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THE NEWSPAPER FOR THE GOLF COURSE INDUSTRY

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NSIDE

On Top of Two Worlds

Sugarloaf's Ed Michaud maintains Maine's top golf

Less Fire, More Science

Oregon grass seed growers relying more on chemicals and less on burning53



IN DEMAND ON THE GRAND STRAND Golf course architect Mike Strantz has followed one Best New Upscale Course selection in 1996 — Stonehouse with a second Best New pick, Royal New Kent, in 1997. Now he is in such high demand that he is turning down developers each week. See Q&A, page 35.

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Toro, Grizzle suit settled 54

El Niño'd: West Coast gets hammered, with rains, floods By DAVID WILBER

The winter's intense El Niño-driven storms have hammered California golf courses, highlighted in early February when a series of weather-related records were broken. Several areas of the state recorded the lowest barometer readings ever in February.

A First Tee 'first' looms

By MARK LESLIE

Neighboring Chesterfield County is "fast-tracking" the Richmond First Tee Foundation (RFTF) proposal through an approval process that could lead to earthmoving in May and put it on target to be the nation's initial project built from the ground up as a First Tee facility.

"We are thrilled with the county's support," said Fred Tattersall, a financial adviser and the moving force behind RFTF. "They have put us on a fast-track program they reserve mostly for large businesses moving to the area."

If all goes smoothly, an April 6 informational meeting with the general public and representatives from the County Board of Supervisors and Planning Commission will be fol-Continued on page 42



Access to the 15th tee at Pebble Beach Golf Links is destroyed as a result of the El Nino-driven storms in early February.

California courses found that no amount of installed drainage could handle the rains since they began on already wet ground. El Niño was not choosy about the golf courses it attacked as rivers, streams, drainage and retaining walls

SEE EL NIÑO COVERAGE, PP.30-33

statewide reached their limits.

The Monterey Peninsula received no mercy. "We had the highest tide and the biggest swell ever recorded in Stillwater Cove," said Mark Michaud, superintendent at Pebble Beach Golf Links. "If we hadn't put in the new seawall on the 18th hole, I'm sure we would have had some ma-Continued on page 31

Employees come first at Gotham

California Golf Club was one of the early purchases that propelled Gotham Golf Partners into the world of course operations.

By PETER BLAIS

B uilding a course operations firm that is both financially successful and provides a first-rate quality of life for its owners and managers are the dual goals of Gotham Golf Partners, according to company President R. Danny Mays.

"Family and quality of life are very important to all my managers," said Mays, who along with many of GGP's upper-level executives are former employees of KSL Fairways, a Virginia-based multi-course operator.

"In the golf business, it's always been a given that you work seven days a week. But to properly manage entities you have to put people in place who can perform and do their jobs. We have sophisticated management so that there is time for other things in our lives.

"We push our managers to make sure they get their days off. If a manager can't take his days off then he Continued on page 49

Mower manufacturers see 'ease' to please

By JOHN FARRELL

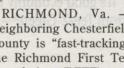
Hoping to make life a little easier for golf course operators, major mower manufacturers are addressing real-life - everything from ease of concerns . operation and maintenance to noise pollution - as they bring the next wave of products to market.

In what is part of the largest new prod-

uct roll-out in the company's history, Jacobsen is introducing its new HR-9016 Turbo (TM) Wide-Area Rotary Mower.

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'One of our goals in designing the HR-Continued on page 56



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BRIEFS

AUBURN, Ala. - Work is set to start this summer on a golf course for the University Club at Auburn. The lavout, which will be home to the Auburn University men's and women's golf teams, will be located about two miles from the Auburn campus. The club will feature an 18-hole course, full-service clubhouse, swimming and tennis facilities and a practice range. Residential development around the University Club is also being considered. The course is scheduled to open for play by fall 1999.

...

BELCHERTOWN, Mass. - Developers planning a 6,800-yard, par-70 golf course at Hillcrest Orchards in this town between Springfield and Amherst, Mass., hope to start work later this summer and open by the year 2000. Edwin Waskelewicz and partner Mark Kramer of Cold Spring Development Corp., plan to build an 18-hole daily-fee course along with 120 to 140 custom-built condominiums. The Coldspring Golf Course has been designed by architect Marvin Armstrong of Francestown, N.H. As planned, the condominiums would be nestled on a hill east of Route 21 with the golf course spread out below.

Garl to lead new Fla. golf coalition

Group to fight legislative battles for fragmented golf industry

tect Ron Garl has been named president of the newly formed Florida Golf Alliance (FGA)

"Florida's Golf Industry has been splintered far too long," said Garl. "With all of the golf associations and organizations residing in Florida united under the Florida Golf Alliance, we will become a healthy resource that the industry can draw upon and a strong influence to be contended with in Tallahassee."

The Florida Golf Alliance was

formed after several formal meetings held over 14 months from September 1996 through last December, with most of the core Florida golf associations/organizations invited or in attendance.

The mission statement for the incorporated FGA reads: "The Florida Golf Alliance's mission is to unify Florida's golf industry into an effective alliance in order to promote and to protect the industry as a major contributor to the state's economy, environment, and quality of life.

"It just makes sense," said Roy Bates, immediate past president of the Florida Turfgrass Association and vice president



LAKELAND, Fla. - Golf course archi- of the FGA. "We're all conducting research and providing grants for special projects to benefit our respective association goals. But few of us are sharing the knowledge, or even know how to ask that

> might have information to help a particular cause."

"The FGA is a means for the industry to unite and start to become alligned for a targeted productive future," Bates added.

The founding FGA members and board of directors are PGA Tour representative Richard

Bowers, LPGA Tour representative Terri McCracken, Tommy Armour Golf Tour representative Terry Fine, Florida Turfgrass Association representative Roy Bates, Florida Chapter Golf Course Managers Association representative Mike Fiddelke, Forida Golf Course Superintendents Association representatives Joe Ondo and Joel Jackson, and Mercury Titleholders Championship representative Ann Palmer.

Garl was voted president because of 'his dedication to the sport and obvious dedication to serve Florida's golf industry through his many and varied affiliations with Florida's golf associations.'



Garl has served on numerous boards and committees over the past 28 years. "Although each affiliation is treasured by me for different reasons, my service to the Florida Turfgrass Association on the IFAS advisory board for the University of Florida comes closest to what I envision for the Florida Golf Alliance," said the new president.

"Our goals were consistently focused on the industry as a whole - not various special projects. That's what the FGA will be about - all industry representatives uniting and making decisions as an alliance regarding priorities to benefit Florida's golf industry.'

"Given the distinction of the founding groups that have banded together to fund the start-up of this alliance I am confident that this unification will succeed," Garl said.

At the next meeting a special invitation will be reviewed for mailing, along with the 1998 FGA business plan for inclusion, in order to invite all identifiable Florida golf associations and organizations to become FGA members and share a seat on the board of directors.

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GOLF COURSE NEWS

Fazio ringing Philadelphia's bell

NORTH COVENTRY, Pa. — Golf course architect Tom Fazio is quickly making his mark on the land of Chester County outside Philadelphia.

Fazio has been chosen to transform the 172-acre Gruber estate in northern Chester County into a private, 18-hole facility called Bellewood. Bellewood will be a 6,877-yard, par-72 course straddling Route 724 just south of the Schuylkill River. A 16,000-squarefoot mansion built in 1864 will serve as the clubhouse. An additional 6,000-square-foot mansion will be used for overnight accommodations and meetings.

When it opens, possibly sometime in 1999, Bellewood will be the second course in Chester County designed by Fazio. The first is Hartefeld National in New Garden. Hartefeld National will host the Senior PGA Tour's Bell Atlantic Classic later this spring.

As is often the case, Fazio will be working with another classic piece of property, with rolling terrain and thousands of pink and white dogwood trees. The Gruber Estate, once owned by the Edward L. Gruber family which made its fortune manufacturing T-shirts and undergarments, had a reputation for finely manicured grounds. More than 70 acres of the site were maintained and will be the setting for eight holes.

Fazio's design features five holes north of Route 724 and the remaining 13 holes to the south. Plans call for a tunnel to be built

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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 \$45 annually; other paid subscriptions to the U.S. and Canada cost \$55. 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. under the roadway to provide better access. The site will feature two main water hazards, an existing pond and an artificial lake. There will also be a driving range, practice area.

Earth Enterprises of Kimberton, Pa., is handling the construction. Earth Enterprises Tom Drauschak has said he hopes construction will start this spring.

Meadowbrook makes splash in City of Brotherly Love

WEST CHESTER, Pa. — Meadowbrook Golf Group Inc. is about to begin construction on a new upscale, daily-fee course here.

Tattersall Golf Club will be located 45 minutes from Philadelphia, ranked by the National Golf Foundation as one of the most undersupplied golf markets in the country. The Rees Jones-designed layout will border an upscale housing project developed by Tattersall Development Co. The total development cost is estimated at \$10 million.

Meadowbrook will operate the course once it opens. Meadowbrook Golf Group is the partnership Meadowbrook formed with Apollo Real Estate Investment Fund II to develop and acquire golf properties. Tatersall is the first development project for Meadowbrook under its \$36 million commitment from the Apollo fund.



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packed soil. The Aercore 800 delivers the



4 April 1998



Proposed R.I. track runs into Revolutionary problem

PORTSMOUTH, R.I. — British golf course developer Peter DeSavary's plan to build an 18hole links-style golf course and luxury lodging on a 250-acre site here has run smack into 18thcentury history.

DeSavary wants to build the new facility for the Carnegie Club, the group which owns and

operates the elegant but remote Skibo Castle and its 7,500-acre grounds — including an 18-hole golf course — in northern Scotland. Skibo Castle has hosted a growing list of political, sports and entertainment celebrities, including U.S President Bill Clinton, for golf, gourmet dining and luxury lodging and a host of

other activities from hunting and hiking to archery and overnight camping.

The Rhode Island site proposed for a new golf course and lodging, however, includes land where American forces battled the British troops on Aug. 29, 1778. The site of the Battle of Rhode Island has remained rela-

1200A

tively untouched for more than two centuries, according to the *Providence Journal-Bulletin*.

Some stone walls, which shielded Colonial military forces and newly freed slaves who also fought the British, are still standing at the site.

Richard Greenwood, a project review coordinator for the Rhode Island Historical Preservation and Heritage Commission, has called the site, "a rare survivor." Preservationists have pushed for an independent archeologist to survey the property and outline its most historically sensitive sites on the former battlefield.

The course proposal has cleared its first major hurdle, receiving a special permit from the local Zoning Board of Review. DeSavary told the board that most of the land would be left in its current state.

For the golf course project to move forward, it will still need the approval of the Army Corps of Engineers and Rhode Island's Coastal Resources management Council, both of which seek advice from the preservation commission.

Course planned for R.I. estate

NORTH COVENTRY, R.I. — A private, 18-hole course has been proposed on the grounds of the massive Gruber Estate.

The estate, home of the late industrialist Edward Gruber, is owned by TPT Partners. TPT has said it would like to develop a course or a retirement community.

The proposed course would take in the entire Gruber Estate. That includes Edgewood Estates, 242 acres on the south side of Route 724 and the prime 16,000-square-foot Georgian Mansion, along with Bellewood Estates, 27 acres on the north side of Route 724 and the 6,000square-foot Colonial Mansion. A clubhouse would be constructed at the Georgian Mansion.

Construction on the course could start this spring with completion by June 1999. Real estate developer Charles Tornetta is one of the principals of TPT.

Golf plan set to land in Bay State

WEYMOUTH, Mass. — A plan to convert part of the decommissioned South Weymouth Naval Air Station to a shopping mall has won approval from Town Meeting voters.

Residents in neighboring Rockland and Abington still must approve the proposal, which also calls for a golf course, housing for the elderly and open space.

The three towns must agree on a plan for the 1,400-acre site by June 30, or lose much of their control over the site's future to the Pentagon and other federal agencies. Approval is expected in both Rockland and Abington by the end of March.

The planned anchor for the development is a 1.5 million-squarefoot entertainment-themed outlet mall, the brainchild of Mills Corp. of Arlington, Va.





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Els, Kemper team on Md. links

IJAMSVILLE, Md. - 1997 U.S. Open Champion Ernie Els and Kemper Sports Management are teaming up to design an 18-hole golf course near Ijamsville to be called Whiskey Creek Golf Club.

Developer Sam Dunn has said he'd like the facility to open for play by summer 1999.

The Chicago-based Kemper, which owns and manages 25 courses around the country, including the nearby Holly Hills Country Club, and also sponsors the Kemper Open golf tournament, will manage the club. Wellknown golf instructor David Leadbetter will also reportedly help develop the course and offer a golfing school. Ryan Inc. Central is the builder.

The course was at one time set to be called Ironwood, but Dunn decided to change the name to Whiskey Creek. He discovered there were at least 10

Fla. resort links to be restored

HOLLYWOOD, Fla. A new Diplomat Resort & Country Club will soon be built here.

The United Association of Plumbers and Pipe Fitters plans to spend nearly \$400 million to redevelop the Diplomat's 21 acres and redesignits golf course. Architect loe Lee is overseeing the course renovation.

Plans call for work to begin next month on a 39story, 1,000-room hotel. Driscoll Development also intends to build a 107-unit condominium complex.

In the early 1960s, The Diplomat was among the great South Florida resorts. Reopening the Diplomat, once Hollywood's biggest employer, has been one of the city's top economic goals. Driscoll estimates the new Diplomat will create 2,100 jobs and generate \$28 million in tourist spending the first year.

The project will have a new 150-acre country club, including a championship course and 12court tennis center.

Driscoll has applied for building permits, but the project has a number of hurdles to overcome before construction can begin. In addition to needing approvals from the Federal Aviation Administration and state Department of Transportation, it will have to undergo an environmental assessmentand pass local reviews.

other courses in the country with the name Ironwood and decided on Whiskey Creek, a reference to prohibition-era activities in the region where the course will sit. According to Dunn, prohibitionists burned a Price's Distillery to the ground at a site not far form the golf course site. Construction is set to start this spring.

Va. course developers set to start construction

CHESAPEAKE, Va. - Jerry Harris and William Judah plan to build an 18-hole, public course on 113 acres in southwestern Chesapeake.

Glencoe Greens will be completely handicapped accessible, Judah said. Some golf carts will be equipped with hand controls and space to carry wheelchairs, while assistants will be provided to help visually-impaired golfers sight their balls. Harris-Judah Limited Liability Co. is investing \$3 million to \$3.5 million in the course. It will border the 17-lot Fountain Farms residential development.

The Planning Commission should consider the application next month. Construction is scheduled to start in June with the course opening in August 1999. Judah designed the course. Harris-Judah LLC will build and manage it.

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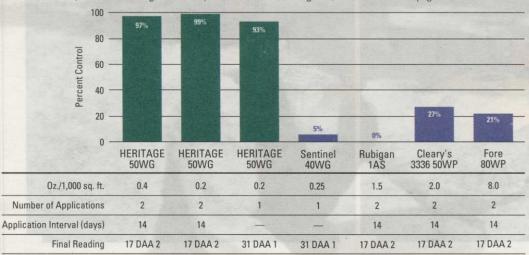
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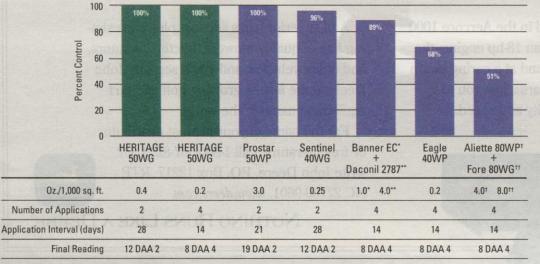
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Dr. Don Scott, Purdue University, 1995 Also isolated from plots: 2 species Rhizoctonia; 3 species Pythium; and several species Phytophthora

Brown Patch (Rhizoctonia solani) on Colonial Bentgrass



Dr. Pat Sanders, Penn State University, 1994

US 66-94-P356

US 67-95-P354



Arnie, Jack to team up at World Golf Village

ST. AUGUSTINE, Fla. — The first of two highly-anticipated golf courses designed by four living legends of golf has opened at the World Golf Village, while the second will soon be underway.

"The Slammer and The Squire" — an 18-hole course designed on the collaborative vision of golf legends Sam Snead and Gene Sarazen, opened last month. Later this spring, ground will be broken on the second collaborative 18-hole effort there by two of the game's all-time greats—Arnold Palmer and Jack Nicklaus. "The King and The Bear" — named for co-designers Palmer and Nicklaus — will be set with a residential community about four miles west of World Golf Village.

According to the *Florida Times* Union, architects from Palmer Course Design in Ponte Vedra Beach and Nicklaus Design in West Palm Beach have already held discussions on the philosophy of the course's design. Nicklaus and Palmer reportedly talked things over at the Senior Skins Game earlier this year and have continued the conversation both on and off the course.

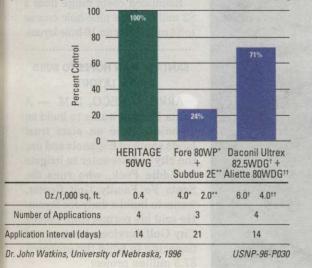
Palmer and Nicklaus, who waged so many memorable tournament battles through the years, have both designed more than 100 courses. But this project will mark a first for each in many ways. Lead designers for both



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Pythium Blight (Pythium aphanidermatum) on Perennial Ryegrass





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firms have said the course will reflect a genuine collaborative effort with input from both legends on each hole, as opposed to having one man design nine and the other another nine. Although Palmer and Nicklaus have some different ideas about golf course architecture, one designer said they have at least one common belief.

"Both of them let the land dictate the design," said Greg Stang of Palmer Course Design. "They don't like to force anything."

Bruce Borland, a senior designer with Nicklaus, has said, "It's going to be a flat Florida course," and "very naturalized in its look." He said both Palmer and Nicklaus are also very sensitive to designing playable courses for all golfing abilities with different strategic options on each hole.

"I think they're going to be very compatible," said Borland.

Giles, Georg<mark>e</mark> join forces in Va.

MANAKIN-SABOT, Va. — Work is scheduled to start by May on Kinloch, an 18-hole dailyfee facility that will feature a course designed by Lester George in collaboration with Virginia golf legend Vinnie Giles.

Giles is a former U.S. and British Amateur champion and Walker Cup captain who now represents more than 25 professional golfers as an agent.

CBR Associates of Richmond is developing the course, which will be set on 275 acres near the 3,400-acre West Creek commercial-industrial development. The course will be part of a 645-acre project that will include residential development and a lake.

Kinloch will also feature a unique finishing touch — a 170yard par-3 19th hole that will play across a lake back to the clubhouse. George said the hole which will be optional — will give golfers a chance "to settle bets and have something to do on the way back to the clubhouse."

KIAWAH DEVELOPERS TO BUILD ON NEIGHBORING ISLAND

SEABROOK ISLAND, S.C. The two developers of Kiawah Island have bought a 1,044-acre property on this coastal island called the Andell Tract and plans call for an 18-hole course designed by Tom Watson. The two buyers, Kiawah Resort Associates (KRA) LP and Virginia Investment Trust, said they will not build a harbor or marina on Andell Tract. Charleston-based KRA, which develops and resells homes on Kiawah, bought a large parcel facing Captain Sam's Inlet and plans to build a new golf course community.



GULFPORT, Miss. — Who is the newest player on the fastgrowing Mississippi Gulf Coast golf course scene ? Try the Naval Construction Battalion Center in this coastal city.

The base, which has had a nine-hole layout since the mid-1970s, is adding nine holes in a substantial upgrade. The newly expanded 18-hole course should be ready by November.

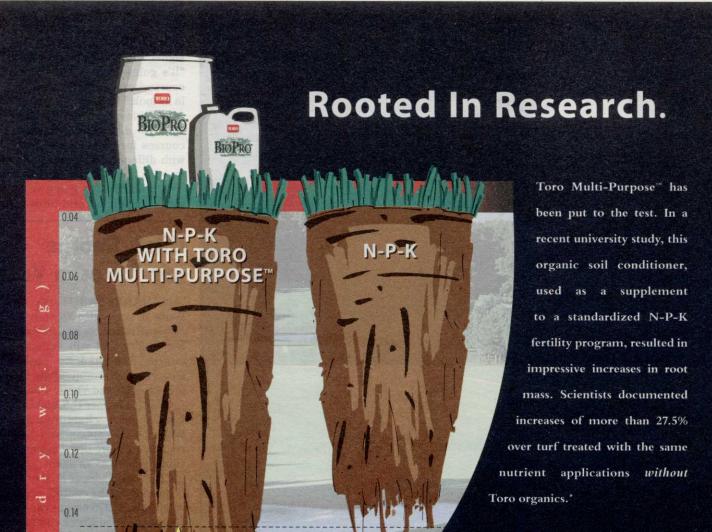
Miss. base expands course

Architect Willard C. Byrd designed the addition. The new Pine Bayou Golf Course will measure about 6,800 yards and feature numerous new bunkers and hazards.

Base officials were faced several years ago with a decision over the fate of the course and decided to move ahead with a major upgrade and expansion. The facility will also be getting a new clubhouse in 1999.

Commander Jack Zimm, the base's executive officer, told *The Sun Herald* of Gulfport: "We had to make a decision ... Either make this course a viable proposition for generating revenue or get out of the golf business." Zimm said the expanded Pine Bayou will be comparable to nearby courses like The Oaks and Windance Country Club.

The base has already taken a step toward generating more play at Pine Bayou. In April, the Seabees opened the course to the public. The expansion should allow the facility to host from 40,000 to 50,000 rounds per year, up from 17,500 in 1997.



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Williams, Gill design new Dallas layout

CARROLLTON, Texas — Construction is underway on Coyote Ride Golf Club in this Dallas suburb.

The 18-hole, daily-fee track includes a practice facility, beverage/banquet services and a pro shop. The \$5 million course is part of the 1,000-acre master-planned community of Indian Creek Ranch.

Williams & Gill Associates designed the course for developer Mesa Golf Inc. Nine holes will play through an abandoned gravel quarry adjacent to the Trinity River and the other nine along a ridge overlooking northern Dallas. The course is scheduled to open this fall.

Madison board OKs Wis. track

MADISON, Wis. — Prospects for a golf course between Madison and Sun Prairie have improved with the Madison Board of Estimates' endorsement of the purchase of 79 acres for \$1.73 million and spending \$195,000 for consulting a course architect and soil lab.

The City Council must still approve the purchase and consultant contracts. The purchase would give the city 72 percent of the 247 acres needed for the Madison-Sun Prairie Open Space Project, which includes plans for a golf course on the property.

Remaining land acquisition includes the 18-acre Whitson Swift property and the 50-acre Tancho property. The 18 acres aren't considered vital for a golf course, and the 50 acres will be donated to the city under an annexation agreement if certain conditions are met by next April.

Estimated costs range from a \$2 million for a nine-hole course to \$4 million for an 18-hole layout.

SANTA FE MAN HOPES TO BUILD NEW LAYOUT

ARROYO SECO, N.M. — A Santa Fe man wants to build an 18-hole course on state trust lands south of Espanola and use the city's wastewater to irrigate it. Eddie Peck, who runs the Santa Fe Family Golf Center, wants to build a daily-fee layout. He said his partnership, Capital City Golf Services, has secured financing to build the proposed \$7.5 million project.



Feds delay completion of Scottsdale golf facility

SCOTTSDALE, Ariz. - An unexpected federal regulatory hurdle has pushed back, for at least a year, the completion of the long-delayed Scottsdale Links, public 18-hole course in the Indian Bend Wash Greenbelt near the Salt River Pima-Maricopa Indian Community.

Construction was scheduled

Oregon's Indian Bend nears local gov't approval

BEND, Oregon - The city has filed the last formal paperwork for an 18-hole municipal course near the sewage treatment plant east of town.

The site plan for Indian Bend Golf Course was submitted to Deschutes County for an upcoming hearing on the \$4.5 million, privately financed project.

Plans for 5.5-acre pond to store effluent for irrigating the course have been scrapped, as have all other water features, at the urging of the Federal Aviation Administration. The FAA was worried the ponds would attract migratory birds that could interfere with planes at nearby Bend Municipal Airport.

A practice range, putting greens, 4,350-square-foot clubhouse, parking for 170 cars, paved cart paths and 5,000square-foot maintenance building are also planned. If the proposal wins approval soon, construction could start this spring with the course ready for play by mid-1999.

The county first proposed the course at the site in 1991. The city took over the project in 1996. Last fall the city agreed to a 25year, \$100-a-year lease of the 170acre site to SRL Corp., a local group which includes PGA golf pro Greg Little, Richard Page, Ray Schmidt and course architect Robert Muir Graves.

..... PALMER TO DESIGN COURSE IN SACRAMENTO

SACRAMENTO, Calif. - Golf Dimensions has signed a 45-year lease with the Sacramento Municipal Utility District to develop, finance and operate the Rancho Seco Golf Facility to be built on a portion of a 1,600-acre site owned by the District. The daily-fee course was designed by Palmer Course Design Co. The project design is complete and all permits secured. Plans include a fullsized practice facility and 12,000square-foot clubhouse. Golf Dimensions expects to break ground in April and have the course ready for play by January 1999

GOLF COURSE NEWS

to start in January on Scottsdale Links at Indian Bend, a \$5 million joint venture between the city and private golf course developers. But a permit needed from the U.S. Army Corps of Engineers halted those plans. The delay pushed back the anticipated opening of the 132-acre, 18-hole layout from November

of this year to November 1999.

This latest development is yet another setback for golfers in the area who have been waiting more than a decade for a new course that would improve an undeveloped and often unkempt section of the Indian Wash Greenbelt. The city has been unable to get at least two previous

the site off the ground.

The key stumbling block for the project is that 90 acres are within regional floodcontrol channels, over which the Corps has jurisdiction. A misunderstanding between



proposed golf course projects at the city and the developer, Even Par Golf LLC, and the Corps over

whether a special permit was needed caused the delay. Even if the Corps grants the permit, the project still requires final design approval from Maricopa County.

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Everybody's talking junior golf

When I first set sail for my trip around the golfing world - itinerary for which I've detailed in previous columns - I was dead sure I'd return Michael Levans. with a file full of trend stories to vividly editor detail the "state of the industry" in the

countries of Europe and Asia. What I found was quit surprising. At Fairways '98 in Munich and Golf Asia in Singapore, two top conference/trade shows for the global market, the underlying theme was junior golf and how to attract more kids to the game.

I was almost certain that the talk in Munich would be about the solid growth of golf in Germany, the proposed "mini boom" coming in Greece or the fallout of Textron's purchase of Ransomes. Instead, the cocktail party chat I was able to ease into revolved around the need for Europe to move away from the pricey signature course and into the affordable, sustainable project.

Sound familiar? Getting sick of hearing it?

The consensus at Golf Asia was that the wild economic roller coaster ride will obviously calm in two to four years, leaving golf to ease its way back into the consciences of developers and players after a temporary hiatus. If one overriding message emanated from the Golf Asia conference it was that once economic tensions have eased, golf will come back stronger and smarter - and hopefully with a slew of kids ready to fill new junior golf programs.

Day one of the conference, which featured a country-bycountry analysis of the golf market in Asia, started to sound like a broken record.

A.S. Khamis, managing director of ASK Golf Management Sdn Bhd, is about to open and manage Malaysia's first public golf course. Scheduled to open at that end of May, the course will be located in the Klang Valley near the International Airport in Kuala Lumpur and will host Malaysia's first fulltime golf academy.

The key to golf's future in Indonesia, said Bob Horan, general manager at Klub Golf Bagor Raya, is aggressive marketing and the development of youth golfers. Peter Goh, general manger of Laguna National Golf & Country Club in Singapore echoed Horan's sentiments, commenting that Singapore needs to improve its infrastructure for facilities that can further stimulate growth, including driving ranges and public courses. Singapore will also have to capitalize on the recent growth of women players.

