyoak, owner of Ken's Hatchery and Fish Farms, Inc. in Alapaha, Ga., the largest supplier of *Gambusia* in the country.

"They would have never finished the Panama Canal without that minnow..."

Ewoldt, who has taken every "air" measure against mosquitoes, has had his wooded areas sprayed with the insecticide Malathion once or twice, "but we do not like to use any chemicals, so we're going this [mosquitofish] route."

The mosquitofish were dumped into Sand Creek's wetlands in late June. Because the weather has been cool since then, "it hasn't been a good indicator for mosquito infestation," Ewoldt said. "But you can see them out there eating away."

Wolfe recommended transplanting 300 to 500 mosquitofish per acre in ponds where they have no predators. "If you have bass or bluegill that eat mosquitofish, you need to put a lot more in there — several thousand per acre," he said. "Once they get established, depending on wintertime temperatures, you needn't restock them."

Mosquitofish are "prolific," Holyoak said, "and reproduce hundreds of babies every 28 days." Which is good, since they are food to other fish, frogs, snakes and turtles.

Gambusia are native to the Southeast and therefore susceptible to cold winters, especially where water ices over.

"In South Bend," Wolfe said, "we're marginal [in climate] for having them over-winter."

"If you have deep water, they'll go to the bottom of the lake and survive a harsh winter," Holyoak said. "But they'll die in shallow water."

With his shallow wetlands, Ewoldt put in 3,000 mosquitofish per acre of wetland and expects that he will have to restock each year because of Indiana's harsh winters. Nevertheless, he sees the mosquitofish as worth the investment.

"We bought 10,000 fish at a cost of \$250," he said, "but it cost \$300 in shipping because of the weight and because the fish had to be shipped quickly so that the heat and lack of oxygen didn't kill them."

The best time to order mosquitofish is in cool or cold weather because "June to August is too hot to ship them," Holyoak said. He adds 15 to 20 percent more fish than ordered because of the loss during transportation.

Ken's Hatchery sells the fish for 3 cents apiece in large quan-

ties. They are shipped 5,000 per container — the fish costing \$150, the container \$20 and the freight \$120 — anywhere in United States.

Mosquitofish have been known to eat up to 230 larvae per hour, Wolfe reported.

And because they can live in as little as one-inch-deep water, Holyoak said: "Some people cover a 10-mile radius around their farm, putting them in road ditches — everywhere."

"I wouldn't have a lake without them," Holyoak said. "They are the most valuable fish that

swims. They don't do any harm. They do nothing but eat mosquito larvae, and some aquatic insects, crustacea, algae and zooplankton. They really add to the food chain."

But why haven't golf courses "discovered" these little mosquito-killers sooner?

"I don't think anybody has ever informed them," Holyoak surmised.

Buyers need not worry about the supply, he said. There reportedly are a couple of other fisheries that grow *Gambusia*, and, Holyoak added: "I have 20 million of them."

White opens turf consultant firm

WATKINSVILLE, Ga. — Charles B. "Bud" White, a longtime agronomist with the USGA Green Section and most recently national manager of agronomic services for the Toro Co., has formed a company here specializing in professional turfgrass consultation.

The firm, TotalTurfServices, Inc., will be associated with both domestic and foreign



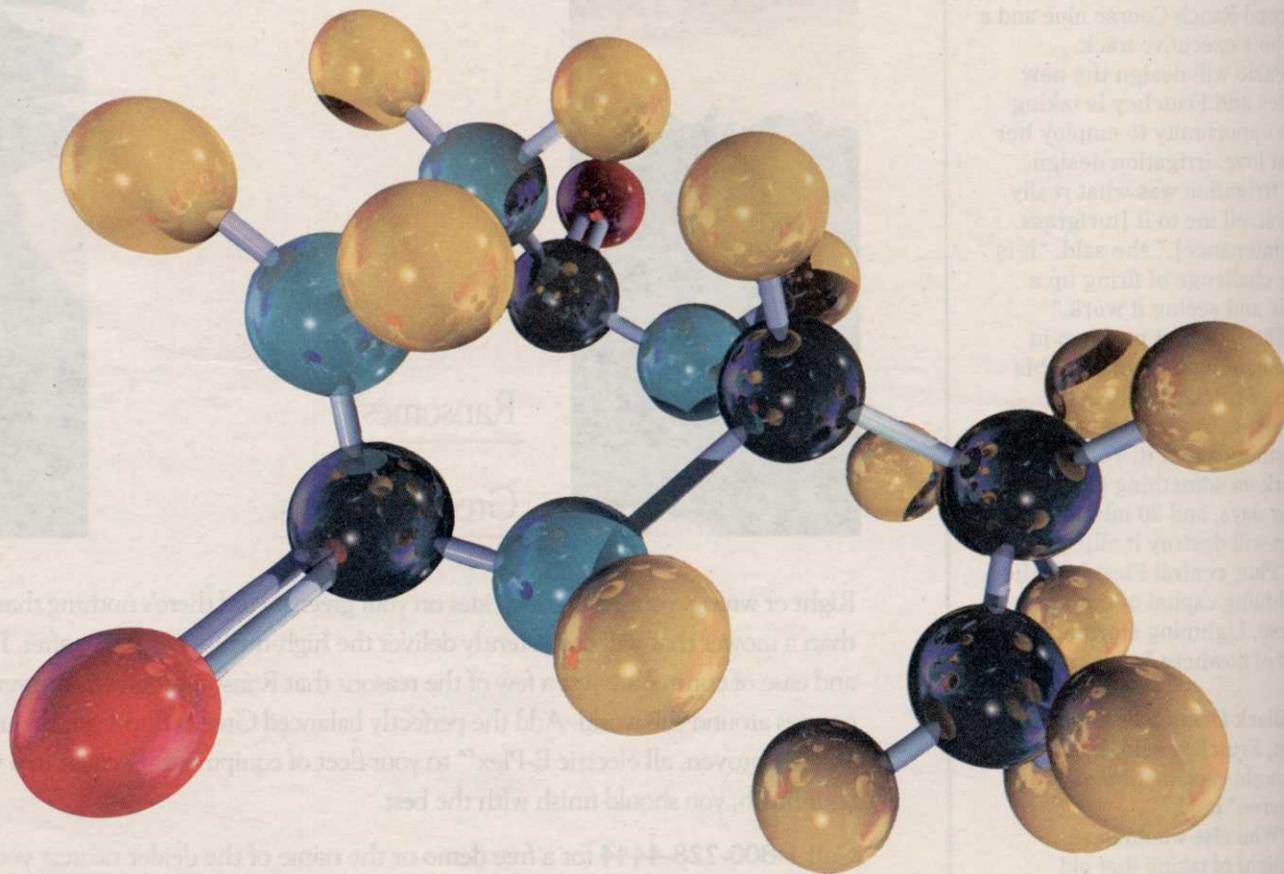
Bud White

projects. Its purpose is to provide technical and managerial assistance to golf course superintendents, architects and other turfgrass professionals.

White will also provide outsourcing services to management companies.

The company is located at 1141 Station Drive, Watkinsville, Ga. 30677; telephone 706-769-4570.

WE'VE GOT QUALITY DOWN TO A SCIENCE.



Long-time Maine supers shuffle positions, leave posts

AUGUSTA, Maine — In a state known for its stability, an unusual turnover has taken place this summer. Superintendents at six of arguably the state's top seven golf courses have left for their jobs.

Most visible are former Maine Golf Course Superintendents Association (MGCSA) Presidents **Pat Lewis**, **Kevin Ross** and **Chuck Ravis**.

• **Ravis**, MGCSA president in 1982-83, is leaving Augusta Country Club this November to

pursue another career

• At Portland Country Club former assistant **J.B. Christie** has assumed the superintendent's duties, moving into a post held by **Lewis**.



Pat Lewis

Lewis, the MGCSA president in 1994, has taken on the title of property manager.

• **Ross**, MGCSA president in 1988-89, started the bandwagon of departures last year when he left Falmouth Country Club to take on the position of director of agronomy at Country Club of the Rockies in Edwards, Colo. Assistant superintendent **Scott Cybulski** succeeded him.

• **Kyle Evans** has left Waterville Country Club to be general partner in a new public golf course under construction



in Belgrade (see story page 31). Evans has been succeeded by **Luke Gagne**, who has left another of the top-ranked Maine courses — Kebo Valley Golf Club in Bar Harbor.

• **Chuck Welch** left Sable Oaks Golf Course in South Portland to take charge as superintendent at Nonesuch River Golf Club, formerly The Greens at Eagle Brook in Scarborough, which is adding nine holes to its nine-hole layout.

• Superintendent **Jeff Smith** has left The Woodlands Club in Falmouth to join Irrigation Supply Inc.

• **BRASELTON, Ga.** — **David Keel** is the new assistant superintendent at the South Course at Chateau Elan Golf Club, formerly The Fields.

• **STONE MOUNTAIN, Ga.** — **Richard Larimore** has assumed the assistant superintendent position at Hidden Hills Country Club here.

• **ROSWELL, Ga.** — **Ricky Campbell** has left his superintendent's post at Brookfield West Golf and Country Club here and joined Stovall Turf & Industrial as Northeast sales representative. Campbell was succeeded by **David Burchett**, who was superintendent at Metropolitan Club of Atlanta.

• **NORCROSS, Ga.** — The Standard Club assistant superintendent **Dwight Kelley** has left to join the Cobblestone Group as superintendent.

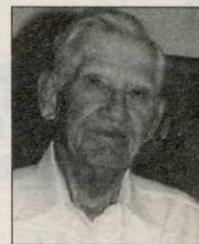
• **GREENSBORO, Ga.** — **Steven Brady** has left nearby Port Armor Golf Club to join Great Waters Golf Course here, while former Great Waters superintendent **Michael "Butch" Foust** is growing in the new Tom Fazio golf course.



Mendenhall in Kansas Hall

OVERLAND PARK, Kan. — The late Chet Mendenhall, a pioneer in golf course management, was inducted into the Kansas Golf Hall of Fame, Aug. 2, at the Marriott Hotel here.

A charter member of the Golf Course Superintendents Association of America (March 1, 1927), Mendenhall joined PGA Senior Tour professional Jim Colbert and Wichita



Chet Mendenhall

State University men's golf coach Grier Jones as honorees. GCSAA Director Dave Fearis of Blue Hills County Club in Kansas City, Mo., assisted as Mendenhall's inductor and made a special presentation to his widow, Sue.

"Chet was a true professional in every sense of the word," said Carl Beer, Mendenhall's successor at Mission Hills (Kan.) Country Club. "Today's superintendent owes a great deal to him for the standards he set, the work he did in organizing the national association and for his emphasis on education for the superintendent."

Mendenhall died Sept. 25, 1991, shortly after assisting in the dedication of GCSAA's new headquarters in Lawrence.

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For more information on IsoTek³¹ homogeneous products with isobutylidene diurea, call Lebanon Turf Products at 1-800-233-0628. Available in greens or fairway grades.



Do it yourself, and better, with paver blocks

By TERRY BUCHEN

COLUMBUS, Ohio — Paver blocks, traditionally used for home driveways and other landscaping, are an alternative to surfacing a cart path with asphalt or concrete.

Superintendent Carl A. Wittenauer of Brookside Golf and Country Club here needed a unique golf car parking lot directly behind the practice teeing area, so he devised an interesting conceptual design.

Wittenauer and his crew laid interlocking paver blocks on a bed of straight sand. The blocks were tinted a brown earth-tone color for aesthetic appeal.

As golf cars enter the parking area, they drive over some octagonal bricks that border the asphalt cart path. Instead of painting parking space stripes on the brown paver blocks, a row of contrasting gray-colored cinder block-style bricks were inset to mark the individual golf car parking spaces.



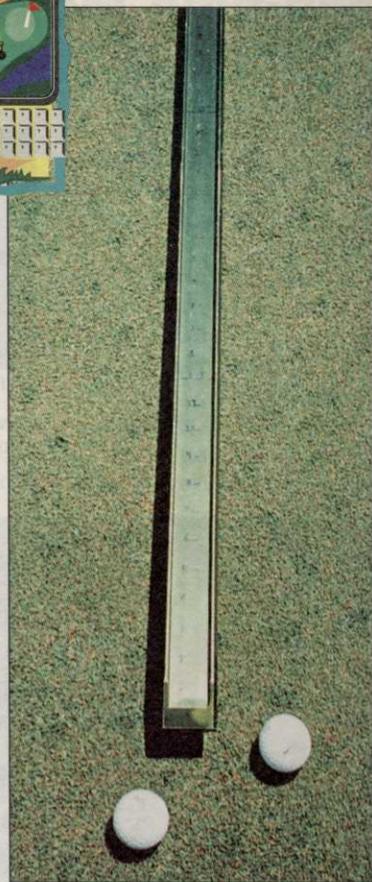
Brookside Golf and Country Club's new golf cart parking area, built by superintendent Carl A. Wittenauer and his crew.

Concrete curbing borders the parking lot on three sides.

"All in all, eight golf car parking spaces were used and we planted some

trees and annual flowers at either end for added appeal," Wittenauer said.

"Our members and guests have made many compliments."



'Metered' Stimp saves super time

NEW ALBANY, Ohio — Tony Mancuso, superintendent at New Albany Country Club, has done away with a tape measure when using his Stimpmeter.

How? Simple: marking 1-inch measures on his Stimpmeter.

"Since the U.S. Golf Association Stimpmeter is exactly 36 inches long, we put 1-inch grids on the back with a black permanent felt-tip marker," Mancuso said.

"Each foot increment is also marked and highlighted. The 1-foot and 1-inch increments could also be painted on with a contrasting color paint or with the traditional or new-type label markers currently on the market."

Pump-station mechanics, maintenance on menu

COLUMBUS, Ohio — Golf course superintendents interested in learning more about pump-station mechanics, electrical circuitry, preventive maintenance and other related topics can select from an expanded schedule of 24 course offerings throughout the United States this fall.

"FinalNet," an eight-hour course designed specifically for golf course superintendents, irrigation consultants and other pump-station users drew 600 industry professionals last year. Some of them also earned continuing education credits from the Golf Course Superintendents Association of America (GCSAA) for completing the instruction.

Sponsored by Flowtronex PSI, the course is planned for the following cities:

Chicago, Oct. 6; Columbus, Oct. 8; Philadelphia, Oct. 9; Washington, D.C., Oct. 10; Charlotte, N.C., Oct. 11; Raleigh, N.C., Oct. 14; Myrtle Beach, S.C., Oct. 15.

Also, Birmingham, Ala., Oct. 17; Atlanta, Oct. 18; Fort Lauderdale, Fla., Oct. 22; Orlando, Fla., Oct. 23; Sarasota, Fla., Oct. 24; St. Louis, Oct. 28; Kansas City, Kan., Oct. 29; Denver, Oct. 30; Las Vegas, Nev., Oct. 31; Chandler, Ariz., Nov. 1; Laguna Hills, Calif., Nov. 4; Ontario, Calif., Nov. 5.

Sacramento, Calif., Nov. 6; Pleasanton, Calif., Nov. 7; Portland, Ore., Nov. 8; San

Antonio, Texas, Nov. 12; and Dallas, Nov. 14.

Exact site locations will be announced, although every class will be held at a golf course. The dates are subject to change.

FinalNet costs \$50 per participant. Because all classes are limited to 45 participants on a first-come, first-serve basis, interested superintendents should contact Greg Lush at Flowtronex PSI at 214-352-7718.

Initial reservations can be placed by faxing the participant's name, phone and the course location closest to the participant to 214-352-7743, or by sending information by e-mail to Greg.lush@onramp.net.

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Saint Andrews' Reagan certified

HASTINGS-ON-HUDSON, N.Y. — John L. Reagan, superintendent at Saint Andrews Golf Club here, has been designated a certified golf course superintendent by the Golf Course Superintendents Association of America (GCSAA).

Reagan has been superintendent at Saint Andrews since 1992 and lives in Cromwell, Conn. The GCSAA instituted the certification program in 1971 to recognize outstanding and progressive superintendents.

To become certified, a candidate must have five years experience as a golf course superintendent, be employed in that capacity and meet specific educational requirements of college credit or continuing education units.

The candidate must then pass a rigorous six-hour examination covering knowledge of the GCSAA and its certification program; the rules of golf; turfgrass management; pest management; safety and compliance; and financial and organizational management. More than 1,600 active GCSAA members currently hold CGCS status.

Vargas on gene injection, other modern advances

Continued from page 15

After trying to convince them they were wasting their money, we conducted the experiment anyway. They were right. If we applied Peat Sorb within a half hour of the spill, plants didn't die. Peat Sorb is so effective in absorbing hydrocarbons, that if you apply it before the oil reaches the crown of the turfgrass plant, the plant will live. Recovery of the injured foliage occurs very quickly for the uninjured crown.

GCN: How is your GCSAA-funded research progressing on a cure for crown-rotting anthracnose?

JV: GCSAA has a new policy of matching funds donated by local chapters for practical research. Crown-rotting anthracnose (CRA) has become a major problem on U.S. putting greens. The increased incidence of CRA is probably related to close mowing heights, which puts stress on the plants, and the high-sand content greens causing wounds that allow pathogen entry into the plant. Control for many years was high rates of thiophanate-methyl drenched into turf. However, in the past couple of years, the CRA fungus has developed resistance to this chemistry. This research will hopefully lead to a better understanding of the disease and more practical ways of managing it.

GCN: What do you think of the way the USGA and GCSAA allocate their research dollars? Is there something they could do to improve the process?

JV: The USGA has done a great job of spreading the money around U.S. universities on worthwhile projects. Bringing Dr. Mike Kenna on board as research director turned the program around because you had a full-time academic person who understood research. [National Director] Jim Snow deserves credit for convincing the USGA's executive committee of the importance of continuing support for turfgrass research.

GCSAA is just back in the business of supporting research. They likewise have a former academic heading their research program, Dr. Jeff Nus, who was involved in university research before he went to GCSAA. Having input from local GCSAA chapters on their research needs helps money go to worthwhile projects.