I was ready for a country-by-country gloom-and-doom report, but what I heard was cautious optimism and positive plans for building golf for Asia's future.

I wanted to forward a few thank-yous to our Hawaiian friends at Turtle Bay Golf Course, Kahuku, Koolau Golf Course, Kaneohe, and the Sheraton Makaha Resort & CC, Makaha, for their hospitality while GCN Publisher Charlie von Brecht and I were on Oahu taking a much-needed break. As you may know, Koolau has been rated the hardest course in the United States. While stunning, that "hardest" rating needs to be reconsidered.

FROM THE EDITORS

Time to stop global whining!

Stop Global Whining!

Warming? No. Whining! We've heard enough. Enough of what, you ask? I've got a list a scroll long, but I'll keep it to a choice few. Listen, if you think your personal circumstances are bad, look around. Look at Ranchos San Marcos, a brand spanking new golf course where superintendent Scott Nair watched, helpless, as the Santa Ynex River went berserk, changed course

and washed away his 3rd green and fairway. Or look at Pebble Beach's Mark Michaud, who walked out onto the course one day to find the access road for golf carts and maintenance vehicles to the 15th tee washed away, along with about 20 feet of subsurface. Or look at the many superintendents in Maine where the Ice Storm of the Century snapped, cracked and broke gadzillions of trees, leaving a carnage that re- Mark Leslie, minded one of London after the air raids.

Now do you want to Whine?

OK. Then look at the superintendents in Florida who have lost their jobs - not trees, but livelihoods - because they could not control the weather. They couldn't command the clouds to part and let the sun shine on their turfgrass so that it would grow. And an executive committee here, or an owner there, determined the dead grass was the superintendent's fault.

A reporter of mine once was a paraplegic. While in college, he had fallen from a tree, and since then had used two crutches to get around. Yet he always was pleasant beyond belief. I was close to him and so thought one day that I could ask him how he remained in such high spirits. "Whenever I get down," he said, "I think of the person who is a quadriplegic.'

So, now will you please Stop Global Whining?

Here's a short list of who else I want to stop Whining:

· The Richmond, Va., city officials who put off the Richmond First Tee Foundation (which was donating the \$2 million to build a kids' course) until it had to move onward with neighboring Chesterfield County - and then got angry that the Foundation didn't wait around for them. You folks will be so-o lucky if the First Tee folks do come back and build a second course with you.

• The PGA Tour officials lamenting, and appealing, the court's ruling in the Casey Martin case. Hey, the guy's a great golfer who can't walk. How many handicapped people will ever have the talent to earn a spot on the Tour? One in a million? A billion? Show some heart and let him ride.

 Sierra Clubites, who disparage professional golf course superintendents, color the truth and outright lie to advance their agenda. You folks are as bad as Al Gore.

Michael Eisner, who can keep his New Age grunge about Mother Earth, Father Sun and the Nerd Queen in his own closet, thank you. Strike on, people!

• The Global Warmheads, who haven't got a clue. Show me the science, will you? No, you won't, because it doesn't exist. And yet you've deceived the majority of the world into thinking global warming is a proven fact. Last Oct. 27 anchorman Peter Jennings claimed, "The overwhelming majority or scientists now agree climate change is being caused by man."

Oh? Did you think to ask the experts in the field? Sixty-eight percent of state climatologists feel global warming is not occurring. Again, I say, show me the science.

Continued on page 14

Letters

hank you for Mark Leslie's very perceptive commentary in the March issue. Based on many recent articles in other publications, one might think that, all of a sudden, and over the protestations of golf's plutocrats. golf is "opening up to women and minorities.

Anybody who believes that has probably not spent much time at their local, family-owned public golf course. And, after all, most rounds of golf in the United States are played at public facilities, and have been for many vears.

Here in Ohio, and in much of the country, a nine-hole ticket is 10 April 1998

available for little more than the price of a movie ticket. I operate an affordable daily-fee public course, where \$3 gets you three holes of golf on our practice course, a kid can play nine holes for \$8 or less, and just \$15 buys 18 holes on either of two regulation courses

At our first tee, and at the first tee of family-owned public courses everywhere, golf is affordable and accessible, without discrimination. Also, we are actively involved in sponsoring youth golf programs. We give away many rounds of golf and many dollars each year to grow the game and to bring new people

into golf, including "non-traditional" players.

Still, as you point out, privately owned public courses need to be profitable to keep golf affordable.

"The good of the game" requires course operators to be able to pay their workers and maintain their facilities. That means charging a fair price for a decent product, and doing our best to keep new golfers in the game and experienced golfers coming back more often.

Sincerely, Chuck Bennell General Manager Bob-O-Link Golf Course North Canton, Ohio

With an appeal to those who are responsible for TV golf commentary, please listen!

Anyone who watches TV golf has heard Johnny Miller and other commentators say, "This putt is going 'down grain.' " I am not sure the TV audience understands what this means. The word "grain," as used by TV analysts, is grossly overused and misunderstood by the golfing public.

Having spent my professional life studying turfgrasses, with a Ph.D. in turfgrass breeding. I have worked many hours collecting, observing, breeding and Continued on page 59



managing editor

Publisher

Charles E, von Brecht

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Editor Michael Levans

Managing Editor Mark A. Leslie

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Editorial Office

Golf Course News Box 997, 106 Lafayette Street Yarmouth, ME 04096 207-846-0600; Fax: 207-846-0657 mlevans@golfcoursenews.com mleslie@golfcoursenews.com

ADVERTISING OFFICES

National Sales: Charles E. von Brecht Box 997, 106 Lafayette Street Yarmouth, ME 04096 207-846-0600; Fax: 207-846-0657 cvonb@golfcoursenews.com

Western Sales:

Robert Sanner Western Territory Manager

2141 Vermont Lawrence, KS 66046 785-842-3969; fax: 785-842-4304 Marketplace Sales:

Trish Hoffman 207-846-0600: fax: 207-846-0657

Public Golf Forum Sales Phil McKay

207-846-0600; fax: 207-846-0657

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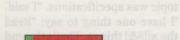
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Dave Oatis said: "Trees are wou? fei ful. Where else would we get urnitore?"

Accepting the Donald Rossi Humanitarian Award for Argold Paimer from the Golf Course Builders Association of America (GCBAA), his partner Ed Seay

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DR. C. RICHARD SKOGLEY

PROVIDENCE, R.I. - Dr. C. Richard Skogley, a pioneer in the turfgrass industry and longtime professor at the University of Rhode Island (URI), has died.

Given the Golf Course Superintendents Association of America's (GCSAA) Distinguished Service Award in 1989 Dr. Skogley had retired from

URI, where he was a professor of turfgrass agronomy and a turfgrass researcher.

He focused on management and plant improvement in his research and spoke at many seminars and

conferences on such topics as bentgrass species and varieties for golf master's degrees from URI and turfgrass.



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ber of New England area golf course superintendents' organizations. Dr Skogley served as a chapter newsletter editor and on GC-SAA national committees. He held bachelor's and

An honorary mem-

OBITIIARIES

a PhD from Rutgers University.

WILLIAM "PETE" JONES 1933-1998

RALEIGH, N.C. - William P. "Pete" Jones, longtime golf writer and co-founder of the Donald Ross Society, died here in his apartment at the age of 64.

Born March 1, 1933, Mr. Jones retired in 1990 and became very active as archive historian for the Ross Society and had completed much work on a biography of Ross when he passed on.

His wife, Lois, and a son, Bruce, passed on before him.

He is survived by a son, Keith, and daughter-in-law, Jane, of Garner; a sister, Bobbie Medland of San Jose, Calif.; six grandchildren and one great-grandchild.

Leslie comment Continued from page 10 I thought I had heard it all.

Then, a couple years ago earthworm diggers in Maine went on strike. United they stand, those earthworm diggers. I'm reminded of Doug and Wendy Whiner of Saturday Night Live! fame. Even they never Whined like this short list of Whiners.

So, I ask them: Please stop Warming the Globe with your hot-air Whining!

Several members of Sugarloaf Golf Club superintendent Ed Michaud's golf maintenance

Speaking during the New England Regional Turfgrass Conference on how shade kills grass, U.S. Golf Association agronomist Dave Oatis said: "Trees are wonderful. Where else would we get furniture?"

crew are in Sugarloaf USA ski area's grooming department with Michaud, and have taken a new name. "They're calling themselves 'Guest Surfaces' rather than 'Guest Services,' Michaud laughed. (See more on Michaud on page 16.)

Speaking during the New England Regional Turfgrass Conference on how shade kills grass, U.S. Golf Association agronomist Dave Oatis said: "Trees are wonderful. Where else would we get furniture?"

Accepting the Donald Rossi Humanitarian Award for Arnold Palmer from the Golf Course **Builders Association of America** (GCBAA), his partner Ed Seay mentioned the first time he spoke to the GCBAA and his topic was specifications. "I said, 'I have one thing to say: "Read the xj!8&! things. That's the end of my presentation. Now do you have any questions?' "

Before I sign off, a plug for a neat little tool called The Greenskeeper from the golf clothing and accessories manufacturer Churchill. It's a heavy-duty ballmark repair tool with a ball marker and shaped to hold a golf club or cigar off the turf. Check it out, but you can't have mine.

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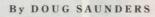
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GOLF COURSE NEWS



Golf course 'living lab' Cal State Poly's aim



OMONA, Calif. - Dealing with society's trash is an issue that

draws little attention from the public until a landfill needs to be created or closed down. After operating a 200-acre landfill on campus property since 1957 in conjunction with the Los Angeles County Sanitation Districts, California State Polytechnic University here hopes to close the landfill and build an 18-hole golf course that will serve as a living laboratory.

The landfill has served two purposes over the last four decades. It has been a repository for the tons of refuse from the growing LA metropolis, and has served as an outdoor lab for waste

management, environmental sciences, engineering, and agriculture.

'The landfill has been very beneficial to the university from not only an economic standpoint, but also as an educational tool," said Ed Barnes, executive director of the Land Lab and Asset Development for Cal Poly Pomona.

At some point landfills do reach capacity and the next question was how to best close this one down. Strict EPA guidelines specify the closure procedures for landfills. The university has decided that, in conjunction with closure and monitoring regulations, creating a golf course can continue to provide economic and educational

benefits into the future.

"Our desire," Barnes said, "is to build and 18-hole course that will generate income through greens fees, provide a recreational outlet for students, be of value to our athletic program, and give more opportunities for internships for our colleges of hotel and restaurant management, turfgrass management, landscape architecture, and biosciences.

Cal Poly recently selected Golf Dimensions, a golf course management firm based in Irvine, to help the university through the project's planning and construction phases. Golf Dimensions recently completed the

Continued on page 29

GOLF AND THE ENVIRONMENT

NEW ENGLAND TURF CONFERENCE Wake up to soil acidity tests, Hummel tells superintendents

By MARK LESLIE

PROVIDENCE, R.I. - Decrying the fact that many of them have no idea how acidic their soil is, Dr. Norm Hummel called on turfgrass managers to establish soil-testing programs "to define the best fertilizer regimes" for their properties.

Speaking at the New England Regional Turfgrass Conference here on March 4, the former Cornell University profes-



sor said: "As basic as it is, it's amazing to me how many people don't have an idea of what the pH of their golf course or athletic field is at.'

A soil test can address soil acidity and liming requirements, pH reduction, soil phosphorus and potassium, secondary nutrients like calcium and magnesium,

and soluble salts for those in coastal areas, said Hummel, who now operates Hummel & Co. in Trumansburg, N.Y.

Calling pH "one of the most basic soil fertility aspects," Hummel said the optimum reading for most cool-season grasses is in a range of 6 to 7.

"One of the reasons is that optimum nutrient availability is found within that slightly acidic range," he said. "When you get into higher pHs, many of the micronutrients are there but tied up in unavailable forms. When you get much below that, nutrients Continued on page 20

Sunlight assessment, other tools taking turf care into 21st century

By MARK LESLIE

PROVIDENCE, R.I. - Sunlight assessment and digital imaging - two new technologies that are pulling golf superintendents into the computer age - will also help them deal with the difficult task of course renovations, according to a spokesman for the U.S. Golf Association Green Section.

"Frankly, most of the people here have the equipment and capabilities to operate this technology," Dave Oatis, director of the Northeast Region, told the New England Regional Turfgrass Conference here.

Oatis hailed the sunlight-assessment technology developed by Arbor Com Inc. of Toronto area. Company owner Scott Robinson, an arborist from Toronto, developed this tool "and it is mind boggling what they can do with it," Oatis said.

Oatis cited the usefulness of digital imaging as "limited only by your imagination.'

On difficult sites with difficult memberships, and for particularly important trees, you can use [sunlight assessment] to document and quantify how many and which trees need to be removed" to save shaded turfgrass, Oatis said. "You need eight hours of sunlight for healthy turf."

The position of the sun as it rises differs by approximately 22 Continued on page 21



Aspetuck Valley Country Club in Weston, Conn., is home to alltypes of birds, waterfowl and other creatures.

Aspetuck Valley fulfills Audubon requirements

WESTON, Conn. - Aspetuck Valley Country Club has achieved designation as a Certified Audubon Cooperative Sanctuary by the Audubon Cooperative Sanctuary System (ACSS), the educational division of Audubon International.

The membership is very proud that Aspetuck Valley is a Certified Audubon Cooperative Sanctuary golf course," said superintendent Steven Colangeli, who initiated the program at the club in 1996.

"It's a great feeling to know that a golf course can act as a recreation area for golf as well as a wildlife sanctuary. It's also nice to know that our daily maintenance practices and Continued on page 25

The policy game of golf

By RON DODSON

One of the major problems facing the golf industry today is whether governmental action is the most effective way to protect or restore the environment. Actually, it's a question of whether the public believes govern-



mental action is the only way to protect or restore the environment. To golfers, superintendents and developers, this is an important question because governmental action impacts us all - individually and collectively.

Because the public's awareness of environmental issues and golf courses is at an all-time high, it's timely to take a Continued on page 25

Golf Courses. Vittum is well-known for research into the hyperodes weevil. An affiliate of the UMass Cooperative Extension Service, she has been the pesticide coordinator and state liaison representative for the National Agricultural Pesticide Impact Assessment Program for Massachusetts in the 1990s.

BRIFFS

METGCSA HONORS VITTUM

tor of the Department of Entomology

at the University of Massachusetts,

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Association's John

Reid Lifetime Ach-

ievement Award. Co-author of the IPM Handbook for

Dr. Patricia Vittum, program direc-

HAMILTON JOINS TWINEAGLES

NAPLES, Fla. - John Hamilton has the Nicklaus-designed joined TwinEagles Golf & Country Club as an agronomist. Hamilton has more than 20 years experience. Before joining TwinEagles, he operated a turfgrass consulting service for three years to international golf course clients in China and Guam, and also served as an agronomist with Golden Bear International.

MILLETT ASSUMES MET PRESIDENCY

.....

WHITE PLAINS, N.Y. - Ridgeway Country Club superintendent Earl Millett has taken over the presidency of the Metropolitan Golf Course Superintendents Association (MetGCSA). A graduate of the University of Massachusetts' Stockbridge School of Agriculture, Millett has been involved in the MetGCSA for 21 years, the New York State Turfgrass Association, and the Tri-State Turf Research Foundation, on whose board he serves. He has been at Ridgeway since 1980.

FERTILIZER INSTITUTE ON THE WEB

Washington, D.C.-The Fertilizer Institute has launched its internet web site and they implemented a new logo. The site, located at www.tfi.org on the world wide web, will contain general



information about fertilizer for the public as well as specialized news about association activities for TFI members.

"We view the new web site as a means of extending the lines of communication with our membership and the general public," said TFI President Gary D. Meyers.



Sugarloaf's Ed Michaud: A man of two worlds

ARRABASSETT, Maine - Ed Michaud may just transform the phrase "jack of all trades, master of none" into "master of both." The Sugarloaf Golf Club superintendent has kept his course in the No. 1 ranking in this state for years while gaining each season on the nation's best. And last September, Snow Country magazine named the Michaud-designed terrain park at Sugarloaf USA Ski Area the best resort park in North America, while ranking Sugarloaf one of the top five resorts on the continent for

snowboarding. From the world where he for nine years has maintained the "bunkers," "berms" and "greens" of Sugarloaf Golf Club, Michaud five winters ago began sculpting Sugarloaf USA's snowboarding world of "pipes," "parks," "table tops" and "pyramids.

His reputation for keeping the golf course in top shape despite the battles with heavy and lingering snows may already have been overshadowed by his wintertime work, where local boarders and skiers revere his artistry and where Sugarloaf owner American Ski Co. (ASC) is sending him around the country preparing slopes for national snowboarding championships.

Instead of carting around hose, plugcutters and other greenkeeping paraphernalia behind his Truckster, Michaud is operating a Snowcat with a Halfpipe Grinder mounted on the front, or dragging a mammoth Pipe Dragon behind a Bombardier groomer.

In addition to building Sugarloaf's giant slalom and half-pipe for the only Grand Prix event on the East Coast the

last two years and the Olympic tryout this winter, he built the pipe at ASC's Attitash Mountain, the terrain park at The Canyons in Utah, and "carved the pipe" at Sunday River [in Bethel] for the National Snowboarding Championships at the end of March. Ski Wentworth in Nova Scotia, which is not even an ASC slope, hired Michaud to build its terrain park and pipe.

"I was one ecstatic person," said Michaud about learning of the Number-One ranking his terrain park received last fall. But it was surprising that it came before his golf-course rating.

"My goal when I took over as superintendent [in 1989] was to make the top 100 list in 10 years," Michaud said of the Robert Trent Jones Jr.designed golf course. "I knew we had the track. Granted, not the amenities, but we had the layout. Those who play here go away shaking their heads. They can't get over it. We're now 23rd in America's upscale public courses, and Golf Magazine's top 100 list. But not Golf Digest's top 100.

"Some courses in the top 100 list are ranked behind us on top 75 upscale list [including Bay Hill and Golden Horseshoe]. The problem is we need 24 raters to rate the course before we can qualify to make the top 100 list.'

Michaud takes solace in the fact that Men's Journal last year listed Sugarloaf Golf Club the No. 1 course in America "Remote But Worth the Effort.

While seeking recognition for his course, Michaud is enjoying the challenges of his two jobs and meeting the increasing demands for perfection at both.

"The snowboarding is a little more



Ed Michaud, above left, is all smiles when snowboarders soar over the 'hits' he has created on Sugarloa, USA's nationally top-ranked terrain park, above right.

fun, but the golf is more satisfying," he said. "You can get really creative making the snowboarding pipes and parks. You look at the flow of the land, the width of the trail and the pitch, and think

about what kind of feature will fit. It's a lot like golf. An architect tries to use the lay of the land rather than fight it, to blend it in so it looks like it belongs there. I want the tabletop to look like it belongs there.

"I'd like to get my hands on a 200acre farm and see what kind of a golf course I could build. Something tells me it would be a little unorthodox."

Looking at the pitch of the land, Michaud determines how fast a snowboarder or skier will go down through a section so he can build a 'hit' - or feature — accordingly. "Then you can develop a hit like a tabletop, or teetop spine, or flat-top spine, or doubleroller, bank turns, pyramids - whatever your imagination comes up with," he said, breaking into his wintertime vernacular.

How does the park feel compared to the course when his work is done?

"Aesthetics isn't as big in the park, but it's very important first thing in the morning when you're standing there and it's all groomed perfect no chunks or ridges. Whether transition is perfect or not SUPER FOCUS it feels like it's riding wonderful because it

looks so appetizing," Michaud said. "It's the same idea of the aesthetics on the golf course when you're the first one out there, and it's all striped up and everything looks crisp and sharp. If it looks good and you get that good first impression aesthetically, then it plays well. Whether it plays any different or not doesn't matter, because in your mind it is playing better because it looks so nice.

Maintaining an edge with his two jobs is a balancing act for Michaud.

"This time of the year [mid-March]," he said, "I feel the pressure of getting behind on the golf course job. I haven't had time to shop for the best price on equipment. I come down here [maintenance complex] April 1, a month before the crew begins. So, it's difficult. I could be busy enough with planning, working on the computer and getting

Continued on next page



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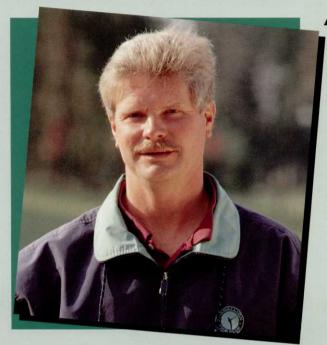




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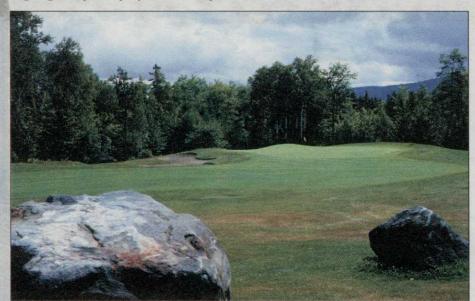
Tifton Lab earns A2LA accreditation

TIFTON, Ga. — Tifton Physical Soil Testing Laboratory, Inc. became an accredited laboratory on Feb. 4 by the American Association for Laboratory Accreditation (A2LA) for technical competence in the field of Geotechnical (Putting Green Materials) Testing.

The A2LA is a non-profit, scientific, membership organization dedicated to the formal recognition of testing laboratories and related organizations which have achieved a demonstrated level of competence. Accreditation demonstrates ongoing competency by the lab in performing the required tests specified by the U.S. Golf Association (USGA) for Putting Green Construction Recommendations.

The USGA recommends that only A2LA accredited laboratories be used for testing and analyzing materials for building greens according to specific guidelines.

The company's president and owner, Powell Gaines, served on the review panel and offered much technical expertise to the USGA in writing the 1993 revision of the USGA Green Construction Recommendations.



The 3rd hole at Sugarloaf Golf Club, Maine's top-ranked golf course, under Ed Michaud's care.

Focus on Michaud

Continued from previous page

information most of the winter. It would be nice to work 30 or 40 hours a week during the winter after working all those hours in the summertime, and have some time to myself.

"But I do enjoy the snowboard end of it. Those kids are so grateful for whatever you do for them. I swear I could just push up a pile of snow and drop my tiller to smooth it out, and they'd think it was great."

Nevertheless, "the more you deliver, the more the guests expect the next year," he said. "Instead of grooming the pipe three days a week, now they want it groomed five days a week. Next year it may be every day.

"Basically each year the challenge now is to keep wowing them, keep dazzling them."

"We wrestle every year with that on the golf course," he added. "They expect a great-conditioned course, smooth cart paths and everything we've done so far."

The new "wow factor" this year, he expects, will be a GPS (Global Positioning System) on the golf carts.

Which of the two "careers" came first is hard to figure. Michaud earned a college degree in forestry, then found himself running heavy equipment.

During the winters for many years, he worked as a groomer and became manager of the Sugarloaf USA grooming department.

When Jones and golf course builder Greenscape started to build Sugarloaf Golf Club, Michaud was on an earthmoving machine. Superintendent of construction Fred Downs liked GOLF COURSE NEWS Michaud's work ethic and hired him to help finish the golf course, installing the irrigation system, seeding and as a shaper.

When the work was done, Michaud stayed on to operate the complex irrigation system, and when superintendent George Howe left in 1989, Michaud was hired as head superintendent. He attended the University of Massachusetts' Winter School for Turfgrass Managers and dropped his management position in the grooming department, although continuing to work for it.

Still, the two jobs overlap.

"Last year we skied until June 1," he said, "and we had two weekends of 'Ski and Tee,' so imagine what kind of shape I would have been in running both those departments."

Which of the jobs does Michaud prefer?

"Both have good and bad points," he said. "The snowboarding job in the past was more relaxed and the expectations were less; but as I get more involved in national events and national championships, the pressure is on and the expectations are about the same as with golfers.

"The snow is not living. If it gets icy, you can push snow on top of it, groom out, and it's fixed. You don't have a soil profile and micro-organisms working for or against you. Snow doesn't get thirsty or sick... You don't worry about an a outbreak of snow mold.

"On the other hand, you don't get the feeling of satisfaction that you get from looking at the golf course at peak foliage. It may be the best pipe on the East Coast, but it's not alive and living and depending on you to feed and water it and give it medicine when it's sick."

Softspikes continues suit parade

ROCKVILLE, Md.—Softspikes, Inc., has filed separate lawsuits against four manufacturers of alternative golf cleats, claiming violation of intellectual properties against patents the company holds in Canada. The four manufacturers are Green Keeper, Flatspikes, Smart Spikes and Gripper Golf Cleats.

"These lawsuits are a continua-

tion of an aggressive position the Softspikes, Inc., has taken, and will continue to take to vigorously protect our intellectual properties," said CEO Jon Hyman.

Softspikes has 12 issued patents in the United States, with 12 more patents pending. In addition to Canada, Softspikes has other patents issued in the United Kingdom, Japan and Australia.

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NEW ENGLAND TURF CONFERENCE



Veterinary sheds light on pesticide perceptions, realities

By MARK LESLIE

PROVIDENCE, R.I. — Addressing the question of whether risks to animals from pesticide applications is real or perceived, a Virginia toxicologist said he spends "most of my time convincing people that a 'poisoning' wasn't a poisoning at all," but some such cause as an infectious disease.

Nevertheless, Dr. Dennis Blodgett recommended to an audience of mostly lawn-care professionals that they take a number of measures to assure they do not harm birds, fish or other wildlife. While fungicides cause no problems and fertilizers are a concern primarily with fish, Blodgett said the herbicides 2,4-D, dicamba, MCPP, MCPA and Bensulide must be used carefully.

Listing birds, bees and fish as "more susceptible [to pesticides] than other species," the associate professor at Virginia-Maryland Regional College of Veterinary Medicine said: "We need a non-application zone around fish ponds."

He also suggested that pesticide applicators:

• Not irrigate pesticides to water-saturated ground.

• Not apply them before a heavy rain

• Avoid application on windy days.

Avoid puddling herbicides. Not apply pesticides if wa-

terfowl or pets are in the area. • Instruct clients to keep pets off the lawn until the chemical is dry.

• Empty and turn over feeding bowls, water dishes, etc.

• Use newer insecticides that are not organophosphates and are safer, in general, than LPs and carbonites.

• Beware using Ficam or Dursban where waterfowl could be affected.

• Beware using the pre-emergent herbicide Bensulide where there are young dogs, which have developed signs of SLUD (Salivation, Lacrimation, Urination, Diarrhea).

If a person claims a pesticide application harmed wildlife, Blodgett said that in order to determine whether the problem is real or perceived, the applicators should:

• Make sure any clinical signs of sickness are compatible with the pesticide used.

• Make sure the onset times of the symptoms match the time of application.

• Determine if they share the blame. For instance, he said, if a dog owner has used a flea collar, shampoo, or flea dip on a dog, the animal's ingestion of a chemical might "put them over the top, • Have public relations literature explaining why problems are unlikely.