GCN: Your book, *Management of Turfgrass Diseases*, is generally considered one of the best turfgrass science books on the market. Do you have plans for any additional books?

JV: I am writing a book dealing with pesticides and how they relate to human and animal health products, as well as how their toxicity compares to the food we consume and the everyday products

we use around the house.

GCN: In what areas will the major advances in turfgrass research come over the next 10 years?

JV: The major advances will come in the areas of turfgrass breeding and biological management of pests because of genetic engineering and our ability to move genes from one species to another. Several researchers have

creeping bentgrass plants that are resistant to Roundup and Finale. Imagine a creeping bentgrass cultivar resistant to either one of these. You can spray your creeping bentgrass once a month and not worry about annual bluegrass.

Eventually, we'll be able to put BT genes or endophytes into creeping bentgrass, which should eliminate cutworm and sod webworm problems. We have many good biological-control agents, and with technology like the Bioject, and others yet to come, biological-control agents will be delivered in a

timely and efficient manner.

As good as some of the biological control agents are, we should be able to genetically engineer even better ones. This does not mean all our problems are over. There are regulatory problems in getting these products released. Resistance by weeds, insects and fungi will inevitably occur to the genetically engineered plants and microbes. But there should be others coming on stream all the time to replace them. The next five to 10 years are going to be the most exciting we have ever seen in the turf industry.

USGA JOINS EPA GROUP

FAR HILLS, N.J. — The U.S. Golf Association is one of 10 companies and associations that are charter members of the Pesticide Environmental Stewardship Program, an initiative of the federal Environmental Protection Agency (EPA) to reduce the health and environmental risks of pesticide use. "I commend the organizations that have stepped up and made the commitment to reduce the potential risks of pesticides," said EPA Administrator Carol M. Browner.

Turn your cart fleet into a divot repair armada.

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Ewoldt certified in environmental specialty

CHESTERTON, Ind. — Don Ewoldt, director of grounds at Sand Creek Country Club here, has earned an environmental management specialist certificate from the Golf Course Superintendents Association of America (GCSAA) for completing a specialization program for Employee Safety and Right-To-Know. Ewoldt had previously earned specializations in Integrated Plant Management, Underground Storage Tanks, and Water Quality and Application.

GCSAA is addressing the environmental impact of golf course maintenance and the increasingly complex training needs of golf course su-

perintendents by offering specialized training through its Environmental Management Program (EMP). Due to increasing demands regarding employee safety and right-to-know issues, course work in this area was designed to strengthen understanding of employee training requirements to meet the standards implemented by regulatory agencies for safety in the work environment.

Superintendents may choose to complete one or more of the EMP specializations, each of which is composed of a series of continuing education seminars.

USGA to educate developers

Continued from page 1

new projects so we can help developers and others make good decisions before construction begins."

Moore emphasized the Construction Education Program is far different from the ill-fated TRACS program, which was first proposed several years ago but never got off the ground.

Critics viewed TRACS as a quality-control program that would have made Green Section agronomists critical overseers of

an architect's and builder's work. The two groups were unhappy about the USGA assuming that role and TRACS never saw the light of day.

The Construction Education Program, on the other hand, is intended to be a resource that any interested party can tap into before starting construction, allowing them to make informed choices regarding the entire construction process, Moore explained.

"One of the biggest problems for anyone doing a construction project is simply getting in touch with people capable of doing the job," Moore said. "The web site we're developing, for instance, will have a resources page with the Golf Course Builders Association of America's membership list. Anyone who accesses that page can get information about a particular builder and then link to the builder's web site, if one exists. Links are included for architects, blenders, suppliers, formulators, etc."

Moore believes the most important aspect of the program, however, will be the seminars, which will be available at a minimal charge to any golf association or group. While organizations like the Golf Course Superintendents Association of America give occasional lectures on course construction, "and do a good job of it," Moore said, "when you're talking about things like USGA-spec greens, we'd like to see a USGA official there to discuss it."

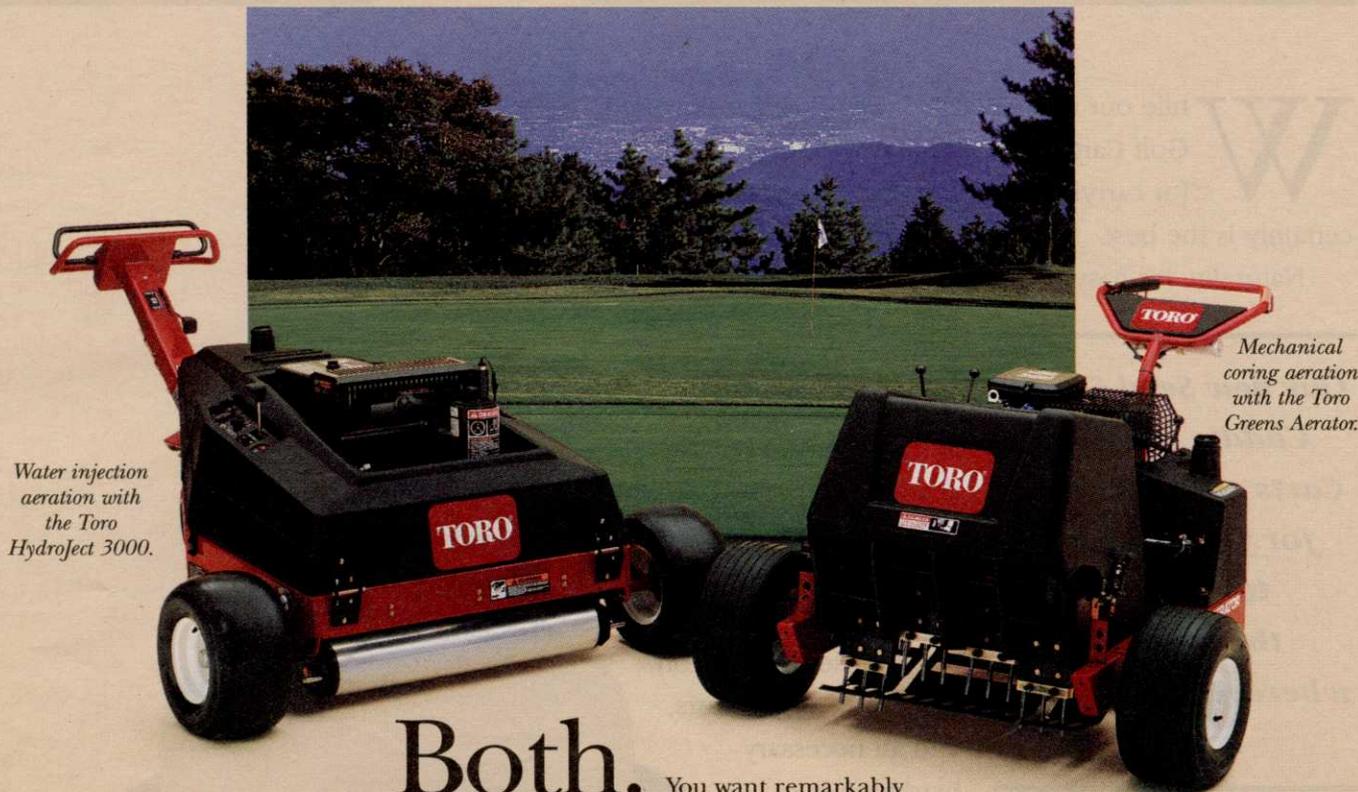
"We don't see ourselves as being in competition with the GCSAA or anyone else. A lot of this information simply isn't out there. Say someone wanted to rebuild a bunker at his course. We'd be able to provide five or more case studies on how that job was handled elsewhere. We can do the same thing for building new tees, installing irrigation systems, rebuilding greens or whatever."

Moore is perhaps the most knowledgeable Green Section staffer regarding course construction. A graduate of Texas A&M's agronomy school, Moore worked on many construction projects during his seven years as a head superintendent and has consulted at hundreds of courses during his 12 years on the Green Section staff.

"They [USGA] were looking for someone with a combination of talents to do this job," Moore said. "They wanted someone who loves to talk in front of a group of people, was computer literate and had a lot of experience in the construction area."

Paul Vermuelen will replace Moore as Mid-Continent regional director and Brian Maloy of Arlington, Texas, will be the new agronomist, covering Moore's former area.

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Southeast

TREE CARE SHOW SET

CHARLOTTE, N.C. — The 7th Annual Tree Care Industry Trade Show and Seminars, TCI Expo '96, will be held at the Charlotte Convention Center from Nov. 7-9.



Admission is free. The show includes a three-day speaker program filled with information for the arborist and urban forestry professional. Dr. Alex Shigo will deliver the keynote address on the future of tree care professionals as they head into the 21st century.

The speaker program will feature a Smart Manager Series and an Expert Practitioner Series.

More than 150 exhibitors will display tree-care equipment, services and products. There will be live demonstrations daily on aerial rescue, rigging, climbing, and electrical hazards.

Trade show hours are from 9:57 a.m. to 5 p.m. on Nov. 7; 9 a.m. to 5 p.m. on Nov. 8; and 9 a.m. to 3 p.m. on Nov. 9.

For more information, or to receive a registration kit, which includes hotel and travel discount opportunities, contact the National Arborist Association at P.O. Box 1094, Amherst, N.H. 03031; telephone 800-733-2622.

North Central



MOSHER, HAMMANS CERTIFIED

WICHITA, Kan. — Ron Mosher of Sim Park Golf Course here and Paul Hammans of Lyons Town and Country Club in Lyons have both been certified by the Golf Course Superintendents Association of America after completing the association's certification program.

Northeast

PROVIDENCE, R.I. — The Rhode Island Turfgrass Foundation will present the Second Annual Rhode Island Turfgrass Show and Conference, Dec. 3-5, at the Rhode Island Convention Center here.



The show will feature more than 200 booths, as well as a program of workshops and seminars.

Manufacturers will display equipment, turf-care products and supplies. Educational sessions will cover market trends,

and Pesticide Applicators Recertification Credits are offered for New England states, New York and New Jersey.

"This show is truly a win-win situation for turfgrass professionals and distributors alike," said Gary Sykes, chairman of the Rhode Island Turfgrass Foundation (RITF). "The dates are ideal, as industry specialists are beginning to formulate budgets for the coming year. We are also pleased to have joined forces with the Connecticut Association of Golf Course Superintendents, who will assist in overseeing the show and meet-

ing exhibitor needs."

RITF is a non-profit organization created to benefit the New England golf and green industry. Proceeds will assist the University of Rhode Island and turf research.

Educational programs begin Dec. 3 at 3 p.m. Show hours are 11 a.m. to 6 p.m. on Dec. 4 and 9 a.m. to 3 p.m. on Dec. 5. Advance passes are \$30 (one-day) and \$50 (two-day). All passes include lunch and Show reception.

For booth rates and information, contact the Show Office, 401-847-7666.

Mountains

ROCKIES CONCLAVE PLANNED

DENVER, Colo. — The 43rd Rocky Mountain Regional Turfgrass Conference and Trade Show is scheduled Wednesday through Friday, Dec. 4-6, at Currihan Hall here.



Workshops Wednesday, a trade show on Thursday and the conference Thursday and Friday will highlight the event.

Among the workshop topics

— many of which qualify for continuing education credit for pesticide certification, are Turfgrass and Weedgrass Identification, Turfgrass Pest Identification and Turfgrass Disease Diagnosis. Other talks include Analyzing Soil Test Results, Using Ornamental Grasses and Sprayer Calibration.

The speakers include Dr. Tony Koski of University of Arizona, Dr. Terry Riordan of University of Nebraska, Dr. George Hamilton of Pennsylvania State University and Dr. David Minner of Iowa State University.

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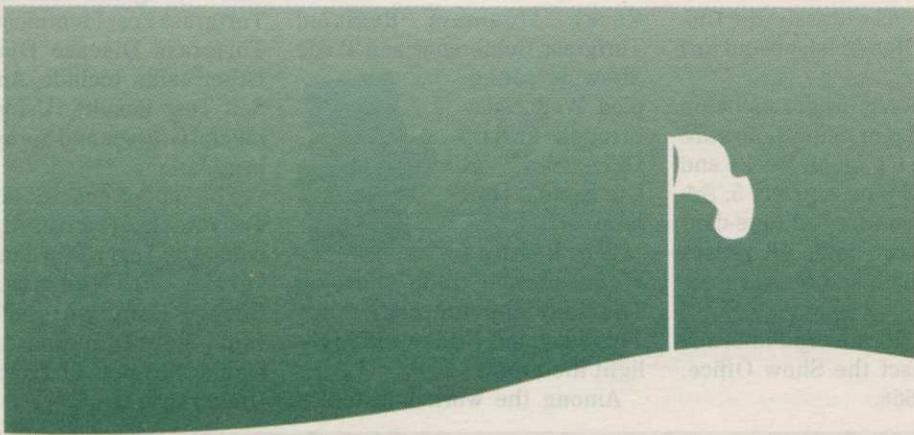
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- Test and compare products and services from leading golf course suppliers at the vendor showcase—your chance to talk with key suppliers about your needs
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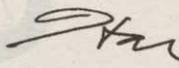
FROM THE DESK OF HAL PHILLIPS

As a reader of *Golf Course News*, it's no secret that public-access golf courses have been the focus of a lot of attention in our pages over the past few years. The reason is simple: Your courses are growing in numbers, your facilities are expanding to meet demand and competition, and your role in the golf industry is taking on added importance.

Let's face facts. Public-access golf facilities represent 70% of the nation's course stock!

That's why *Golf Course News* is sponsoring the Public Golf Forum—to help you meet the business challenges you face every day. It's an educational conference but even more, a chance to connect with your peers and colleagues, exchange information, solve your problems, and meet with vendors who can help your business grow.

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Hal Phillips, Editor

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Yes

BRIEFS



STIRLING JOINS KAVANAUGH

TUCSON, Ariz. — Kenneth Kavanaugh Golf Course Design has hired Blake Stirling as senior designer. Stirling has worked in golf course design and construction for nine years, including seven years as a senior designer with Dye Designs, Inc. of Denver. Leaving Dye, he briefly operated Stirling Design Group. He has been involved in more than 80 golf projects worldwide. Before joining Dye, he was a high-ranking collegiate and amateur golfer in the West and apprenticed with Killian Design Group.



Blake Stirling

.....

FREAM GETS CALIF. PROJECT

BAKERSFIELD, Calif. — Golfplan-Ron Fream Design Group is designing an 18-hole public golf course in this town in agriculturally endowed San Joaquin Valley. River Ranch will be a par-72, ranging from 4,650 to 6,650 yards, winding through a residential subdivision. Extensive earth-moving will contour the golf holes and raise adjacent building sites to enhance homesite views.

COORE-CRENSHAW IN ARIZONA

SCOTTSDALE, Ariz. — Bill Coore and Ben Crenshaw broke ground in July on a 36-hole daily-fee facility here for the Pima Maricopa Indian tribe. Called Talking Stick Golf Club, it will be operated by Troon North Golf Management. Coore said the north course will be low-profile with crowned-off greens and holes of "great latitude where you can pick angles off the tee." Walking will be encouraged on the south course, which will feature the "club look," he said, "greener, more elevation change, more trees and a couple of streams and lakes."



Ben Crenshaw

.....

PELICAN BAY ENLARGING GREENS

DAYTONA BEACH, Fla. — Golfers will experience larger greens and more consistent putting surfaces now that a \$260,000 greens improvement project has been completed at Pelican Bay Country Club's Members Course here is completed later this year. All greens at the 18-hole course were reconfigured and enlarged, and most bunkers and sandtraps changed, according to Jerry Broome, regional manager for International Golf Management, which oversaw the project.

Maine busting out of slumber

By MARK LESLIE

BANGOR, Maine — Maine golf course construction, in hibernation for six years, has emerged with a bang, counting 17 new projects or expansions in the last year and another eight in planning.

Not since suburban Portland's Falmouth Country Club and The Woodlands opened in 1988 and nearby Sable Oaks Golf Club opened in 1989 has anyone built an 18-hole golf course in Maine. But this summer, construction began on The Meadows in Litchfield, Belgrade Lakes Golf Club, Felts Brook Country Club in Holden and Dunegrass Country Club in Old Orchard Beach which is ex-

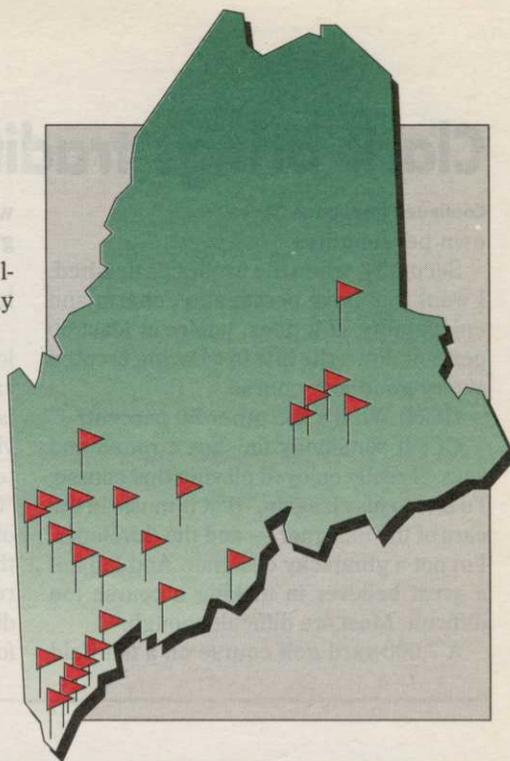
panding from nine to 27 holes.

"This is like the shopping center developments back in the '80s. Everybody seems to want to build a golf course," said Chuck Kellogg, a project director for the Maine Department of Environmental Protection.

The surge has carried over from 1995 when construction began on several new nine-hole facilities and additions from nine to 18 holes. In this short time second nines have been added at:

- Bridgton Highlands late last year.
- Point Sebago in Naples this summer.
- Bath Country Club last year.

Continued on page 33



Belgrade Lakes is Clark's first American canvas

By MARK LESLIE

BELGRADE LAKES, Maine — Two score and two hundred years ago, Maine — as part of the Commonwealth of Massachusetts — declared independence from England. This summer it reopened relations, welcoming British golf architect Clive Clark to build his first course in America.

The property is marvelous. The stakes are high.

"We hope this will be a catalyst [for economic growth]," said co-managing partner John Alford, grandson of Belgrade Lakes Golf Club, Inc. (BLGC) partner Harold Alford. "Central Maine needs a boost and this is it."

"This will mark the resurgence of Belgrade Lakes as a resort," agreed co-managing partner Kyle Evans. Evans, former superintendent of Waterville Country Club and now president of BLGC, was referring to the position the Belgrade Lakes Region held among wealthy vacationers until a 1958 fire destroyed the area's cornerstone hotel, The Belgrade, and its nine-hole golf course.

The 240-acre golf course property sits on very high, wooded ground overlooking Belgrade and Messalonskee lakes and Long and Great ponds. Seven holes, a putting

Continued on page 33



Architect Clive Clark, left, and Belgrade Lakes Golf Club President Kyle Evans look over routing plans at the site.

Brit Clive Clark brings design career to U.S.

Clive Clark. It's not a household name in the United States, but the Brit hopes to change that, starting with Belgrade Lakes Golf Club in Maine (see accompanying story). After copping four National Amateur Championships, Clark was a touring professional for 12 years, representing both the Walker and Ryder Cup Teams, winning the Danish Open Championship and five European titles. For 10 years he was the playing pro at Sunningdale Golf Club and was head pro there for another nine years. He has either played in or broadcast the British Open Championship for 31 straight years, the last 18 from the BBC-TV



booth. He studied architecture at London University. He moved to La Quinta, Calif., 18 months ago.

Golf Course News: Your first course design in America is Belgrade Lakes Golf Course in Maine. You're bringing golf back to an resort area that had it 90 years ago. What is your philosophy of golf course design — the traditional or modern?

Clive Clark: I wouldn't say I'm extreme at either end of the spectrum. My philosophy is simple. I like to design a course with different holes, for a

Continued on page 32



Dave Axland, left, and Bunker Hill partner Dan Proctor.

Colleagues hail Bunker Hill

By MARK LESLIE

PHOENIX, Ariz. — Bill Coore of Coore & Crenshaw calls Dan Proctor and Dave Axland "fantastic." Golf course architect Ron Forse says they are "great to work with, and care intensely about the quality and authenticity of their work."

Sand Hills Golf Club owner Dick Youngscap was so impressed by their work that he cited them in his brochure on the Mullen, Neb., track which was voted *Golf Digest's* Best New Private Golf Course in 1995.

Coore, Forse, Youngscap... Even with these endorsements, who in the world are Dan Proctor and Dave Axland? Is the Dave and Dan Show

— officially called Bunker Hill Golf Course Design and Construction Co. — the best-kept secret in the golf industry?

"I'm probably shooting myself in the foot telling how great these guys are," said Coore, "because if they start getting their own [design and construction] work, we won't be able to get them."

Proctor and Axland's work should speak for itself, said Coore, the consummate "minimalist" designer. He cited Delaware Springs Golf Course, a municipal course they designed and built for the city of Burnet, Texas. "It is so good — low-key, strategic, an incredible

Continued on page 37

Clark brings tradition to America

Continued from page 31
own personality.

Secondly, when the product's finished, I want it to have personality, charm and enjoyability. If it does, you're at least 50 percent down the line to a having created a very good golf course.

GCN: What's the other 50 percent?

CC: If somebody finishes a round and says, "I really enjoyed playing that course; I'd like to play it again," that is music in the ears of the designer — and the developer. I'm not a gimmicky designer. And I'm not a great believer in making a course too difficult. Most are difficult enough.

A 7,000-yard golf course on a flat field

would be quite difficult for the average golfer.

GCN: What do you mean by each hole having its own personality?

CC: Holes that flow and blend, yet don't look the same. The other thing people would say coming off a course designed that way is that they could remember each hole individually. A day or two later, the memory tends to blur, but I'd want them to say, "Gosh, there were so many different types of holes." But if he plays a course in which the holes are "samey," the club golfer doesn't remember the holes. So you basically use different features and use them in different formats. I like things like the old-style cross

bunkers. Where I play my golf at home in England — Sunningdale — that's a course that evolved around the turn of the century. They have quite a few holes toward the finish that have cross bunkers which, in the old days, were put there when they were playing with featheries and they had to get over with their second shots. Nowadays you can get over them with a driver and wedge, but they are still very attractive features.

Doglegs are always nice and off-setting tees is a good idea, so you're not always firing straight down the fairway. And you can do an enormous amount in green designs. This is an area where my drawing and sketching helps me a lot. I do all my own artwork, and I can put ideas down in a prospective sketch as well as straight

onto a plan.

GCN: You've played all the great British golf courses. Can you pinpoint what effect they have had on your designs?

CC: St. Andrews has a lot of nice features about it. One is placing your ball on the fairway. I design wide fairways, which is nice because I think about two things for golfers: They don't like three- or four-putting; and they don't like losing balls.

At Belgrade Lakes, for instance, it's a daily-fee course, and we're carving out, through the trees, landing areas 70 to 80 yards wide. The fairways will average 50 yards wide, which is quite generous. I've never heard anybody complain that they hit too many fairways — "Oh, I hit it. Damn, I hit it again."

Golf is such a punishing game within itself. The trouble is, the more features you design — bunkers, water, mounding, ditches and canals running across the fairways — you make the golf course a little more difficult. You have to be very aware to temper your features, which makes the course become very interesting against its difficulty.

I'm also not against fairly short golf courses for the club golfer.

GCN: How many yards are you talking about?

CC: For the average handicap, a 6,000-yard course can be quite a good course.

Belgrade has quite a lot of features. But you can place them in a very penal position, or you can move them out a little bit off-line or nearer the player so he can fly over the problem.

GCN: Have you ever worked with CAD [computer-aided design]?

CC: They are very clever. Two things come across quite strongly. Where you're perpetually submitting plans and they have to be altered, it's hard work to do it by drafting. If you have your own CAD your alterations are much simpler and quicker. And they can quantify the amount of earth movement. But it takes a long time to log in the information. They would be very useful for someone doing four or more golf courses a year. I personally like working with pencils and black ink.

GCN: You were the architect of the year for Europe in 1991. To this point, what has been your ultimate designing accomplishment?

CC: Each course is special and they're all different. I think probably the best test for a talented designer, or to separate the more from the less talented would be to start with a square, flat field and make a golf course out of it with a given budget.

If you get a beautiful site like Belgrade, even a modest designer could make 6 or 7 out of 10. Then again, one could argue that if you could only make 6 or 7 out of 10 you've wasted a good site.

GCN: You're next to one in La Quinta—PGA West Stadium Course.

CC: There are a lot of diehards in the world who like playing a really hard course. Generally, you'll find it's the 1- to 6-handicap golfers who like to play that kind of course. If you have a very difficult course it's nice that it's in a complex of three or four courses. It's like the ski slopes, where you have expert down to easier slopes. Then you have a break and something for everybody. But if you have a 36-hole complex and design a course that is brutally hard, it will scare a lot of people away.

There are a lot of great holes on the Stadium. It's a great course. But ask yourself, "How would I like to play the Road Hole [at St. Andrews] 18 times in a round

Continued on next page

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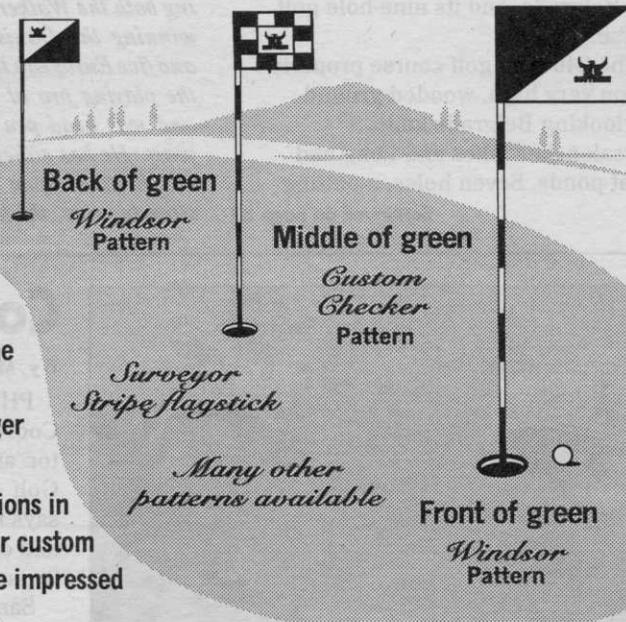
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CIRCLE #124

Maine welcomes Clark

Continued from page 31

course and driving range will boast panoramic water views.

"It's a wonderful site and we're able to put a lot of features into the course," Clark said from his home in La Quinta, Calif. "I think off the back tees, at about 6,700 yards, Belgrade will be quite challenging. But off the forward tees it will be very playable."

Clark was named the best golf course designer in Europe in 1991 by the *London Times*, but his first American course is "exceedingly important," he said.

"It's a bit like winning a golf tourney. It's easier once you've won one. I've worked in Spain, Belgium, a number of countries putting designs together ... but I need to show the people over here what I can do."

Construction began in August on the property which features a 200-foot elevation change. It will be an 18-hole, public-access facility with no housing.

Walking will be encouraged and caddies available, according to Evans.

"The town is very much behind us," Evans added. "We're bringing golf back to Belgrade."

"We think we're right on with the public approach. The sky's the limit in marketing. People have approached us from hotel chains, from area youth camps... We're going to create a walking trail for the townspeople. And it's a great place for cross-

Q&A: Clive Clark

Continued from previous page

of golf?" I think balance is a great word in design.

The trend over here is to come back from that. Owners and designers are softening their courses quite a bit. I think it went through a phase where people were trying to build something that was more brutal than the last one.

GCN: Have you made a permanent home in La Quinta—a sort of "Americanized Mr. Clark"?

CC: I'm still Mr. England. I have a holiday home here at PGA West. I just love being here. For four or five years I've come over around Christmas time and spent a few weeks here. But this is a transition. Now I live here and will holiday back in England.

GCN: I understand you are working with Ernie Els.

CC: Yes, we will break ground this winter on a course in Capetown, South Africa. Sometimes we work together and sometimes I work independently.

GCN: Long-time St. Andrews superintendent Walter Woods is working with you as well.

CC: He will be doing some consulting with me over here.

GOLF COURSE NEWS

country ski races and running races. We want to fit into the community."

"Our philosophy was to provide enough land for the golf course and to create one that is playable and fair without a lot of forced carries," said Rizzo-Donahue Realty's Pat Donahue who with Gail Rizzo are the other partners in BLGC.

"This is a unique property and a unique team that can do the job."

Pine Tree State busts out

Continued from page 31

At least a half dozen new second nines are in the midst of construction from southern to western to central Maine. They are:

- Sanford Golf Club.
- Naples Country Club.
- Lake Kezar in Lovell.
- Nonesuch River Golf Club, formerly The Greens at Eagle Brook in South Portland.
- Turner Highlands.
- Hampden Country Club.

New owners of Lucerne Hills, formerly Pinewood, in East Holden redesigned the nine-hole track last year.

New nine-holers that have been built include:

- Highland Farm in York last year.
- Turner Highlands' first nine.
- Allen Mountain Golf Club, which opened last year and is adding nine.

Meanwhile, developers are planning:

- The Ledges, an 18-hole track in York.
- A nine-hole expansion at the 18-hole Samoset Resort Golf Course.
- A second nine at Wilson Lake GC in Weld.
- The first nine holes at Lincoln Golf Course, with an expected expansion to 18 holes later.
- A renovation of the nine-hole Evergreen Valley Golf Club, with a future expansion to 18.
- A second nine at Cape Neddick Golf Course.
- Ocean 18, a regulation 18-holer in Wells.

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Hawk Hollow reclaims sand quarry

By MARK LESLIE

BATH, Mich. — Another mining-operation property, this one in mid-Michigan, has been turned into a golf course, with interesting results.

"It's awesome," raved Hawk Hollow Golf Course head pro Kirk Sherman. "There's nothing quite like it. Jerry [Matthews] did an excellent job designing this course."

Matthews, with builder D.L. Kesler & Sons Construction, integrated 12 holes through the

mile-long reclaimed gravel and sand-mining quarry for owners Daryl and Diane Kesler. It joins such other famous quarry courses as Black Diamond in Lecanto, Fla., and The Quarry in San Antonio as developments turning mined-out properties into green space.

The 27-hole, public facility opened in August to strong reviews.

This track is not characterized by a quarry cut deep into the earth, but rather by a num-

ber of small lakes and ponds and an assortment of land forms left by the surface-mining operation, said Matthews, who lives in this community and is headquartered in nearby Lansing.

"We were lucky enough to find some really interesting land forms that we simply incorporated into golf features," he said. "For instance, the 12th tee was a peninsula of land sticking out 12 to 15 feet high in a little body of water. We enlarged the water, then built a green 230 yards away and wrapped water around the green."

Kesler bought the land intending to build a golf course on it after it was mined. But Matthews routed the course first, and the mining operation skirted the golf holes, the designer said.

Citing the work of his project manager, Gary Chapman, Matthews said: "We set out to create a course that was friendly to play. It looks more intimidating than it is because of the water. We gave golfers wide fairways and did a lot of fairway shaping to make it interesting."

A lot of wildflowers and natural grasses like creeping red fescue are being maintained, Matthews said, while greens, tees and fairways will all be bentgrass.

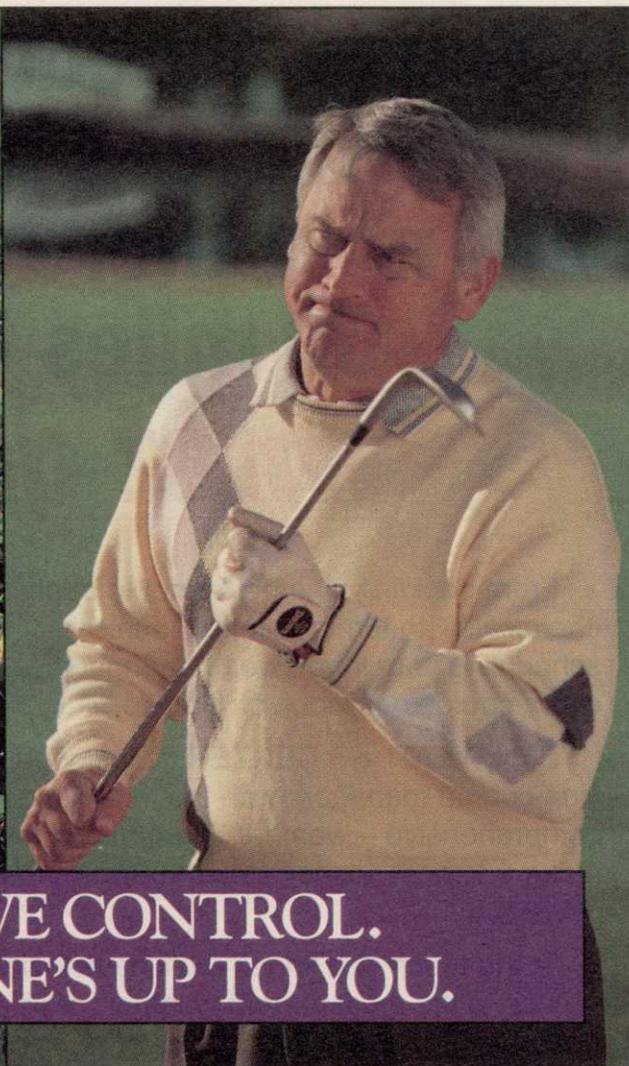
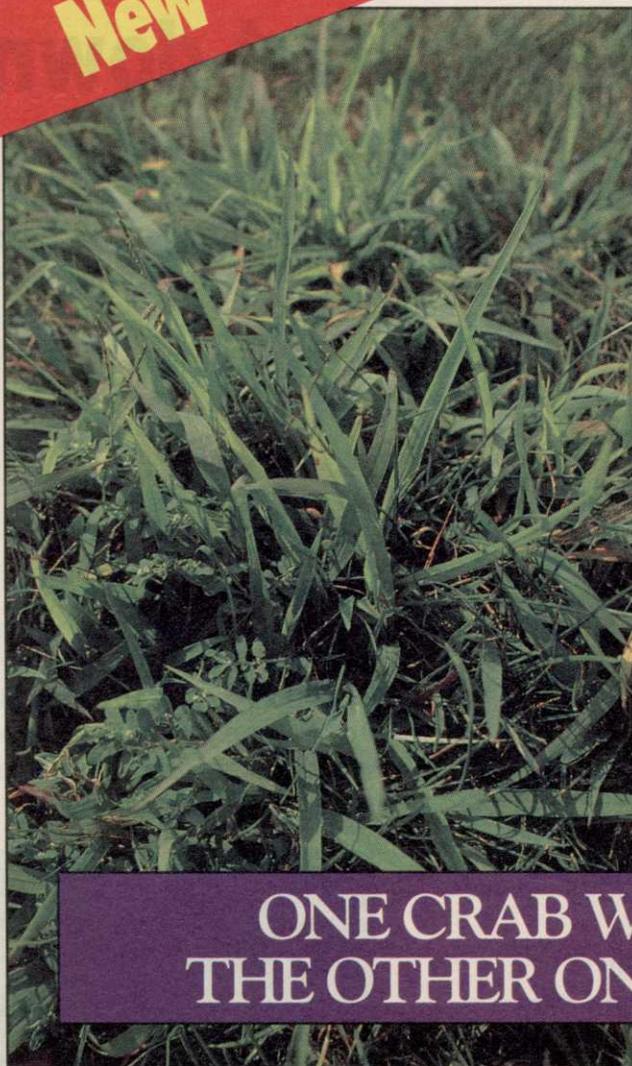
"The contouring is great," said Sherman. "And there's water everywhere — crystal-clear ponds with nice sand bottoms."