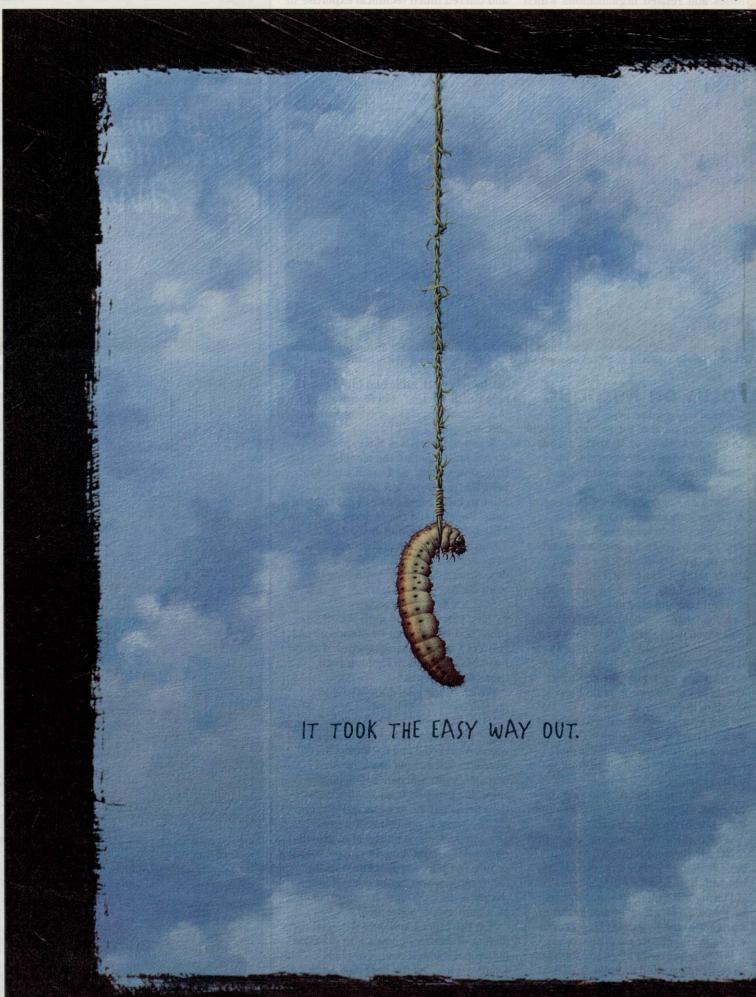
If people are convinced the pesticide application caused a problem, Blodgett recommended the applicator get "a real diagnosis from a veterinarian" — through blood or urine samples, or through brain samples and stomach contents if the dog is dead.

"Communicate with a veterinarian, whenever possible," he added. "Volunteer to call the vet with information on what was in the spray and, especially, the concentration. Most veterinarian colleges have toxicologists on staff who are available for consultations."

In Blodgett's audience at the New England Turfgrass Conference here, half the people had been accused of poisoning pets, yet none thought the animal was poisoned. "Some of the problems occur because of the innate habits of the animals," Blodgett said. "Cats lick themselves, so anything that gets sprayed on them is going to end up in their stomachs. Once it's in their stomach, it gets absorbed into their body a lot faster than if it were just going through their skin.

"Waterfowl consume grass as a large percentage of their diet,

Continued on next page





Pesticide truth & fiction

Continued from previous page so an insecticide sprayed on a lawn will be ingested in a larger amount by them than dogs or cats.

"Dogs' indiscriminate appetites get them into trouble."

Listing the SLUD symptoms, Blodgett said certain pesticides can also cause seizures, respiratory distress, muscle tremors and pinpoint pupils from contact.

"We need those clinical signs to believe an insecticide was involved [in a sickness]," he said. "But we also need a pretty quick onset time — oral ingestion within a couple of hours, internal ingestion within 24 hours or so." Insecticide problems are rare in cats and dogs, but are observed in waterfowl because of their diet, Blodgett said.

Spraying for sod webworms can cause a problem with songbirds, which can eat granules or even the sod webworms as they come out of the ground to die, he said.

"We have some problems with cats and Dursban and Lorsban (chlorpyrifos)," Blodgett said. "We don't get SLUD signs... You get a sick cat that doesn't want to move around or eat. It has a delayed onset of three to seven days after application."

He said Diazinon is behind most calls he gets concerning waterfowl, so it's been taken off golf courses. "It only takes two granules to kill a songbird," he added. "So 5-percent Diazinon is the highest concentration that can be safely used on lawns if you have waterfowl in the area, or birds of most any type. Two pounds per acre can kill birds."

Ficam and Dursban also are implicated with waterfowl cases, he said.

Concerning 2,4-D, he said high doses cause paralysis in dogs, while lower, but still toxic, amounts can cause vomiting and diarrhea.

The lethal dose of 50 milligrams per pound of body weight categorizes 2,4-D as toxic, but the application rate of one pound per acre only produces a concentration in grass of 150 parts per million.

"That is the same as 150 milligrams for every two pounds of grass," Blodgett said, "and since a dog will, at most, eat only one cup full, that is way less than will poison him."

He said the old fear that 2,4-D is a cancer concern for dogs has been disproved.

Citing fish being highly susceptible to most pesticides organophosphates, carbamates and even parathrides, Blodgett said, "Some of the herbicides are pretty toxic to fish, particularly Prowl or Pendimethalin."

He added that fish are also susceptible to fertilizers and the ammonia in fertilizer, and noted that urea breaks down into ammonia.

Super: Nemacur not 'misapplied'

HOLLYWOOD, Fla. — The Nemacur "misapplication," which lead to Florida officials drastically reducing the use of the remedy for nematode, was not a misapplication at all, according to William Peace.

Peace, superintendent at The Club at Emerald Hills here who was assistant superintendent at the time of the incident in 1994, said the application was done by the book.

Responding to an article in the GCN March edition, Peace said: "We had an outside contractor come in to put out the Nemacur. Everything was done by the label. There was nothing on the radar indicating rain, and no prediction of rain."

But, 3 inches of rain fell during the night and some of the Nemacur was washed into the abutting Intercoastal Waterway, causing a major fish kill.

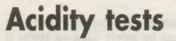
Peace said that after the state's investigation, the club was never fined and it split the cleanup cost with the contractor.

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Continued from page 15 such as phosphorus in particular are there but unavailable.

"Simply by 'liming' a low-pH soil, phosphorus becomes available and you see benefits in terms of rooting."

Hummel added that microbial activity is also increased simply by adding lime. "When you have a pH of 5.2," he said, "microbiological activity is slow and you get a little thatch. Simply liming it, and bringing the pH up into the mid-6s, you increase the microbiological activity and, as a result, you are able to keep up with the organic accumulation so you get thatch decomposition. It demonstrates pretty clearly the importance of thatch on water movement into the soil."



Hummel suggested golf course and lawn-care managers purchase their own soil pH meters.

"We found that the inexpensive (\$50 or so) meters are actually pretty accurate," he said, recommending that the meter should have automatic temperature collection and a reference electrode. A kit to calibrate the meter should also be bought, he said.

Determining pH is simple, Hummel said. "Put a soil sample in a cup, add water, let it sit a half hour and take the reading."

- He listed liming guidelines:
- Apply in the fall or spring.

• Coordinate the application with core cultivation if possible "because lime neutralizes acidity where it is at. It does not move down into the soil. So anything you can do to get it down deeper, the better off you will be."

• Use a maximum of 50 pounds per 1,000 square feet on estab-

lished turf.

• If you have high pH soils, add elemental sulfur applications to lower the pH to slightly acidic.

While nitrogen is so dynamic in the soil that it is rarely tested for, Hummel did recommend "management factors" for phosphorus and potassium.

Phosphorus, he said, "is essential in establishment. And if you are in newly established field, a soil test is valuable to determine phosphorus levels.

"Established turf is unaffected by additional phosphorus because it has a very fibrous root system and obtains whatever phosphorus is there. Phosphorus is very immobile in soils. Its availability is very closely tied to pH."

Potassium content in turf, he said, is about half that of nitrogen.

Saying that secondary nutrients — calcium and magnesium — are important, Hummel added, "But in most native soils we rarely run into deficiencies."

Referring to the Cation Exchange Capacity (CEC), which defines the soil's ability to hold nutrients, Hummel said: "Sand and silt have little CEC. Most CEC in a soil is in clay or organic matter. So, add organic matter to a soil and it improves CEC."

Soil reports also divulge "percent base saturation," the ratio of basic cations in the soil — calcium, magnesium and potassium.

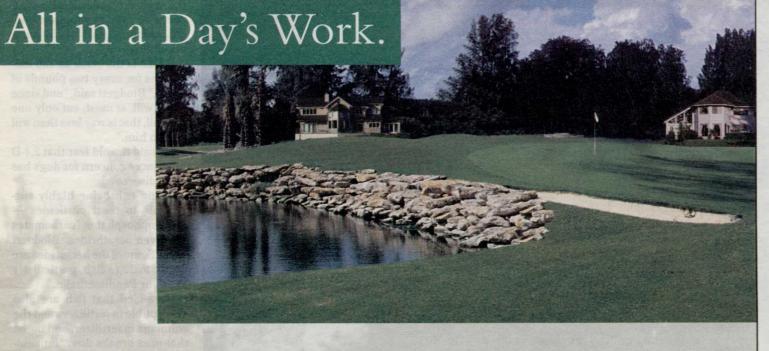
The recommended percentages of basic cations in soil, he said, are: potassium, 2-7 percent; calcium, 65-85 percent; magnesium, 10-20 percent; and hydrogen, 0-5 percent, when present.

He listed as calcium sources: calcidic limestone, 32 percent; dolomite limestone 22 percent; gypsum 19-23 percent; superphosphal fertilizers 12-21 percent; and natural organic fertilizers, like bone meal and some poultry manure products.

He recommended magnesium oxide as the best source for magnesium. "It's 33 percent magnesium and is a granular form that is easy to apply," he said, adding that other sources are dolomite lime, 12 percent; potassium magnesium sulfate, 11 percent; and magnesium sulfate, 9 percent.

"A soil test is only as good as you send in," Hummel said. "First, identify the different soil and turf areas. Then, collect a representative sample from each area. Use 10 to 20 subsamples using the top 2 inches of soil, excluding thatch. The depth of the sample should reflect the depth of rooting."

"Soil testing, though a widely used tool, can be misused or better used," he said, asking people to maximize their soil test programs by deciding on a reputable lab and staying with it; keeping accurate records; sampling to the same depth each time; and sampling at the same time of year.

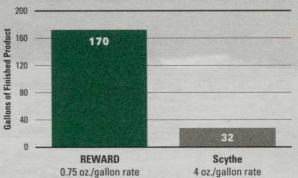


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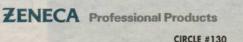


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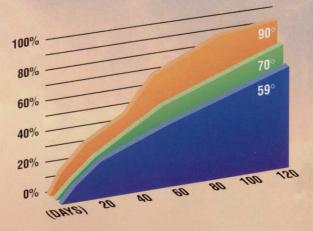
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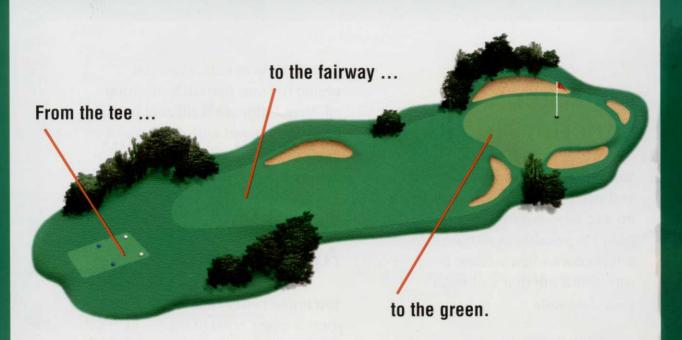
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Continued from page 15

degrees, depending on location, from the longest day to the shortest. And its angles change over the course of a day and the year. "So, when we ask which trees should be removed, the answer is different for different times of the year," he said. "If you do a sunlight assessment on just one day of the year, you will make a serious mistake, cutting the wrong trees entirely, or not cutting enough trees - usually the latter.

Using Arbor Com's technology solves the quandary, Oatis said. Setting up a sunlight location device on the green and connecting it to a laptop computer, Arbor Com can provide the exact location of the sun at any hour on any day of the year.

"You map the green and trees and run a shade-assessment program which shows how much light different areas of the green get ...,' he said. "It can rate which individual trees have the biggest impact on shade. The program also calculates the amount of light you will gain after doing the tree work. It identifies trees, or even branches which are causing problems and quantifies how much you'll gain by doing the work."

He said Thornhill (Ontario) Country Club superintendent Keith Bartlett, who has used the program very successfully, claimed this technology "saves as many trees as it eliminates because it eliminates unnecessary removals.'

After completing this program, superintendents could use the digital imaging program to sell membership on a renovation project. This technology creates a visual representation of proposed work. The computer operator can change digitized images to show whatever changes they propose.

"There are as many possibilities as you can think of for this technology," Oatis said. "You can add or remove trees or features, mounding, bunkering, landscaping around the clubhouse. Your only limit is your imagination."

Using this technology requires a "pretty fast computer with mid-sized memory, a simple software program like MGI Photo Survey; and you have to get digital images," he said, suggesting a digital camera, or having photographs or slides scanned. Digitized photos cost \$1.50 apiece, and scanners sell for as little as \$300, Oatis said.

Meanwhile, Oatis also recommended that superintendents investigate using:

 irrigation coverage analysis "an excellent technology that is not being used enough"; • seed purity testing; and

· pest forecasting devices, "which will become more valu-

GOLF COURSE NEWS

able as you get more forecasting on your golf courses... The cost is not prohibitive and if it helps you eliminate one pesticide application a year it will pay for itself very quickly."

Irrigation coverage analysis is important because "if you don't have sprinkler heads that will apply water evenly, the best control system in the world is not worth a dime," Oatis said.

Saying that some of the sprinklers on the market today do not



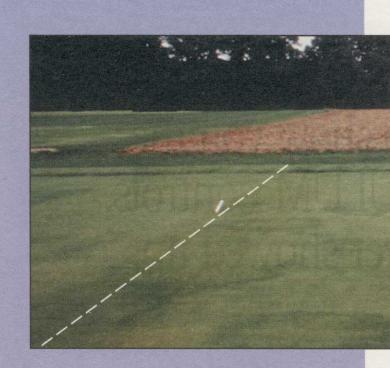
apply water accurately, he encouraged superintendents to use the SPACE (Sprinkler Profile and Coverage Evaluation) software program developed by the University of Southern California. SPACE previews how a specific head, nozzle and spacing combination will work, both through a picture and numerically.

"You can use it in a couple of ways," Oatis said. "First, it virtually guarantees that the system you're putting in will provide

good coverage. And spending a couple hundred dollars to ensure that the \$500,000 irrigation system will work, is cheap insurance.

"Second, if you have an existing system, it is a great tool for troubleshooting. In the past, when you saw a coverage problem the only way to treat a dry spot was handsyringing, or to go through a period of trial and error with different heads, nozzles or pressures to correct the problem. With this program, you can do it very effectively in the laboratory."

Testing seed purity, Oatis said, is another cost-saving investment. Spending \$200 for a laboratory's test seed in 50-gram samples, as opposed to 2-1/2-gram samples, can prevent many problems with weeds, he said. He cited a study in which 90 seed samples were tested at the 2-1/2-gram rate and 94 percent were shown as clean. Yet a 50-gram sample showed that 45 percent of the samples contained poa annua and poa trivialis.



PRE-TREATMENT:

TWO WEEKS LATER:

Untreated area (left) shows severe signs of stress due to water repellency. Area on right (treated) exhibits recovery and shows good turf quality.

Both areas exhibit the presence of Fairy Ring. The area on the right received 2 treatments of AQUEDUCT at 8 oz./1000 sq. ft. Treatments were applied one week apart.

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The Boss of the Moss — A group solution

working information was D. Frank Dobie, general manager and superintendent at The Sharon Golf Club here. Dobie wrote an article in September 1996 in *Northern Ohio Turfgrass News* about using a combination of Subdue 2E, wetting agent and spreader sticker, and the database was formed soon thereaf-

By TERRY BUCHEN

HARON CENTER, Ohio -

lems are not always resolved by

universities. A great example of networking information has oc-

curred from superintendents,

U.S. Golf Association (USGA)

agronomists and university sci-

entists nationwide who got to-

Chairing the database net-

gether to beat moss.

Research and subsequent

answers to turfgrass prob-

ter when many superintendents expressed interested in doing further experimentation.

"The most effective method and material in terms of moss kill and safety to *Poa annua* and bentgrass was Dawn dish-washing detergent," said Dobie. Four ounces of Ultra Dawn were mixed in 1 gallon of water. The solution was spot-sprayed with a backpack or hand sprayer, thoroughly soaking each spot of moss. The best results were achieved when air temperatures were between 55 and 80 degrees on days with full sunlight.

The moss turned an orangebrown within 24 hours, with no injury to the surrounding turf,

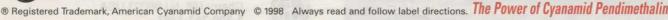
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PENDULUM				•		•		
Barricade ^a		0	0	0		0		
Dimension ^b		0		0		0	•	0
Team ^c	CABUC	0	0	0	0	0	NR	NR
Ronstar ^d	0		NR	0	0	NR	NR	NR
Surflan ^c				0		0		
Level of cont	rol OM	edium 🔺 I	Nedium-I	High 🖪	High	NR Not	registered	1

CYANAMID



Rohm and Haas Co.



Dobie reported. "We know

that moss

starts from

ON THE GREEN

spores. So, it is important to attack the moss plant before the moss flowers in order to interrupt this part of the life cycle," Dobie said. "We believe the Dawn dehydrates the moss plant, resulting in its death."

"We do not know how long the spores will continue to germinate, so clean-up treatments may be necessary for several years," he added. "We also do not know what conditions, cultural practices and discontinued pesticides may have allowed moss to become a problem in recent years. These are questions that could be answered by university testing."

Michael Hambach, superintendent at Stoneleigh Golf & Country Club in Winchester, Va., suggested using Dawn to Stanley Zontek, director of the USGA Green Section's Mid-Atlantic Region. Keith Happ, USGA agronomist who shares an office with Zontek, further researched the chemistry of Dawn and found that it contains cryptocide, which controls spores. That is most likely the reason for the formula for success. Cryptocide desiccates the moss and also kills the spores, which keeps the moss from reoccurring, Dobie said.

"Eighteen superintendents from eight states participated, and we discovered many interesting things as a group," he said. "Moss occurred under a wide variety of conditions. It did not matter if the greens were USGAspec or soil greens. The grass types varied from Poa annua to Penncross, Pennlinks, South German, Washington, A4 and G2. The very dense turf of the G2 was not a deterrent. Heights of cut were from 1/8 to 5/32 inch. Thatch thicknesses were from 1/16 to 3/4 inch. pH's ranged from 6.0 to 8.0. Most greens had good drainage. But if the thatch was kept moist, moss seemed to be more prevalent. All had moss in full sun."

He added that annual nitrogen feedings ranged from 2 pounds to 7 pounds per thousand square feet. Years that moss was first seen were from 1985 to 1996. Years that greens were constructed varied from 1919 to 1993. Sources of top dressing were from eight suppliers. Some top dressing had peat and some was straight sand, he said.

Several superintendents reported that mercury-based fungicides had no effect on the moss or the spores. Most consider treatments with iron sulfate and/or ammonium sulfate to be ineffective. DeMoss killed moss but was too damaging to the surrounding turf, Dobie said. If only one green **Continued on next page**



Cal Poly Pomona plans 'living lab' course

Continued from page 15

conceptual development plan. which was approved by the Cal Poly Pomona Campus Planning Committee. The plan deals with the various aspects of the project, including market feasibility, financial analysis, environmental resource analysis, design, alternatives, cost estimates and implementation strategy.

The facility will encompass a 340-acre parcel that sits on a hill offering views of the valley and surrounding mountains. Two hundred acres are impacted by the landfill and the remaining acreage was severely affected by grazing and agricultural use. The original concept was to build a nine-hole course over the closed landfill. New plans are to blend 18 holes through the entire site, offering the opportunity to revegitate the property with natural plant materials and encourage the return of wildlife to the area.

The landfill itself is due for closure in July 1999. The Sanitary Districts will be responsible for capping the landfill with 3 feet of clay and monitoring the site for leachate and methane releases for the next 30 years in accordance with EPA regulations. The landfill already produced an ample supply of methane gas that is collected and converted into electricity. All of the landfill's energy needs are generated on site and the excess power is sold to the SoCal Edison power grid.

The operation of a selfsustaining site such as this is a very positive approach to dealing with waste," Barnes said. "The methane that will be generated by the landfill, even after closure, will be collected and used in an even more efficient manner for the operation of the golf course and its facilities.

Golf course architect Cal Olsen will assist in the course design. One of Olsen's recent projects, Coyote Hills Golf Course, reclaimed an oil-production site operated by Unical Petroleum. The hope is to begin

Beating moss

Continued from previous page had moss, it was spread to other greens within a few years, probably by mowing equipment.

All superintendents considered moss a serious problem. All who used the Dawn treatment in 1997 considered it the best method of control.

"We will continue to correspond with the 'Moss Men' in search of some more answers, Dobie said. GOLF COURSE NEWS

construction in 1999, with nine holes and clubhouse ready in the spring of 2000.

Students from the various schools at the university will be directly involved in construction, revegetation and operation of the course.

For students in biological sciences, it is a chance to be directly involved with recreation of open space and wildlife habitat while managing a closed landfill.

The need for a golf course seems obvious in the growing area of Pomona. The two courses in the area average 100,000 rounds and the analysis estimates that the Cal Poly

course could generate 70,000 to 85,000 rounds annually. Barnes is beginning the

difficult task of obtaining approvals . Public hearings have begun and concerns about golf construction are being heard. The debate becomes more a topic about which the public is not well educated.

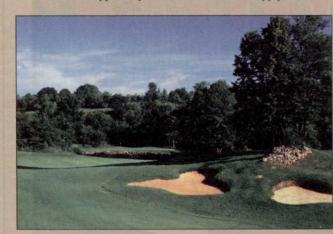
"There is the feeling from some that golf simply is bad and that the site should be turned into open space," Barnes said. "We are willing to discuss specific concerns about the project, but we hope we can not be bogged down dealing with broad generalizations that have been addressed many times before.

"Our goal is to create a quality golf course that will benefit the university as well as the community and the environment."

ovidence is Still Number' Leading superintendents rate Providence the best creeping bentgrass for the northern U.S. and Canada. "We chose Providence for its outstanding perfor-



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mance all over the U.S. and particularly in the Northeast. We established greens in the hot, dry summer of '95 and they have performed beautifully. Our new practice putting green was open for play eight weeks after seeding. My membership is very pleased with the quality of our putting surfaces.'

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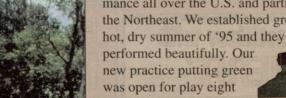
"This is my fifth grow in and my first with pure Providence greens. It's a very fine, upright turf. Slightly slower to establish because of our cold and rainy fall, but now that we are maturing it's showing its true colors to be a great putting surface."



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S UNRIVER, Ore. — The Little Deschutes River has undergone a restoration program at Crosswater Golf Course to stabilize its banks and create fish habitats and spawning areas. Crosswater's interest is to protect nature's valuable assets, while at the same time, enhance their natural habitats.

Working closely with the Oregon Department of Fish and Wildlife and Inter-Fluve, a fisheries, hydrology and resource management enhancement company, Crosswater superintendent Jim Ramey oversaw the restoration.

"We are very serious about the respect-

Crosswater GC restores river

ful treatment of the rivers for which Crosswater is named," said Ramey. "This program is good for the river and we are exercising the utmost care and caution during this restoration process."

Following a thorough evaluation of the Little Deschutes River banks, flow patterns and erosion levels, different treatments were designed for seven sections of the river based on need. Restoration involved the banks or the creation of habitat areas for wildlife. Banks were stabilized by adding rock at the toe, reconstructing the slope, laying a biodegradable fabric and then sod. The organic, geotextile fabric holds the vegetation in place until roots are re-established and protects vegetation from river flow fluctuations. Willow stakes now anchor the fabric layer in place until mature willows and native plant roots provide permanent soil stabilization.

Two types of habitat restoration were also employed at designated parts of the river. Riffles, using various sized rocks, were created where solid clay soil beds existed, thereby establishing protected spawning areas for fish. Along other sections of the Little Deschutes, trees with large trunks were be placed at angles across the flow to create fish habitat and feeding environments within their branches. This process will not block the natural river flow.

Arlyn Davis Construction Co. of Lake Oswego did the restoration work, with oversight from Ramey and Ted Wise of the Oregon Department of Fish and Wildlife and the Army Corps of Engineers.

La Cantera GC Texas' 3rd course to be certified

SAN ANTONIO — La Cantera Golf Club has become the third golf course in Texas — and the 123rd in the world — to earn designation as a Certified Audubon Cooperative Sanctuary by the Audubon Cooperative Sanctuary System (ACSS).

The golf club in 1994 joined the ACSS, the educational division of Audubon International which provides golf courses with information and guidance that help them preserve and enhance wildlife habitat and protect natural resources.

Bill Bedford, La Cantera's director of agronomy and golf course superintendent, said the certification had long been a goal for the club, which he described as "a great environment for wildlife and golfers to coexist."

Cindy Bradley, environmental educator for ACSS, said, "La Cantera Golf Club has shown a strong commitment to its environmental program. They are to be commended for their efforts to provide a sanctuary for wildlife on the golf course property.

La Cantera's efforts are rewarded with the presence of a variety of native animals including black squirrel, coyote, white tail deer, dove, quail, chaparral (roadrunners), hummingbirds and a flock of "about 30 turkeys with chicks," Bedford said.

To keep the environment friendly for wildlife, La Cantera uses organic fertilizers whenever possible. In addition, the La Cantera agronomy staff grows microbes that feed on fungi in order to eliminate fungicide use.

As part of its water conservation program, La Cantera utses a computerized irrigation system with an on-site weather station. The equipment allows the staff to calculate the plants' evapotranspiration rate, so they know exactly how much moisture needs to be replenished.

Still another component in La Cantera's water-efficiency program is use of xeriscape plants like verbena, lantana, butterfly bush, salvia and coreopis, which are attractive to birds and butterflies and less demanding of water resources.

In certain areas, Bedford said, his staff planted maize for turkeys and deer. Bird houses made for native bluebirds by students at Corbett Junior High School in Schertz also are placed in strategic locations.

Bedford, who is developing plans to work with educators on creating butterfly gar-

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GOLF AND THE ENVIRONMENT

Policy-making a politican maneuver

Continued from page 15

brief look at who really makes policies and how they affect us. Although in this space we can't examine the detailed process of forming governmental policy, we can identify the basic ingredients and major actors in the policy-forming process

Basically, policies are formed by people for people. There is really no such thing as "environmental policy." There is only "people policy."

The effect of any specific environmental policy is important mainly because of its effect on people. Policy decisions are rarely neutral. Usually somebody gains and somebody loses. In some cases everyone might gain, or everyone might lose as the result of a particular policy decision.

"Politics" is the process of forming governmental policy. All the activities we commonly associate with the term "politics" are carried on with the prime goal of influencing governmental policy. Campaigns and elections, for example, are mainly preliminaries to pick the players for the "policy game." "Governmental policy" is an enforceable decision or set of decisions that determines who gets what, when and how, and who pays for it.

The "what" is not restricted to material things, like a new sewage treatment plant, but may include concepts like freedom or justice or a "healthy" environment.

"Who" may be a single person, group, state, section of the country, or "the general public.

Most policy proposals are created for the "good of the public," or to "protect the public interest,." But such proposals will ordinarily benefit one or a few groups more that the rest, and it will be these groups who are most active in supporting the proposal. These groups will sometimes attempt to concentrate public attention on the benefits and tend to ignore the overall "costs."

In society, forming policy is an on-going process in which no decision is truly final. However, the impact of environmental policy decisions may be greater than policy decisions in other areas. In some cases, the cost of reversing or changing a decision may be unacceptably high. We are not likely to destroy a multimillion-dollar project because of negative environmental repercussions identified after the construction.

And, in fact, some environmental policy decisions may be ecologically irreversible. We cannot take back the DDT that has been deposited in the oceans. We cannot bring back a species that has become extinct

In the United States, we solve most problems and resolve most conflicts without any action from the government. It is only when such resolutions become unsatisfactory to a politically aware and effective public that they become a matter of government agenda. Believe me, the public is carefully watching the golf industry.

Golfers, superintendents, course architects, developers, and anyone else who believes that properly sited, appropriately designed and environmentally managed golf courses represent a form of sustainable development must become involved in environmental stewardship to demonstrate their commitment. The future of the game of golf and the environment depends on setting high environmental standards for golf courses.