For instance, the 10-acre Hawk Lake runs along the entire length on the right side of the par-4, 395-yard 9th hole on the East Course. A series of sand bunkers on the left side of the fairway direct the way to the large peninsula green. While golfers must carry over the lake to reach the green in two, an ample bail-out area sits to the left of the green.



The 18th hole at Hawk Hollow.

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Johnston's Cape Fear 18 complete

WILMINGTON, N.C. — The dominant feature at River Landing Country Club, a Clyde Johnston design now open for play here, is a mile of frontage on the NE Cape Fear River.

However, while Johnston brought the river into play on six holes, the course's signature element may be a man-made water feature: a 10-foot high, crescent-shaped waterfall that connects two lakes that guard the green at the par-4 18th. Johnston also used multiple lakes, streams and wetlands to help define the character of the 7,009-yard private course.

Johnston, whose firm is headquartered on Hilton Head Island, S.C., was recently voted to a two-year term on the Board of Governors of the American Society of Golf Course Architects during its annual meeting in St. Andrews, Scotland.

Pebble Beach

Continued from page 1

ing group issues a draft report recommending 14 strategies for fighting the salt-content problem.

According to Curtis Weeks, a project manager for Parsons Engineering Science — a firm closely involved in the study and drafting of the report — the possibilities range from reverse osmosis, electrodialysis and other technical desalination procedures to the development of new turfs. More drastically, putting surfaces could be rebuilt at the older courses which have “push-up” style greens built on clay that drain poorly compared to modern, sand-based greens. It’s also possible the courses could revert to using only potable water on the greens.

Weeks, who has been involved in the Pebble Beach recycled water project since 1987, said a process like reverse osmosis could cost between \$3 and \$5 million while piping potable water to the greens at all courses would cost roughly \$1 million. The cost of rebuilding a green, he said, is about \$30,000 per putting surface.

The salt problems, even if they prove temporary, are not being taken lightly at Pebble Beach (built in 1919), Cypress Point (1928), Spyglass (1966), Poppy Hills (1986), The Links at Spanish Bay (1987) and the 36-hole Monterey Peninsula Country Club (1926, 1961). Many of these courses are among the most famous and expensive in the world, where expectations persist for near-perfect course conditions.

“From a golf standpoint, it’s a pretty grave concern,” said Bob Zoller, superintendent at the 36-hole Monterey Peninsula CC and chairman of an oversight committee working with the reclaimed water project. “To us, the accumulation of salts in the soil is a potentially serious problem. Everybody’s been very careful and prudent. Everybody’s doing a lot of testing and trying to anticipate the problems.”

Part of the challenge facing the study committee — and the superintendents — is each of the seven courses on the peninsula have different characteristics which may require different solutions. Some courses are in or near wooded areas, some in wide-open areas. Some courses have sand-based greens, others have clay. Yet, for now, each course is on the same pipeline, receiving the same recycled water.

The salt saga goes back to the fall of 1994, when seven Monterey Peninsula courses began using recycled water as part of a \$34 million recycled water project. The Pebble Beach Co. — the largest employer in the county and subsidiary of several Japanese companies that own the Pebble Beach resort — financed the ambitious project. The goal, in part, was to greatly decrease the reliance on local potable water — always an issue in California and other western regions. In doing so, the courses, and especially the Pebble Beach Co., would build good will in the community.

But turf problems surfaced last fall. The peninsula received less-than normal rainfall in September, October and November of 1995. Superintendents started noticing discoloration and other signs of stress on their greens. By November of last year, superintendents were voicing their concerns to the groups providing the water, namely the Carmel Area Wastewater District and the Monterey Peninsula Water Management District.

“Contractually we’re tied to the same cost for using reclaimed water as potable water,” said Zoller. “At Monterey [Penin-

sula CC] we spend about \$250,000 a year on water. That’s a lot of money. We’re paying a quarter million dollars for something that’s having a detrimental effect on our turf.”

According to Ray von Dohren of the Carmel Area Wastewater District, the sodium level in the recycled water used by the courses ranges between 50 and 150 parts per million, a relatively low concentration that doesn’t bother fairways or other vegetation it irrigates. But bluegrass can be affected by about water with 75 parts per million sodium, said von Dohren. The water previously used on the golf courses — purchased from the California-American Water Co. — averages 51 parts per million sodium, according to a Cal-Am spokesperson.

Ironically, the greens are being adversely

affected by water that is cleaner than drinking water in some parts of California.

“The type of water we have would be fine for most golf courses around the country,” added von Dohren.

As a short-term fix, the Carmel Area Wastewater District has already invested \$150,000 to inject gypsum into the recycled water. Gypsum, which is calcium sulfate, can carry the sodium through the shallow root zone of bluegrass and keep excess sodium from getting into the grass plant, according to von Dohren. Weeks said his group has been conducting frequent tests and even though the results aren’t definitive, he said, “I know the SAR (salt absorption ratio) is down, based on the calcium we’re adding.” Weeks said the gypsum injection will probably end

up being the first step in a “staged approach” to deal with the problems.

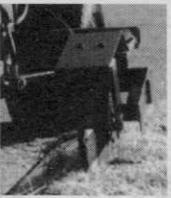
Further, under contract terms set more than two years ago, the golf courses are allowed to use potable water for five to seven days at a time, if needed. Many courses have been doing so this summer to stem the problems. But while they wait for an engineering draft report — and a final plan by the end of this month — Zoller and other superintendents are concerned the problems could get far worse if the Monterey region suffers another multi-year drought, as it did in the late 1980s.

“If that happens the greens will never get flushed properly,” said Zoller. “We assume that could lead to very serious problems. And if that happens, it would be resume-printing time.”

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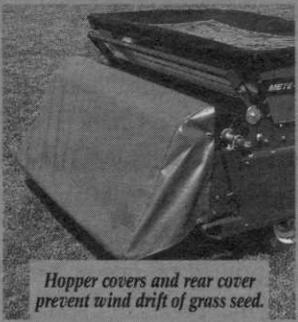
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CIRCLE #127

Ironhorse unveils 'Little League' facility

LEAWOOD, Kan. — The nation's first "Little League" golf facility was introduced at the Ironhorse Golf Club here June 24. This facility, designed by Dr. Michael Hurdzan, allows youngsters the opportunity to learn and play golf in a fun, challenging and rewarding atmosphere [see related story page 9].

It features a practice tee, short game center and three-hole practice course which is part of Ironhorse Golf Club.

"We're proud to be the national model site for the Hook-A-Kid On Golf facility which will serve

as the guide for future golf course development nationwide," said Scott Whitaker, director of the Leawood Parks and Recreation Department.

When Leawood began construction on Ironhorse, officials intended that the facility not only provide a golf course for adults but also a feeder system for youngsters to learn the game.

"We've had various programs on our fields, but until Hook-A-Kid On Golf was created we never had a league-structured program for kids to get involved in golf on a regular, ongoing basis," Whitaker said. "The program is truly an exciting innovation long over-due."

Through Hook-A-Kid On Golf's Tee Level Clinics, which are held at 150 sites nationwide each summer, youngsters receive a week of golf instruction and various materials to help them learn and play the game. They can progress to the Challenge Golf League, which allows junior golfers to play in a team format like they can in the more traditional team sports.

Municipal parks and recreation departments nationwide provide an estimated 61,000 facilities for youngsters to play baseball, soccer, football and various other "Little League" sports.

Leawood's practice tee includes grass and artificial hitting surfaces. A separate teaching tee provides a private atmosphere for instruction. There are four target greens which give golfers a different look to sharpen their skills.

The short-game center features a large pitching and chipping green, coupled with a 13,000-square-foot putting green for practicing bunker play and pitch shots.

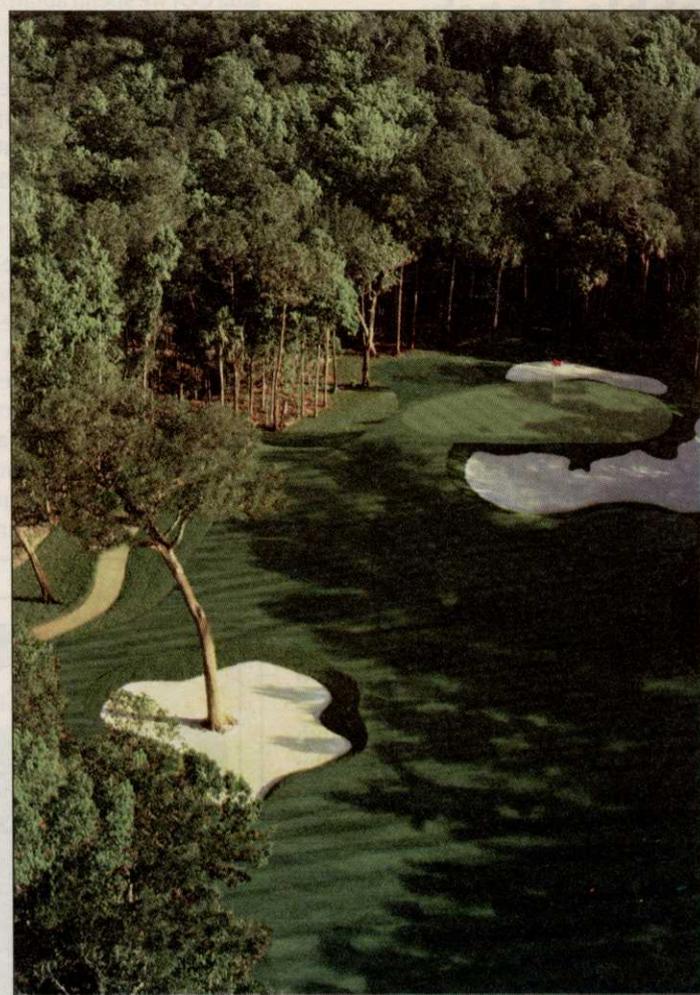
The practice course consists of three par-3 holes that allow youngsters to integrate real-game situations into their practice routine.

Press Maxwell is nominated for Hall

DENVER, Colo. — The Rocky Mountain Golf Course Superintendents Association (RMGCSA) has nominated James Press Maxwell for induction into the Colorado Golf Hall of Fame. The RMGCSA's board of directors nominates golf course architects, builders, turfgrass professors and superintendents who have made significant contributions to golf in the state.

Maxwell, the son of noted golf course architect Perry Maxwell, was one of the pre-eminent architects in the United States during the 1950s and '60s. He was born in 1916 in Ardmore, Okla., but has made his home in Morrison the last 30 years. In 1960, Press served as president of the American Society of Golf Course Architects.

Press designed or remodeled more than 20 courses in Colorado. His most prominent Colorado designs are Hiwan, Kissing Camels, Boulder Country Club, Inverness, Rolling Hills and Pinehurst.



CELEBRATED CO-DESIGN

Celebration Golf Club in Orlando, the long-awaited collaboration of Robert Trent Jones Sr. and Robert Trent Jones Jr., will open Oct. 3. The golf course, managed by American Golf Corp., is a centerpiece of the new town of Celebration, built by Walt Disney World Co.

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Proctor & Axland: One in two

Continued from page 31

design," Coore said. "They are the perfect guys to do design/build... You wonder why they haven't gotten all kinds of work."

"We were naive enough to think that if we put a good product out there for people to see that we would have plenty of work," said Proctor. "But it hasn't worked out that way, even at the small-town level. We have projected ourselves as shapers who can also design and build. But even at the small-town level, they want a 'name' architect. Perhaps, one of us should have stayed aside as an architect, so they [clients] could say, 'There's our architect.'"

Instead, Proctor and Axland have gained a reputation for their shaping on such high-profile courses as Sand Hills, where they worked with Coore and Crenshaw, and at Riviera Country Club in Pacific Palisades, Calif., where they helped Forse in bunker restoration.

"They were a natural for this project," Forse said. "What I really enjoyed was their uncanny emulation of the [architect] George Thomas style of bunker (the sand-flash variety, very gnarly and natural, with a dunes-like edge, a controlled raggedness). It was masterful."

Proctor, strong on design, and Axland, mechanically minded, like to say that together, the two of them make "one whole man."

"Dave," Proctor said, "is one of the premier bulldozer operators in the world and he knows the game, the strategy, and every angle of construction. You give him a spark of an idea and he goes with it and makes something very good."

"Dan," said Axland, "is an excellent golfer. His strength, as it relates to our partnership, is in conceptualizing golf holes and routing, where I gravitate more toward actual construction and earthwork. It's a good partnership. There's a lot of overlap."

Excellent golfers, Proctor and Axland had both decided they were not good enough to play professionally, but they wanted to find a niche in golf — somehow, somewhere. Their paths merged in 1987 at Kings Crossing Golf and Country Club, which Coore designed in Corpus Christi, Texas.

Proctor had worked on the maintenance crew under Coore when Coore was superintendent at Waterwood National Resort and Country Club in Huntsville, Texas. "Bill always wanted to get into design," Proctor recalled. "I've worked for him on and off ever since."

Meanwhile, Axland had earned a turfgrass management degree from Kansas State University and had moved to Corpus Christi as an assistant superintendent. When construction of Kings Crossing began two miles down the road, he decided to get building experi-

ence. Axland stayed on as assistant superintendent and the Proctor-Axland team was born basically at the same time Coore and PGA Tour great Ben Crenshaw began their design partnership.

Since then, the Dave and Dan Show has been closely tied to the skyward climb of Coore and Crenshaw.

"Working for Coore and Crenshaw, you have the best of both worlds — design and construction," Axland said. "They allow so much freedom with the people on site. It's a consensus

of opinions carefully edited by Bill and Ben.

"Doing our own work is more rewarding. But working with them is the next best thing."

"We're all drawn to design because of the artistic side," Proctor said. "Plus we love golf. It's a great combination. The bottom line, especially with Coore and Crenshaw, is the product: building good golf holes.

"Most important is how a course plays and if it's fun. We want it to be fun for the 15-, 20-, 25-handicapper. We want to make those people think and still challenge the good player. That's

the dream of every golf course designer, but it doesn't happen often enough."

However, the elusive dream — a Bunker Hill turnkey contract — remains. Axland and Proctor would do the routing on paper, first spending a lot of time on site, and gaining a basic conception of variety and balance — short, long, dogleg left, dogleg right, uphill, downhill. Then they would build it through to the end.

"We still see the need for people like us in the small-town market," said Axland.

"And there's a joy working with small-town people. They ap-

preciate what you do," Proctor added.

In the meantime, as Proctor and Axland wait for that next design/build opportunity, they have started a 36-hole project on the Salt River Indian Reservation here for ... that's right, Coore and Crenshaw.

THE DAVE AND DAN SHOW

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CIRCLE #129

Can compost actually fight snow mold?

By PETER BLAIS

GLENVIEW, Ill. — Superintendent Dan Dinelli is experimenting with yard compost this fall to see if the organic alternative will help suppress snow mold here at North Shore Country Club.

"There's some data that supports the idea that a top dressing of compost injected with certain bacteria can help prevent snow mold," Dinelli said. "It's pretty preliminary data. But since they've taken away the mercury-containing products we've always used to combat snow mold, we've got to find an alternative."

"There are several other fungicides out there, but none that work as well as the mercury products. Compost is a natural alternative. Hopefully it works."

Laying down snow mold treatments to prevent snow mold is one of the main winter preparation projects at Northern courses. Snow mold is particularly prevalent where snow remains on the ground for three months or more without a thaw. It is characterized by the springtime appearance of grayish to dark brown-colored areas ranging from 3 to 24 inches in diameter.

Dinelli plans to test a compost mix

Continued on next page



A Scott's Company fertilizing/overseeding vehicle on the job in Jacksonville.

Fertilize & overseed: All at once

By PETER BLAIS

MARIETTA, Ga. — It's mid-fall, the summer help has returned to school and superintendent Tracy Meeks is looking at overseeding Canterbury Golf Club with a "bare bones" crew.

Until a couple of years ago, Meeks' crew did the time-consuming job itself with the limited equipment available at the course. That's when O.M. Scott representatives approached him about putting their custom fertilizing trucks to a new use, i.e. overseeding Meeks' course.

"It's worked very well," Meeks said. "There are some skips because the trucks act as giant drop spreaders. The little that doesn't get covered we can go back and do ourselves. Overall, though, it's the quickest way I've seen to get the course green for winter."

Scott first introduced its fleet of fertilizer trucks in 1992,

example, the truck travels through the center of the fairway at 11 to 12 miles per hour. It slows significantly as it approaches the green. The radar tells the computer the green is ahead, the vehicle slows and the computer slows the application rate.

"The technician operating the vehicle is the key to the operation, however. We hire trained golf course personnel, many assistant superintendents, who understand the placement of seed."

Meeks was impressed with the operators. "I don't even send someone to ride with them anymore," he said. It cost Meeks \$12,000 to overseed Canterbury's 20 acres of fairway. That included three visits: an initial starter fertilizer, the actual seed and a high-quality fertilizer application in early winter.

Two years ago, Scott realized it could also help Northern courses prepare for winter by using the same vehicles to

Continued on page 40

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The ability to use the Turfco F-12 top dresser as an overseeder is made possible by its patented chevron belt. It allows the user to apply a wide variety of materials — in top-dressing mixtures of sand, peat, mosses and humus as well as crumb rubber and calcine clays. Turfco discovered the top dresser could also apply grass seed.

The F-12 handles all ryegrass blends and other large seed grasses used for overseeding. These seeds are used predominantly in Southern parts of the country and intermittently in the North. The F-12 can spread rye seed at a minimum rate 7 pounds per 1,000 square feet or 300 pounds per acre.

The F-12 does not apply very

small seeds at lower rates.

Turfco developed a special-fitting hopper cover to prevent lightweight grass seed from blowing out of the hopper. To prevent wind drift during overseeding, a wind screen covers the rear panel and seeding zone from the hopper to a few inches above the turf. A hand-controlled clutch actuator lets the operator start and stop overseeding without ever getting off the seat of the tractor.

For more information call Turfco at 612-785-1000.

CIRCLE #307

Verti-Drain offers aeration alternative: Narrow-needle tines

Verti-Drain, developer of a diverse line of soil aeration systems, has introduced a series of multi-tine aluminum holders that utilize narrow needle tines for effective golf course and sports field aeration during the hot, high-traffic summer months. The new equipment, with tines divided into two rows, enables turf professionals to aerate faster with the same amount of holes per square foot, or at the same ground speed with more holes per square foot.

The solid needle tines (each 5/16 of an inch by 9-1/4 inches) used in Verti-Drain's multi-tine heads can penetrate the soil and deliver air and other nutrients to the roots up to a depth of

7 inches with virtually no surface disruption. Follow-up topdressing isn't necessary. Multi-tine heads developed for the Verti-Drain 005.120 Model (7 inch by 2 inch by 1-3/16 inch) incorporate 7 needle tines and offers two 3/4-inch by 2-3/16-inch adapters which fit directly into the 3/4-inch holes of the tine holder. A separate multi-tine holder for the Verti-Drain 105.145 Model (8 3/4 inch by 2 inch by 1-3/16 inch) fits 8 needle tines symmetrically into two rows. It also comes with two adapters.

For more information, contact Verti-Drain at 717-288-9360.

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Compost test

Continued from previous page

on five acres of tees and fairways. "We'll keep it off the greens because compost could interfere with soil mechanics, air and water movement," he said.

The major problem with compost is its variability, Dinelli said. Since it contains everything from sticks to leaves to grass clippings, compost can vary greatly in terms of carbon/nitrogen ratio, ash content, pH and other nutrients. To help minimize any variations, Dinelli will purchase all his compost from a local supplier, Greencycle. The cost should run between \$7-14 per cubic yard.

"You can make compost on site, but there is really quite a science to it if you want to do it right," Dinelli said. "Compost suppliers have expensive tub grinders and windrow equipment. They constantly monitor their materials so they can turn them at the proper time."

Dinelli will transport the compost to the course site where he plans to incorporate the compost with a bacillus bacteria in early October. He will top dress the material into the specified areas in early November, "just about the time the turf goes dormant," he said.

"We'll remove the top dressing or work it into the soil in the spring," he added. "It will be a heavy top dressing and the leaf blades have to be visible. There's no smell. And it won't interfere with play since it won't be on the greens. Besides, we get very little off-season play."

"I'll let you know how it works out next spring."

Hayter Cup

Continued from page 3

and Neil Thomas, executive director of the British and International Golf Greenkeepers Association (BIGGA). It was at the Hayter Challenge finals in September 1994 when the idea of an international team match was first floated. It took shape through 1995 and was birthed publicly in September 1995.

European success during the 1995 Ryder Cup at Oak Hill played no small part in the final decision to proceed.

Yet the competitive element, though fundamental, is not the only raison d'être of the new contest. Macfie recognizes the value in the cross fertilization of ideas

and methods in turf care, to say nothing of the opportunity for European greenkeepers to share experiences with their counterparts around the globe. Given Hayter's line of business and its current modest showing in the North American market, this is hardly surprising. Not that Macfie is in any way coy about this point — as sales and marketing director, he is obviously keen, as he puts it, to "raise the profile of Hayter around the globe, particularly in North America."

More power to his elbow if this is to be a biennial event and the return match will be stateside.

Selection of the two 12-man teams was fairly uniform, with the top players from the various domestic greenkeeper's tourna-

ments being chosen to fill out the respective sides. The Americas squad drew players from North, Central and South, while The Rest of the World is represented by Britain, Europe and Australasia. Team spirit will have to be built quickly.

Explained Dean Cleaver, non-playing captain of the Rest of the World team: "We'll meet the first time on Saturday, have a practice round on the Sunday, sink a few beers in the evening and discuss selection and tactics then."

The match starts Monday.

Cleaver is taking his job very seriously. He recognizes the guys on his team have succeeded through many rounds of golf to get there. But is he confident? Will his team win?

"I hope so," said Cleaver. "We will certainly be competitive."

He's not kidding. One of the two German greenkeepers on the team actually flew to West Lancashire last month in order to get to know the course.

"But winning isn't everything," Cleaver observed. "The most important thing is the bringing together of like-minded people to discuss our profession and learn a little bit from each other."

Cleaver's pre-Cup politesse sets off a swirl of déjà vu. Hungry for some sign of high-stakes build-up, this correspondent tried to press the "True Brit" and scratch him into aggressive gamesmanship. But he wasn't having any of it:

GCN: Don't you want to crow

a little bit about the Ryder Cup?

Cleaver: Hah hah hah, oh no... hum, no, I wouldn't like to say that at all.

Perhaps all this was a front. As Cleaver talked about the venue for the Hayter International, he let slip a nugget of information which smacks of gamesmanship.

GCN: Why is the event to be held at the West Lancashire GC?

Cleaver: Because the Challenge Finals were hosted so well there last year.

GCN: Ah! So the four Brits in the team know the course reasonably well?

Cleaver: I suppose so... but it wasn't the reason we chose it, honestly [silence]. It's a typically British seaside course so I don't suppose the Americans will have much experience of such courses.

Sneaky Dean, very sneaky. Well done.

But what of the greenkeeper of the West Lincs course? How does he feel about having 24 of the best golfers from his worldwide peer group casting a critical eye over every sward of his daily labor?

John Muir, the West Lincs greenkeeper, is stoic. "There is a certain amount of trepidation involved," he said. "The members complain that the course is better prepared for visitors, but I strive for the same very high standards all the time."

The West Lincs course is typically British Links and was remodeled in the early 1960s by Frank Pennick. It is set between the sea and a railway line and, as with most links, it demands a variety of shots from golfers. It is here that greenkeeper Muir believes the Americans might struggle.

"The guy who can use the wind and play a chip and run game has the advantage over the general American game of target golf," Muir said.

Was this, I wondered, the hardened edge that I had been looking for? Was Muir suggesting that British and European golfers are, overall, better and more resourceful shotmakers on average than the Americans and would therefore claim the first-ever Hayter International Cup?

Not at all, claimed Muir. He said he isn't very competitive and, in any event, his very job demands neutrality.

So, it appears the whole ethos of the event is one of comradely harmony — for now anyway. Perhaps the pinch will come on the first green.

Scotts program

Continued from page 38

courses dispense Scott's FFII snow mold treatment.

"We begin applying it on northern Michigan courses in early October and start moving south, ending up in Kentucky about mid-December," Lybarger said. "It's another way to keep our vehicles operating."

Scott has 10 vehicles that service roughly 75 courses. The vehicles are kept busy in the Southeast. "We have some excess capacity in the Southwest," Lybarger noted.



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PALM COAST HIRES THOMPSON

PALM COAST, Fla. — Palm Coast Resort named Jerry Thompson director of golf for its four championship 18-hole courses, designed by Gary Player and Arnold Palmer— Cypress Knoll Golf Club, Matanzas Woods Golf Club, Palm Harbor Golf Club, and Pine Lakes Country Club. He will also oversee the operations of Palm Coast Resort's fifth course, a Jack Nicklaus Signature layout, when it is completed in September, 1997. Thompson joins Palm Coast Resort after 12 years at PGA National Resort and Spa, where he served as head golf professional of the five courses at PGA National Golf Club.

RMA TO MANAGE PHOENIX LAYOUT

PHOENIX, Arizona — Resort Management of America (RMA) has been selected to manage Chaparral Pines golf club and homeowner recreational facilities near Payson, according to RMA President Henry DeLozier. The Phoenix-based golf course management firm operates two other Arizona golf facilities: Stonecreek, The Golf Club in Paradise Valley and the ASU-Karsten Golf Courses in Tempe.



Henry DeLozier

IGM AWARDED FLORIDA CONTRACT

LAKELAND, Fla. — International Golf Management, Inc. has been retained to provide professional golf course maintenance services on a contractual basis for Brooksville Golf & Country Club in Brooksville, Fla. International Golf Management will provide complete golf course maintenance and landscape management services for the member-owned, 18-hole course. In other IGM news, Scott Campbell has been retained as superintendent of IGM-managed Sandridge Golf Club in Vero Beach, Fla.

FAIRWAYS TAKES ON LITRENTA

KSL Fairways (KSLF), the community golf division of KSL Recreation, recently named Keith H. Litrenta vice president of business development and acquisitions. Litrenta joined KSL Fairways in March 1993, serving as chief financial officer until May 1996 and interim chief executive officer of Lake Lanier Islands Resort, a KSL Recreation property, until August 1996. Litrenta brings 17 years of financial and operational experience, including Big Six and Fortune 100 companies, to his new role.



OB Sports acquires Vegas' Legacy

PORTLAND, Ore. — OB Sports, a golf course development, management and design company, has purchased The Legacy Golf Club in Henderson, Nev.

OB Sports also owns and operates Angel Park Golf Club, which is located on the other (western) side of Las Vegas.

OB Sports has managed The Legacy under contract since 1989. "We are very excited about this purchase," said Orrin Vincent, president of OB Sports.

"The Legacy is a golf course which we built and have managed since it opened more than six years ago. Not only do we know all of the intricacies of this facility, but we really know and appreciate the value of the Las Vegas market."

As a first act of ownership, OB Sports changed the turfgrass on all 18 greens at The Legacy. John Fought Design, a subsidiary of OB Sports, also made slight alterations in the shapes of the greens.

PERSONNEL PERSPECTIVES

Employees must know what you expect of them

By VINCE ALFONSO

It was a hot June day, during my second year as head professional and general manager of Holiday Golf Club in Olive Branch, Miss. We were just getting things off the ground. I had a million things to do that day but I had promised to meet with Tom, one of my golf car boys. I rushed into my office, a few minutes late, plopped down in the chair behind my desk, and said, "Go Tom, I'm all ears."



Vince Alfonso

Tom stuttered and stammered, asking me question after question for over 10 minutes. To each question I answered, "Yes, Tom, that's true." or "That's correct."

When he finished, I said: "Let me see if I have it straight. You believe you have earned a raise because you have: (1) shown up for work on time, or called in to tell me you would be late; (2) performed all tasks given to you without grumbling or complaining; (3) never reported to work drunk or stoned; and, (4) never given me cause to suspect you of stealing." There was a long silence, then a big gulp by Tom. He straightened his frame, raised his chin up and said with confidence, "That's right, Mr. Alfonso."

Continued on page 45

Consolidation name of FGCI's game

By PETER BLAIS

MELVILLE, N.Y. — Based on its aggressive financing and acquisition strategy, Family Golf Centers Inc. (FGCI) appears well on the way to meeting its goal of becoming the prime consolidator in the stand-alone, golf driving range industry.

In July, the publicly held company completed a successful offering of 3 million shares of its common stock at \$27 per share. FGCI plans to use most of the \$75 million raised to acquire, lease, or develop new practice centers; improve its existing golf facilities; and build up a working capital fund.

The recent purchase of Pin High Golf Center in San Jose, Calif., increased the company's holdings to 25 facilities in 11 states, including seven Golden Bear Golf Centers licensed by Jack Nicklaus' Golden Bear International. Plans are to operate 30 practice centers by year's end and 50 by the end of 1997.

"We have an infrastructure with enough assistant managers in training that we could staff another 50 right now," said President Dominic Chang. "But we'd like to have more controlled growth, somewhere between 15 and 20 facilities per year. That means we should have more than 100 centers by the year 2000."

FGCI reported its net income rose 115 percent to a record \$1.574 million or 18 cents a share for the second three months of 1996, up from \$729,000 or 15 cents per share from the same period a

year ago. Sales for the quarter were up 87 percent to \$6.852 million from \$3.655 million in 1995.

Those increases are due largely to the aggressive growth the company has experienced over the past four years. Chang, who holds a master's degree in industrial engineering and was a high-level executive with the Bank of New



Dominic Chang

Continued on page 46



Photo courtesy of PBI Gordon

VALHALLA CAUGHT IN LEGAL TRAP?

Valhalla Country Club (above) in Louisville, Ky., host of last month's PGA Championship, was the focus of a civil rights protest and subsequent court trial the week after the tournament. In early July, Rev. Louis Coleman Jr., who is black, and nine other civil rights activists purposely walked on to the grounds of the private club to protest what it called the discriminatory practices of the PGA. They were arrested for second-degree criminal trespassing. Coleman said the PGA, and by extension, Valhalla, should hire more minority businesses and more minority employees for the tournament. The trial started Aug. 19, a week after the tournament finished.

Golf course management an evolving business

The professional golf course management business has moved out of its infancy and has attained toddler status. Still, less than 5 percent of the nation's courses are operated by professional management companies. Most people believe that number will increase and, as it does, that the course management business will evolve into something different than what we know today.

With that in mind, we asked several management company executives, "What other industry will the golf course management business most resemble 20 years from

now?" Following are their responses.

Rich Katz, director of marketing, Billy Casper Golf Management—The proliferation of daily-fee courses is similar to the growth experienced by the hotel industry. There is still more demand for courses than there is a supply in some markets. But that could change in 20 years and we could be oversupplied in many areas of



Rich Katz

the country, just as the hotel industry is oversupplied in some markets.

With the increased supply will come an increased need for third-party managers with recognized expertise in managing golf properties and enticing golf-smitten individuals to their doors. Hyatt, Hilton, Doubletree and Westin have done excellent jobs of differentiating their products in their markets. They've taken their manage-

ment expertise and applied it to properties they own or are owned by others. Hyatt, for instance, has Hyatt Resorts, Hyatt Regency and regular Hyatt rooms. The rooms are different in each, but they've standardized the level of service so customers know what to expect at all three.

Tim Miles, President, Crown Golf Properties—Despite the influx of management companies in the past decade and the improved technology available, the course management business has only emerged from a juvenile state as a business. I foresee continued consolidation of firms, although this will be very difficult due to the nature of our business. For example, there remains a preponderance of management companies in urban areas that manage two to four golf courses and, therefore, possess a separate identity but good golf opportunity for the companies' principals. This fact reduces consolidation possibilities.

In 20 years, I envision management systems in our industry that will significantly improve reporting processes, quality control, customer service and financial accountability. The nature of the game of golf will allow the golf management business to maintain a separate identity that slightly touches the food service and retail industry, yet will most closely resemble the entertainment industry because golf will always be an experience and an opportunity to escape from the everyday pressures of life.

Golf, in its purest form, provides competition, camaraderie, a walk with nature, exercise, and skill recognition, and the golf management business must endeavor to preserve these qualities to insure success.

Michael Rippey, President, North American Golf Inc.—One way to answer this is to look at the dominant and emerging trends in our business and try to project them out 20 years to some logical conclusion.

Trends I would consider most relevant are, first of all, the continuing consolidation of multiple facilities under larger and larger ownership/management groups. Second, there is a continual widening of the quality/pricing spectrum in public golf. And, third, the growing recognition that we are really in the entertainment business and not simply in the golf business.

Projecting forward 20 years on the basis of these trends, I expect that we will follow developmental patterns that are similar to those we have seen in the American restaurant industry over the past 25 to 30 years.

Joe Black, President, Western Golf Properties—The golf course management business will most resemble the hotel management business. Golf management companies will refine their practices and management systems so they are readily recognizable by the consumer.

Management company names will be profiled by the golf clubs to attract customers. Many companies will establish market niches that will immediately tell the con-



Michael Rippey



Joe Black

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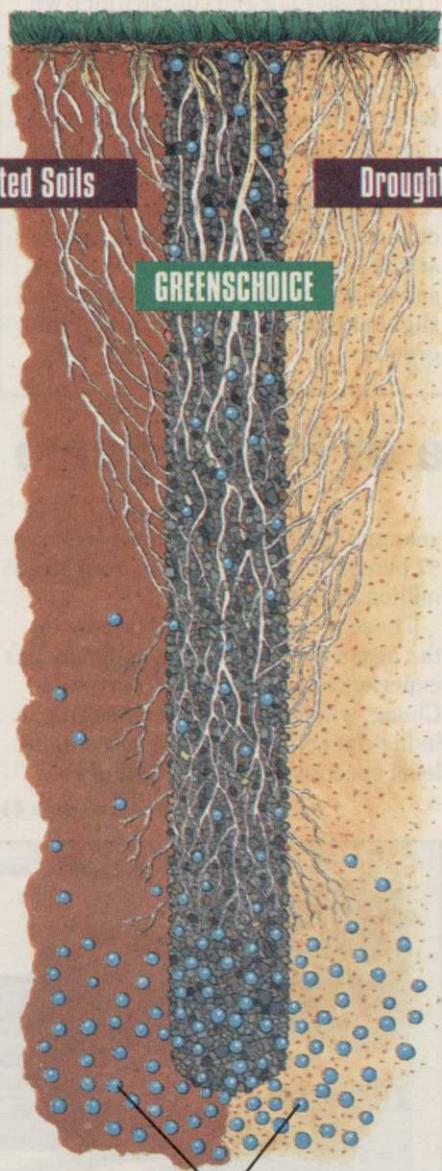
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Western Golf Properties, U.S. Homes hook up on two desert projects

SCOTTSDALE, Ariz. — Western Golf Properties has been selected to manage two golf facilities being developed by U.S. Home Corp. The golf clubs are part of the master planned communities Heritage Highlands in Tucson, Ariz., and Heritage Palms in Palm Springs, Calif.

Both Heritage Highlands and Heritage Palms will feature 18-hole, Arthur Hills-designed golf courses with practice facilities and a full-service golf shop, which will be located in the expansive community clubhouse.

"U.S. Homes has had much success on a national basis with their master planned

communities. Golf is an integral part of their communities and a key selling point", said Mark Kizziar, vice president of Western Golf Properties.

David F. Herman has been selected as course superintendent for Heritage Highlands. Prior to joining Heritage Highlands, he was assistant superintendent at the Westin La Paloma Country Club in Tucson from 1994 to 1996, and Deserts Hills Golf Club in Green Valley, Ariz. from 1992 until 1994.

Cary D. Lee has been named superintendent for Heritage Palms. Prior to joining Heritage Palms, Lee served as super-

intendent/director of maintenance at Rancho Mirage Country Club, Rancho Mirage, Calif., and construction superintendent with Westinghouse Desert Communities, Inc., where he led the team that brought Bighorn Golf Club in Palm Desert, California to fruition.