Ultimately, the public, through its governmental voice, may have a substantial impact on forming environmental policies for golf courses. On the other hand, forming policies for golf courses - setting standards for designing, building and maintaining them — can effectively be set by those who love the game of golf, but only if they take the initiative to establish and into action policies that are beneficial to both golf and the environment.

Aspetuck certified

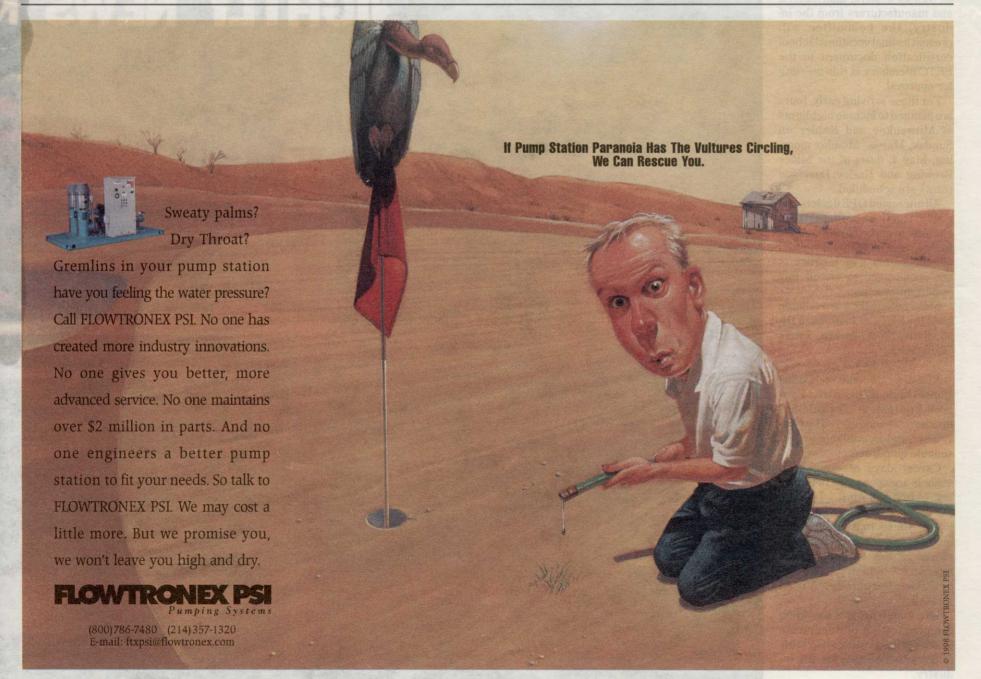
Continued from page 15 long-range projects are enhancing the environment as well as the wildlife in the area.

Aspetuck Valley Country Club has shown a strong commitment to its environmental program," said Joellen Zeh, ACSS staff ecologist. "To reach certification, a course must demonstrate that they are maintaining a high degree of environmental quality in a number of areas."

Aspetuck Valley fulfilled requirements in environmental planning, wildlife and habitat management, outreach and education, integrated pest management, water conservation and water-quality management.

La Cantera certified Continued from previous page

dens at area elementary schools, said the golf club's education and outreach program gives him and his assistants an opportunity to spend time with children of all ages. He wants them to see both kinds of "birdies" on the golf course both the kind that signal a great shot and the ones that rely on the land for their very existence.



MECHANICS CORNER

EETC schedules conference speakers

MENOMONEE FALLS, Wis. — The second annual meeting of the Equipment and Engine Training Council will be held Monday, May 4, at 1 p.m. at the Briggs & Stratton Distribution Center here. The annual OPE Technician Certification Test Committee meeting will be held on Tuesday, May 5, at the same location.

Speakers include John Rainone, vice president of service for MTD, and Curt Larson, vice president of distribution, sales and service for Briggs & Stratton. They will share their views on the state of technician competency and service in theindustry, as well as vocational school programs. Other prominent industry and vocational education leaders are expected to be announced.

The task force committee created at last year's EETC meeting in Dallas, has completed its work on a plan for OPE program certification for vocational schools. Composed of vocational school administrators and instructors, as well as dealers, distributors, and manufacturers from the industry, the committee will present its final vocational school certification document to the EETC members at this meeting for approval.

For those arriving early, tours are planned to include highlights of Milwaukee and Kohler on Sunday, May 3. Monday morning, May 4, tours of the Miller Brewing and Harley Davidson plants are scheduled.

All interested OPE dealers and distributors, as well as OEM equipment and engine manufacturers, and vocational school administrators and instructors are encouraged to attend this important meeting.

More information is available from the EETC at 1946 South IH-35, Suite 100-A, Austin, Texas 78704-3693.

...

EETC's "Become a Professional Outdoor/Industrial Powered-Equipment Technician" brochure was completed last November and is available in reasonable quantities.

Career days at most high schools are sponsored in February, March and April.

"We need industry assistance to get these to students who might consider a career as a technician in the outdoor power equipment industry," said Executive Directory Virgil Russell.

The major project has been the preparation of documents to accredit Vocational Schools to train technicians for the industry.

26 April 1998



Small Engine School a 'Texas Model'

HOUSTON—Briggs & Stratton has sponsored a Small Engine School for WSD Small Engine Repair teachers. Eleven WSD Small Engine Repair teachers attended the three-day school at Engine Warehouse here.

Bruce Radcliff, national training director for Briggs & Stratton, was assisted in the

training by Andy Caldwell of Engine Warehouse and Albert Herron, service manager for Texas Outdoor Power Equipment in Georgetown.

Bruce Radcliff of Briggs & Stratton and Virgil Russell, executive director of the Equipment & Engine Training Council (EETC), are looking at WSD as the "Texas model" for meeting the demand for trained and certified technicians in the outdoor power equipment industry. It has three components:

• Teachers are trained to industry standards

• Students are trained to in-

dustry standards • Students receive industry-endorsed credentials/certificates. Radcliff estimates that nationwide, there is an immediate need for more than 30,000 trained technicians. As technology advances, and with the new EPA regulations, the need will be even greater for people who are adequately trained.

Briggs & Stratton and other manufacturers are looking to Continued on next page

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HIGHTLY NEWS N



SUNY Delhi session attracts Northeastern mechanics

DELHI, N.Y. - A group of 30 turf mechanics from across the Northeast recently enhanced their skills through a special seminar series offered at the State University of new York College of Technology at Delhi.

The four-day seminar, "Turf Equipment Mechanics Advanced Training School," was the latest in a series of hands-on training programs offered at the college.

It was sponsored by Delhi College, in cooperation with the Golf Course Mechanics Association and the New York State Turfgrass Association.

"These courses are very much

becoming a victim of air pollution.

in demand," said Steven Tait, assistant professor of turf equipment management.

"They fill an important need for specialized training in the industry."

Instructors focused on two areas: welding and troubleshooting electrical systems. Gerald Scheck, assistant pro-

the 90s.

fessor at Delhi, led sessions in specialized welding techniques for light-gauge metal parts commonly found on turf equipment.

Paul Zellner, area service manager of the Jacobsen Division of Textron, taught troubleshooting turf equipment electrical systems.

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of facts seems to have been

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Tests were conducted on equipment donated by S.V. Moffet Equipment Inc. of West Henrietta, N.Y.

"Participants were very enthusiastic about what they learned," continued Professor Tait.

"Normally when they're working in the field and something breaks, they'll just fix it the best they know how. Now we have given them the proper solutions."

Engine school

Continued from previous page WSD to provide the training and help meet the demand for technicians in Texas. Radcliff said that other prison systems have shown an interest in the Texas model, "but we want to make sure we know how to make it work in Texas before attempting to duplicate it in other states."

Besides providing the training to the WSD teachers at no cost, Briggs & Stratton has donated new engines and equipment to the Small Engine Repair classes. Radcliff said he hopes the program proves successful in terms of training students in industry standards to meet the needs of employers. He said he hopes the partnership between Briggs & Stratton will be long-term and beneficial to all.

PLCAA tabs Delaney

The board of the Professional Lawn Care Association of America (PLCAA) has hired Acting Executive Vice President and Government Affairs Director Tom Delaney to fill the position of executive vice president.

Since former Executive Vice President Ann McClure left the position a year ago, Delaney has managed the association in an acting capacity. He has testified before the U.S. Senate and House Subcommittee lawn care and FIFRA hearings.

He works closely with government and industry leaders and organizations, and the media on a range of issues affecting the industry and our businesses. For the nine years that he has been with the association, he has helped earn PLCAA the reputation as the "voice of the industry," the board said.

"I must add that Tom does not act alone," said PLCAA President Larry Messina. "We have a strong staff, dedicated volunteer leaders - it is a team effort Karen Weber, our communications director, works closely with Tom and has been assisting him in his management role this past year and she will continue to do so.

The board also agreed to retain Bob Andrews, owner of The Greenskeeper in Carmel, Ind., as an independent consultant to assist with member services. he is a past president of PLCAA.

replaced by the pursuit of ratings. cide industry needs a media watchdog that not only watches. But that also takes action. Industry for a Sound Environment. manufacturers, formulators and distributors from all areas of the specialty pesticide business. environmental stewardship, RISE makes sure the media doesn't report misinformation as fact. meetings with media decision-makers. And respond to negative articles or broadcasts that are incorrect. We've been very successful so far. Not surprising considering what our most powerful weapon is. a lot more work to do. But rest assured, RISE is up to the task. we eliminate air pollution, the pesticide industry can breathe a lot easier. 1156 15th St., N.W., Suite 400, Washington, D.C. 20005. ©1995 RISE RISB-0047-1



Superintendent's safety and compliance checklist

ILLIAMSBURG, Va. -The ever-expanding job description for golf course superintendents now includes employee safety and compliance in the workplace.

So detailed and technical is this task that safety committees are meeting regularly -

making this effort more efficient and lowering insurance premiums.

The following checklist features some of the more salient points accomplished in day-today operations all types of courses:

SAFETY & COMPLIANCE ISSUES Right-to-know stations/emSee related story, p. 23

ployees sign-off that they have received proper training

• MSDA sheets-pesticides-fertilizers-all other chemicals/compounds. register all pesticide with local fire department

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 - Fertilizer usage records
 - Burn permits
 - Used oil/fluids permit

· Fuel storage/spill containment/fire extinguishers/emergency shut-off switch/safety signs bilingual/properly vented

 Pesticide storage — 24hour/day exhaust fan-spill containment-no floor drain-safety shelving-explosion proof lightsprinkler system-heated/cooledrinceaid tanks to reuse waterfire extinguisher

• Fertilizer storage - 24hour/day exhaust fan-spill containment-no floor drain-safety shelving-explosion proof lightsprinkler system-heated/cooledfire extinguisher

· Safety shower/eye-wash station

· Wash rack-rinse aid to reuse water-oil separator

· Irrigation pumphouse/firstaid kit-fire extinguisher/electrical/bilingual piping proper signage/heated/cooled/ventilated

• Fire extinguishers - inspected monthly with signature on inspection tag

- · First-aid kits
- Eve-wash bottles
- Disposable ear plugs
- Portable oxygen bottles
- Goggles
- Glasses
- Face shields
- Paint masks
- Head protection

· Spray technicians/respira-

tors, with spare cartridges/rubber gloves/rubber boots/pesticide apron/spray suits/goggles/ safety glasses

- Safety bingo
- Bilingual safety signs

Safety floor marking

• Safety electrical & piping sign markings bilingual

· Sign signifying "days without an accident" bilingual

 Handicap parking spaces & signs

• Insurance company safety audit

 Worker's compensation safety compliance voluntary inspection; and

• Employee suggestion box. GOLF COURSE NEWS



Safety Bingo game can save club big money

By TERRY BUCHEN

AGUNA NIGUEL, Calif. - One of ✓ the largest expense items in a golf course operation is worker's-compensation insurance premiums. El Niguel Country Club's worker's-compensation insurance premiums were draining \$120,000 from the budget each year and course officials felt they had to reduce the number of accidents, provide a safer work environment for their employees and save the course money in the process. More intense safety programs were carried out in each department, with good results, but course officials felt a better job still could be done. Their answer? A unique and fun way for employees to really think and practice safety in the workplace.

"We started a Safety Bingo program many years ago," said General Manager Mike Mooney. "Employees from all departments play, drawing five numbers at 2:30 p.m. each Friday. The club puts \$50 in the Safety Bingo pot and adds \$5 per week until one of our employees wins."

He said there is usually never more than \$70 to \$100 in the pot before someone wins.

Mooney budgets \$1,200 for Safety Bingo every year. Not a bad investment,

he said, since in the first year alone we saved the club \$49,000 in worker'scompensation insurance premiums.

> "Besides the cost savings to the club," he said, we really have a great

spirit with our employees, to really provide a safer workplace because no one wants to get hurt on the job, but especially now with the added incentive to win cash in our Safety Bingo contests.

He explained that if an employee gets hurt on the job where a worker's-compensation claim must be filed, the club does not have Safety Bingo for one week. A notice is posted in each department stating that if there are no further accidents or safety violations, Safety Bingo will resume the next Friday.

"We use three different colored Bingo cards that are rotated and each employee's full name, employee number and pay period is printed onto an adhesive label and attached to the current week's Bingo card," Mooney said. "Our insurance company issues an 'Experience Modification' percentage. The lower the percentage number, the safer and better the workplace is for employees, which is averaged over the past three years.'

If a golf course is in the 120percent or higher "experience mod" category, a representative from Occupational Safety and TALK Health Administration auto-

matically visits the property and performs a safety audit. El Niguel's best "experience mod" percentage has been 69 percent, "which is good," Mooney added.

"If an employee gets hurt on the job and fills out an insurance claim, they are still eligible to play the following week when Safety Bingo resumes," said Alan R. Andreasen, former superintendent at El Niguel. "There is a noticeable amount of peer pressure by the club employees as they police each other by looking for safety items that need attention, for better safety in the workplace so the Bingo game is not canceled for one week.

"This safety program has probably eliminated a few frivolous claims as employees, for example, with a pulled muscle might go home and see if it hurts tomorrow after notifying their supervisor," he added. "Any other questionable injuries were sometimes not reported because of the Bingo game, but not a large amount."



El Niguel Country Club's Safety Bingo form

Andreasen said Mooney and some of the department heads do not play Safety Bingo so the other employees would have a better chance to win the pot, sometimes even giving an employee their card so they could play two cards and have better odds of winning. Sometimes employees in some departments are also rewarded with an additional Bingo card if they did an outstanding job.

With a sign that lists how many days have passed without a time/loss accident, we further encouraged safety and for employees to think safety," Andreasen added.





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CIRCLE #117



Ice Storm of the Century cracks the back of Maine woods & fairways

By MARK LESLIE

UGUSTA, Maine - "War zone" was the operative description of Maine's landscape after "The Ice Storm of 1998." The January disaster was actually The Ice Storm of the Century, leaving golf courses as well as homeowners reeling from the damage. Never before in recorded annals had Mainers been under such an attack of nature as rain froze sometimes an inch thick on trees, causing even the thickest of them to snap like toothpicks.

It was as if an angry Paul Bunyan had taken a scythe and cut off the tops of trees in a swath across the state.

Electrical power was out for more than two weeks in some places, and in the aftermath people were left to clean up.

"I got crushed. The trees are destroyed," said superintendent Steve Hoisington of Martindale Country Club in Auburn.

"It looks like a jetliner or helicopter came down and took the top of the trees right off," said superintendent Tony Plant at Augusta Country Club.

"We had more tree damage this year than in the last 20 years combined," said owner and superintendent Joe Golden of Springbrook Golf Club in Leeds. "Off the course it looks like a war zone. The tops of all the tree are gone. They are sheared off."

In the wake of the storm, superintendents opened their checking accounts to purchase wood chippers and extra chain saws and to hire crews long before they normally would.

"We're expecting it will cost us between \$10,000 and \$15,000 just in extra labor," said Plant. "As soon as the storm hit, we hired eight guys who normally work for us in the summer, so we have a 12-man crew working on cleanup.'

Superintendent Jim Hodge at the mu-

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Ice-laden limbs and entire trees crashed to the ground on the fairways of Springbrook Golf Club in Leeds, Maine.

nicipal Val Halla Golf & Recreation in Cumberland said cleanup will cost \$20,000, but FEMA (Federal Emergency Management Agency) and the state will pay \$18,000. FEMA pays based on cubic yards of material that must be removed, so Hodge needed to do a hole-by-hole estimate of trees and limbs that had to be removed.

Golden, who hired three extra employees, estimated his storm cost at \$7,000 to \$8,000.

He and Hoisington both bought chippers, while Plant rented one, and all three had to buy extra chain saws.

The major tasks facing the golf courses remain cleaning up the many tree tops and tree limbs littering their fairways, roughs and out-of-play areas; deciding which trees to leave standing and which to cut down; removing trees and hanging branches that pose a safety threat; and determining what kind of trees to plant as replacements, if any.

There's no better way to keep

water from being a hazard.

"The worst tree disaster I've ever seen was from an ice storm we had here in 1994," said Dr. R. Jay Stipes of Virginia Tech in Blacksburg, Va., a professor and author who is dubbed The Tree Doctor of Virginia. "The big factor is trees that are safety hazards. I've worked on litigation cases where trees fell on people. And the general legal standard is, if a property owner or someone superintending trees on a property knows about trees that might be hazardous or wind-thrown, they are liable if they do not report it or take action. The superintendent or arborist needs to report the situation and the management decides whether to take it down.

"They call me Dr. Kevorkian down here for that reason."

Hoisington confirmed this concern. We have a lot of broken branches that are still up in the trees, and it is a safety factor," he said. "We'll have to hire a tree company to remove those.'

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Since play won't begin in Maine until mid-April, that concern was not as immediate as it might have been. Good thing, too, since tree companies and arborists have their hands full in residential areas right now. Plant was one of the lucky few to hire on a tree-care company early, and has been able to keep it very busy.

Of more immediate concern is determining which trees to salvage from the devastation. The more difficult decisions are trees whose trunks have been snapped off at some height.

Those trees can send up new tops, but they will be weaker branches and more susceptible to this type of storm in the future," said Jim Skorulski, an agrono-

mist and tree expert in the U.S. Golf Association Green Section's Northeastern Region. "They are narrower, thinner. You can save a tree, but perhaps you should take it down and plant another one instead.

"An arborist will give an objective opinion. But they're in high demand now.'

While pines and fir trees survived the storm relatively well, hardwoods did not. Ash seemed to get hit the hardest, along with maples, birches and poplars. Many not only lost a lot of branches but also had their trunks snapped off at 10, 20 or 30 feet high.

Many of those, Skorulski said, are probably not worth saving. "If it is deciduous, it will have a funky canopy when it's done and a lot of weak branches that come off the trunk will take over."

The larger a branch or the main trunk is when they are ruptured or fractured, the more likely rot is to develop," Stipes added. "The fungi move in and establish rot columns. Breakage is very, very bad. In fact, that kind of breakage is the worst that happens to forest trees.

'In those cases it's better to take the tree down. They will ultimately become hazardous and very likely could be windthrown trees.'

Trees with "V crotches" are less likely to survive than those with "U crotches," which have more mechanical strength to hold up weight, Stipes added.

Skorulski recommended that where crews have done "a lot of rough work," superintendents should inspect "any trees that are worth saving and check the pruning cuts to ensure they've been done correctly. It's not a flush cut but a close one. If you have an excess of stub, the tree won't be able to callous off the wound and decay fungi can get in.'

Hoisington expects cleanup to take three or four years. He anticipates that many of the trees he leaves untouched this year will fail to survive in the future.

To hasten recovery, Skorulski suggested superintendents "give them a shot of nitrogen in the early spring.

'Not a lot," he said. "Two pounds per 1,000 square feet is more than enough. Broadcast it under the trees, or root-feed it. All you want to do is make the tree vigorous this year. You want flush leaf growth and to start recovery."

He also said wound compounds - like the long-time asphalt-based paints - generally do not speed up recovery.

When deciding to replace destroyed

Continued on page 33

CIRCLE #123

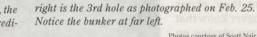
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A RIVER RUNS THROUGH IT

When 25 inches of rain fell on a 10-day period, the Santa Ynez River rose to record flows and redirected its course right

through Rancho San Marcos Golf Club's 3rd hole. Below is the 3rd hole before the El Niño-driven rains, with no river in sight. At right, a photo taken on Feb. 10 shows half the green and fairway washed away. Far





El Niño out West

Continued from page 1 jor damage.

"I cannot imagine how bad it would have been. Some comments during the TV coverage of the AT&T said the wall was making the waves break more violently. But the reality was that the old seawall might have been gone."

Some erosion has also taken place off the cliffs on Nos. 9 and 10. "It's not the big concern right now," Michaud said, "but all the sand is gone from Carmel Beach."

The damage at Pebble Beach was not only right next to the ocean. "We lost cart-path access from the 5th tee to the 5th green and access from the 15th tee to the 15th green."

By "lost" Michaud meant the entire area was ravaged by storm runoff from the inland. The roads, water, sewer and other utilities were all severely damaged and when the water lines broke the damage was dramatic, leaving several areas of 17 Mile Drive impassable.

"We've recorded over 35 inches of rain this season, but nearly 20 of that came during a one-week period," Michaud said. "We're lucky no more damage was done."

Perhaps the most hard-hit facility in the Monterey area was Rancho Canada Golf Course, where Carmel River flooded and deposited large amounts of silt on more than 15 acres and 15 greens at the lower end of the property. Clean-up efforts will continue on that property for some time amid hopes that the Carmel River not repeating its performance.

"We went through the flooding and the resulting silt being dumped on the golf course in 1995. This is a bit worse this time," said Bob Costa, vice president and director of golf course management for the Lombardo Group. The company owns and operates 18-hole Laguna Seca Golf Course and 36-hole Rancho Canada Golf Course.

"We welded a piece of 4- inch steel pipe

Dave Wilber is a consulting agronomist and owner of Wilber Turf and Soil Services in Rocklin, Calif. to the bottom of the blade on a D-4 dozer and basically started pushing silt across the fairway," he said. "The pipe acts as a sort of training wheel and we avoid digging up grass and damage to sprinklers. We windrow the material into the rough and then pick the piles up with a loader. We finish the cleanup with box scrapers, then we drag, drill seed and water."

The greens are top priority, Costa said, adding: "We have to hand-remove the silt and wheel it away. We squeegee and water to finish the greens, but we get as much silt off as we can before we use any water."

The Carmel River chose to make its own path and took out a large chunk of fairway on No. 12 hole of the East Course, he said.

"We lost two-thirds of the par-5 hole clear to the left rough as the river eroded the bank," Costa said. "One of our irrigation wells ended up in the middle of the river."

In 1995 a part of the course was closed 76 days, and Costa said: "We are probably looking at the same thing this time."

They opened 18 holes on March 6. Costa expected engineering near the



riverbank to restore the lost fairway, but promised, "We will continue to open as much of the golf course as possible."

One of Southern California's newest golf courses, Rancho San Marcos Golf Club, located inland from the coastal community of Santa Barbara, was heavily damaged as the waters of the Santa Ynez River rose to record flows of over 80,000 cubic feet per second.

"That's just too much force of water," said Rancho San Marcos superintendent Scott Nair. "We got 13 inches of rain on Feb. 2-3 and a total of almost 25 inches in that 10-day period."

While the storm caused heavy erosion around the course, the river cut a new path, removing more than half of the 3rd green. As Nair's crew established a temporary green and cleaned up to continue play, a second big storm struck.

"When it started to rain hard again, I knew we were in trouble," Nair said. "There was no place for the water to go."

The second system took what was left of the 3rd hole.

"I saw trees with 60-inch-diameter trunks just get swallowed up and swept away," recounted Nair. The water-soaked soils were not able to take the rain from the second storm and the highway connecting the golf course to Santa Barbara fell victim of a large rock slide. Work to reopen the road may take until early May. "There's a way around but it takes an extra 45 minutes," Nair said.

Nair plans to reroute the golf course and, he said, adding: "It looks like we are going to be just fine. Play is impacted, but amazingly enough, we have people coming to play the course now that the weather is better."

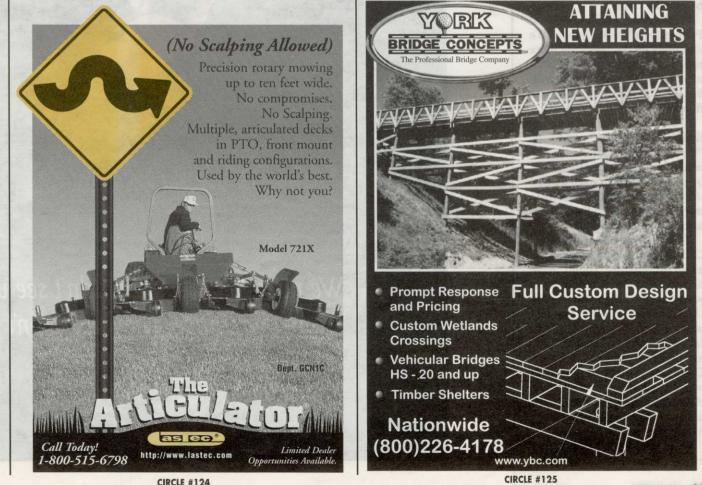
In Northern California, the San Francisco Bay area received the same punishment from the ocean. Nearly 50 feet of coastline was swallowed up by record high surf in more than a few areas.

San Francisco's Olympic Club, site of the 1998 U.S. Open, received some damage to its recently constructed cliff holes nearest the ocean, but the damage was limited to two holes. Olympic Club superintendent John Fleming said, "We are assessing the damage to those holes and making plans."

The Lake Course which will host the Open was not affected, Fleming said.

Elsewhere around the state, golf courses everywhere felt the impact of having too much rain. Many were closed for the first time ever.

"This storm caused the first time in my 11 years that I have ever had to close all 18 holes of my golf course at once," said Sam Williamson of the Ojai Valley Inn and Spa, which is located in storm-ravaged Ventura County. "We even lost a **Continued on page 32**



GOLF COURSE NEWS

West 'watered'

Continued from page 31 few trees from wind — and the

wind hardly ever blows here." While insurance companies count the losses in real estate and property in the state of California at nearly \$1 billion, it seemed obvious that economic impacts will be felt by the golf courses that have endured damage and by those that have just simply been too wet.

"The sun came out for a few days recently and we realized that not many people had been out to play golf and all of the sudden it seemed like they all came out at once," said Nair.

Ojai's Williamson has another way to look at it, saying: "Our golf revenues are down 40 percent, but the hotel stayed busy due to people using our new spa facilities. We have plenty of smiling faces here. It could have been worse."

"We really have an opportunity to work with this situation and make the golf course better," Nair said. "Our staff really pulled together. By that, I mean our entire staff: my people, the pro shop staff and everyone else. We had members of the office staff filling sandbags and the food-and-beverage people pitching in and helping to clean up and get us open after the storm.

"Everyone really gave 200 percent and I am proud of them. I cannot imagine getting all the work done just to be able to use the cart paths again if it were not for all of those people working their tails off. I saw Rancho San Marcos at its worst and its best. I'm looking forward to making the course better than it was before the rains."

"We're doing better now," said Pebble Beach's Michaud. "We definitely do not need any more rain. There is going to be a bunch of work being done in the area, but the golf course is doing just fine now."

"This sort of thing is not a good time for democracy," said Costa. "We can't really gather everyone around and start asking them their opinions and taking votes on how to get things done. We just have to work hard and keep the staff informed about our plans.

The superintendent at Rancho Canada, Tim Greenwald, and his assistant, George Young, have done a great job of getting a ton of work behind them, Costa said.

"We have found that the only way we get through this is to take the problems in small bites and help everyone stay focused," Costa said. "In a perverse sort of way it is exciting because it is a challenge in lots of problem-solving and I think that is what draws many of us to this business."

Bob Costa agrees that a team effort is needed during these

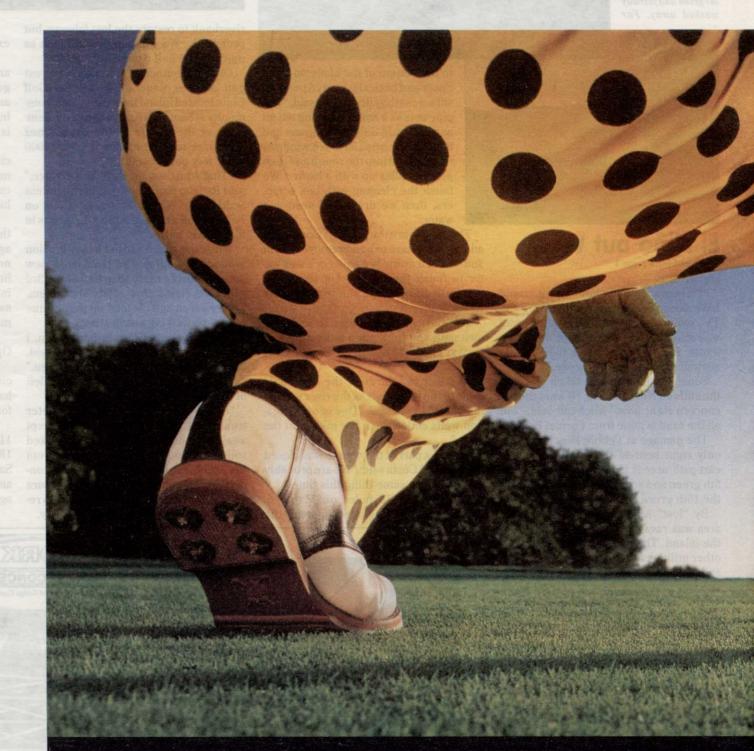
times. "We've had the pro shop staff and the cart attendants out working with everyone else. I know they get a sense of ownership when they see what it takes to get through these things," he said

Nothing would have led those in the golf business to be able to see what was coming in 1998 even the hype over the possibility of a hard winter due to the El Niño effect. However, golf courses have endured the storm and soon the normally mild springtime weather will have golfers lacing up their shoes again. Most may never know that the course they are playing on was in some stage of flooding only a few months earlier.

MAINTENANCE

Record rainfall, combined with high tides and pounding surf, left this bank unable to support trees along the 6th fairway at Pebble Beach Golf Links.





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THE EL NIÑO EFFECT



Sunless and rain-laden, Florida's courses causing stiff test for supers

By JOEL JACKSON

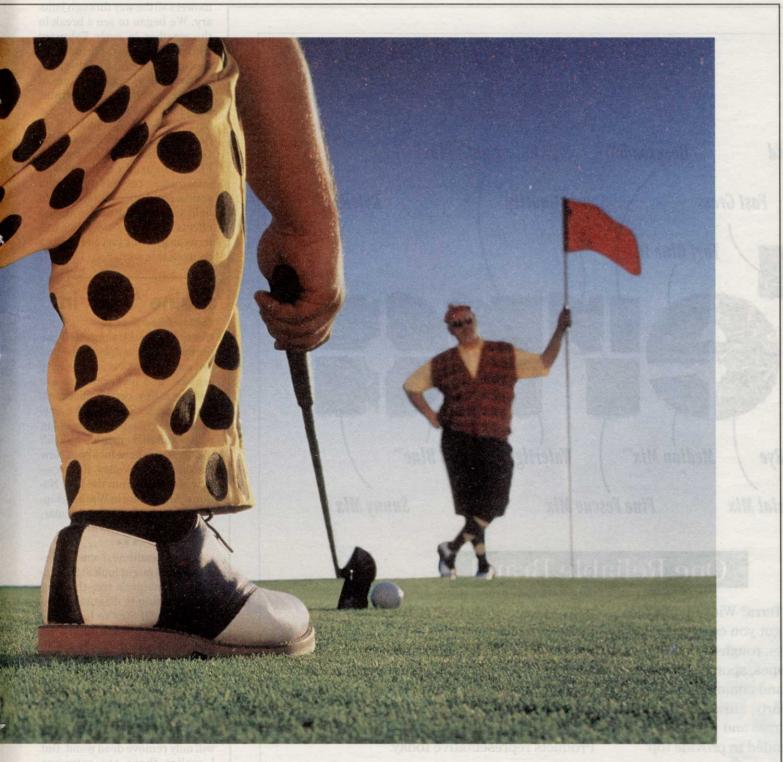
Florida's golf courses escaped El Niño's big wind, but the heavy rains are causing serious problems.

A winter storm attributed to El Niño raced across central Florida in the early morning of Feb. 22, unleashing a cluster of tornadoes that touched down in Kissimmee, Winter Garden and Sanford near the middle of the state and in Ormond Beach on the East Coast. Forty people were killed and hundreds of families left homeless as the twisters targeted several residential areas.

A survey of courses in the affected areas revealed that no golf courses were hit directly and any damage sustained was no more that a few broken limbs and power outages typical of any Florida thunderstorm. Kissimmee Bay Country Club may well have been the closest course to the destruction.

"We were very lucky," said superintendent Jim Moulton. "The tornado that did all that damage to the Ponderosa Park mobile homes touched down only three-tenths of a mile from here. The irony is that we were going be sweeping and vacuuming the course for all the fallen oak leaves, and the next day after the tornado, they were gone — sucked up by the tornado."

Kissimmee Bay was without



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The ice Storm of the Century for many, many years to come. "Five six, eight years from now, you il see misshaped forms out there," he said.

CIRCLE #126

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power for six days and managed to stay open by renting eight portable generators to operate the clubhouse facilities and charge the carts. As a result, the club will be installing a large emergency generator for future back-up.

Duane Petersen at nearby Meadow Woods Golf Course also dodged the bullet on that fateful morning.

"We were in the path, but it skipped over us," he said. "Our problem has been like everyone else's in the state: lousy growing conditions. The weather has been wetter and warmer than usual and that has led to lots of algae and fungus on the greens.

While the courses in central Florida avoided the cataclysmic disaster, they have been enduring more insidious and frustrating effects from the freakish uncharacteristic weather patterns spawned by El Niño.

Rainfall records tumbled as precipitation amounts four to seven times normal were recorded during Florida's normally drier winter months. The incessant rains and overcast days ruined attempts to establish stands of overseeded grasses and made normal turf management on unoverseeded greens a nightmare.

The soggy conditions have caused more course closings, lost revenues and marginal playing conditions than any other prime winter season in recent years.

Dan Alwyn, superintendent of Oceanside Country Club in Ormond Beach, said: "We missed the wind damage, but the heavy rainfall just added to the misery of our thinner-than-normal greens. The constant rains have kept the greens very soft and ball marks have become a major problem."

Superintendents Joe Ondo at Winter Park Pines and Pat Hennessey of Disney's Bonnet Creek Club are preparing to regrass their greens.

"During the worst spells of rain and overcast in December and January, some of our weaker strains of Tifdwarf just disappeared," said Ondo. "I have had soil and tissue tests run for nematodes, disease and chemical residues to identify the problem. Nothing has come back positive. It was basically environmental stress."

Hennessey attributed the thinning of several of his greens to a combination of circumstances aggravated by the bad weather.

"When the weather started going bad, we were in the middle of a major event which required us to keep several of our greens Continued on page 34

A certified golf course superintendent, Joel Jackson is director of communications for the Florida Golf Course Superintendents Association.



Florida in long-term 'greyness'

Continued from page 33 groomed to maintain high greens speeds," he said. "They had a lot of foot traffic and we had an outbreak of Pythium at the same time. Without good growing conditions, they just couldn't take it. Then the floodgates really opened up and high water levels up to 10 feet above normal kept the greens' subdrains full and the root zones under the greens saturated."

Preparing for major professional golf events in the area has been a difficult challenge for superintendents. Tom Alex of Grand Cypress Golf Club hosted the LPGA's Healthsouth Inaugural in January.

"First, the decision to host the tournament was made after we had begun our overseeding program for 1997-98. At that time we didn't know we'd be hosting the event," Alex said. "In the past we had been very successful with a 100-percent bentgrass overseeding and we decided to try it again this year, but this winter was decidedly different.

"Bentgrass doesn't like wet and humid conditions and that's what this winter has been. We were fortunate to get through the tournament just as the bentgrass was germinating, but the prolonged dark and damp conditions took their toll on several greens. We are in the process of rebuilding a couple of greens that didn't handle the wet weather very well."

Dwight Kummer at Bay Hill Club spent a nervous winter nursing thinner-than-normal greens through December and January.



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"Getting ready for this year's Bay Hill Invitational has been a battle of wills," he said. "Every time we put down seed, it would rain and wash it away. Consequently, we have had to seed more often than in the past to get the density we wanted for the tournament.

"Also, the weather didn't permit us to be as aggressive grooming our greens this winter. We kept the solid rollers on our mowers all the way through January. We began to see a break in the weather in early February with sunnier days. Fortunately, it's finally coming together."

The widespread decline of course conditions this winter prompted the Golf Course Superintendents Association of America, U.S. Golf Association Green Section and University of Florida to send out letters and information packets to Florida courses and superintendents to help explain and deal with the effects of El Niño's weather patterns on growing turf on Florida's courses this winter.

Maine 'iced' in Continued from page 30

trees, Skorulski suggested superintendents look for sugar and red maples, oaks in more sandy regions, and hickory. "Ash are getting hit by certain diseases, but I'd prefer them to the lowvalue trees like poplar, weeping willow and silver maple," he said.

Stipes was hopeful about New Harmony and Valley Forge new elm trees from the U.S. National Arboretum in Washington, D.C., which are not on the market yet.

...

In the meantime, some superintendents might look at this example of nature's tree-thinning as "a blessing in disguise," said Skorulski. "If they've had some problems with trees out on the course, this is their chance to take care of them.'

"Nature has been trimming trees for years. It's one of the greatest tree maintenance methods," said turfgrass consultant Terry Buchen. "A lot of times it will only remove dead wood. But I realize there are extremes where it does severe damage."

"I suppose there are a few trees I would have liked to take down," said Hoisington. "On the 3rd tee we lost trees behind the tee that will increase sunlight and air circulation. But, overall, it's much better to go in and cut them than to have the damage we did."

Whatever course superintendents take, Skorulski said they can expect to see the effects of The Ice Storm of the Century for many, many years to come. "Five, six, eight years from now, you'll see misshaped forms out there," he said.

GOLF COURSE NEWS

BRIEFS



FOSTER PROMOTES SCHAUPETER

Keith Foster Golf Course Design has expanded the role of associate designer Art Schaupeter. In addition to his existing design responsibilities with Foster on two current projects,



Schaupeter will pursue new opportunities for the firm, primarily within the Midwest. Schaupeter has been with the firm since February 1992, and has col-

laborated on most of the its golf courses, including Buffalo Run, Haymaker, Texas Star, The Bandit, Persimmon Woods and Gateway National Golf Links.

OFFICE PARK ADDS \$6.3M TRACK

BROOMFIELD, Colo. - Valley Crest, a landscape and site construction company, is building a 27-hole, \$6.3-million golf course in the Interlocken office park here. Interlocken Golf Course represents the single largest assignment in the 25-year history of Valley Crest's Colorado branch office. Construction of the course was commissioned by Interlocken Hotel LLC, a joint venture between the Interlocken Corp. and Omni Hotels. Work began last July, with completion scheduled for October, to coincide with the opening of the new Omni Hotel that will border the course. Architectural firm Graham & Panks International is responsible for the course design.

ASGCA MEETING IN LA

LOS ANGELES — The 52nd annual meeting of the American Society of Golf Course Architects will be held here April 25-30. President Alice Dye said the society is planning numerous informative



and entertaining professional development sessions. Guest speakers include golf course

architecture writer Geoff Shackelford, who will discuss the work of classic architect George Thomas, and Audubon International Executive Director Ron Dodson, who will provide information on the Audubon's Cooperative Sanctuary Program. ASGCA members will play their tournament on Riviera, Bel-Air and Los Angeles Country Club, courses designed by Thomas.

The Squire, The Slammer (and Weed) finish Village track

DEVELOPMENT

PONTE VEDRA BEACH, Fla.—The Slammer & Squire, the first 18-hole course at the World Golf Village in St. Augustine, opened March 1.

Bobby Weed, architect for the course, is pleased with the results. "I feel that we have created a course that is worthy of the location, and having input from two legends of the game contributes significantly to the overall importance of the project. The World Golf Hall of Fame at the World Golf Village represents a new era in the game of golf. To have all the world's greatest golf associations united in this wonderful effort certainly stirs the spirit of those who love to play," Weed said.

Gene Sarazen and Sam Snead were chosen as player consultants to the course, which will host The Legends of Golf tournament beginning in 1999. Both Sarazen and Snead will be enshrined in the Hall of Fame when it opens in May.



The 8th hole at the World Golf Village's Slammer & Squire course.

"Our charge was to create a 'fun and interesting' golf course. While it is always difficult to pick a favorite hole or holes on any golf course, I think that most players will find a number of holes to be unique and challenging," Weed said. "Overall, the design intent is strategic with risk and reward opportunities. Each golf hole has its own character and provides multiple tees and a diversity of options to fairly challenge every caliber of player." The course meanders through an old pine forest plantation, typically referred to as flatwoods. Much of the surrounding property is set aside as preservation, with wetland corridors linked together to protect wildlife. The abundant native and indigenous vegetation of north Florida abounds and creates a recurring them throughout the golf course.

The Slammer & Squire is a Signature Course of the Audubon International Cooperative Sanctuary Program.

Strantz leaps to the top

Mike Strantz is a world-class commercial artist, holds an agronomy degree from Michigan State University and understudied for eight years with Tom Fazio. But it wasn't until he returned to golf design from being a freelance artist that he burst onto the national golf scene as one of the most sought-after course designers of today. Strantz was lured back into golf by Larry Young of The Legends Group to design two courses in Williamsburg, Va. The result? Golf Digest picked both creations as Best New Upscale Public-access Course of the Year — Stonehouse in 1996 Royal New Kent in 1997. He has come a long way from working on the maintenance crew at the age of 15 and edging bunkers and shaping greens for Fazio from 1979-87, when he left to pursue his art interests. We caught up with him at his home in Mt. Pleasant, S.C., where he lives with wife Heidi and children.

Golf Course News: You studied art, then earned a degree in agronomy from Michigan State. How has that helped your design career?

Mike Strantz: Understanding maintenance of golf courses and about soils and the scientific aspect that affect the design process.

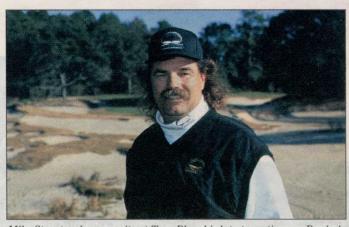
GCN: How much does your skill as an artist help you?

MS: Other than the overall feel for the basic design elements and what is appealing to the eye, it's a huge help communicating with shapers. I'll draw a whole perspective — eye-level views of dogleg to green, tee to dogleg and, if it's a par-5, first dogleg to second dogleg. It's a lot easier for those guys to understand. It reduces the down time, and you don't have constant re-doing.

I can use my days as a shaper and know what you have to do to get it to that point. It helps when you've been on a machine and know its capabilities.

GCN: Is there a Strantz trademark?

MS: I would think there are tendencies, but I hope each product has its own individuality. There are going to be cer-Continued on page 44



Mike Strantz, above, on site at True Blue, his latest creation, on Pawley's Island in South Carolina. Below is the 11th hole.



True Blue opens next to Strantz's Caledonia

MYRTLE BEACH, S.C. — True Blue, the fourth Mike Strantz-designed golf course, opened for play Feb. 1. Strantz designed the award-winning Caledonia Golf & Fish Club on plantation land adjacent to True Blue.

True Blue is a 6,875-yard, par-72 course on the site of True Blue Plantation, a famed 19th-century indigo and rice plantation. The course features bentgrass greens, an 18-acre practice facility with a learning center, and an emphasis on the natural beauty of the area, using native grasses and vegetation and maintaining much of the character of the property. **Continued on page 37**



CSM to design 'Son of Captains' track in Bay State

BREWSTER, Mass. - Ground has been broken here on 18 new holes adjacent to The Captains Golf Club, the award-winning layout from course designers Cornish, Silva and Mungeam (CSM)

CSM Partner Brian Silva, whose original 18 at The Captains was named Golf Digest's Best New Public Course for 1985, will design the new 18 right next door. However, Silva will integrate both courses so each nine will feature new and original holes. Silva expects all 36 to be playable by late summer 1999.

When we're done, the town of Brewster won't have an old golf course and new golf course,"

Silva explained. "It will have two completely new golf experiences. Of course, this requires that we work hard to blend the style of the new holes with those existing holes. Fortunately, the original course routing makes this sort of integration feasible. It's extremely serendipitous that the original course had four starting holes and four finishing holes in reasonable proximity to the clubhouse.'

The town of Brewster and CSM have enjoyed a long, successful history. CSM Partner Geoffrey Cornish first walked the original course site in the mid-1970s, but funding wasn't approved for the project until 1983.

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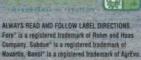
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CIRCLE #128

After the original course opened to immediate acclaim, the town considered building the second course straight-away. However, funding for the new 18 wasn't approved until 1997.

The original Captains design - so called because each hole is named for one of Brewster's historic sea captains - was Silva's first solo effort; the new 18 will be his 38th. The contractor which built the original course, International Golf of Arlington, Mass., returns this summer to build the new one. "There are all sorts of wonderful ironies and happenstance associated with this job," Silva said. "It's an incredible thing to do another 18 adjacent to my very first solo design. I can't wait to get started."

When the new course - which Silva affectionately calls "Son of Captains" - opens for play next summer, the tiny Cape town of Brewster will boast four CSMdesigned lavouts. Ocean Edge Golf Club, longtime site of the New England PGA Championship, made its debut in 1986, while Cape Cod National will open for member play in May. "Needless to say, the town of Brewster has been beddy, beddy good to CSM," said Silva, paraphrasing the immortal Chico Esquella.

Based in Uxbridge, Mass., CSM will christen five original 18-hole designs in 1998, including the hotly anticipated Waverly Oaks in Plymouth, Mass., and Charleston Springs in Monmouth County, N.J.

Further afield, Silva recently completed a renovation of all 185 bunkers at Donald Ross' Seminole Golf Club in North Palm Beach, Fla. Meanwhile, work continues at Seth Raynor's Fox Chapel Golf Club, which Silva is restoring in anticipation of the USGA's Curtis Cup matches in 2002.

Legacy reopens after \$2.3M redo

PORT ST. LUCIE, Fla. - The Legacy Golf & Tennis Club reopened Jan. 17 after a \$2.3-million renovation. Improvements included several new tee boxes, bunker remodeling, extended cart paths, a new practice tee on the back side of the driving range, and extensive landscaping.

The Legacy Golf & Tennis Club is a private equity club located in "The Reserve." The course was designed by George Fazio and his nephew Jim Fazio. Built in 1984, and originally known as The Reserve Golf & Tennis Club, it was owned and operated by the Fazio family.

GOLF COURSE NEWS



Schreiner busy on Ohio projects

AKRON, Ohio — Recent assignments at Chippewa Golf Club and Westfield Companies Country Club are fueling architect Craig Schreiners' presence in Ohio. He has been retained by the two northern Ohio clubs to prepare long-range master plans.

"We will focus on basic improvements such as drainage, new tees, bunker renovation, tree work and practice area enhancements," said Schreiner.

The Westfield Companies Club is a 36hole facility with two distinct courses developed in the 1970s. The older South Course was initially a nine-hole layout. The North Course evolved to accommodate the successful growth of the Westfield Insurance Co. The Chippewa Golf Club was built in the 1970s in two phases as well.

"The renovation of Chippewa will be dramatic," Schreiner said. The site is exceptional due in part to a major drainageway that bisects the site eastwest. Several holes will be rerouted increasing length and variety in the layout.

Schreiner, who helped restore Donald Ross's East Course at Oak Hill Country Club for the 1995 Ryder Cup Matches, is also under contract with NCR Country Club, where preparations are underway for the 1998 U.S. Mid-Amateur. The two 18-hole courses were designed and built by Dick Wilson in the early 1950s.

"The intent of the master plan is to improve playability for both courses while maintaining the integrity and distinct character of each golf course," said Schreiner. "The South Course is more challenging, tighter, and tree-lined with undulating topography and dramatic greens.

"The North Course is much more playable due to its wide landing areas and shorter length. It is open, the greens are somewhat modestly contoured, and the landing areas are more forgiving."

True Blue opens

Continued from page 35

The project broke ground in June 1996. Strantz has modeled True Blue on the characteristics of Pine Valley and Pinehurst #2 — with emphasis on maintaining a natural feel similar to the top courses in the United Kingdom. "What makes the British courses so great is the subtle nuances of the fairways and rough," he said. "It's why those great courses really withstand the test of time. We're not taxing the acquifers by pulling out water to irrigate 100 acres of grass. Instead, we're making use of sand and natural vegetation to compliment the wetlands."

These efforts are aided by a layer of white sand just below the topsoil, which allows for some tremendous scenery and contour changes.

Strantz was joined in the building of the course by former PGA Tour player Forrest Fezler and Danny Gore, the head PGA professional for True Blue. Gore volunteered to step out of a traditional "golf pro" role to help build the course with the construction team, allowing him to learn the nuances of the course literally from the ground up. North Course improvements include developing a short-game practice area and renovating the existing practice range tee and landing area. Native vegetation will be introduced in non-play areas of the golf course to diversify wildlife habitat areas and to reduce maintenance costs. To improve playability, forward tees will be added on the North and South courses and back tees will be added on the North course. A tree program for removal and planting will be developed for both courses. Schreiner will also prepare landscape plans for the entry of the newly renovated clubhouse as well as formal landscape treatments for the starting tees on both golf courses.

"We'll be tweaking the courses at NCR to make sure they are in pristine condition come tournament time," said Schreiner. "We're pleased that NCR is dedicated to improving their fabulous facility."

Elsewhere, Schreiner is finalizing a

strategic preservation plan for Donald Ross-designed Oyster Harbors Club in Osterville, Mass.

Planned improvements include drainage on several holes, remodeling of the practice range, development of a short-game practice area, and new tees.

Poorly drained areas will be addressed and a golf cart path will be added to facilitate efficient golfer circulation while reducing compaction on the course.

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Maxwell designing Corporate Club

LOUISVILLE, Ky. — Maxwell Golf Group, Inc.'s Golf Course Design Division is designing an 18-hole layout for a group of private investors here.

The facility, to be named The Corporate Club, will be the first design project in the Bluegrass State for the Jackson, Miss.based company.

"We're extremely excited about the opportunity to be involved with this particular project," said MGG founder and president Frank M. "Max" Maxwell Jr. "The owners have some impressive goals for the facility and they have given us one of the most beautiful pieces of property you can find in the area."

The facility will be private, with executive villas incorporated into the design. The Corporate Club will be the firm's first new course design project for an exclusively private club.

"The situation is somewhat ironic," Maxwell said, "in that when we were approached by the owners, they had no idea of our experience with 'Scottish links-style' designs and that's exactly what they had in mind with their open and rolling piece of farm land." Maxwell also mentioned that The Corporate Club will be centered around a group of old brick farm buildings on the property which are all painted white with red roofs. "The buildings, which are present throughout the property, are priceless because they will provide a striking contrast to the deep green color of the surrounding turf," he explained.

Meanwhile, MGG has been working on the design of a new semi-private golf course north of Baton Rouge in Zachary, La. Copper Mill Golf Club is an 18hole layout which will be the centerpiece of a new upscale residential development sharing the same name. Target opening date is this fall.

"The owners wanted to take the theme of a 'Scottish linksstyle' course to the next level," said Maxwell. "Copper Mill will have the old-world traditional golf course styling blended nicely with the agronomic conditioning and aesthetic appeal which we as Americans have come to expect from an upscale facility."

Maxwell claimed the 14th hole will become "The Longest Hole in America." The par-6 will play 880 yards [one-half mile] from the tip. "On the other hand," he laughed, "The alternate route to the green, which is shorter and riskier, is only 750 yards."

Maxwell was quick to note, however, that the 14th hole is not merely a gimmick. "The design of the entire course will be fun to play and have that **38** April 1998

world-class look and feel," he continued, "This will be one of those courses which golfers can't wait to play again." Copper Mill will, however, provide Maxwell with the opportunity to realize one of his oldest design ideas a downhill par six with the chance to "get home in three for an eagle."

Joint venture eyes North Dallas facility

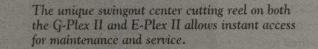
DALLAS — Olympus Real Estate Corp. and Castle Hills Golf Partners, Ltd. have entered into a joint venture to develop Castle Hills Golf Club & Academy. An 18-hole daily-fee course, which will be expanded to 27 holes in the future, the facility is scheduled to open in early 1999.

The North Dallas course was designed by Jay Morrish and will include a teaching center.

The venture plans to solicit proposals for daily management of the facility.

Castle Hills Golf Club will be located on a 2,500-acre master-planned development formerly known as Bright Ranch. The project will include 3,000 single-family homes, numerous multi-family sites, retail and commercial office parks and a 350-room, \$60 million conference center.

Ray G. Wicken, managing partner of Castle Hills Golf Partners, said Castle Hills will feature the most comprehensive golf facilities in the state, including three golf holes for on-course instruction."





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Nicklaus takes on preservation challenge on Rocky Gap project

CUMBERLAND, Md. - The developers of one of the East Coast's newest destination resorts were faced with a formidable task: to design a golf course of the caliber and quality of a competition course in a mountain setting, while preserving the site's natural beauty and distinctive environment.

The result is the 18-hole Jack course promises to be a moun-Nicklaus Signature Golf Course, the cornerstone of the soon-tobe-opened Rocky Gap Lodge & Golf Resort in the mountains of western Maryland near Cumberland. With the front nine holes scheduled to open in late summer, and the back nine in the fall of 1998, the Rocky Gap

tain marvel combining modern engineering with Mother Nature's handiwork.

"Jack Nicklaus is very excited about this course," said Troy Vincent, design coordinator with Nicklaus Design, who is overseeing construction of the course. "Rocky Gap presents a

rains. By preserving as much as possible of the natural mountain landscape and foliage, the course provides more challenges to player than other courses.'

The front nine holes will provide wide open spaces and gently sloping holes, similar to golf courses found in the Southwest.

unique site, with multiple ter- The back nine will climb the area's natural rugged mountain terrain, with woods surrounding the fairway.

Greens are being planted with bentgrass. Formations of natural stone are scattered throughout the periphery of the course, and grass and foliage native to the region will be planted. Many natural springs and wetlands, carefully preserved, are on site.

Natural methods and materials will be extensively employed in maintaining the course. Pest control will use organisms found in nature and introduced into the irrigation system to prevent weed and insect infestation. Once the course is open, organic fertilizers will be used to nourish the greens.

Water run-off from the course has been minimized. Water used for irrigation will filter through a turf canopy, thatch layer and into underwater aquifers to remove contaminants.

A "wash down" area for golf carts and maintenance equipment has been designed specially for Rocky Gap. Water used to wash equipment drains into a unique "weir" system, where wooden barriers trap solid waste. The newly cleaned water flows into underground separators and runs back into the lake as pure as when it was removed.

An average of 250,000 gallons of water will be used to irrigate the course each day. A system using more than 18 miles of pipe and 139 miles of wiring will deliver water to approximately 900 sprinkler heads throughout the site.

A hi-tech satellite control allows operation of the sprinkler system from several points around the green, rather than just one.

Computers will manage each of the aspects involved in the course's upkeep, including irrigation, labor analysis, chemical inventory, equipment and project management.