In other Western news, Drew Brown, president of DMB Associates, has announced the appointment of Colleen Gillis as membership director for The Country Club at DC Ranch, Scottsdale, Ariz. The Country Club at DC Ranch is a private country club and is an integral part of the master planned community, DC Ranch,

being developed by DMB Associates of Phoenix, Ariz. Western Golf Properties will manage the property.

Prior to joining DC Ranch, Gillis served 11 years as club administrator for the exclusive private golf community, Desert Highlands in Scottsdale, Ariz. The Country Club at DC Ranch will provide an 18-hole, 6,918 yard, par-71, Scott Miller-designed golf course, an expansive traditional clubhouse, practice facility and separate tennis and swim facility. The membership will be limited to 400 golf members. The club will begin offering memberships in the late fall of 1996.

CMAA handbook can help private clubs avoid costly litigation

ALEXANDRIA, Va. — The Premier Club Services Department of the Club Managers Association of America (CMAA) has released a new publication titled *Your Club and the Law—a legal handbook for club managers*.

Developed by Murry Page of Page and Associates, *Your Club and the Law* is a comprehensive legal document designed specifically for managers of private clubs.

Beginning with Volume I, The Club and its Employees, managers will find information on independent contractors, minimum wage, overtime, child labor, employment agreement and termination. Volume II, The Club and its Members, will cover important legal scenarios such as membership applications, membership disputes, suspensions, expulsions and other traditionally member-related issues.

Scheduled to be released in six volumes over three years, the books were created to address the large spectrum of legal issues with which club managers might be confronted. Before any legal situation develops, this document can be referenced and further legal consultation with Page and Associates sought.

All Premier Club Services subscribers receive *Your Club and Law* as part of their \$500 subscription package. Non Premier Club Services subscribers may purchase each volume at \$60 each or the entire six-volumes for \$259

For more information, contact the CMAA at 703-739-9500.

Manager on Street

Continued from previous page

sumer what level of service and golf experience they can expect.

Eric Affeldt, President, KSL Fairways — The golf course management industry will more closely resemble the hotel and airline industries. The successful owners and operators will have much more extensive technology to manage information on space utilization, customer profiles and cost controls. There will also be more clearly defined niche marketing as progressive operators narrow their focus and improve the return on marketing expenditures.



Eric Affeldt

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Customer service

Continued from page 1
and that has to change."

Ken James, senior vice president of golf operations at American Golf Corp., believes the industry is changing, widening the gap between sophisticated golf course operations and those with mom-and-pop mentalities.

"I think, on a select basis, there are some very sharp operators out there," said James. "It really starts with golf course management. These days, leadership at golf courses is more often in the hands of businessmen coming from industries that are extremely in tune with

customer service. I know we're hiring a lot of people who come from outside the golf business because they have that sort of expertise."

In order to compete, owners and managers at public-access facilities need to face facts: Upgrade customer-service levels or possibly perish. To assist in this effort, The Public Golf Forum will feature "Customer Service: The Competitive Edge," an in-depth, interactive general session on Tuesday, Oct. 29.

Sponsored by *Golf Course News*, the Public Golf Forum is the only national educational resource for owners, managers, developers and superintendents at public-access golf facilities. The Forum

will be held Oct. 27-29, here at the Lincolnshire Marriott. For information on attending or exhibiting at the Forum, call the *Golf Course News* Conference Group at 207-846-0600.

"Customer Service: The Competitive Edge" will feature a trio of speakers experienced in bringing high customer-service standards to golf operations. Following these 20-minute presentations, the audience will break into roundtable discussion groups where attendees will discuss what they've heard and help each other formulate and implement new customer service strategies. The speakers include:

- Claye Atcheson, vice president of

operations, Marriott Golf: As a member of both the golf and hospitality industries, Atcheson will share insights on how his firm has integrated the two.

- Marty Kavanaugh, senior director of operations, PGA of America. The PGA at the Reserve — the association's new 36-hole development in Port St. Lucie, Fla. — is a textbook example of how to center a golf operation around customer service. As the driving force behind the development, Kavanaugh will detail for Forum attendees what has made The Reserve an industry model.

- Vince Alfonso, president, Alfonso Creative Enterprises: As the former owner and pro at a successful daily-fee golf course operation, Alfonso has long recognized and preached the importance of customer service. His top-down approach to customer service will pinpoint shortcomings and begin the correction process.

"The main thing owners have to realize is this: Nobody on the planet needs a round of golf to live," said Alfonso. "Hey, what do the airlines say every time you get off the plane? 'We know you have options so thanks for flying American,' or whatever. I didn't make this up. All service business operations realize this.

"It's sad, but golf hasn't picked up on it yet. We've got to think about first impressions. We have to be ahead of the customers with a 'Hello' and a 'Thank you.' And we have to look in the mirror; we have to look at management first. What kind of job are we doing? Are we setting a good example? Do we have systems set up to make it happen?"

The differences between a positive golfing experience may be small but their impact is immediate.

"How many places answer the phone, 'Pro shop!' Well, which pro shop?" asked Gagliardi. "I remember someone said at the *Golf Course News* conference a few years ago: *Every call is a purchase order.* That is soooo true. That might be [a golfer's] only contact with your operation.

"Also, when there's nobody there to greet you in the parking lot — that drives me crazy! If you pulled up to a hotel and there was nobody there to help you with your bags, how nice would you think the hotel was?"

"And here's a really simple one: We really stress the cleanliness of our golf cars. Golfers spend four or five hours in these cars, but a lot of places don't clean them or have them on a steady maintenance program. We have a program where we fully service three per day — wash, wax, the works. It makes a difference to people, and the residuals on our trade-ins are unbelievable."

James noted that even American Golf Corp. routinely sends its management teams to refresher courses on customer service. It all comes back to the growing competitive nature of the golf business, he said.

"There are so many choices people have now; choices they never had before," said James. "Operators who have a passion for the *business* of golf have no problem recognizing this. But people who have a passion for the *game* have trouble.

"All things being equal, golfers will go where they perceive people appreciate their business. The upscale operations have recognized that it makes a difference to people. Even the city-owned courses recognize they have to offer added value."

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The Honors Course
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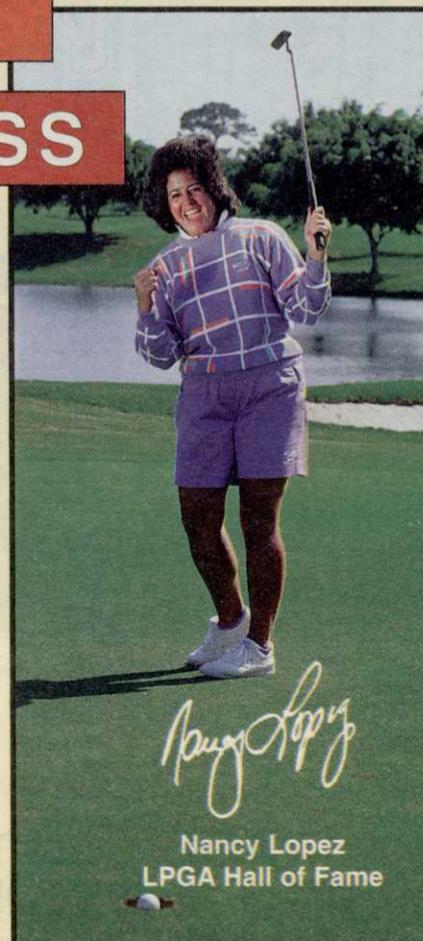
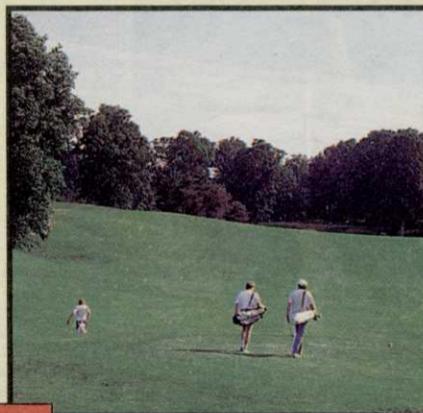
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Nancy Lopez
LPGA Hall of Fame

Personnel issues

Continued from page 41

My mind went racing back to the day I hired young Tom. He had just turned 16 and was ready to tackle his first real job. He had mowed yards and had a paper route, but he had never punched a clock. I knew from his actions around Holiday Golf Club that he was a polite young man and I could tell he was a hard worker. He was doing well in school, according to his dad, and, well, he just seemed like a very honest kid.

"Yep", I said that day, "I have found myself an all-star candidate for golf car boy."

But what had I told him about how he would earn a raise? A better question was, had I told him anything at all about how he would earn a raise? I remembered giving him my standard line, "If you ever feel you are entitled to a raise and I have not said anything about it, fell free to set up a meeting with me so we can talk things over. I hope you never have to do that, I hope I am always one step ahead of you, but don't hesitate, I'll be glad to visit with you."

Now, here he was, four weeks into his new job, asking me for a raise because he had done what I had expected him to do; what I had hired him to do. Everyone ought to know you don't get a raise for doing what you are supposed to do, even Tom. You get a raise for exemplary, extraordinary behavior and actions. I straightened my frame, stuck out my chin and said with confidence and authority: "Tom, that is exactly what I expected you to do when I hired you. I expected you to show up on time, do the job you were assigned, not come to work drunk or stoned and, for goodness sake, not steal from me. There is nothing extraordinary here. You are just doing your job."

Well, young Tom got all fired up! He began to ramble on about his contemporaries who were always late for work, constantly complaining, didn't think twice about showing up for work drunk or stoned and would steal anything they thought they could get away with.

I shot back: "That's why you work for me and they don't. I wouldn't put up with that behavior for a New York second."

I guess the heat of our exchange burned away the fog, because as the words "New York second" rolled off my tongue, it hit me right between the eyes. By Tom's peer-group standards, he was extraordinary, he was outstanding, he was exceptional and thus deserving of special recognition. The problem was me. He knew what he had to do to be exceptional by their standards and not by mine. And the reason was painfully simple. I had not made it clear, either verbally or in writing, just what I expected of him. I didn't clearly state what I expected of him, *period*, much less what his behavior and performance would have to look like before he would be a candidate for a raise.

Tom came to see me June day to get something for himself. Instead, he gave me something. He gave me the chance to be a better employer by admitting my shortcomings and by doing something about it.

Tom and I had a nice long meeting. I apologized for not clearly explaining what was expected of him and spent a significant amount of time explaining what I thought exemplary and exceptional behavior and performance looked like.

I must tell you, I gave Tom a quarter-an-hour raise that day and I told him why. I told him he had displayed exceptional character by his willingness to state his convictions to me. He had proven to me that I could trust him to come to me with his concerns and share his

thoughts and ideas with me. I further explained, although I wished that all my employees would do likewise, he was the exception, and exceptional in his behavior and performance, and thus, deserving of a raise.

That was 1978. I was 33 years old then and should have known better, but I didn't. How about you? It's 1996.

Do your employees know what is expected? And more important, do they know how and when they become a candidate for a raise?

Marketing consultant Vince Alfonso Jr. spent 13 years as general manager and partner at The Rail Golf Course in Springfield, Ill., and is a past president of the National Golf Course Owners Association.

Fairways standardizes F&B menu at facilities

MANASSAS, Va. — KSL Fairways, has implemented a new standardized food and beverage menu at most of its 22 clubs which the company says has improved cost of goods, ensured consistency between clubs and increased efficiency in kitchen operations.

Ken Solem, director of food and beverage for KSL's 26 courses, said, "The implementation of standardized menus at all KSL Fairways clubs is just the first step in providing a quality, affordable experience to everyone who enjoys our restaurants."

Solem said the standardization has improved cost of goods by more than 3 percent company wide. He said the fluctuation is due to the development of national contracts with food vendors like Hormel and Coca-Cola and an intense training program for all food and beverage employees.

The training program includes supervised production of all items, taste-testing, and market studies. Photographing menu items and building cost analysis sheets ensures proper portion controls.

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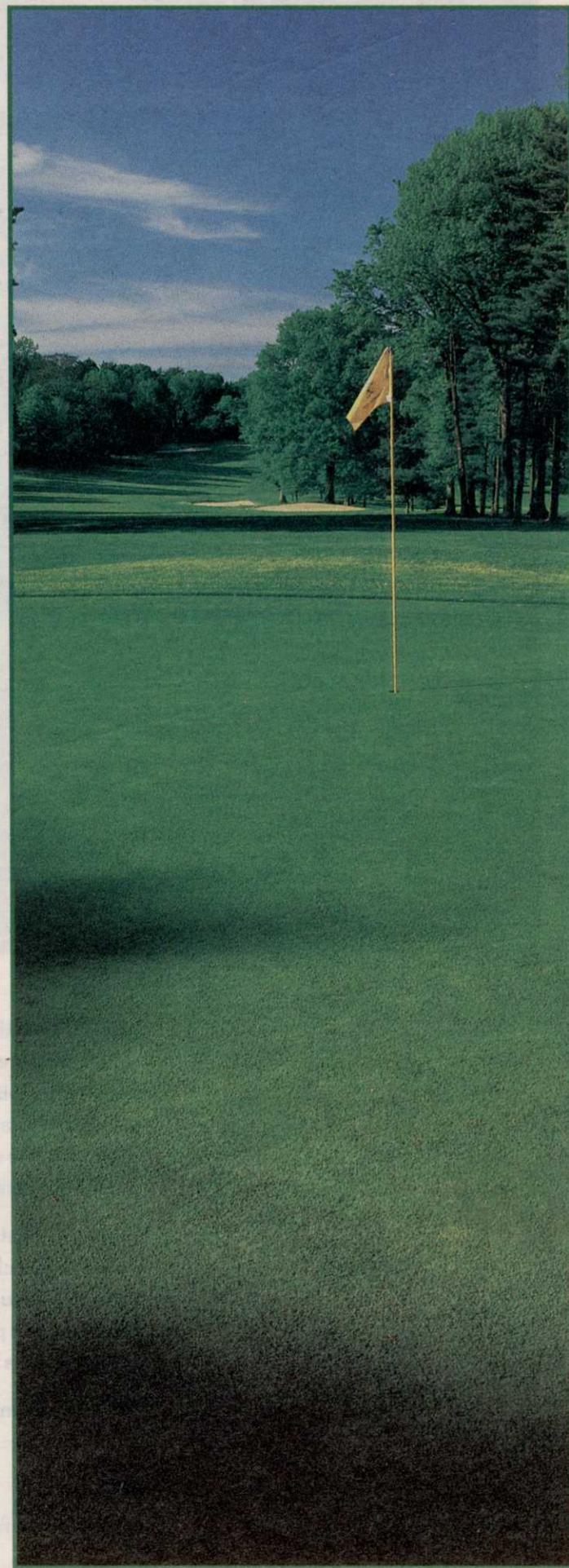
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FGCI taking the range market by storm

Continued from page 41

York for 18 years, started the firm with a single center in 1992. He added a second facility in 1993, and three more by the time the company first went public in November 1994. FGCI added 10 more centers during 1995 and another 11 through the first six months of this year. Most were acquisitions of existing facilities.

"A number of family-run centers lack the capital that we have to renovate their facilities up to today's standards," Chang said. "In other cases, the operators are getting up in age and want to retire. Traditionally, they hoped a residential or

commercial developer would offer to buy them out and put houses or businesses on the property. But with the real-estate market slump, the offers haven't come. We provide another way for them to exit the business."

FGCI targets communities with attractive demographics and tries to buy the best facility in that market. It then upgrades the center to a full-fledged Family Golf Center. For example, when it purchased Peachtree Masters Golf Center in Duluth, Ga., last year, FGCI added an 18-hole, par-3 course, sheltered hitting area on the driving range, full-service pro shop, miniature golf course and batting cages.

The ideal Family Golf Center, Chang said, would sit on a 15-to-20-acre parcel with 80 tee stations, a 275-yard range, chipping and pitching areas, a par-3 course, miniature golf course and 5,000-square-foot clubhouse.

Once it has a presence in a certain market, the company seeks to cluster additional properties nearby to benefit from marketing and cost efficiencies. It operates six centers in the New York City metropolitan area, four in upstate New York, and two each in suburban Atlanta, Virginia Beach, Va., and the San Jose, Calif., area.

"It [clustering] gives us buying power with suppliers," Chang said. "We have the capital to improve the facilities once we buy a property, and many need a facelift. And we have the marketing expertise we can use at several facilities."

When existing facilities aren't available, Family Golf's own construction company can build a center. FGCI constructed five of its facilities from the ground up, taking anywhere from four to six months to build each one.

The firm also manages municipal golf centers in New York and El Segundo, Calif. The city of Seattle has selected FGCI to develop and operate a golf center and executive course in the downtown area. The company finds municipal centers attractive because of their large population bases and the reduced level of capital investment compared to privately owned facilities, according to its annual report.

The company is trying to increase use at its existing centers, especially during off-peak times, by providing special programs for groups and schools. It plans to expand its marketing budget three-fold (to between 2 and 3 percent of total revenues) and hopes to hike merchandise sales at its centers.

"The big retailers, like Nevada Bob's, compete on price," Chang noted. "But as golf clubs become more expensive, customers increasingly want to try them out before buying."

"Nevada Bob's might have space for a customer to hit a ball five yards into a net. At a facility like ours, a golfer can try out the club in every situation. And we have instructors and golf pros on staff who can push our merchandise."

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I started using the 1-2-3™ product in mid-summer on greens, tees, and collars and have continued applying every 2 weeks at six ounces per 1,000 square feet. This winter, 1-2-3™ was the only nutrient supplement I made outside of one application of 34-0-0. The 1-2-3™ gives me much darker color without a surge of top growth, which helps me considerably with ground temperature in the desert.

During the heat of summer, the product was safe and effective. In Las Vegas we get three inches of rainfall per year and the temperature is over 100° F from May through September. Annual water bills can exceed \$1 million in Las Vegas, so a product which improves water penetration and increases root growth is a big help.