Players will be able to practice their swings from a 2-tier, half moon-shaped driving range with a putting and chipping green nearby.

A PGA professional will provide expert instruction in the game, and golfers can visit the lodge's pro shop, offering firstrate golf clothing, shoes and equipment.

For after-golf celebrating, duffers can visit the 54-seat Signatures Bar and Grill, overlooking the lake. Plans call for the establishment of a professional golf academy at the resort in the near future.

The resort is managed by Florida-based Buena Vista Hospitality Group.

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N.C. corporate park opening resort daily-fee golf club

CHARLOTTE, N.C. — Adding a unique touch to the newly developed Ballantyne Corporate Park, Bissell Golf and owner/ developer Smoky Bissell have announced the May opening of Golf Club at Ballantyne Resort.

The focal point of the 525-acre Ballantyne Corporate Park, the upscale resort dailyfee golf course was designed by Land Design, Inc. of Charlotte. Ballantyne Resort is a resort and recreation complex being developed by Bissell Development.

"The Ballantyne Resort course will be one of the finest resort/daily-fee courses in the South," said Bissell Holdings' David Conlan."

The par-71 layout has five sets of tees that play from 6,735 to 4,815 yards.

"The course has a distinct Donald Ross feel," said Director of Golf Dana Rader. "Every hole is memorable, the topography is undulating and scenic, and the challenges are numerous. It is what I call a 'thinker's' course."

The 4,500-square-foot Dana Rader Golf School and teaching center opened Oct. 1. Nelson Cato, a 20-year veteran with extensive experience in North and South Carolina, is the golf course superinten-

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developed not only to facilitate absorption by the leaves and roots, but to increase mobility of the calcium within the plant as well.

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Foster faces history in Miami, Louisville tracks

LOUISVILLE, Ky. — Keith Foster Golf Course Design has been retained to work with Louisville Country Club here and at Miami Springs Golf Club in Miami, Fla.

Louisville Country Club is considered among the top old clubs in Kentucky and was designed by Robert White and Walter Travis in the early 1900s. The intent at Louisville is to develop a program for a sensitive restoration of the course.

Miami Springs Golf Club has been referenced as one of the more historic courses in the country. Miami Springs will be going through an extensive renovation and restoration.

Big Canyon hires Harbottle to handle redesign

NEWPORT BEACH, Calif. — Golf course architect John F. Harbottle III has been hired to oversee a major remodeling of Big Canyon Country Club here.

Ground will be broken early this year on the \$3.5-million project, which should be completed by the fall.

...

Meanwhile, grassing is complete on the Harbottle- and Johnny Miller-designed Sierra Nevada Golf Club in Genoa, Nev. The second upscale public course Harbottle has designed in the area, the track winds through rugged, high-desert savanna. It should open for play in the summer.

Construction is completing at The Tradition, a 27-hole upscale public course Harbottle designed in San Jose. Expected to open in the fall, the stand-alone course is carved through oak forests and over rolling terrain near the Callero Reservoir.

VALPARAISO ADDING MUNI

VALPARAISO, Ind. - The brainchild of Mike Laughner and Nancy Bender, the city's PGA teaching professionals, this community will build a new upscale municipal golf course and training center here. The city owns and maintains an 18-hole course. Due to explosive growth of the city's junior and beginning golf programs, the concept of focusing on the development of a golf training and teaching centers became evident. Don Childs Associates has been awarded the master planning and design contract for the facility. The initial master plan is to focus on developing the remainder of the acreage as public park and nature preserve.

AGRICULTURE DIVISION Baltimore, Maryland



Atlantic Canada rediscovers golf as an attraction

By PETER BLAIS

After years of limited development, Canada's Atlantic Provinces — New Brunswick, Prince Edward Island, Nova Scotia and Newfoundland — are beginning to attract the interest of major golf developers.

Geoffrey Cornish-designed New Ashburn (1969) in Halifax, N.S., and Bill Mitchell-designed Mactaquac (1970) outside Fredericton, N.B., were the last major Maritime projects to open in the three decades preceding the 1990s, according to Larry Brown, president of Fredericton, N.B.-based Atlantic Golf Construction Ltd. Atlantic Canada saw only the occasional renovation project and low-level pushup golf courses through the 1970s and 1980s, Brown said.

"The first modern course was Crowbush Cove on Prince Edward Island (PEI) which opened in 1994," said Brown of the Thomas McBroom design that Golf Digest named the Best New Course in Canada that year. "The PEI government had the foresight to do Crowbush against a fair amount of opposition. They've never made a lot of money off it. But a golf course generates a lot of ancillary revenue such as accommodations, gasoline and retail sales."

The government has traditionally been a major sponsor of golf in Eastern Canada. The federal government's Parks Canada has owned or operated Cape Breton Highlands in Nova Scotia, Fundy National in New Brunswick, Green Gables on PEI and the Golf Course at Terra Nova in Newfoundland.

Provincial governments have also been heavily involved. There are three provincial courses on PEI — Crowbush, Mill River and Brudenell; and two in Nova Scotia — Digby Pines and Northumberland Seashore Golf Links. New Brunswick's provincial government participated in the construction of several facilities, including Mactaquac and Campobello Island.

"Crowbush turned the corner and created a new demand for golf," Brown said. "It's the way it should be done. It's not an easy course to play. But it has been well accepted by the better golfers and has attracted people to the region."

Since Crowbush, developers have shown renewed interest in the region, Brown said.

McBroom-designed Bell Bay on Cape Breton Island was the next major project after Crowbush. It was built with government money, but is operated by the private sector. Rain slowed the project with the remnants of three hurricanes drenching the Atlantic coast in 1996. But it opened in 1997 and has been nominated for *Golf Digest's* Best New Course in Canada.

Cape Breton Highlands was renovated in the mid-1990s and was very well received. The Stanley Thompson design has traditionally been ranked among the country's top courses.

Newfoundland has had some projects, including Graham Cookedesigned tracks in Saint Johns and Cloevalley.



The new Bell Bay Golf Club in Baddeck, Nova Scotia, designed by Thomas McBroom, sports Atlantic Canada's largest practice area — and spectacular views with its 18 holes.

While high-end facilities like Crowbush, Cape Breton and Bell Bay received most of the attention, many moderately-priced courses undertook renovations to keep up with their more well-to-do neighbors. Localities and entrepreneurs also built inexpensive courses throughout the region. Having a relatively low population and little private investment capital, these lowerend courses are important to the region's beginning golfers.

In 1996, Cooke received a contract to design Osprey Ridge in Lunenburg, an hour west of Halifax, that Brown expects will be ranked among the top five in Atlantic Canada. "Modern courses in our region are characterized by a complete irrigation system (not necessarily double row) and bentgrass fairways. That [Lunenburg] will be one of three bentgrass courses in the region."

The future looks bright in the Martimes. Cooke-designed Glen Arbour, the first real-estate golf community in Nova Scotia, is being developed by a group of Halifax businessmen.

A nine-hole Ward Northrup-designed track with housing running along most holes will open in Batherston, N.B., this summer and a Rees Jones design called Royal Oaks is scheduled to break ground in Moncton, N.B., this spring. Ron Gogan, a local drilling company owner, is among the developers of the Royal Oaks golf course community.

The province of New Brunswick hired McBroom to oversee a two-year renovation to the St. Andrews course at the Algonquin Resort, owned by the province and operated by Canadian Pacific railroads. The fact it is a Donald Ross design has caused some controversy. But the design has been modified so much over the years that little of the Ross flavor remains, Brown said.

Michael Hurdzan has been retained to design a second course at the existing Brudenell Resort in southeastern PEI. Construction is expected to start this year. Other less-expensive projects should also begin construction this year on PEI, Brown said.

But Nova Scotia is truly the hot spot along the North Atlantic coast. Cooke is designing Fox Harbour on Northumberland Strait. The high-end course, a jet strip and housing should start construction this year and open by fall 1999. After a 12-year effort, businessman Jim Leahy hopes to start construction this spring on an 18-hole course named Arrowhead, located just north of Halifax. Heartland Park Golf Club, an 18-hole military course that is open to the public in southeastern Dartmouth, will add nine seaside holes. Cooke is overseeing new green-site construction at existing Oak Hill Golf Club near Halifax. Avon Valley Golf Club 40 minutes from Halifax is midway through a renovation program overseen by Cooke. Inverness on Cape Breton, a former seaside mining site, is under consideration for a Cooke course.

Cooke is also designing an 18-hole track in Fredericton, N.B., called Kingswood Meadows that will likely begin construction in 1998 as part of a privately owned recreation complex.

A number of smaller, low-budget courses will begin construction or come on line this year throughout Atlantic Canada, Brown added. A typical ninehole course with push-up greens can cost as little as \$150,000 Canadian.

"One of the most important things that has come along in the Fredericton market during the 30 years I've lived there," Brown said, "is an inexpensively built, nine-hole course called Gilridge. You can play it in an hour and a quarter and it costs just \$8. It's extremely busy. New golfers are not intimidated by Continued on page 46





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Continued from page 1

lowed on April 21 by a Planning Commission vote on land use and permitting and on April 22 by a Board of Supervisors session to approve a lease that has been drawn up between the county and RFTF.

RFTF's move to work with Chesterfield County followed closely on the heels of a proposal to the city of Richmond. But Richmond officials wanted to delay any decision beyond the timeline desired by RFTF. Tattersall and his board were adamant that the Richmond First Tee be the first in the country to be built. Other existing golf facilities have added First Tee pro-

SysTec 1998[®]

grams, but Richmond's would be the first from the ground up.

"It's a terrific project and quite inspirational," said Tod Leiweke, who took over in late February as administrator of the national First Tee program. "What we saw there was a very committed group of people who had come together and donated time and money. But, more than anything, they had a passion to see something happen — to make a difference in the lives of kids through this great game of golf.

"Chesterfield County stepped up and provided an excellent piece of land and are in a real fast-track to get this thing done."

The First Tee, Leiweke said, "is not a lay-down concept. It takes some imagination and a leap of faith... There is something unique about being the first one. We're creating a project that will be the model for many of the agreements we get into."

The First Tee's vision, he said, "isn't 10 facilities. Our vision is hundreds across America."

Hundreds of inquiries have already been fielded by Leiweke's office at PGA Tour headquarters in Ponte Vedra Beach, Fla. They have ranged from people saying they would love to see a First Tee facility in their community to people, like Tattersall, saying they will do whatever it takes to make it happen, Leiweke said.

For his part, Tattersall is excited about the Chesterfield County property. It is a 125-acre parcel of land in Iron Bridge Park within 10 miles of 11 elementary schools, four middle schools and three high schools.

"Draw a five-mile circle around it," said Chesterfield County Director of Public Affairs Don Kappell," and the demographics are such that it would very well serve the stated needs of The First Tee organization: underprivileged youths, seniors and women. You have Petersburg, Richmond and other areas that have a lot of immigrants and others who meet that criteria."

"All the discussion has been very, very positive," Kappell said. "It's a tremendous site. The relationship has been very good among all the different parties. The caveat is that we're still discussing it and nothing has been signed — yet."

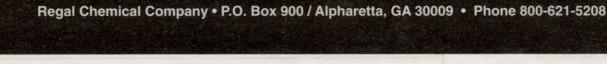
While Tattersall said RFTF still hopes to do a First Tee facility in Richmond, he said the county property is twice the size of the city's. That will allow an 18-hole course instead of nine holes.

"It will have a full driving range that will probably be lighted," he said. "And we are planning a three-hole peewee course for 60to 100-yard shots, for the kids to practice on after graduating from the range, but before they're ready for the full course."

Golf course architect Lester George, who is donating his services to design the course, said, "This is a beautiful property rolling with creeks meandering through it." He even plans a waterfall between the 9th and 18th greens.

"It is really important not only for the First Tee to be developed here but that it is the first," said PGA Tour golfer Robert Wrenn, a Richmond native who is donating his services. "Being first creates phenomenal exposure for this area and the greatest opportunity for greater expansion of the program locally... More importantly, it would quickly create the opportunity for underprivileged inner-city kids to enjoy

Continued on next page



DEVELOPMENT

ALNUT CREEK, Calif. The Northern Cali fornia office of Graves and Pascuzzo Golf Course Design and Development have announced two new Southern California projects.

With its Glen Annie project for Environmental Golf nearly complete in Santa Barbara County, the design firm is expanding its Southern California portfolio with the addition

First Tee project

Continued from previous page a game that we all love. And, it will create this benefit without cost to [taxpayers]."

Indeed, Tattersall's group has raised all the money necessary to build the facility and operate it for five years. By then, it should be self-sustaining, he said.

The list of those who are stepping forward to help is growing. Virginia Turf and Irrigation has offered to help install the irrigation system at its cost. Free legal services are being given by the local law firm Williams, Mullen Christian and Dobbins. Ernst & Young will do accounting work pro bono.

The local engineering firm Timmons & Associates has agreed to do the engineering work for one-third the normal cost. And, nationally, Arnold Palmer has given The First Tee 3.000 sets of clubs to be disbursed to various First Tee chapters.

"What we will have here," said Tattersall, "is a \$4-million facility we hope will cost about \$2.2 million. That's \$1.25 million in land and \$2.8 million worth of construction. We may get as much as \$600,000 in free services.'

Leiweke promised: "We will provide the same amount of passion for the 100th project as for the first.'

"We have a number of other facilities not far behind Richmond," he added. "Every day we're collaborating and giving life to First Tee projects. Our goal is to have 100 in development by the year 2000, and I think that's a very realistic target."

The PGA of America, PGA Tour, LPGA, U.S. Golf Association and Augusta National Golf Club are all directly supporting this initiative.

While Wrenn is lending his time to what will be called the Richmond Metropolitan First Tee Chapter, Leiweke said: "There are lots of icons in the world of golf: all the tour players, local heroes, etc. In their respective communities The First Tee will be a big deal. The enthusiasm is out there because there is such an extraordinary need. Not just the need to play golf, but a need for the values inherent in the game of golf."

Graves, Pascuzzo ink Southern Cal projects

of two 18-hole projects. The first is The Knightsbridge Golf Club in Camarillo. A project of R.W. Hertel and Sons, Inc., it is a 243-acre golf community with single-family residential units and clustered golf villas.

The course will be an 18-hole, semi-upscale daily-fee course with practice range.

The golf architect will be Damian Pascuzzo.

Design development is underway, with construction documents immediately following. Ground-breaking is scheduled for November.

Meanwhile, Sunroad Enterprises has contracted with Graves and Pascuzzo to design

an 18-hole course on the "Old Coach Site" in Poway, in northern San Diego.

This is Sunroad's first venture into golf development following a history of commercial office building development.

The 7,100-yard, par-72 course has been named Sunroad Country Club. The

parcel has a history as a former stage coach stop. Rock outcrops will punctuate the design and a streambed will wind through the course and play into the strategy of the design.

The project will also feature an 18-hole putting course and a practice range.

Robert Muir Graves and senior golf course architect and Neal Meagher will collaborate on the design.

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tain things people can pick out as me in my designs. But I'm probably known more for being very selective and doing one job at a time. I turn down at least one job a week.

GCN: What design concepts do you stress?

MS: A lot of strategy, especially for the better player — the player

who wants to think around the golf course. There is also a lot of subtle contours that can be used once you start to learn the course. I never try to demand that a golf hole be played a specific way. Let a golfer be creative. I feel that way especially after playing some courses overseas, and others like The National Golf Links [on Long Island]. That's a prime example. Depending on how you're hitting the ball, there are



18 ways to play a golf hole.

Strategy's always an underlying current. I think if you were to dissect every project I've done on my own, you will see that every piece of property has either one, or several distinguishing features. That's what I try to play upon. So, hopefully, the course takes on an individual look and feel.

A job is basically functional artwork to me. I want to build a

product that's not just another golf course. There may be a segment of people who don't like it. That's fine. But the people who know golf, who love golf and appreciate the historic aspects of the game, I want them to get out there and say, "Man, it's unbelievable. It's not just a golf course, it's an environment. It' an environment for you to be challenged in and to enjoy yourself, to take in some beauty."



CIRCLE #136

It's not just to go out and knock the ball around. There are plenty of places to do that. There's no need for me to add to that list.

The more time you spend on a property, the more it tends to speak out to you. The little nuances - whatever it has going for it - jump out at you or, over time, subtly come to you. And it's up to the designer to highlight those things. You take the best natural features on the ground and incorporate them into a strategic design. That's the way the old guys did it. They didn't have the technology to move earth, so they were forced to think their way through it. I spend a lot of time on routing plans, walking the site before we start construction. And I'm on site four days a week. I feel more comfortable working that way, and my clients appreciate that.

It takes a year to a year and a half to do the job. Some guys visit a site three or four times. If a client is willing to pay big bucks to get a big name to help the marketing, that's fine. There are all kinds of clients. Somebody like me wouldn't appeal to them. GCN: Obviously you appealed

to the Youngs.

MS: The Youngs' track record at Myrtle Beach was that the average guy could come to any of their facilities and feel special. It was like a private club to him, and they were great at that. They weren't about to change that outlook in Virginia. They wanted to create a very special place for people to come and play golf. That's why the Youngs and I got along so well.

What I do to me is a passion. I love doing it, and I love the interaction with my clients, having them have a say in what I do. I try to enjoy the process as well as the end product.

I have three or four shapers who work with me on every job — Mark White, Luke Kinder and brothers Mike and Jeff Jones. They're the whole reason I'm doing as well as I'm doing. A lot of the laborers also go with us. It's like a little community. I really like these guys and we have a lot of fun together.

GCN: Were you golfing when you were young?

MS: I worked on a golf course ever since I was old enough to work. I wasn't a serious golfer, but we played a lot after working on the course.

GCN: How important was working for Fazio?

MS: That was lucky. I had graduated from turf school and was working at the Inverness Club in Toledo getting ready for the U.S. Open in 1979. George and Tom [Fazio] had changed some holes there to accommodate more people and I just fell in with them, really. I was just Continued on next page

F-13.



Q&A: Strantz Continued from next page

working on the crew. I was just doing bunker edges with the Fazio guys, laying sod, work that was not that design-oriented. They saw I had a knack for this and asked me to go to work for them. They hired me as a shaper and that's the work I did for the first five years with Tom. At that point in Tom's development, the shapers were doing all the on-site design work themselves. That was a big break.

Andy Banfield is the person most responsible for getting me in the business. I owe it all to Andy. I tried to spend as much time with Andy as I could. He is brilliant.

GCN: Did Stonehouse and Royal New Kent propel you into the top echelon of golf course architects?

MS: I never stopped to think about it. Publications still write about them. But the job I had after those two — the one we just finished at Pawley's Island — was one for a former client. Clearly, the phone has rung more since those projects. But, hopefully, each previous job sells the next job.

GCN: You say you turn down a lot of proposals. Do you get intrigued by the land on some projects — by the developer who says he has a piece of oceanfront land, or property on a mountaintop, for instance?

MS: For anyone who likes the business and likes to get creative juices flowing, it's very hard to say, "No" when someone dangles something like that in front of you. But it has to be close enough for me to be there four days a week.

The promise I made to myself and my family, and my clients, is I can't fit you into my schedule until after the year 2000. Quite honestly, that will be the end of the conversation for a fair percentage of those who call me. I had three of four people who've said they'll wait three or four years if that's what it takes.

GCN: Do you think you'll ever do more than one course at a time?

MS: I seriously doubt it. There is always some overlap. This early summer we will be grassing True Blue now and starting to clearing the next in Sanford, N.C., about 20 miles north of Pinehurst. This is in sandy hills and could be one of the best projects I've been involved in. It's called Tobacco Road and is 18 holes with no housing. Lee Paving owns it and has been mining sand out of this property for 20 years. It has great contours, scrubby-looking pine trees that are 50 years old and 2 feet high. It has 70 to 80 feet of elevation difference. We'll try to open it in late fall.

It will have Bermudagrass fairways, zoysiagrass roughs and bentgrass greens. We did that with New Kent and at True Blue. It's a nice contrast. It's what Pete Dye was trying to do years ago with centipedegrass: emulate the Northern courses with different texture. But zoysia is a lot more prolific and stands up better than centipede.

GCN: What is your new course you're breaking ground on this spring?

MS: Tot Hill Farm in Ashborough, N.C., about 20 minutes south of Greensboro. It's in the same town as North Carolina's only zoo. It's a gorgeous site. It has 250 feet of elevation change, natural waterfalls, huge rocks everywhere. It takes up 240 acres and the golf envelopes are nice and wide. That will have some housing around it, mostly above the course up in the hills.

GCN: What is your professional relationship with Forrest Fezler?

MS: He is an basically an associate. But Forrest just loves this work. He has been infatuated since we did Golden Eagle in Florida. He is one of the few guys who did not use his stature to bypass all the work and learning to get into design. He realized you have to learn it from the ground up. He's out there with shovels and rakes, anything you ask him to do. He'll be the dirtiest guy to leave the job at the end of the day. He came to work for the Youngs in Virginia. The Youngs struck a deal where he was director of golf at both courses. But it was a year prior to opening, so he helped with construction, which he loved even more than being director of golf. He left that position to come work with us.

GCN: Do you have a favorite classical architect?

MS: I like quite a few of them, and there are strong points about each one. But if I had to pick a favorite it would be Mackenzie. I like his attitude — his philosophy. He told it like it was. He was the same thought that the golfing people in the British Isles had: forget telling me the golf course is too hard, it's this or that, there it is, just go play it to the best of your ability. After he built Cypress Point, nobody was criticizing it, so he got back on the train to go out there and see what in the world was wrong.

I'm trying to appeal the guy who can be a scratch to a 30-handicapper who look at an almost insurmountable shot and make it happen. Even if it's only one shot a round. He was into competitiveness and character-building. Forget about the score. He said medal play has ruined golf.



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Dale, Elliott named vice presidents at Golfplan

SANTA ROSA, Calif. - Senior architects David Dale and Richard Elliott have been named vice presidents at Golfplan, the course design group founded here by Ronald Fream. In their new positions, Elliott and Dale are entitled to full voting rights at meetings of Golfplan's Board of Directors

"I couldn't be happier to recognize David and Rick for their years of outstanding service to Golfplan," said Fream, whose firm has designed more than 150 golf course in 52 countries. With this move, they have more of a tangible stake in how we do business."

Dale joined Golfplan in 1988,

fresh out of Washington State University where he earned a BS in landscape architecture. "Ron had me on a plane to Asia within six months," said Dale, whose extensive course credits include the acclaimed Panya Park Golf Club near Bangkok, Guam International CC and Grand Shanghai G&CC. Dale is

also lead architect at Eagle Ridge GC, a hotly anticipated daily-fee design which should open for play south of San Francisco near Gilroy, Calif., next year.

"I'm excited about our focusing on the U.S. market, where we have several projects in the planning phase," said Dale, who will spearhead Golfplan's spectacular Sparrebosch project in Knysna, South Africa. "Our work abroad has earned a great deal of attention for its quality. I'm confident our work in the U.S. will do the same."

Elliott earned a double major in landscape architecture and turfgrass management from the University of Maryland. After serving as head superintendent at Echo Mesa Golf Club, part of Sun City West, he worked with architect Cal Olson before joining Fream in 1988.

Since that time, Elliott has served as lead architect on several award-winning projects, including Golf de Fregate in St. Cyr sur Mer, France, and Golf de L'Isle Adam, named France's top new course for 1996. His spectacular design at Bali Pecatu Resort will open this year.

Canada

Continued from page 41 members or anyone pushing them around the course. They play the game at their speed, learn the game and encourage their kids to play. It's the best thing to happen in the Fredericton golf market in a very long time. There's a place for those facilities as feeders for other courses. They develop players for the future."

Brown sees growth ahead for the Eastern Canadian market and continued government involvement, since tourism is so important to the area's economy. The golf fever that has gripped Southern Maine will eventually work its way up the coast into the Maritimes, he predicted. Land is available at favorable prices outside the three major metropolitan areas Saint John, N.B., Halifax, and St. John's, Newfoundland.

"Land around those cities is very rocky, which has made it expensive to build there," he said. "But today, with modern highways, people don't seem to mind driving a bit. You can build something a half hour to an hour outside the city and people will travel there if you give them a good product."

The rocky ground and relatively low budgets are the major roadblocks to building in Atlantic Canada. The weather is another problem. "We used to have nice summers and springs. Now you don't know what the devil you are going to get. We had the wettest weather in 140 years in 1996. And after June 20 of 1997, we had the driest."

On the plus side, the area is populated with good workers, friendly people, spectacular scenery and a Canadian dollar that provides good value for U.S. tourists. After cutting funds in recent years, Brown said, the government is increasing spending for good park projects.

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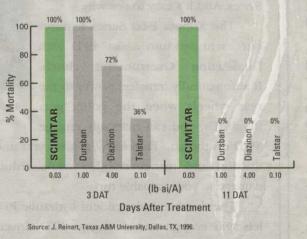
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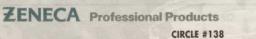
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BRIEFS



BERNARD ACQUIRES R.I. FACILITY

PORTSMOUTH, R.I.-Bernard Investments, Ltd., a Rhode Island development company that builds courses and residential subdivisions, acquired nine-hole Pocasset Country Club at auction for the price of \$1.15 million. The course had been in Chapter 11 bankruptcy for almost a year, and the auction was part of a court-ordered liquidation. The loan acquisition was negotiated and funded by Clubhouse Capital, a Rhode Island-based golf finance company which has worked with Bernard on previous deals. Bernard will complete about \$200,000 in improvements to the course and clubhouse. The course will be managed by Bernard Golf & Asset Management Company, a newly formed affiliate of Bernard Investments, Ltd. The management company is headed by Don Carpenter, formerly of American Golf Corp. and National Fairways, Inc. Bernard Investments, Ltd. is considering several other golf course acquisitions in the region.

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LAS VEGAS -Master Mind Communications, a leading marketing and Internet consulting firm, in conjunction with the newly formed

World Golf Association (WGA), has created a new marketing program for course and range owners to promote their courses worldwide called "Partners 4 Profit." Course owners who participate will have their courses listed as a WGA Member Course, have their courses promoted to all World Golf Association (soon to be 100,000+) members, get a free course listing and web-page link on the high traffic-MasterMind Sports "Golf Links - The Best Golf Courses To Play In The World" web site and more. For further information, contact Fred Conquest, MasterMind Communications, 9353 West Twain Avenue, Suite 165, Las Vegas, NV, 89117; telephone 702-363-1174.

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LUTHERVILLE, Md. - David Wells of the Sports Consulting & Finance Group of Legg Mason Real Estate Services has moved to 2330 West Joppa Road, Suite 375, Lutherville, Md. 21093; telephone 410-296-0701; facsimile 410-321-8049. GOLF COURSE NEWS

LEGAL CORNER

Harassment, discrimination part of golf workplace

By LAWRENCE ROGAK

oss, you had better think twice before commenting on how tight that co-worker's skirt looks, or passing around jokes based on race, sex or

national origin. You might have to reach deep into the company's coffers to pay for it.

Businesses have always had to worry about risk and lawsuits, but this was usually in connection with injuries. But now, injured

feelings can present a bigger economic hazard than injured bodies, and savvy business owners have no

choice but to familiarize themselves with the potential risks in this area and to put into place a set of rules to deal with it.

Lawrence N. Rogak is the principal attorney in The Law Office of Lawrence N. Rogak, a 10-attorney firm in Oceanside, N.Y. which specializes in defending businesses in liability lawsuits. His telephone number is 1-888-LET'EM SUE.

discrimination or harassment in the workplace have been turning in increasing numbers to the courts, where juries have, of late, shown an alarming willingness to award millions of dollars in compensatory

Employees who have been affected by real or perceived

damages for emotional injuries, even where the alleged victim has not shown any economic harm.

In any business, management must make it a goal to rid offensive behavior from the

workplace, and to have written procedures in place to respond to it when it occurs. The Courts usually decline to hold a company liable when it can provide documentary evidence that it complies with the law, even when an employee or supervisor has engaged in an offensive or discriminatory act.

There are three steps to creating an effective workplace policy that can help immunize employers from harassment/ Continued on page 50

PERSONNEL CORNER

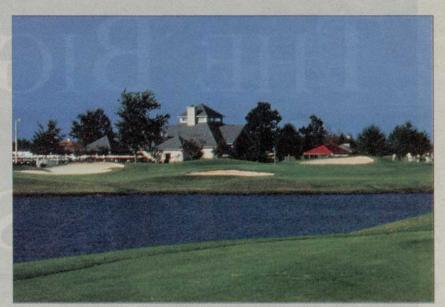
Our golfing guests have arrived By VINCE ALEONSO

The Bible has a lot to say about how you treat guests. The Orient has forever been known for its traditions concerning



guests. The word hospitality truly transcends all cultures and religions. To say that someone is hospitable, that they practice hospitality, is to pay them a wonderful compliment. And everyone loves to receive genuine

warm hospitality from their host or hostess. Don't you? I certainly do. Why, to be Continued on page 52



A GOTHAM ORIGINAL

Stonebrook Golf Club in Pensacola, Fla., is one of the first courses acquired by Gorham Golf Partners, April's management company of the month. For the complete story on the fastgrowing, 4-year -old firm, see the cover story on page 1.

Dakota Mgt. signs on in Sioux Falls

SIOUX FALLS, S.D. — The city of Sioux Falls and Dakota Golf Management, Inc. have announced the signing of a long-term contract for management services at the City's three municipal courses.

Dakota Golf Management, founded

by PGA Professionals Terry Comstock and Tom Jansa, has managed the courses since 1995 when the city of Sioux Falls decided to privatize operations at the courses. The new contract is for four years, with a four-year extension based on satisfactory performance by Dakota Golf.

'We are very pleased to be able to

continue our work with the city," said Terry Comstock, Dakota Golf's president. "The new contract will allow both the city and Dakota Golf to continue to make real improvements at the courses.'

The city owns three courses with a

total of 54 holes. Elmwood Golf Course is a 27-hole facility, with an 18 hole course designed by Larry Packard and a nine-hole layout that has been redesigned by Comstock and Jansa. Elmwood was listed on Golf Digest's original list of "America's 200 Tough-

est Courses.' Kuehn Park Golf Course is a par-30 executive course that opened in 1976.

The city's newest facility is Prairie Green Golf Course, which opened in 1995. The course has received nu-

merous honors. It was designed by Dick Nugent and built by Landscapes Unlimited

The three courses hosted more than 130,000 rounds in 1997.

Under the agreement, Dakota Golf will continue to manage all aspects of course operations. The courses are completely funded by user fees.

AGC's Price receives Humanitarian Award

SANTA MONICA, Calif.-American Golf Corp. Chairman of the Board and Chief Executive Officer David Price has received the prestigious 1998 Jerry Buss Humanitarian of the Year Award, in rec-

ognition of the company's many years of support for the Muscular Dystrophy Association (MDA) and numerous other local charitable organizations. Price received the



award, named after

Los Angeles Lakers owner Dr. Jerry Buss, on March 1 during the 11th Annual Magic Johnson Sports Star Award Dinner & Auction benefiting MDA.

The American Golf Foundation operates its "Adopt-A-Charity" program in which each of American Golf's courses develops a partnership with a local charity and organizes an annual benefit golf tournament or other special event. Proceeds, including green fees, cart fees and Continued on page 52





LinksCorp receives additional backing from investors

NORTHFIELD, III. — LinksCorp, Inc., a national golf course acquisitions, marketing and management company based here, announced a \$25 million investment in the company by AEW Partners II, L.P., an affiliate of AEW Capital Management of Boston.

This agreement with AEW will

provide LinksCorp with substantial growth capital to acquire up to 20 new courses over the next few years. LinksCorp altready owns and manages 19 private, semi-private, resort and daily-fee courses, primarily in the Midwest and Southeast.

Other LinksCorp investors include Chicago-based Batterson,

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Little in Greenwich and find out how we take the hazards

estimate of its value and the equity available to you.

RENOVATE

Johnson & Wang Venture Partners and William Blair Capital Partners, as well as J.P. Morgan Capital Corp. of New York and Norwest Venture Capital of Minneapolis.

AEW currently manages approximately \$6.2 billion of capital invested in over \$13 billion in property nationwide. The firm's clients include many of the nation's leading private and public retirement programs and endowments, as well as international and private investors.

LinksCorp also recently purchased River Islands Golf Club, located just east of Knoxville, Tenn.

Rated the No. 1 public course in Knoxville and No. 2 in the state, River Islands features numerous holes crossing or playing along the meandering French Broad River.

"We've been looking for some time to have a presence in Knoxville," said LinksCorp CEO, Ben Blake. "Having the No. 1- and No. 2-rated public courses in the state within one hour of each other gives us a number of crossmarketing opportunities to pursue. We also plan to aggressively grow the golf package business. And, we believe we can attract a number of local golf outings given the high-quality outing facilities at River Islands."

Planned improvements include turf, bunker and irrigation work. Improvements to the clubhouse are expected as well.

Barrett forms management co.

BIRMINGHAM, Ala. — Robert Barrett has formed Barrett Golf Management, Inc., a fullservice golf development and management company. Company activities include the acquisition and development of golf courses as well as construction and on-going operational management on a fee basis.

Barrett was recently Director of Golf Operations for Drummond Company, Inc., headquartered in Birmingham, Ala. While with Drummond he was responsible for planning and managing golf operations of Rancho La Quinta (Calif.) Country Club; Old Overton Club in Birmingham; and Grasslands Golf & Country Club in Lakeland, Fla.

Barrett is also a managing partner of the golf course at Kelly Plantation, in Destin, Fla.

Prior to joining Drummond in mid-1993, Barrett was vice president of Sun Belt Golf Corp., which built Alabama's renowned Robert Trent Jones Golf Trail, consisting of 18 premier public golf courses spanning the state from the Appalachian foothills to the Gulf Coast.

From 1977 to 1991 Barrett was manager and director of golf at Shoal Creek Club in Birmingham.

ST. PAUL UPGRADES COVERAGE

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ST. PAUL, Minn.-St. Paul Fire and Marine Insurance Co. has expanded and enhanced coverages for golf facilities to include municipal and daily-fee courses as well as private operations under Eagle 3, a property and liability insurance program for commercial policyholders. These golf facilities are eligible for Eagle 3 as long as the operation of the golf course is the principal business of the insured. "The expanded coverage and enhancements of Eagle 3 should make it easier for agents to do business with us and help us to grow in the marketplace," said Jim Schulte, St. Paul's executive vice president.

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interest rates. We lend and lease to all types of golf

course facilities, from daily-fee courses to member-

owned clubs and long-term leaseholders. When we

48 April 1998

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GOLF COURSE NEWS



Watts, Ritts elected as NGF directors

JUPITER, Fla.—Edwin Watts, president/chief executive officer of Edwin Watts Golf Shops and LPGA Commissioner Jim Ritts have been elected to the National Golf Foundation's Board of Directors.

The balloting took place at the recent NFG Board meeting.

In the election of officers, all four were re-elected. They are:

• Chairman — Robert Maxon, vice president/group publisher of Golf Digest-The Golf Company

• Vice Chairman — Scott Creelman, executive vice president of Spalding Sports Worldwide

• Treasurer — Joe Louis Barrow, Jr., president/chief operating officer, Izzo Systems, Inc.

• Secretary — Cindy Davis, senior vice president/business development, The Arnold Palmer Golf Company.

Creelman was also re-elected to another three-year term as a director, as was Allan Solheim, executive vice president of Karsten Manufacturing Corp.

The remaining board members, who were not up for reelection, are:

• Edmond S. Abrain, executive vice president of sales and marketing, Titleist and Foot-Joy World Wide

• Patrick O'Grady, senior vice president/golf business development, Spalding/Etonic

• George Peper, editor-inchief, GOLF Magazine

• Bob Rief, general manager, NIKE Golf

• Grant Spaeth, vice president business development, Golfweb

• Charles J. Yash, president/ chief executive officer, Callaway Golf Ball Co.

TPC at Wakefield names Davis director

NORTH RALEIGH, N.C. — Robert P. Davis has been named marketing director at the PGA Tour's Tournament Players Club (TPC) at Wakefield Plantation, the private golf club on Falls of the Neuse Road in North Raleigh.

Davis is responsible for corporate and individual membership sales, marketing collateral and strategy, and public relations for the TPC at Wakefield Plantation, the 21st facility in the TPC Network operated by PGA TOUR Properties Inc. of Ponte Vedra Beach, Fla. Davis previously served as national accounts manager for GTE Wireless in Cary.

The TPC at Wakefield Plantation features a course designed by three-time US Open champion Hale Irwin. Also planned is a 35,000-square-foot clubhouse. Both the course and clubhouse are scheduled to open in spring 1999.

Gotham Golf Partners Continued from page 1

isn't managing very well. It's kind of a reverse of the industry norm. We want to make sure our managers are spending time with their families. It's healthier for them and, in turn, they are happier people who give better service to our customers... The corporate rat race is not what we are after. But there is the opportunity to grow."

Members of GGP's management staff are largely graduates of KSL Fairwys, the Virginia-based course operator.

Before founding the Miami-based firm in 1994, Mays was vice president of operations with KSL Fairways for three years and director of operations at Doral Resort and Country Club in Miami for four years before that.

Vice President of the Southern Region Mark McCagg was KSL Fairways' director of business development and acquisitions.

Vice president of the Northern Region John Caporaletti was a regional manager with KSL Fairways.

Chairman Stephen Garchik's expertise is in the acquisition and financial arenas, having since 1987 been president and coowner of The Evans Co., a regional commercial real-estate and development firm

GGP acquired its first course on Dec. 13, 1996, and its second three weeks later. By the end of 1997, the firm's portfolio stood at five properties: California Golf Club (GC) in North Miami Beach, Fla.; Miami (Fla.) National GC; Stonebrook GC in Pensacola, Fla.; Montgomery National GC in Montgomery, Ala.; and BlackJack Bay Golf Links in Biloxi, Miss.

The company went on a buying spree in early 1998, acquiring eight courses and starting construction of a ninth in the space of three weeks. Added to GGP's holdings were Robindale GC and Lake Arbor GC in Prince George's County, Md.; Edgewood in the Pines GC in Pennsylvania's Pocono Mountains; Eagle's Nest Country Club (CC) in Sewell, N.J.; Wild Oaks GC in Salem, N.J.; Honey Run GC and Yorktowne GC in York, Pa.; and Greencastle Greens GC in Greencastle, Pa. The company also reached agreement to begin its first golf construction project in Port St. Lucie, Fla., with St. James Residential Developer to build, own and operate the Rick Smith-designed course as part of the St. James community.

"We don't have a definite plan to grow by 10 or 15 courses a year," Mays said. "We never went at it that way. Our plan is quite the opposite. We'll simply grow as fast as we can get good people in place. We'll be governed more by people than plan, equity, debt or whatever."

What differentiates GGP from other firms?

"We're going in buying," Mays said. "We're not looking to manage. We're specialists in turn-arounds. The first two courses we bought were definitely turnarounds and they turned around even more than we'd projected. When you do that, why work for just \$10,000 a month? We like to make an investment in time, effort and capital and realize a reward, from both the capital appreciation and annual revenues."

GGP's original name was Florida Golf Properties, reflecting the Southeastern location of most of its original five properties. As the company expanded up the East Coast, it searched for a new identity. Following this February's multi-course acquisitions, the firm changed its name in deference to Gotham Partners, the New York-based investment partnership that has capitalized much of GGP's growth.

"It's an equity fund that looks for projects that are under-capitalized with good management. That's basically what we were when we found each other," Mays said.

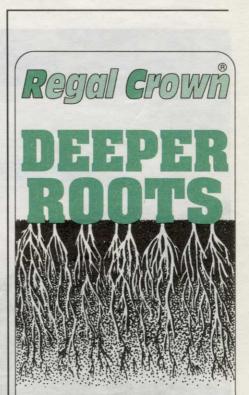
While many industry experts say most of the easy-turnaround properties have been bought up, Mays disagrees.

"There has traditionally been very little financing available for non-cash-flowing properties," he said. "If you tried to go to golf lenders today, unless you're a proven operator, you won't be able to get a project financed. But there are still a bunch of turn-around properties available... We get calls every day from areas we're not in. The reason we won't go is because we don't have the extra people within our system. We could grow by 25 courses year if we wanted. But that would be foolish."

Asked if GGP is either putting itself in position to be acquired or looking to acquire another major course operator, Mays replied: "We definitely have the equity and debt lined up to go that route. But none of the private guys can compete with the public funds. The cost of their money is so much less than ours, i.e. Meditrust, National Golf Properties, Golf Trust of America. Public money, where you are paying a 5- or 6-percent dividend, is obviously a lot less than we have to pay.

"It's still very much a cottage industry. There are more than 15,000 courses with less than 1,000 that are professionally managed. That means we [professional operators] are not even at a 10-percent market share, even with everything that's going on. There's plenty of opportunity for everyone. There will be a consolidation. The public companies are in the driver's seat. But the REITs (real estate investment trusts) still have to have course operators."

The Mississippi River is the company's westward geographic boundary. GGP would also consider any type of course. It currently operates semi-private and dailyfee layouts and will start construction of the private, St. Lucie, Fla. project in the next six months.



MINIMIZE DRY WILT AND WINTER DESICCATION

Golf Course Superintendents, Turf Grass Managers, Sod Grass Growers and Nurserymen are praising the results of Regal Crown.

Regular use of Regal Crown root growth stimulator exhibits phenomenal results. Turfgrass types such as bermuda, bent, zoysia and others develop more roots that are healthier and penetrate deeper. More roots imbedded deeper into the soil means better nutrient and moisture up-take creating thicker, greener tops.

Regal Crown is a blend of hormones specifically designed to promote root growth in turfgrasses and ornamentals. Used regularly, Regal Crown roots can minimize hot weather dry wilt stresses and winter desiccation.







Harassment

Continued from page 47 discrimination liability. First, the company should implement a formal and rigorously enforced anti-

harassment policy with procedures through which employees can voice complaints. The policy should be distributed to all employees and explained verbally. Second, the employer should conduct a prompt investigation of all harassment complaints, coupled with immediate and appropriate corrective action to remedy the situation. All this should be documented. If economically feasible, the investigation should be conducted by independent counsel, not company management. This creates more of an air of objectivity in case litigation follows, and information gathered by independent counsel is far less likely to be subject to disclosure than information gathered by management. A company's business records are usually "discoverable," i.e., they must be disclosed to a plaintiff's lawyers; while information gathered by your attorney is usually "privileged," or secret. The alleged victim should be interviewed as soon as possible after the incident. The interviewer should take detailed notes. Witnesses should be identified and questioned until the circumstances are sufficiently clear and reasonable conclusions can be drawn. The offender should be given the opportunity to



123

The Medalist is a unique course with twelve acres of dwarf Bermuda and thirty-two acres of Greg Normans new GN 1. ROOTS 1-2-3[™] Premix gave me the balanced nutritional program all in one container. ROOTS 1-2-3[™] sure made it easier to maintain the quality of turf we are looking for here at the Medalist. ROOTS 1-2-3[™] makes a difference.

> *Tim Rappach* Superintendent Medalist Golf Club

RDDtSinc. 3120 Weatherford Road • Independence MO • 800 342-6173 CIRCLE #142 respond promptly. And any remedial action taken should not punish the victim, such as an unwanted transfer or reassignment. The offender should be given appropriate sanctions; a mere request that he/she refrain from such conduct in the future is not enough.

The sanctions must be appropriately severe so as to show that the behavior will not be tolerated. Yet, sanctions that are too severe are likely to result in lawsuits as well.

Third, the employer should implement a standardized system to document that it has complied with the law by utilizing appropriate preventive and corrective measures. These should include: (1) written policies on harassment; (2) proof that these policies have been distributed; (3) formal notice of the grievance procedure; (4) written and signed witness statements and interview memos; and (5) a summary statement of the results of the investigation and the remedial action taken. An employer should be able to demonstrate that it has handled all harassment complaints in a systematic and consistent manner.

Unfortunately, discrimination and harassment lawsuits are often used by disgruntled or fired employees for revenge. Such lawsuits can follow the end of an office romance; a dismissal based on poor performance; or because the plaintiff is unusually sensitive. But sometimes the harassment is real and the lawsuit has merit.

Insurance companies are beginning to offer policies to protect businesses from harassment suits. However, coverage is usually limited to the acts of supervisors or coworkers which was not known to, nor condoned by, management. Such insurance is well worth looking into, as it provides legal counsel. The cost to a business of hiring specialized counsel to defend discrimination suits can be very high. And in the American legal system, the defendant pays its own legal costs, even if it wins the suit.

The field of discrimination law is new and evolving rapidly. The Equal Employment Opportunity Commission (EEOC) is always busy writing new regulations which prohibit an ever-wider range of behavior, giving more and more people a basis to sue.

Businesses must evolve defenses which will enable them to survive this new and potentially destructive form of risk.

April 1998 49



Palmer adds \$100m in course acquisition funding

SAN FRANCISCO, Calif. — Arnold Palmer Golf Management LLC has closed on a \$100 million acquisition loan facility with Credit Lyonnais-New York Branch, as agent and arranger, and jointly underwritten with Wells Fargo Bank, NA.

This new acquisition line allows the company to add additional courses to its expanding portfolio and continue its growth. Last October, Palmer Golf acquired eight courses around the United States and plans to add another 20 to 30 in 1998. Palmer Golf operates about 30 courses in the United States and Europe.

Pascal Poupelle, executive vice president and head of U.S. investment banking for Credit Lyonnais, said, "In addition to the company's strong management team, we believe Arnold Palmer Golf Management's prospects are further enhanced by their affiliation with Olympus Real Estate Corporation, the real estate investment affiliate of Hicks Must Tate & Furst, whose industry expertise in consolidat-

Nicklaus starts tee time service

CHARLOTTE, N.C.—Ticketmaster Golf, a joint venture of Ticketmaster Group, Inc. and Golden Bear Golf, Inc. have announced agreements to provide advance tee-time sales for 20 Myrtle Beach, S.C. courses.

The agreements are with the Premier Golf Group, which markets a group of leading courses in Myrtle Beach, the initial market targeted by Ticketmaster.

Ticketmaster Golf will use Ticketmaster's proprietary computerized distribution system to sell tee times to golfers by telephone and through the Internet. The joint venture expects its service to become operational in 1998 for many additional golf courses across the country.

"One of Premier Golf s key goals is to attract new players to the Myrtle Beach market," said Chip Smith, executive director of the Premier Golf Group. "We believe this agreement with Ticketmaster Golf — which will bring their convenient and powerful sales system to our golf courses — greatly enhances our level of services and will appeal to golfers considering our destination."

Golden Bear Golf, Inc. is a diversified, international brand name golf products and services company. Ticketmaster is a major computerized ticketing service, selling nearly 70 million tickets a year through 2,900 retail ticket center outlets, 26 telephone call centers, and an Internet site.

GOLF COURSE NEWS

ing industries is world renowned."

According to George Haworth, chief financial officer of Palmer Golf, "We immediately financed six courses through the credit facility and in the future, expect this credit line to support other ventures sponsored by Palmer Golf and other top golf operators."

...

In other Palmer news, the firm appointed David Baker midwest regional director of business development. Baker, who will also handle the north central United States, comes to Palmer Golf from Keller-Williams, a realestate firm where he served as director of franchise sales and development. Prior to that, Baker was vice president of a 15-state region at Century 21 Real Estate Corp.

Palmer has also added its second franchisee, White Hawk Country Club scheduled to open in late June in Crown Point, Ind. "They've helped us with everything, from the design process right through to course operations," said Jack Slager, vice

D LID

president of White Hawk Development Corp.

"Palmer helped us find, interview and hire a superintendent; they've also assisted in locating and sizing up candidates for general manager."

Designed by Tim Nugent of Dick Nugent and Associates, White Hawk is the second facility to become a Palmer Golf franchisee.

The best ball washer has our name on it and now it has yours. Order nine or more Standard Golf ball washers and you'll receive

FREE one-color laser engraving of your club logo. Head-to-head tests have shown that players prefer the Standard Golf ball washer because the crank action is easy to use, splatter-free and washes four balls at once. You'll appreciate its leak-free durability and easy maintenance. And be sure to compare prices. Standard Golf is

still your best ball washer value, and now it's personalized for FREE.



Talk to your Standard Golf distributor today. Or call 1-319-266-2638 for more information.



Alfonso

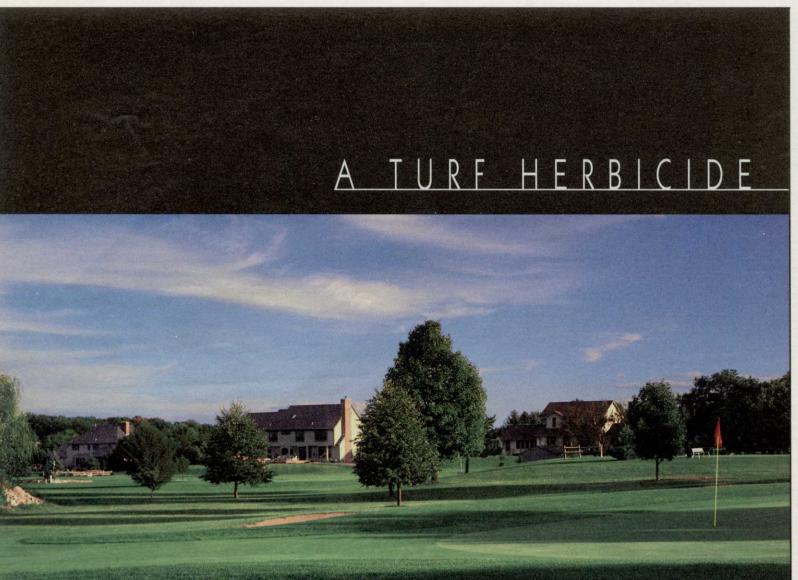
Continued from page 47 imade to feel as though I am intruding or that I am in the way is downright uncomfortable. I can assure you that when, as a guest, I am made to feel that way, I have only one thought on my mind... "Get me out of here."

The big question for course owners and managers is really quite simple. Is your customer a guest? For me, the answer is as simple as the question. Yes.

Let's think about this for a minute. The game of golf is a recreational activity for the golfer population of the world. People choose to play golf. *(Stay with me on this)*. In spite of what some people think, people do not have to play golf. People choose to play golf and they choose where they are going to engage in this activity. They do not need our product or service. We, in the golf business, are not selling fossil fuel. We are selling recreation and our customers have a plethora of recreational options from which to pick. Therefore, when golfers choose to come to play golf at our establishments, I believe we should be most thankful and should treat each and every one of them as we would treat a guest in our own home.

Okay, Vince, my customers henceforth will be known as GUESTS. Now what?

This is the fun part. Treating customers as guests is really quite simple. First, we start out like we do at home, by cleaning the bathrooms spotless and by providing the best toilet paper and paper towels on the planet. (Would you want your guest using tree bark? I



YOU CAN LIVE WITH

As a golf course professional, it's your responsibility to make the right choices. Right for the turf, and for the people who enjoy it. One way to meet that responsibility is with Dimension[®] turf herbicide.

Dimension provides season-long control of crabgrass and over 20 other tough grasses and weeds, with excellent safety on established turf. And Dimension does it without staining, or harming adjacent ornamentals. That means no more weed "fringes," because you can apply Dimension with confidence right up to the turf's edge, even around walks, drives, and landscaping.

Dimension's low use rates and favorable environmental profile mean less worry. The active ingredient features very low toxicity to mammals, birds, and insects. Plus it bonds to soil particles instead of leaching into groundwater. Dimension offers the widest application window-6 weeks more than other preemergence products. That lets you delay application for optimum control of goosegrass and other weeds. And split applications can stretch control even further for areas with long growing seasons. It all adds up to a turf herbicide that only weeds find hard to live with.

Call 1-800-987-0467 or visit us at www.dimensionpro.com to learn more.



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

think not.) Clean the shop. Clean the golf cars. Clean the pull carts. Clean the snack bar. Clean the restaurant. Clean the golf course equipment. Clean the golf course. Put on your best clothes.

Splash on you finest cologne. Warm up your smile. Make some fresh coffee. Put a log on the fire. And most of all, thank them for coming to see you. Thank them and thank them some more. You see, customers truly brighten our day and make our business what it is. Why without them, our business would simply disappear.

"OUR CUSTOMERS ARE OUR GUESTS AND SHOULD BE TREATED ACCORDINGLY."

Put this little sentence by your time clock, in your break room, on your employee's paychecks, on your office wall and then act accordingly. Talk at length with your employees about this concept. Help them understand that making customers feel like guests, extending to them warm and genuine hospitality, will make their decisions as to where they choose to recreate much easier. Believe me, golfers will always choose to play where they are made to feel welcome and appreciated.

Please excuse me. I have to run. Our guests have arrived. I'll see you next month. Thanks for reading.

AGC's Price Continued from page 47

donations from hole and tee

sponsorships, raffles and auctions, are given directly to the charity.

Since the Adopt-A-Charity program's inception in 1985, American Golf has raised more the \$14 million for local organizations including MDA, Special Olympics, the Make-A-Wish Foundation, Toys for Tots, children's hospitals, March of Dimes, Boys and Girls Clubs, Hispanic Scholarship Programs, senior citizen centers, centers for abused and neglected children, and disabled services. In 1997 alone, the program raised more than \$4 million.

Additionally, American Golf recently announced an alliance with MDA in which the company will host charity golf tournaments as its courses, as well as offer a rebate program in which the company will donate a percentage of green fees and cart fees generated through MDA charity events staged at its courses.



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HORIZON PROMOTES DILLER

TEMPE, Ariz.-Tempe-based Horizon, one of the nation's largest suppliers of integrated turf-care and irrigation solutions, has promoted Lee Diller to regional sales manager of the metropolitan Phoenix area. Diller, an em-



ployee of Horizon (formerly known as Mesa Sprinkler) for the past 12 years, most recently was the manager of Horizon's Scottsdale location. In his new role, Diller

will be responsible for developing new business opportunities as well as supervising customer service and training throughout the Greater Phoenix area. Horizon is a distributor of Rain Bird, Jacobsen, E-Z-Go, Irritrol and Hunter products,

BOWDEN TO HEAD LASCO PERSONNEL

BROWNSVILLE, Tenn. - LASCO Fluid Distribution Products has named Rick Bowden its new human resources manager. Bowden has more than 20 years experience in personnel management, employee relations, training and safety with such companies as GW Composites, Emerson Electric-Motor Division, General Tire and Rubber Co., and Hall Printing Co. of the Mobil Corp. His education includes bachelor's and master's degrees as well as post-graduate work from the University of Tennessee. Located in Brownsville, LASCO is one of the largest manufacturers of PVC pipe fittings in the United States.

FACTS FROM ZENECA FAX LINE

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WILMINGTON, Del.-Pest-control and turf-management product information from Zeneca Professional Prod-



available by facsimile. Call 1-800-640-2362 toll free,24 hours a day, seven days a week, for quick re-

ucts is now

trieval of documents on any fax machine. Product information will be promptly sent directly to a fax machine. Customers can receive product labels, Material Safety Data Sheets and Worker Protection Standard requirements for products currently offered by Zeneca Professional Products. GOLF COURSE NEWS

SUPPLIER BUSINESS

Less fire, more science for Ore.'s grass growers

By KATHRYN BARRY STELLJES

ORVALLIS, Ore. - Farmers in the Pacific Northwest grew over a half-billion pounds of grass seed in 1995 - most in Oregon's Willamette Valley. Several species of ryegrass, fescue and bluegrass make up most of the turf and forage crops. But growing the seed is getting tougher. After 1997, Oregon seed growers can use their most important farming tool — fire — only on a very limited acreage.