Bill Fielder, Spanish Trail Golf and Country Club

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CIRCLE #139

BRIEFS



ADVANTA WEST NAMES NEW GM

ALBANY, Ore. — Advanta Seeds West has announced the appointment of David Holman as general manager. He will join the firm this month from Plants Genetic Systems (Canada) Inc. and brings with him extensive experience in the overall management of seed and seed-related activities. Holman has also worked internationally with Conti Seeds (now Zeneca Seeds) and InterMountain Canola.

PRIME TURF TO REP STRANTRON 810

LOCKPORT, Ill. — Prime Turf, the midwestern distributor of the pH-control chemical pHairway, has been named by Stranco as its exclusive representative to the turf industry for the Strantron 810 pH control system. Stranco's experience in water treatment is substantial, with more than 20,000 pH control systems in use world wide, including the Strantron 810, designed specifically for golf course irrigation systems. The Strantron 810 is available for immediate shipment worldwide by calling Prime Turf at 708-301-1110.

COMINGS AND GOINGS...

Versa-Lok Retaining Wall Systems has moved its headquarters to 6348 Highway 36, Oakdale, Minn. 55128. The firm may now be reached by phone at 1-800-770-4525 or 612-770-3166; by fax at 612-770-4089; or via the Internet at <http://www.versa-lok.com/wall>.

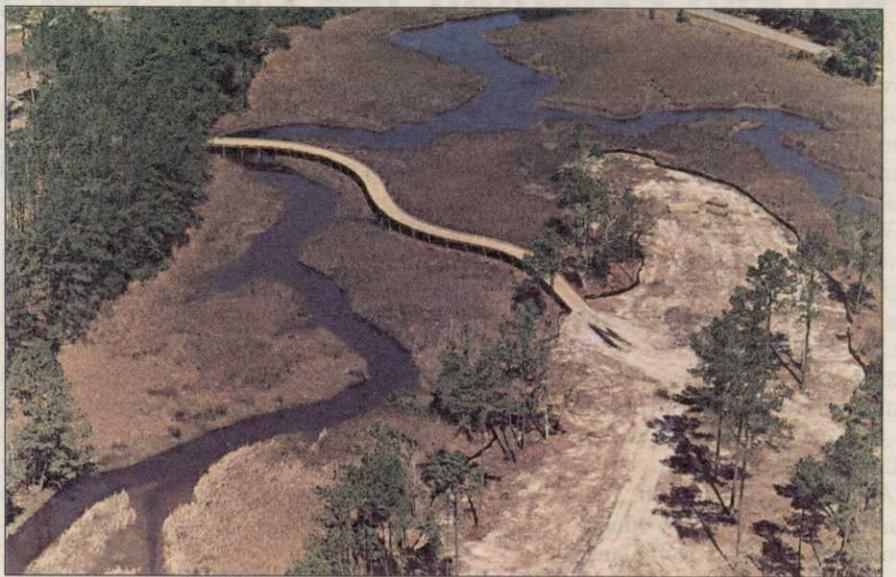
Aqua Control, Inc., manufacturers of aerators and decorative fountains, has also changed addresses. The firm may now be reached by post at 201 Walnut St., Peru, Ill. 61354; or by phone at 800-377-0019 and 815-223-0019.

NEYMAN JOINS LEBANON TURF

LEBANON, Pa. — Gary Neyman has been named product group manager for Lebanon Turf Products, a division of Lebanon Seaboard Corp. Neyman will be responsible for sales and marketing of Country Club, Country Club², NX-PRO and IsoTek³¹ Professional Turf Products. Prior to joining Lebanon, Neyman served as product line manager for Vigoro Professional Products of Winter Haven, Fla., where he was responsible for product development, new product introduction, and marketing of Vigoro's ParEx Turf Product line, and as territory manager, where he was responsible for sales of ParEx and Woodace products.



Gary Neyman



A BRIDGE TOO FAR?

Hardly. There are so many bridges at Arnold Palmer's soon-to-be-opened course in Biloxi, Miss., the developers incorporated them into the name: *The Bridges at Casino Magic*, due to open this fall. Constructed by York Bridge Concepts of Tampa, Fla., the serpentine bridges span 4,000 feet of wetlands, while more than 6,000 feet of timber retaining wall elevate fairways, tees and greens above the wetlands. "I don't think I've ever seen or designed a course with the amount of bridge this one has," said Palmer designer Harrison Minchew. "We're very happy with the job [York Bridge] is doing not only on the Casino Magic course but on our Cherokee Run [Georgia] and Lost Key Plantation [Florida] projects as well."



NEW PRODUCT OF THE MONTH

Aerway of Norwich, Ontario, Canada has introduced its new 100 Series aerators designed to provide superintendents a new option for green and tee aeration. The fine tines on the Aerway unit penetrate 6-inches deep and follow with a built-in greens roller to smooth the openings, resulting in an instantly playable putting surface with a single pass. Starting under \$5,000, Aerway 100 Series greens aerators are available in 4-foot, 5-foot, 6-foot and 7-foot/6-inch widths. They're towed behind utility vehicles or small tractors equipped with hydraulic capabilities. For more information, contact Aerway at 1-800-457-8310. For more winter prep product information, see page 39. For further new product information, see page 50.

Ransomes continues sponsorship strategy

LINCOLN, Neb. — Ransomes has been named an official supplier to the PGA European Tour. Under the agreement, Ransomes, Cushman and Ryan turf equipment becomes a "preferred maintenance product" of the Tour. Additionally, the company's products will be recommended for use at all PGA European Tour venues for the next three years.

The agreement encompasses both the European Tour and European Senior Tour. Combined, both tours hold 50 tournaments, including the British Open Golf Championship and the Volvo PGA Championship.

As a preferred Tour supplier, Ransomes will make equipment available, as required, to help prepare Tour venues prior to all events. Ransomes will also hold special equipment seminars for tournament

directors. In addition, the firm will co-sponsor the annual PGA European Tour Greenkeepers Conference and be involved in the presentation of conference sessions and educational papers.

"As a world-class supplier of golf course maintenance equipment, Ransomes is delighted to be extending major support to the tournaments comprising the PGA European Tour," says Ransomes' Group Chief Executive, Peter Wilson. "This agreement further reinforces Ransomes' total commitment to the golf industry, highlighting the renewed confidence being placed in the company and its line of products."

"With St. Andrews, Gleneagles and Pebble Beach already committed exclusively to Ransomes," Wilson concluded, "this latest award demonstrates once again that we now have the full range of equipment."

EPA amends a pair of worker protection laws

Monsanto honored for 'green' revisions to Round-Up chemistry

WASHINGTON, D.C. — The U.S. Environmental Protection Agency (EPA) has announced plans to ease its regulations in two turf-related areas: the instances when decontamination supplies must be kept at a treated site, and the use of languages other than Spanish on worker notification signs.

The amended regulations will take effect later this month, 60 days after their publication in the Federal Register which took place in late July.

The first amendment, which should affect the sod growing industry, has decreased the number of days — from 30 to 7 — that decontamination supplies (soap, water and paper towels) must be available to workers entering treated fields.

This applies only to turf treated with low toxicity pesticides, defined by the EPA as those having a restricted entry interval of four hours or less.

Prior to this amendment, EPA required that decontamination supplies had to be available whenever a worker performed any activity in a pesticide treated area, or where entry had been restricted within the past 30 days.

In the second amendment, which should affect any golf course or business operating in widely bilingual regions, the EPA agreed that employer could replace the Spanish language on required warning signs with another language tailored to suit the tongue most used by workers in that location. The English portion of the sign must remain.

Previously, the EPA allowed only En-



Continued on page 49

Two join Platinum Tee Club; four re-up

LAWRENCE, Kan. — Two firms have signed on with the Golf Course Superintendents Association of America's (GCSAA) Platinum Tee program, while four others have renewed their affiliation.

With their contributions to The GCSAA Foundation, Sandoz Agro, Inc. and Ransomes America Corp. have joined the GCSAA's Platinum Tee Club, whose members are chapters, clubs and companies that donate \$5,000 or more annually to The GCSAA Foundation.

American Cyanamid Co., Ciba Turf and Ornamental Products, Club Car, Inc. and DowElanco Product Co. have renewed their Platinum Tee Club memberships by donating \$5,000 or more each to The GCSAA Foundation.

The Platinum Tee Club was started in 1988 to recognize those chapters, clubs and companies that demonstrate their commitment to the future of the golf course superintendent's profession and industry through an annual contribution of \$5,000 or more to The GCSAA Foundation.

The GCSAA Foundation is a not-for-profit organization committed to supporting educational opportunities for future superintendents and scientific advancements in golf course management.

•••

Underscoring its commitment to environmental stewardship, the Golf Course Superintendents Association of America (GCSAA) has been honored by LINKS Magazine and Audubon International as a 1996 "Best of Golf" award recipient.

Presented at the recently-completed U.S. Open at Oakland Hills Country Club in Bloomfield, Mich., the honor recognizes golf courses, groups and individuals making outstanding contributions in the conservation of natural resources. GCSAA and the United States Golf Association were the only two organizations to capture the group award.

•••

Ten outstanding students, all sons or daughters of GCSAA members, have been named **1996 Ciba Legacy Award winners**. The program, which awards a \$1,500 scholarship to each student, is administered by The GCSAA Foundation in partnership with Ciba Turf & Ornamental Products.

Winners were selected by an independent panel of judges on the basis of academic excellence, extracurricular activities and the quality of an assigned essay describing their parents' involvement with the golf course management profession. This year's Ciba Legacy Award winners are:

- Natalie Broughton, daughter of Jerry W. Broughton, CGCS at The Greens Golf & Racquet Club in Oklahoma City, Okla., majoring in music education at Oklahoma Baptist University.

- Allison Marie Burns, daughter of Joseph H. Burns, CGCS at

GCSAA REPORT

Country Club of Spartanburg in Landrum, S.C., majoring in mathematics at the University of North Carolina at Chapel Hill.

- Karla Hansen, daughter of Vernon F. Hansen, golf course superintendent for the city of Blythe in Blythe, Calif., majoring in anthropology, and molecular and cellular biology at the University of Arizona.

- Megan Marie-Beth

Leuzinger, daughter of Peter V. Leuzinger, CGCS at Ivanhoe Club in Saint Charles, Ill., majoring in speech pathology at Northern Illinois University.

- Corey Lyon, son of Dennis D. Lyon, CGCS at the city of Aurora, Golf Division, in Aurora, Colo., pursuing a medical degree at Colorado State University.

- James C. Matchen, son of Michael Matchen, golf course superintendent at Wilmette Golf Course in Wilmette, Ill. pursuing an undergraduate degree at Southern Illinois University.

- Shelby Kathleen Quinn, daughter of Dale B. Quinn, golf course superintendent at Woodlake Golf & Country Club in Vass, N.C., majoring in journalism and print media at the University of North Carolina at Chapel Hill.

- Lauren A. Stewart, daughter of Roger A. Stewart Jr., CGCS at Stone Bridge Country Club in Naperville, Ill., majoring in pharmacy at the University of Iowa.

- Bronwyn Judith Wenger, daughter of Kim R. Wenger, CGCS at Fiddler's Green Golf Course in Eugene, Ore., majoring in foreign language and international studies at Middlebury College.

- Erin Elizabeth Wimmers, daughter of Lawrence J. Wimmers, CGCS at Sycamore Creek Country Club in Springboro, Ohio, majoring in science and pre-medicine at Kenyon College.

Ciba Legacy Awards are conferred upon children and grandchildren of GCSAA members who have been active members of the association for five or more consecutive years. Students must be enrolled full-time at an accredited institution of higher learning and studying a field unrelated to golf course management. High school seniors must be accepted at such an institution for the coming year.

Weed control

Why take chances when Scotts® preemergent herbicides offer more than 11 years of proven performance?

For over a decade, on thousands of courses, Scotts pendimethalin products have set the industry standard for broad spectrum weed control, effectiveness and season-long performance.

Formulation is the key. No one has more formulation experience with pendimethalin products than Scotts, and no other preemergent can offer better, more cost-effective particle coverage. With Scotts, pendimethalin is distributed evenly over every particle for more



consistent preemergent coverage. Constant particle size monitoring results in smaller, more consistently sized particles than typical products — resulting in up to 3 times the

Alamo okayed in California

GREENSBORO, N.C. — The United States Environmental Protection Agency (EPA) has registered Alamo systemic fungicide in the micro-injection application system for use in the state of California.

Alamo, which fights oak wilt and Dutch elm disease, will be available in individual 10-milliliter units that are inserted directly into the tree's flare roots. The Alamo micro-injection units provide "closed" delivery system, which greatly reduces the potential for user and environmen-

tal exposure during application.

Application time also is shortened with this delivery method which economizes the application process.

In addition to oak wilt and Dutch elm disease control, extensive field control of scab on crabapple trees and anthracnose on sycamores has led Ciba to apply for an expanded Alamo label that would include these new diseases.



EPA amends WPS, heaps praise on Monsanto Corp.

Continued from p. 47
 glish and Spanish language statements regardless of the workers' ability to read either language.

•••

The United States EPA has honored five organizations, including **Monsanto Corp.**, for their accomplishments in "green chemistry".

Monsanto Corp. was honored in the category of "Reducing waste from manufacturing and

reducing toxicity of materials used in manufacturing." Specifically, the firm was feted for creating a new process to manufacture the widely used pesticide, Round-Up.

Monsanto switched from a well-established process using hazardous substances — including formaldehyde, ammonia and cyanide-based chemicals — to a new, highly innovative process that eliminates these more toxic substances from the pesticide, replacing them with more benign chemicals.

The Green Chemistry Challenge was announced in March 1995 by President Clinton and Vice President Gore as part of the Administration's Reinventing Environmental Regulations initiative to promote pollution prevention and industrial ecology.

EPA, working with partners from industry, the states and other federal agencies solicited nominations for the Challenge in October 1995. More than 70 entries were reviewed by a technical panel selected by the American Chemical Society.

Jacobsen assists course in need

FRANKVILLE, Wis. — Fire not only destroyed the maintenance facility at South Hills Country Club late Thursday night, July 11, it destroyed most of the firm's turf care equipment therein.

However, the next morning Jacobsen Division of Textron, Inc. and neighboring superintendents were there to help.

Much of the machinery destroyed was Jacobsen mowing equipment used to maintain the greens, tees, fairways and roughs at South Hills, an 18-hole daily-fee course west of Racine where Jacobsen is headquartered. Accordingly, members of the Jacobsen test department provided South Hills interim use of a Greens King V triplex greens mower, a Tri-King triplex trim mower and a Turfcut out-front rotary and LF fairway mower.

"I'm impressed that Jacobsen was so eager to help — they helped me get back on my feet," said South Hills superintendent John Syty, who added that area superintendents also offered their assistance. "I thought it was excellent. I never expected help that fast."

U.S. Battery adds Dura, Budwick

CORONA, Calif. — U.S. battery Manufacturing Co. has announced the addition of George Budwick and Jim Dura to its Georgia manufacturing facility.

Budwick has been hired as the vice president of sales for all East Coast and European battery distribution. He comes to U.S. Battery with more than 25 years of sales and marketing experience in the areas of distribution and marketing, both in the United States and internationally.

Dura has recently been hired to assume the position of vice president of manufacturing for the company's Augusta, Ga. manufacturing plant. He has spent most of his working career in the battery industry and brings to U.S. Battery more than 28 years of experience in lead acid battery manufacturing.

without the gamble.

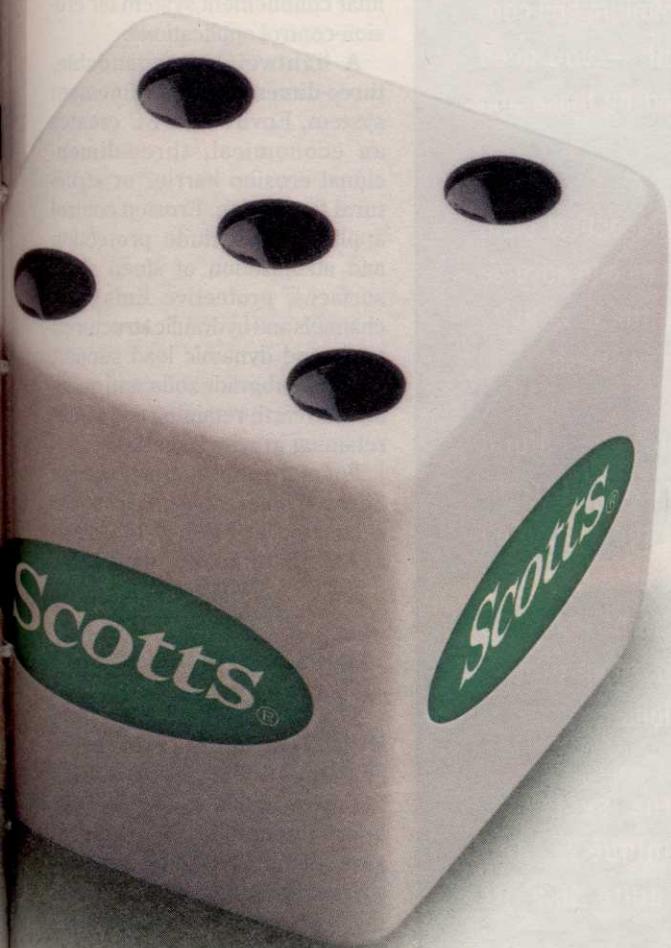
coverage per square inch with fewer application breaks and more effective control of grassy and broadleaf weeds.

No other preemergent comes with Poly-S®. Only Scotts can provide the superior performance of

patented Poly-S technology for controlled nutrient release with flexible release rates, higher nitrogen efficiency and a more predictable response. The result? You get more value from the fertilizer you apply, with overall improvement in turf quality while controlling weeds.

Formulation/application flexibility. Scotts makes it your way, providing a wide range of product rates and application scheduling choices. Scotts offers a preemergent formulation for almost every need — north to south — with varying rates of nitrogen and active ingredients.