Field-burning each year after harvest controls weeds, removes leftover grass straw and destroys diseases, including growers' nemesis, blind seed disease. Infected plants look normal, but many of the seeds won't germinate.

'Blind seed disease was inadvertently introduced, most likely from New Zealand, in the 1930s," said plant pathologist Stephen Alderman of the National Forage Seed Production Research Center, part of the USDA's Agricultural Research Service (ARS).

"By 1944, about 90 percent of the seed fields were infected, and only 13 percent of the seeds in some ryegrass crops germinated. Burning fields between harvests completely controlled blind seed disease and is largely credited with saving the state's grass seed industry," Alderman said. In 1995, grass seed ranked fifth in agricultural production for the state, worth \$236 million.

Jack Pimm, a third-generation grass seed grower, heard his grandfather and father talk about blind seed disease when he was a child. But in 1995, he saw the devastation first hand in his field near Halsey.

'Only 70 to 75 percent of the seed germinated. That was unheard of," he said. The seed was from Pimm's 1994 crop, grown in a field that had not been burned for six years. Through the Oregon State University Extension Service, Alderman heard of the problem and came in to help discover the cause.

Sure enough, we had blind seed disease," Pimm said. To stop the disease in its tracks, he burned four of his fields and adopted new management techniques. Fortunately, Pimm was able to sell his seed — but at a substantial loss.

If field burning is so effective, why are growers phasing it out?

As the valley's population expanded in the 1960s, residents began to complain about the smoke-filled summer air. But it was a tragic accident that set the stage for changing growers' management practices.

"In 1988, smoke from a wildfire-believed to have started when the wind blew burning grass straw out of control-

Continued on page 57

Toro, Grizzle settle lawsuit

BLOOMINGTON, Minn. - The Toro Company and Grizzle & Hunter Plastics, Inc. have settled a lawsuit related to irrigation products.

Toro brought suit against former Toro employee Glendale Grizzle and Grizzle & Hunter, a company formed by Glendale Grizzle.

Toro alleged that Grizzle and Grizzle & Hunter used Toro trade secret and proprietary information in its line of irrigation products.

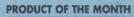


Hunter denied any use of Toro information.

The matter was settled for an undisclosed sum paid by Grizzle & Hunter's insurer, coupled with an agreement by Grizzle and Grizzle & Hunter to maintain the confidentiality of information Toro claims is trade secret or proprietary.

The settlement does not require Grizzle & Hunter to cease the manufacture or the sale of its conversion assembly.

The case had been set for trial in March 1998 before a federal court in Los Angeles.





Fairway single-rider golf car.

Single-person golf car may help speed up play

WAUKESHA, Wis. - Fairway Golf Cars, a division of Ortho-Kinetics, Inc., is introducing the Fairway 8000 Single-Rider, a golf car that allows each golfer to follow his own ball rather than waiting for his riding companion before continuing play.

In development for four years, the Single-Rider features a dual motor drive, a 48-volt power system with transaxle, maintenance-free AGM batteries, and a dynamic braking system which offers smooth deceleration as well as continuous recharging during braking action.

"Twenty years ago, getting on and off a course in four hours was a bad day," said John Perez, director of sales and marketing for Fairway. "Now it's a miracle."

By changing to a single-rider format, the company believes it eliminates the biggest problem ever caused by two-person cars: the wait.

Currently, courses strive - on a very good day- to return players in about 4-1/2 hours, roughly 15 minutes per hole. But that's a lot of work, according to Perez, who says such efforts can mean having to monitor pace of play and using starters to get people off the tee.

'And what has happened is they have to run in 7- or 8minute tee times. They can't go any shorter because there's a funnel effect," stated Perez.

Continued on page 55

King, Ideal reach patent deal

ST. CHARLES, Mo. - Herb King, president of King Safety Products of St. Charles, and David Juday, chairman of IDEAL Industries, Inc. of Sycamore, Ill., have reached agreement to settle the patent infringement lawsuit filed by King against IDEAL in February 1996.

While details of the final agreement are confidential, King and IDEAL will each manufacture and sell several sealant-filled connector products under King's U.S. Patent B1 5,113, 037 and any related North American patents.

The 037 patent remains in force, and relates to twist-on electrical connectors prefilled with non-hardening sealants. Such connectors are suitable for a variety of direct burial, wet, corrosive and aluminum to copper applications.

Both Herb King and David Juday are pleased with the amicable settlement and look forward to working together for broader application and increased acceptance of prefilled twist-on connectors in a variety of markets.

Grizzle and Grizzle &



Toro unveils latest triplex trim mower easier to service. By putting the

BLOOMINGTON, Minn. — The Toro Co. introduced an innovative new trim mower during the recent Golf Course Superintendents Association of America International Conference and Show.

The new Reelmaster triplex trim mower has a comfortable design, Toro-patented traction system and shifting reels that are significant improvements over many reel-trim mowers.

"With this product we want to offer superintendents a next generation of triplex trim mowers," said John Wright, Toro's golf marketing manager for equipment. "It is a product that performs better in the grass, is easier to operate and is also easier to service. By putting the operator in front and the engine in the rear, we significantly improved operator comfort and ease of use, while dramatically improving service access."

To improve trim mower performance while cutting grass, Toro has developed two innovative features. The first innovation is Toro's patented Series/Parallel threewheel-drive traction system, which provides power to at least two wheels at all times. "The Series/Parallel system provides superior traction on hillsides and in wet turf, improving climbing capabilities and minimizing the turf damage that occurs when a tire spins," Wright said.

The second innovation is the ability to shift all three cutting units side-to-side, a total of 24 inches, while cutting grass. "For many years, customers have told us that they needed more overhang on their trim mowers for mowing around bunkers and other obstacles," Wright said. "The ability to shift the reels greatly increases overhang on each side, and it also allows the operator to shift the tire tracks within the cut swath."

For more information , contact Toro at 612-888-8801. CIRCLE #201

Ransomes adds to Greensplex II

LINCOLN, Neb. — The new Ransomes Greensplex II triplex greens mower contains many design features for enhanced performance, productivity and ease of service. The mower is the newest version of the Ransomes Greensplex 160.

A patented center reel conveniently pivots out from under the Greensplex II for easy servicing. The center reel also has an automatic time delay to prevent accidental cutting into the collar of the green. Other major product enhancements to the Greensplex II include:

• A patented stabilizer linkage leveling the cutting units parallel to the ground during raising and lowering to help ensure an even cut and smooth finish over undulating terrain. Additionally, it eliminates bouncing of the cutting heads during transport.

• "Tandem" hydrostatic and reel pumps are directly driven from the engine. The reliable new pumps eliminate the need for belts and pulleys, greatly diminishing noise, vibration and maintenance.

• Two new engine choices, both of which help reduce the overall weight of the mower, are available: an 18-hp, gas-powered Kohler air-cooled unit, or a 18.8-hp diesel Kubota D722, liquid-cooled engine. Both engine models meet CARB regulations for emissions.

• Dependable electric solenoid valves in the hydraulic system eliminate the need to lubricate linkages. The valves also reduce the number of parts and help cut down on the amount of time normally spent servicing a hydraulic system.

The 22-inch steerable floating cutting heads provide a total cutting width of 62 inches. The interchangeable reels, which are available in seven-, nine- or 11-blade configurations, can cut at heights from 0.1-inch up to 0.62-inch — or to 0.078-inch with an optional tournament bedknife. Mowing speed can be adjusted to ensure a consistent clip rate and cutting height.

For more information contact Ransomes America Corp., P.O. Box 82409, Lincoln, NE 68501; telephone 800-228-4444. **CIRCLE #202**

CIRCLE #202

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Bacteria system treats ponds

NORTHBROOK, Ill. - The Cycle System is a new concept in pond management, utilizing super-concentrated formulations of enzymes and bacteria to correct specific aquatic problems. The Cycle System was scientifically formulated to remove algae-supporting nutrients and excessive sludge buildup. This easy-to-use system packs a powerful onetwo punch consisting of two separate, but complementary, products: Spectrum and Devour. The Cycle System is a cost-effective biological tool for long-term improvements in lakes and ponds.

Both Spectrum and Devour contain specialized bacterial strains plus prepackaged biostimulants that work as power packs to enhance enzyme growth and cell reproduction. Together these products provide a pond management program using 100 percent natural ingredients that require no special handling, storage or use permits.

Spectrum pre-emptively digests excess nitrogen and phosphorus in the water column, quickly eliminating the algae's primary food source.

Dead algae from pesticide treatments, fish and fowl waste and fallen leaves are all sources of sludge accumulation on pond and lake bottoms. Left untreated, sludge will re-release nitrogen and phosphorus into the water, feeding the next algae bloom. This also can cause offensive hydrogen sulfide odors and murky water. Devour accelerates the decomposition of sludge and other partially decomposed

Golf Car

Continued from page 53

Fairway asserts the Single-Rider can improve pace of play by an average of about 25 percent, which means the average round drops from 4-1/2 to 5 hours to approximately 3 1/2 to 3 3/4 hours.

"If you can go from 7- to 8minute tee times to six-minute tee times, that is an unprecedented capacity that the golf industry has never seen before using golf cars," added Perez, "because that is eight more players than they can currently run right now under an excellent, best-case scenario every hour."

Charlie Stine, editor of *Florida Golf*, who tried out four of the cars on his home course at Sea Air Country Club, feels singleperson golf cars offer two main advantages: speeding up pace of play and putting down less weight on turf.

"I'm not necessarily advocating this brand," said Stein, "but this is the best single-rider car I've seen by far."

GOLF COURSE NEWS

material by consuming organic compounds in the sludge layer.

Spectrum and Devour are packaged in 1/2-pound, water-soluble packets and are used at rates of 3 to 6 pounds per surface acre initially, followed by a maintenance treatment or 1.5 to 2 pounds per surface acre every two weeks. **CIRCLE #203** Standard's new flagsticks more visible

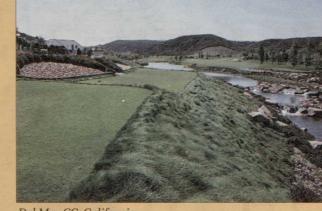
Standard Golf Co., a leading manufacturer of golf course accessories and maintenance equipment, has introduced the new FireStik line of flag sticks.

NEW PRODUCTS

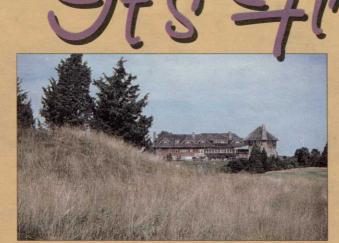
Custom-crafted with a highly reflective coating, the stripes on the FireStik reflect sunlight to enhance visibility and lend a unique flair to the course. Designed to meet the same standards of quality and durability of all Standard Golf flag sticks, the FireStik's unique 7-1/2-foot height helps provide a clear view of the hole placement. The FireStik is available in several color combinations.

For more information on the new range of FireStik flag sticks, contact Standard Golf Co., P.O. Box 68, Cedar Falls, Iowa 50613-0068; telephone 319-266-2638.

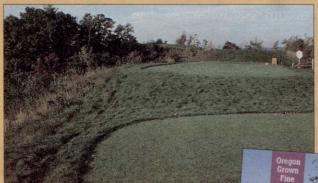
CIRCLE #204



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Write or call today for your copy of the new Oregon Fine Fescue: The Dunes Grass brochure with photos and management tips. More and more architects, agronomists, and superintendents are saying:

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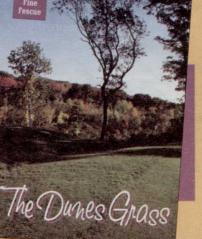
with 1

Fine fescues are a great part of golf history — since the Scottish Links of olden times were carved from fescue covered dunes.

Now, what has become fashion is simply retracing the roots of golf. Whether adding excitement to bunkering, grassing around wetlands and wooded areas, or creating low maintenance roughs; fine fescue is the choice of savvy architects, designers, and superintendents.

Oregon grown Chewings and creeping red fescues will add shade tolerance and low maintenance to Kentucky bluegrass and perennial ryegrass mixtures.

So, no matter where you use it or how you cut it, fine fescue is making history — *again*!





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Mowers

Continued from page 1 9016 Turbo was to make routine maintenance and service as easy as possible," said Bill Potter, Jacobsen product manager.

In meeting that goal, the mower is constructed with no pulleys, idlers or belts, and uses all-hydraulic drive to the three cutting decks to assure efficient, reliable operation requiring lessfrequent service.

Potter added that the product meets the need for peak mowing productivity at golf courses, parks, municipal grounds and sports fields.

Originally designed to meet the needs of European sports fields and golf courses requiring a high-precision, multi-purpose mowing machine, Toro's Grounds Pro (TM) 2000 is ex- fixed-head or an

pected to fit nicely into U.S. markets as well.

Featuring easy-to-reach controls and rear steering to ensure maximum maneuver-

ability, the Grounds Pro utilizes reel cutting units to provide superior quality of cut. Available with either a five-blade eight-blade floating head, the cutting units raise hydraulically to accommodate tight spaces and narrow gates.

In addition, the Grounds Pro Quick Link (TM) A-frame attachment system allows for a wide variety of attachments, converting the machine from a preci-

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sion reel mower to a rotary broom, dump cart, fertilizer spreader, sprayer, debris blower, or snow plow.

"We've touted it as a total grounds maintenance system for a grounds area that has multiple kinds of turf to maintain," said Jody Walsh, public relations spokesperson at Toro. "If you're a golf course that really needs this kind of a utility vehicle, it's a nice fit.'

Moving in a different direction, Ransomes has delivered the industry's first electric triplex greens mower, the E-Plex II.

According to Peter Whurr, director of marketing at Ransomes, the company has taken the firstgeneration E-Plex machine and enhanced it per users' requests, with refinements such as an improved green speed. Now, for instance, regardless of whether it's going uphill or down, the mower maintains the same speed, producing a uniform clip rate.

The company also reports having improved operational characteristics of the product, such as making it easier to steer and placing the whole tractor on a true 48-volt system, so the battery maintains full discharge across all cells.

Of course, because it's batterypowered, it's also environmentally friendly. No pollution into the atmosphere, no noise, and none of the issues normally associated with greens triplex mowing, like hydraulic oil leaks or extensive engine maintenance.

"And because there's no noise coming from it, if you're in a noise-sensitive area, you can still get out early in the morning to cut greens without disturbance to any residents in the area." said Whurr. "Now, if you're able to do that, the course can open earlier and you can get more rounds of golf into the course earlier on.'

John Deere's 2500 Triplex Greens Mower was also introduced in February. Primarily intended to mow golf course greens, the machine also mows tees, approaches, and some small fairways.

"What we've tried to do is design the machine around the operator so it's as easy as possible to operate," stated Nolan Meggers, John Deere product manager.

"This way, they can make nice straight lines on the green, and it does a very effective job of giving a good, quality cut.'

Meggers added that the company also tried to keep serviceability at the forefront of the design so that whether a technician is performing routine maintenance or simply performing a daily check, "it's very easy to do."

SUPPLIER BUSINESS

Field burning Continued from page 53

covered Interstate 5 south of Salem," said David Nelson, executive secretary of the Oregon Seed Council. "A chain collision resulting in several deaths and injuries mobilized the industry, legislators, and the public to negotiate a phasedown of field-burning."

Before 1991, growers burned up to 250,000 acres per season in the valley. The allowable burned acreage has decreased incrementally since that time and will be limited to 40,000 acres, plus up to 25,000 acres of steep terrain as identified by the Oregon director of agriculture.

Grass seed farmers in eastern Oregon, Washington and Idaho may face similar restrictions in the future.

At first, growers worried that instead of diseases and weeds, their businesses would go up in smoke.

"The industry was very uncertain it would be able to make the change," Nelson said.

Alderman and other ARS, university, state and private researchers are helping grass growers produce a viable seed crop.

"Now there's a feeling of confidence that we've solved enough of the problems to produce the same quality of grass seed without burning all our fields," Nelson said. "ARS has greatly helped the industry make that transition."

But the challenges are ongoing: the return of diseases, contamination of the seed crop by weeds, and a million tons of straw left each year after harvest.

ARS scientists are working hard on all three fronts. Alderman has monitored fields since 1988 to detect flare-ups of blind seed and ergot, another serious fungal disease that also destroys flowers and seeds.

"Early detection and treatment are very important to prevent the sudden increase and spread of diseases," he noted. No chemical treatments effectively control these diseases, but Alderman said specific plowing and planting techniques should keep them largely at bay without routine burning.

Two new lines of tall fescue will help growers combat another disease, stem rust. This rust attacks the stems and leaves, rather than the flowers, and can reduce seed yields by as much as 80 percent, said ARS plant pathologist Bill Pfender.

Growers spend nearly \$27

GOLF COURSE NEWS

million annually on fungicides to control stem rust on grass seed crops. The new tall fescue lines resist rust disease up to 10 times better than existing varieties. In laboratory tests, more than half of the plants from the new lines showed rust resistance, compared to only 5 percent of plants from older cultivars. ARS geneticist Reed E. Barker and plant pathologist Ronald E. Welty, who is retired, developed the fescue lines.

"Increasing the number of plants in a variety that are resistant to stem rust can stop or slow development of a disease epidemic," says Barker.

Managing weeds, certifying seed

Unlike most crops, grass is often its own worst weed.

"Grass plants are not neat

and tidy like wheat or corn," said ARS agronomist George W. Mueller-Warrant. "Tillers and seeds on the same plant mature at different times, and there's no way the grower can get all the seed to the same ripeness simultaneously."

Growers time their harvest to get the best yield. But previously ripened seed heads that have shattered and tiny seeds that fall through the combine can mean that up to one-fourth of the total seed production lands back on the field.

"Many of the grass seed crops are perennial, and anything that germinates among the established plants is undesirable," Mueller-Warrant said.

SPEED BOSS

ENTION THAT

Continued on next page

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Field burning Continued from previous page

The reasons are genetic. About half of Oregon's seed is produced under a certification process managed by Oregon State University.

To participate, growers submit requests for each field they want certified. Then the Certification Service reviews crop production records and conducts a series of field and laboratory evaluations. If the field meets the review criteria, it can be certified.

"The industry has more than 1,250 varieties of grass seed eligible for certification, and about half of those were in production in 1996," said Ronald Cook, head of the Oregon Seed Certification Service. "Our job is to ensure that the customers are getting the variety and product performance that they are expecting."

Growers, in turn, can command higher prices for their seed and reach expanded markets by growing certified seed.

One obstacle to certification is genetic contamination.

If a seed falls off the grass plant and germinates, it is the

progeny of the original plant. "These 'children' are weeds," said geneticist Barker. He notes that grass is windpollinated, so the parent and seedling are easily crossed. "This crossing may cause unwanted genetic shifts."

is working with Cook to

determine if these standards

make sense from a genetic

DNA markers, Barker is

likely over time, so weed

sary

standpoint. Using molecular

examining how much genetic

shift is actually taking place.

But at least some shift is

control will always be neces-

"At the same time as the

U.S. Environmental Protection Agency or that were taken out of production because of

environmental concerns. His tests show three as the most promising: oxyfluorfen,

metolachlor, and pendimethalin. The first received an emergency registration under the tradename Goal in 1989. Mueller-Warrant said that chemical best controls a large flush of weeds germinating

after heavy rains.

as Prowl.

said

stands.

Metolachlor, known under

"Pendimethalin will probably be the most useful for the grower. In field tests, it

provided close to 100 percent

control of seedlings with little crop injury," Mueller-Warrant

Biological control also looks promising for controlling

annual bluegrass weeds in

ryegrass and tall fescue crops and in cheatgrass or downy

brome, a noncrop grassy weed

infesting Kentucky bluegrass

ARS soil scientist Lloyd F.

have discovered weed-killing

"In laboratory and growth-

provided virtually 100-percent control of the undesirable

ready to test six of the bacteria

While the burning phaseout increased weed and disease

problems, it also gave growers an entirely new—and perhaps

bacteria that live naturally

chamber tests, the bacteria

species," Elliott says. He's

What to do with residue

in the field.

among the plant roots.

Elliott and colleagues in Corvallis and Pullman, Wash.,

the tradename Dual, was registered last year. The last and newest will be registered

growers lost field-burning, they lost several of the chemicals they were using on weeds," said Mueller-Warrant. He's studied over 20 alternatives to the herbicides that were not reregistered by the

Cook said that in most crops, more than 1 or 2 percent genetic contamination can jeopardize certification. Barker

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harvest, a blanket of plant stalks, or straw, covers the field. Burning eliminated the straw and stimulated regrowth **Continued on next page**

Hurley letter

Continued from page 10

researching various aspects of grasses specially selected for use on golf course putting greens. Additionally, I have attended more than 100 professional tour events, caddied on the pro tour in the late 1960s, and worked on maintenance staffs in preparation for major championships.

Frankly, what you hear on TV about "up grain," "down grain," "grain growing east to west," "grain growing towards Indio," and other statements are oversimplified and, in most cases, misleading. What TV watchers need to hear is more, "up hill," "down hill," "side hill," and less "grain," "grain," "grain" from the commentators.

Let's look at the facts about how turfgrasses grow. Some people may have noticed on putting greens, especially on older courses, distinct patches of grasses, most ranging in size from 3 to 5 feet in diameter, displaying different colors and textures. These segregate patches of grass may produce an orientation of leaves and stems in a certain horizontal direction that we call "grain." This "grain" may influence the direction of a putt, especially as the ball slows down near the cup. However, this "grain" most typically grows in random directions when not unduly influenced by a steep slope, water drainage patterns, a strong wind blowing constantly in one direction, or continued mowing in the same direction.

The main point to be made is that on relatively flat putting surfaces on older golf courses, without the aforementioned influences, grasses typically grow in random directions. TV golf commentators use the word "grain" for all descriptions of how the ball may be influenced. They do not relate that an older putting green is typically made up of many patches of grass, possibly hundreds on one green, that may show some of this 'grain," growing in small patches, and growing in all possible random directions. TV analysts do not factor that golf course superintendents routinely use brushes, and other devices on putting greens designed to stand leaf blades and stems upright so that this random grain can be minimized or totally eliminated.

It should be pointed out that the myths about "grain" constantly talked about by TV commentators are contrary to what turfgrass professionals know. I have discussed the subject of "grain" with other turfgrass experts and golf course superintendents, and they all agree that grain typically is found growing in random directions on putting greens.

Additionally, with more than 400 newly constructed golf courses being built in the United States each year, most new courses in cool-season climates are selecting the newly bred bentgrasses for putting greens. This "state-of-the-art" creeping bentgrass was developed to grow upright and does not produce grain.

When the winter pro tour hits Florida in February and March, golf courses have dormant Bermudagrass putting greens that are typically winter overseeded using a grass called *poa trivialis*.

My advice to the TV commentators is to find a better word for whatever they are trying to express, like "up hill" or down hill." This would be more correct in many situations and would be easier to listen to. Thank you.

Richard Hurley, Ph.D. East Stroudsburg, PA GOLF COURSE NEWS

Golf Course Classifieds

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25-30 — American Society of Golf Course Architects Annual Meeting in Los Angeles. Contact 312-372-7090.

May

4-5 — Equipment & Engine Training Council annual meeting in Milwaukee. Contact Virgil Russell at 512-442-1788.

July

13 — William C. Campbell Scholarship & Research Fund Tournament in Charleston, W. Va. Contact Judy Eddy at 614-373-5145.

16-18 — Turfgrass Producers International Summer Convention and Field Days in Tysons Corner, Va. Contact 847-705-9898.

August

1-4 — Georgia GCSA Summer Conference in Augusta. Contact Karen White at 706-769-4076.

September

7-10 — Responsible Industry for a Sound Environment annual meeting in Palm Beach, Fla. Contact 202-872-3860.

17-21 — Florida Turfgrass Conference in Tampa. Contact 800-882-6721.

22-24 — Turfand Landscape Field Days in Blacksburg, Va. Contact David McKissack at 540-231-5897.

October

26-27 — Golf Course News' Public Golf Forum in Palm Springs, Calif. Contact GCN Conference Group at 207-846-0600.

November

1-3 — International Irrigation Expo in San Diego, Calif. Contact 703-573-3551.

1-3— Georgia GCSA annual meeting at St. Simons Island. Contact Karen White at 706-769-4076.

4-6 — Penn State Golf Turf Conference in State College, Pa. Contact 814-863-3475.
9-12 — West Virginia GCSA Turf Con-

ference and Show in Morgantown, W. Va. Contact Robert Maguire at 304-243-4154. 9-13 — New York State Turf & Grounds Exposition in Syracuse, N.Y. Contact 800-873-8873.

13-17 — Professional Lawn Care Association of America Annual Conference in Nashville, Tenn. Contact 800-458-3466.

December

7-10 — Ohio Turfgrass Conference in Columbus. Contact 614-760-5442.

8-10 — Georgia Turfgrass Show in Atlanta. Contact 770-975-4123.

10-12 — Rocky Mountain Regional Turfgrass Association Conference in Denver. Contact 303-770-2220.

* For more information contact the GCSAA Education Office at 800-472-7878. 60 April 1998

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DURABILITY





Golf Course Marketplace



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CIRCLE #174

Field burning Continued from page 58

of next year's crop.

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Unless the straw is removed from the crowns of perennial grass plants, the crowns don't receive enough light, Elliott says.

Straw left on the field also limits herbicide effectiveness.

About a third of the straw can be sold for animal feed and bedding, but the supply far exceeds demand.

Elliott and ARS agricultural engineer Donald B. Churchill proved for the first time that low-input, on-farm composting of the high-carbon straw was possible. Their method involved gathering the straw in large windrows alongside the field and turning them three or four times with a tractor-mounted front-end loader.

"Before our experiments, it was believed that you would have to add nitrogen before the straw would decompose. There was also concern that the compost wouldn't reach high enough temperatures to kill weed seeds and inhibit diseases," Elliott notes.

Growers discovered that they could also leave the straw on the field to decompose in place, if they chopped it fine enough that the grass crowns weren't covered. Another ARS research project addresses the variation in crop needs and environmental conditions across the Willamette Valley and drier grass-growing regions of the Pacific Northwest.

"The southern part of the valley has poorly drained soils that are very wet in winter," says ARS agronomist Jeffrey J. Steiner. He's coordinating a long-term sustainable cropping systems program with scientists from ARS, Oregon State University, and the USDA's Natural Resources Conservation Service; extension specialists; and growers.

The south valley supplies most of the annual and perennial ryegrass seed. The moderately drained soils to the north allow more crop diversity, and growers farm tall fescue seed as a major crop. Welldrained hilly areas produce fine fescue seeds, but these soils erode easily if not managed properly.

In each of the three regions, Steiner and colleagues are looking at the best methods for managing straw (cutting and leaving on the field versus removing the straw), rotating crops (grass seed continuously or rotating grass with legume seed crops and wheat or meadowfoam), and planting methods (conventional or no-till).

"One of the main problems is how to rapidly establish each crop. Otherwise a grower can go as many as 20 months in the rotation sequence without an economic return," he says.

The first complete crop rotation will end this year. But the study has already provided valuable information for growers.

Stephen M. Griffith, an ARS plant physiologist, also looks at nitrogen use in the seed crops. He and others have found that as long as chopped-up straw residue doesn't cover the growing crowns of the grass plants, it may help the crop in the long run.

"Over time, the residues contribute nitrogen to the soils," Griffith says. "We also have evidence that the microbial community and soil quality are improving underneath the straw," he adds.

Kathryn Barry Stelljes is a public affairs specialist for ARS information in Albany, Calif. FYI contact (541) 750-8722.

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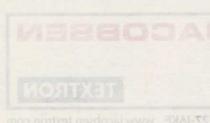
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