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McCance offers new Heftee lift

McCance Engineering, Inc. offers the new Heftee XL3600 Service Lift for easy and safe, complete service access to a wide array of vehicles and machines. The Heftee lifts machines up to 87-inches wide and 3,600 pounds 6 feet high quickly and easily. Other features include

- Forks and reversible wheel cups adjust easily without tools for underside access to front-or mid-mounted mowers and with a clear floor area.
- Dual safety systems of gravity locks and restricted oil flow

plus load testing at 16,000 pounds provide unequaled protection against dropping.

- Patented unique attachments for easy lifting of axles, engines, front floating decks, walk behind mowers, snowmobiles, etc. while up on the lift.

- New flexible in-house rental plans and ownership options with no obligation, very low-cost, simple, cancelable at any time and a complete satisfaction guarantee.

For more information and/or a free video, call 1-800-755-7540.

CIRCLE #301

Genesis now offered in Windows 3.1

Legacy Golf Irrigation has announced it has released new Windows 3.1 and Windows '95 versions of its powerful, PC-based Genesis Central system. With its intuitive, point-and-click user interface, the new Windows versions make the Genesis Central system faster and even easier to use, according to David Truttman, Legacy's vice president of sales & marketing. Further, under Windows, Genesis can now run

in the background, allowing the PC to process other tasks simultaneously.

Previously available only for DOS 5.0, Genesis Central combines simple operation with sophisticated two-way communications capabilities and maximum system flexibility (up to 99 systems controlling 999 satellites). For more information, contact Terrie Yale at Legacy, 209-275-0529.

CIRCLE #302

CableMate offers fault detection

Advanced Electronic Applications' new CableMate Cable Fault Detector quickly and accurately locates faults in coaxial and two-wire cables. CableMate graphically indicates the severity of faults and the distance from you to the fault. The distance is displayed numerically in feet (16 to 1,000) or meters.

How does this instrument apply to golf course maintenance personnel? CableMate can be used to locate a break in the cable connecting the solenoid valves in your sprinkler system. Use CableMate to determine exactly where to dig and find a corroded splice or other cable damage. Damage to the grounds is kept to a minimum, and repair proceeds quickly.

The unit can easily be held in the hand and is battery powered. For more information, call 206-774-5554 between 8 a.m. and 4 p.m. (Pacific) weekdays, or visit the firm's web site at <http://www.aeainc.com>.

CIRCLE #303

Excelsior unveils EnviroGrid EC

American Excelsior Co., the manufacturer and supplier of Curlex erosion control blankets, now offers EnviroGrid EC, a high-density polyethylene plastic cellular confinement system for erosion-control applications.

A lightweight, expandable, three-dimensional confinement system, EnviroGrid EC creates an economical, three-dimensional erosion barrier or structural foundation. Erosion control applications include protection and stabilization of steep slope surfaces; protective linings of channels and hydraulic structures; static and dynamic load support on weak subgrade soils; and multi-layered earth-retaining and water-retaining gravity structures.

For more information, contact: Steve Walker at American Excelsior Co. at 817-640-1555, 800-777-SOIL; or fax 817-649-7816.

CIRCLE #304

Twin-engine seeder

The HTI 750 Twin, new from Hydro Turf, Inc. is a twin engine pumping system capable of seeding up to 10,000 square feet per hour of operation. With one engine (9 hp) providing full-time sparger agitation, a second engine (5 hp) provides the high-pressure discharge power for effective spraying of up to 300 feet.

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For more information contact Ralph Menning, president of Hydro Turf, Inc. at 612-452-6749.

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CIRCLE #143

Golf Course Marketplace

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CALENDAR

September

4-8 — *Responsible Industry for a Sound Environment Annual Meeting in West Palm Beach, Fla.* Contact RISE at 202-872-3860.

5 — *GCSAA Seminar on Reclaimed Water Irrigation in Phoenix, Ariz.* *

5-6 — *Southwest Horticultural Trade Show in Phoenix.* Contact 602-966-1610.

7 — *GCSAA Seminar on Human Resource Management in Sacramento, Calif.* *

12-15 — *American Society of Irrigation Consultants Annual Conference in Pleasanton, Calif.* Contact Wanda Sarsfeld at 510-516-1124.

13 — *GCSAA Seminar on Maximizing Turfgrass Disease Control in Galena, Ill.* *

16-18 — *Virginia Turf and Landscape Field Days in Blacksburg.* Contact David Chalmers at 540-231-5897.

18 — *GCSAA Seminar on Wildlife Management and Habitat Conservation in Sacramento, Calif.* *

19 — *GCSAA Seminar on Wetlands and Golf Courses in Seattle.* *

25-27 — *Asian Seed '96 in Jakarta, Indonesia.* Contact Asia and Pacific Seed Association at 66 2 579-7545.

29-Oct. 3 — *Seed Industry Association of Australia 18th biennial national convention in Queensland, Australia.* Contact Brian Algate at 617 3341 4548.

October

7 — *Ohio Turfgrass Foundation Golf Tournament in Centerville.* Contact Julie Weller at 614-261-6750.

8 — *GCSAA Seminar on Personal Stress Management in Oklahoma City.* *

8-9 — *West Texas Turfgrass Conference Trade Show in Snyder.*

9 — *GCSAA Seminar on The Microbiology of Turfgrass Soils in Billings, Mont.* *

11 — *GCSAA Seminar on Integrated Disease Management for bermudagrass golf courses.* *

17 — *GCSAA Seminar on Calibration and Safety of Pesticide Application Equipment in Birmingham, Ala.* *

22-23 — *GCSAA Seminar on Environmental Considerations in Golf Course Management in Little Rock, Ark.* *

27-29 — *Golf Course News' Public Golf Forum in Chicago.* Contact the GCN Conference Group at 207-846-0600.

30 — *GCSAA Seminar on Maximizing Turfgrass Disease Control in New Seabury, Mass.* *

31 — *GCSAA Seminar on Wildlife Management and Habitat Conservation in New Seabury, Mass.* *

November

3-5 — *Irrigation Association's 17th Annual International Irrigation Exposition in San Antonio, Texas.* Contact 703-573-3551.

5 — *GCSAA Seminar on Maximizing Job Satisfaction in St. Louis.* *

6 — *GCSAA Seminar on Developing Your Hazard Communication Program in Wichita, Kan.* *

7 — *GCSAA Seminar on Drainage Systems in New Brunswick, N.J.* *

7-8 — *GCSAA Seminar on Managerial Productivity in Boise, Idaho.* *

8 — *GCSAA Seminar on Design and Construction of Chemical Storage Buildings in Dayton, Ohio.* *

8 — *GCSAA Seminar on Preventive Maintenance of Turf Equipment in Southfield, Mich.* *

11 — *GCSAA Seminar on Turfgrass Stress Management in Myrtle Beach, S.C.* *

11 — *GCSAA Seminar on Calibration and Safety of Pesticide Application Equipment in Myrtle Beach, S.C.* *

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

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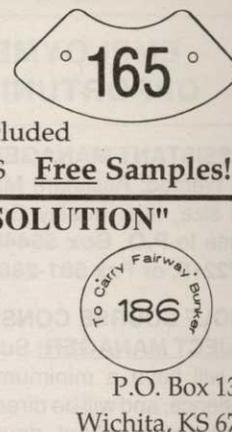
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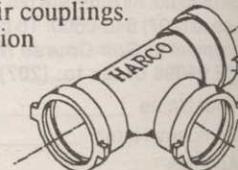
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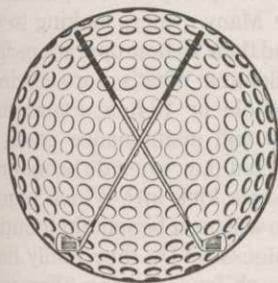
ADVERTISERS' INDEX

Cir.#	Advertiser	Page
126	AgrEvo	34
122	American Cyanamid*	29
133	The Andersons	40
157	Badger Associates	52
123	Brouwer Turf Equip.	32
103	Buckner/Legacy	4
161	Christensen Irrigation Co.	53
—	Ciba	9
104	Club Car	5
153	Continental Bridge	52
125	DTN Weather Center	33
146	E.P. Aeration	35
109	E-Z-GO	14
154	Eagle Golf & Landscape Products	52
158	Enwood Structures	52
166	Excel Bridge Mfg.	53
137	Fine Lawn Research	44
107	Flowtronex PSI	11
128	Fore Par	36
160	Formost Construction Co.	53
150	Grass Craft	52
131	Griffin Industries/Nature Safe	39
138	Gustafson	45
159	Harrington/Harco Corporation	52
106	Jacklin Seed Co.	8
145	Jacobsen	56
162	Jesco Products/Pinhigh	53
105	John Deere	6-7
164	JPF Distributors	53
167	Kirby Markers	53
118	Lebanon Turf Products	24-25
155	Lester Building Systems	52
110	Lofts, Inc.	16
152	Master of the Links	52
108	Milorganite	12-13
116	New Jersey Turfgrass Assoc.	22
143	Nutramax	50
130	Otterbine/Barebo	38
136	Par Aide	43
140	Partac Peat	46
168	Pavelec Bros. Construction	53
169	Precision Small Engine	53
163	Precision Tool Prod. Co.	53
135	Premier Environmental Products	42
—	Public Golf Forum	30
165	Quail Valley Farms	53
114	Ransomes Corp.	20-21
117	Ransomes, Ransomes Corp.	23
139	Roots, Inc.	46
113	Sandoz Agro, Inc.	18-19
141	The Scotts Company	48-49
124	Southern Corp. Promo.	32
120	Standard Golf	27
119	Tee & Green Sod	26
101	Tee-2-Green	2
147	Tennessee Outdoor Power	35
134	Terracare Products	40
121	Toro Comm'l. Prod. Div.	28
156	Trims International Software	52
127	Turfco, Inc.	35
115	Turflite, Inc.	22
144	Ty-Crop	55
129	Uniroyal Chemical*	37
111	Verti-Drain/Emrex	16
149	W.A. Cleary Chemical*	29
102	Watertronics	3
151	Yard Edge	52
132	York Bridge Concepts	40
112	Zeneca Professional Products	17

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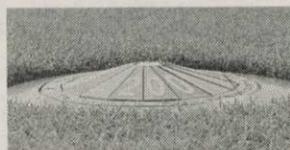
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CIRCLE #168

NTEP funding

Continued from page 1

less frustrated at how turfgrass research is viewed in Washington. Pointing to an increase of \$200,000 in research funding for the USDA, he said: "So, the problem was not that there was no money to support our research.

"We've been able to state our case well. They know we're here now. But obviously we have some educational work to do. There needs to be follow-up, telling them our industry is important, too. Not that we need more funding overall, but we should get a proportionate share of it."

Development program addresses market realities

By HAL PHILLIPS

CHICAGO — Golf course developers continually search for that perfect piece of land: 150-plus acres, affordable, accessible from a large urban area. Problem is, prime sites are harder and harder to find. And more golf courses being developed each year; the National Golf Foundation foresees another 450 openings this year, following on the heels of a record-breaking 468 in 1995.

The Development Program at October's Public Golf Forum was formulated to address, in depth, the primary issues facing developers today — however sobering they may be. For overly optimistic, unrealistic discussions of the current golf development market, go somewhere else.

There are difficult issues at play in the current market, but speakers in the Public Golf Forum's Development Program will address them with candor and innovation. Further, many of today's development opportunities are tied to existing golf facilities. Indeed, many developers are course owners looking to expand. Accordingly, the Public Golf Forum Development Program will address the educational needs of both existing owners and from-scratch developers.

The Public Golf Forum, sponsored by *Golf Course News*, will be held Oct. 27-29, here at the Lincolnshire Marriott. The Forum is the only education con-



PUBLIC GOLF FORUM

A NATIONAL BUSINESS CONFERENCE AND EXPO FOR SUPERINTENDENTS, OWNERS, MANAGERS, AND DEVELOPERS OF PUBLIC-ACCESS GOLF FACILITIES

OCTOBER • 27 - 29 • 1996

ference and trade show serving public-access owners, managers, superintendents and developers. For information on attendance, call the Golf Course News Conference Group at 207-846-0600.

• Following a keynote address by touring pro and course designer Peter Jacobsen, the Development Program begins Monday morning, Oct. 27, with a session on "Golf Course Renovation." Architect Bob Lohmann, principal of Lohmann Golf Designs, Inc. of Marengo, Ill., will lead the session. A veteran of the highly competitive Chicagoland golf market, Lohmann will concentrate on the keys to upgrading an existing design, allowing it to compete with the ever-growing number of competitive courses.

• There's a rule of thumb in the golf management business: New operations often do not turn a profit until the third owner. Don't let this happen to you. Monday's second session, "Golf Demographics: Evaluating Opportunities," will demonstrate how an understanding of population thresholds, niche marketing, customer targeting and competitive course densities can make or break a project. The speakers include Mike Rippey, president of North American Golf, and Donald Wizeman, president and CEO of International Resort and Golf Resources and the man responsible for developing much of Myrtle Beach, Williamsburg and the Gulf Coast.

• Discussions of golf course financing too often concentrate

on funding from-scratch developments. However, during his discussion of "Golf Course Financing," Michael Zmetrovich — director of Golf Services Group at Landauer Associates — will address funding opportunities for new developers and existing owners looking to expand. He'll also touch on sources specific to public-access development; explain rates, terms, conditions, risk profiles and loan types; and describe how to put together a development package that will attract financing.

• The harsh reality of site selection in today's market will be addressed during Monday's final session: "Landfills, Mines and Quarries: Reclaiming Unwanted Land for Golf Development." Through case studies, architects Keith Foster and Dick Nugent will illustrate how marginal sites can be rehabilitated for golf course development. Foster, for example, recently transformed an abandoned quarry in San Antonio, Texas, into an award-winning design. Meanwhile, Nugent's Harborside Golf Center — located on a former Chicago landfill and slag heap — has drawn praise from environmentalists, civil engineers and golfers alike.

• Day 2 of the Development track will begin with "Permitting from A-Z," a thorough discussion of local, state and federal permitting requirements led

by Ron Boyd, president of the Williamsburg Environmental Group. While he will update recent changes in the federal permitting process, Boyd will concentrate on minimizing the need for excessive permits through effective, responsible planning.

• Many owners looking to expand their 18-hole operations face a dilemma: What's more efficient, a 9-hole or 18-hole expansion? How will maintenance costs be affected (i.e., when do economies of scale kick in)? Which expansion will most benefit their outing businesses? Do they really have enough land? During "Expanding Your Course: From 18 to 27 or 36?" these and many others questions will be answered by speakers Roland Bates, president of Golf Realty Advisors, and course designer Jeffrey Brauer, president of GolfScapes, Inc. and immediate past president of the American Society of Golf Course Architects.

• An important but seldom-addressed issue is "Developing Maintainable Courses." Sure, the mounding is dramatic, but can a crew tend to those mounds without committing 30 man-hours a week? This and other dilemmas of design will be discussed by Bill Coore, a former superintendent and current partner with Ben Crenshaw in the design firm of Coore & Crenshaw. While Coore will field questions in an informal, interactive discussion with his audience, he will also address how public-access design factors can incorporate profit considerations.

PEORIA, Ill. — Having opened two original designs this summer, Lohmann Golf Designs, Inc. of Marengo, Ill., will also direct the renovation of Mt. Hawley Country Club and the Country Club of Peoria, two prestigious golf clubs located here.

A noted renovation specialist, Lohmann will speak on the subject of course renovation during the Public Golf Forum, a conference sponsored by *Golf Course News*. The event is scheduled for Oct. 27-29, at the Lincolnshire Marriott in Lincolnshire, Ill. For more information on the Public Golf Forum — the only conference and trade show for owners, managers, superintendents and developers of public-access golf facilities — call the *Golf Course News* Conference Group at 207-846-0600.

Mt. Hawley will celebrate its 75th anniversary in 1997. The renovation of the club will entail rebuilding 18 greens, adding fairway bunkers, and regrassing all fairways with bentgrass. The project calls for the excavation of three new ponds, expansion of existing ponds, and the addition of new drainage and irrigation lines. Construction will be undertaken by Landscapes Unlimited of Lincoln, Neb.

In preparation for next year's 100th anniversary at the Country Club of Peoria, Lohmann will direct the complete reconstruction of all 18

Practicing what he preaches

Forum speaker Lohmann puts renovation skills to work in Peoria



Lohmann-designed Broken Arrow GC in Lockport, Ill., opened for play this summer.

greens, some of which have deteriorated from agronomic and sub-soil problems. The work will be carried out by Construction Co. of Plainfield, Ill.

Both courses were closed Aug. 1, and will remain closed for the duration of the season.

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In other Lohmann Design news, two original designs have opened to the public: Piper Glen in Central Illinois

and Broken Arrow southwest of Chicago.

The Broken Arrow Golf Course, located in Lockport, has opened for play less than 30 miles from downtown Chicago. Broken Arrow was developed as part of a new residential community on a 533-acre site.

"In addition to its 18-hole regulation golf course, Broken Arrow offers a 9-hole double green golf course, the first

of its kind in Illinois," reported Bob Lohmann. "On the combined 27 holes, we created 22 man-made ponds to add to the natural setting and make the course more challenging."

The \$5 million Broken Arrow course also includes a full practice range and putting greens. A pro shop and snack bar opened this year, and long-range plans include a 25,000 square-foot conference center.

Broken Arrow is managed by Crown Golf Properties and owned by Agie Chen. Greens fees with a cart are \$42 Monday through Thursday and \$47 Friday through Sunday. The residential area is being developed by the Robin Hill Development Co., and will include more than 1,500 houses, townhouses and multi-family units.

Piper Glen is a golf course/residential development situated on 395-acre site in Springfield, Ill. The 18-hole regulation course opened to the public on June 1, and has averaged 700 rounds a week. Greens fees with a cart are \$34.

The \$2.5 million course includes a full practice range and greens. A 5,000 square foot clubhouse is scheduled for completion by 1998. Construction is underway on some of the 400 home sites planned for the golf course community, and land has been set aside for office and commercial development.

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